



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R10-OAR-2021-0060; FRL-10017-16-Region 10]

Air Plan Approval; AK, Fairbanks North Star Borough;

2006 24-hour PM_{2.5} Serious Area Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve parts of state implementation plan (SIP) submissions, submitted by the State of Alaska (Alaska or the State) to address Clean Air Act (CAA or Act) requirements for the 2006 24-hour fine particulate matter (PM_{2.5}) national ambient air quality standards (NAAQS) in the Fairbanks North Star Borough PM_{2.5} nonattainment area (Fairbanks PM_{2.5} Nonattainment Area). EPA is also proposing to approve rule revisions and an associated air quality control plan chapter submitted by Alaska into the Federally-approved SIP. Alaska made these submissions on December 13, 2019, (Fairbanks Serious Plan) and December 15, 2020.

DATES: Comments must be received on or before [**Insert date 30 days after date of publication in the Federal Register**].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R10-OAR-2021-0060, at <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should

include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

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SUPPLEMENTARY INFORMATION: Throughout this document wherever “we,” “us,” or “our” is used, it is intended to refer to EPA.

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I. Background

In 2009, EPA designated a portion of the Fairbanks North Star Borough as “nonattainment” for the 2006 24-hour PM_{2.5} NAAQS of 35 micrograms per cubic meter (µg/m³) (Fairbanks PM_{2.5} Nonattainment Area) (74 FR 58688, November 13, 2009).¹ Effective July 2, 2014, EPA classified the area as “Moderate” (79 FR 31566, June 2, 2014). Subsequently, Alaska submitted, and the EPA approved, a plan to meet Moderate nonattainment area requirements (82 FR 42457, September 8, 2017) (“Fairbanks Moderate Plan”).

On May 10, 2017, EPA determined that the State failed to attain the 2006 24-hour PM_{2.5} NAAQS in the area by the outermost Moderate area attainment date of December 31, 2015 (82

¹ See 40 CFR 81.302.

FR 21711). As a result, the Fairbanks PM_{2.5} Nonattainment Area was reclassified as a “Serious” nonattainment area by operation of law.

Upon reclassification as a Serious PM_{2.5} nonattainment area, the State was required to meet additional SIP requirements for the Fairbanks PM_{2.5} Nonattainment Area. In particular, the State was required to submit a Serious area nonattainment plan satisfying the requirements of CAA title I, part D, including the requirements of subpart 4, for the 2006 24-hour PM_{2.5} NAAQS and attain the 2006 24-hour PM_{2.5} NAAQS in the area by no later than the end of the tenth calendar year following designation (i.e., December 31, 2019). Prior to submitting the Fairbanks Serious Plan, Alaska revised its regulations and planning elements to further limit visible emissions and promote the use of certified heating devices and cleaner burning practices in the Fairbanks PM_{2.5} Nonattainment Area and submitted the revised regulations to EPA on October 25, 2018 and November 28, 2018.²

Alaska submitted the Fairbanks Serious Plan on December 13, 2019 to address the Serious nonattainment area requirements for the 2006 24-hour PM_{2.5} NAAQS. The Fairbanks Serious Plan includes further changes to heating device and cleaner burning practices regulations, among other control measures and planning elements. The Fairbanks Serious Plan is comprised of revisions to Title 18, Chapter 50, of the Alaska Administrative Code (18 AAC 50) and the State Air Quality Control Plan, adopted and incorporated by reference into State law at 18 AAC 50.030(a). On January 9, 2020, in accordance with section 110(k)(1)(B) and part D of title I of the CAA, EPA determined that the Fairbanks Serious Plan was administratively and technically complete (85 FR 7760, February 11, 2020).

Within the Fairbanks Serious Plan, the State sought an extension of the otherwise applicable attainment date through section 188(e) of the CAA. On September 2, 2020, EPA determined that the area failed to attain by the Serious area attainment date and denied the State’s

² We approved the remainder of the 2018 submissions in prior actions on June 5, 2019 (84 FR 26019), August 29, 2019 (84 FR 45419), December 18, 2019 (84 FR 69331), and December 23, 2019 (84 FR 70428).

Serious area attainment date extension request (85 FR 54509). As a result, Alaska was required to submit a revised plan to meet additional CAA requirements set forth in section 189(d) of the CAA by December 31, 2020. Alaska submitted the revised plan on December 15, 2020. Alaska's December 15, 2020, submission makes several changes to the State Air Quality Control Plan, adopted and incorporated by reference into State law at 18 AAC 50.030(a).³ In particular, Alaska made additions to several chapters of the State Air Quality Control Plan, including Chapter III.D.7.12 ("Fairbanks Emergency Episode Plan"). Alaska also withdrew and replaced several other chapters. EPA is proposing to approve the base year emissions inventory and the PM_{2.5} precursor demonstration elements of the Fairbanks Serious Plan. Alaska did not withdraw these portions of the State Air Quality Control Plan as part of the December 15, 2020, submission.⁴ Also, EPA is proposing to approve the updated Fairbanks Emergency Episode Plan that was adopted by the State on November 18, 2020 and was submitted on December 15, 2020. EPA will act on the remainder of the December 15, 2020, submission at a later date.

Alaska also made SIP submissions on October 25, 2018 and November 28, 2018 (in addition to the December 13, 2019 submission), requesting EPA approval of specific changes to Alaska Administrative Code Title 18, Environmental Conservation, Chapter 50, Air Quality Control (18 AAC 50) State effective September 15, 2018 and January 8, 2019. The requests included in the October 25, 2018, and November 28, 2018 SIP submissions are discussed in section C of this preamble.

II. Clean Air Act Requirements for PM_{2.5} Serious Area Plans and Summary of Proposal

Upon reclassification of a Moderate nonattainment area as a Serious nonattainment area under subpart 4 of part D, title I of the CAA, the Act requires the State to submit a Serious area

³ See Jason W. Brune, Commissioner Alaska Department of Environmental Conservation, to Chris Hladick, U.S. EPA Region 10, December 15, 2020, letter included in the docket for this proposed action.

⁴ Note that Alaska submitted an additional base year emissions inventory and updated PM_{2.5} precursor demonstrations as part of the December 15, 2020, submission. EPA is not proposing action on the additional base year emissions inventory or the updated PM_{2.5} precursor demonstration. EPA will propose action on these portions of the December 15, 2020, submission at a later date.

nonattainment plan that addresses specific requirements.⁵ On August 24, 2016, EPA promulgated the final rule entitled, “Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements” (PM_{2.5} SIP Requirements Rule).⁶ The PM_{2.5} SIP Requirements Rule is codified at 40 CFR part 51, subpart Z. The PM_{2.5} SIP Requirements Rule establishes regulatory requirements and provides interpretive guidance on the statutory SIP requirements that apply to states with areas designated nonattainment for the PM_{2.5} standards. In accordance with subpart 4 of part D, title I of the CAA and the PM_{2.5} SIP Requirements Rule at 40 CFR 51.1003(b), Serious area nonattainment plans must address the following requirements:

1. Base year emissions inventory meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008(b)(1);
2. Attainment projected emissions inventory meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1008(b)(2);
3. Serious area nonattainment plan control strategy meeting the requirements of CAA section 189(b)(1)(B) and 40 CFR 51.1010, including provisions to assure that the best available control measures (BACM) and best available control technologies (BACT), for the control of direct PM_{2.5} and PM_{2.5} precursors are implemented no later than four years after the area is reclassified (CAA section 189(b)(1)(B));
4. Attainment demonstration and modeling meeting the requirements of CAA sections 188(c)(2) and 189(b)(1)(A) and 40 CFR 51.1011;
5. Reasonable further progress (RFP) provisions meeting the requirements of CAA section 172(c)(2) and 40 CFR 51.1012;

⁵ CAA section 189(b), 42 U.S.C. 7513a(b); see also 81 FR 58010, 58074–58075, August 24, 2016.

⁶ 81 FR 58010. Prior to promulgating the PM_{2.5} SIP Requirements Rule, EPA provided its interpretations of the CAA’s requirements for particulate matter plans under part D, title I of the Act in the following guidance documents: (1) “State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990” (“General Preamble”); (2) “State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990; Supplemental” (“General Preamble Supplement”); and (3) “State Implementation Plans for Serious PM–10 Nonattainment Areas, and Attainment Date Waivers for PM–10 Nonattainment Areas Generally; Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990” (“General Preamble Addendum”).

6. Quantitative milestones meeting the requirements of CAA section 189(c) and 40 CFR 51.1013;

7. An evaluation by the state of sources of all four PM_{2.5} precursors for regulation, and implementation of controls on all such precursors, unless the state provides a demonstration establishing it is either not necessary to regulate a particular precursor in the nonattainment area at issue in order to attain by the attainment date, or that emissions of the precursor do not make a significant contribution to PM_{2.5} levels that exceed the standard;

8. Contingency measures meeting the requirements of CAA section 172(c)(9) and 40 CFR 51.1014; and

9. Nonattainment new source review provisions meeting the requirements of CAA section 189(b)(3) and 40 CFR 51.165.

In the Serious area nonattainment plan, states must also satisfy the requirements for Moderate area plans in CAA section 189(a), to the extent the state has not already met those requirements in the Moderate area plan submitted for the area (see CAA section 189(b)(1), 40 CFR 51.1003(b), and 81 FR 58010, 58075, August 24, 2016). In addition, the Serious area nonattainment plan must meet the general requirements applicable to all SIP submissions under section 110 of the CAA, including the requirement to provide necessary assurances that the implementing agencies have adequate personnel, funding, and authority under section 110(a)(2)(E), and the requirements concerning enforcement provisions in section 110(a)(2)(C).

EPA is proposing to approve parts of the Fairbanks Serious Plan as meeting the base year emission inventory requirements and certain optional PM_{2.5} precursor demonstration requirements. EPA is also proposing to approve rule revisions and an associated air quality control plan chapter submitted by Alaska into the Federally-approved SIP (SIP strengthening). Therefore, the ensuing evaluation of the Fairbanks Serious Plan focuses on only the statutory and regulatory requirements applicable to these Serious area nonattainment plan provisions. Additionally, we are not evaluating whether the Fairbanks Serious Plan or the December 15,

2020, submission meets the additional planning obligations of CAA section 189(d) or 40 CFR 51.1003(c). We note that EPA approved the nonattainment new source review element of the Fairbanks Serious Plan on August 29, 2019 (84 FR 45419). We will take action on the remaining elements of the Fairbanks Serious Plan and the December 15, 2020, submission at a later date.

III. Review of the Fairbanks Serious Plan

A. Base Year Emissions Inventory

1. Statutory and Regulatory Requirements

CAA section 172(c)(3) requires that states submit a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the nonattainment area as part of a nonattainment plan for such area. EPA discussed the emissions inventory requirements that apply to PM_{2.5} nonattainment areas, including Serious area nonattainment plan requirements, in the PM_{2.5} SIP Requirements Rule. The EPA codified these requirements in 40 CFR 51.1008.⁷ EPA has also issued additional guidance concerning emissions inventories for PM_{2.5} nonattainment areas.⁸

The base year emissions inventory for a Serious PM_{2.5} nonattainment area must be one of the three years for which monitored data were used by EPA to reclassify the area to Serious, or another technically appropriate year justified by the state in its Serious area nonattainment plan SIP submission.⁹ The base year emissions inventory should provide a state's best estimate of actual emissions from all sources, i.e., all emissions that contribute to the formation of a particular NAAQS pollutant. The emissions must be either annual total emissions, average-season day emissions, or both, as appropriate for the relevant annual versus 24-hour PM_{2.5} NAAQS. In the Serious area plan SIP submission, the state must include a rationale for

⁷ 81 FR 58010, August 24, 2016, at pp. 58078–58079.

⁸ “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” EPA, May 2017 (“Emissions Inventory Guidance”), available at: <https://www.epa.gov/air-emissions-inventories/air-emissions-inventory-guidance-implementation-ozone-and-particulate>.

⁹ 40 CFR 51.1008(b)(1).

providing annual or seasonal emission inventories, and justification for the period used for any seasonal emissions calculations.¹⁰

For the PM_{2.5} NAAQS, the base year inventory must include direct PM_{2.5} emissions, separately reported filterable and condensable PM_{2.5} emissions,¹¹ and emissions of all chemical precursors to the formation of secondary PM_{2.5}: nitrogen oxides (NO_x), sulfur dioxide (SO₂), volatile organic compounds (VOC), and ammonia (NH₃).¹²

A state's SIP submission must include documentation explaining how it calculated emissions data for the inventory and be consistent with the data elements required by 40 CFR part 51, subpart A. In estimating mobile source emissions, a state should use the latest emissions models and planning assumptions available at the time the SIP is developed. States are also required to use EPA's "Compilation of Air Pollutant Emission Factors" ("AP-42") road dust method for calculating re-entrained road dust emissions from paved roads.^{13, 14}

2. Summary of State's Submission

The base year planning emissions inventory for direct PM_{2.5} and PM_{2.5} precursors (NO_x, SO₂, VOC, and ammonia) and the documentation for the inventory for the Fairbanks PM_{2.5} Nonattainment Area are located in Chapter III.D.7.6 ("Emissions Inventory Data") and Appendix III.D.7.6 of the Fairbanks Serious Plan.

The State developed the inventory using data sources and emission calculation methodologies from the approved Fairbanks PM_{2.5} Moderate Plan as its starting point and then

¹⁰ 40 CFR 51.1008.

¹¹ The Emissions Inventory Guidance identifies the types of sources for which EPA expects states to provide condensable PM emission inventories. Emissions Inventory Guidance, section 4.2.1 ("Condensable PM Emissions"), 63–65.

¹² 40 CFR 51.1008.

¹³ EPA released an update to AP-42 in January 2011 that revised the equation for estimating paved road dust emissions based on an updated data regression that included new emission tests results. 76 FR 6328 (February 4, 2011).

¹⁴ AP-42 has been published since 1972 as the primary source of EPA's emission factor information. <https://www.epa.gov/air-emissionsfactors-and-quantification/ap-42-compilation-air-emissions-factors>. It contains emission factors and process information for more than 200 air pollution source categories. A source category is a specific industry sector or group of similar emitting sources. The emission factors have been developed and compiled from source test data, material balance studies, and engineering estimates.

updated the emissions totals based on additional source and activity data collected since preparation of that inventory.

The State based the 2013 base year emissions inventory on historical source activity data in calendar year 2013 for all source sectors. For point sources, the State updated emissions data for the 2013 base year emissions inventory based on annual fuel use/ process throughput by individual facility and emission unit.¹⁵ The State also included fuel-based ammonia emissions for point sources in the 2013 inventory. Additional home heating survey data collected in winters 2012 through 2015 were used by the State to augment the estimates of residential space heating device/fuel mix and usage in the Moderate Plan based on the singular 2011 Home Heating survey. The State combined this broader sample of survey data to better reflect residential space heating activity within the nonattainment area for calendar year 2013. For both on-road and non-road vehicles, the State used EPA's latest vehicle emissions model, MOVES2014b, to replace emission estimates from the Moderate SIP based on its predecessor, MOVES2010a. Alaska used MOVES2014b emission factors based on local fleet/ fuel characteristics and augmented with Fairbanks North Star Borough wintertime vehicle warmup and plug-in emission testing data. On-road vehicle activity (VMT and speeds) was based by the State on 2013 baseline travel demand model outputs from the Fairbanks Metropolitan Area Transportation System (FMATS) 2040 Metropolitan Transportation Plan (MTP) and 2045 MTP. Alaska used the 2014 National Emissions Inventory to represent Source Classification Code (SCC)-level annual emissions for fugitive dust, which were estimated to have no emissions during episodic wintertime conditions.

The 2013 base year emissions inventory in the Fairbanks Serious Plan has its foundations in the emissions inventory development work conducted for the Moderate Plan, which was based on emission estimates for two historical calendar year 2008 episodes (January 23- February 10,

¹⁵ For directly emitted PM_{2.5}, condensable and filterable components are separately reported, see Appendix III.D.7.6, Table 7-6-76. Alaska and EPA have determined that the point source sector is the only Source Classification Code (SCC) category that must include condensable and filterable PM_{2.5} information in the Fairbanks PM_{2.5} Nonattainment Area.

2008 and November 2-17, 2008). The Fairbanks North Star Borough, Alaska Department of Environmental Conservation, and EPA collectively determined that these “seasonal” modeling episodes typify atmospheric/meteorological conditions and source activity/emission patterns within the nonattainment season when ambient PM_{2.5} concentrations exceed the standard at design day or high percentile levels.¹⁶ Alaska believes that the average of emissions across the combined 35 days of the two historical episodes are well suited not just for attainment modeling, but also to satisfy seasonal planning inventory requirements. Similar to their development of a base year inventory for their Moderate Area Plan, Alaska used the meteorological scenarios and modeling from 2008 historical episodes as the basis for generating their 2013 base year planning inventory within this Serious SIP as provided in the PM_{2.5} SIP Requirements Rule.

Table 1 in this preamble provides a summary of the episodic (24-hour) average inventories in tons per day (tpd) of direct PM_{2.5} and PM_{2.5} precursors (NO_x, SO₂, VOC, and ammonia) for the 2013 base year.

Table 1 – Fairbanks PM_{2.5} Nonattainment Area 2013 Base Year Episode Average Daily Emissions (tons/day) by Source Sector

Source Sector	Direct PM _{2.5}	NO _x	SO ₂	VOC	Ammonia
Point Sources	1.23	10.45	7.22	0.23	0.051
Area, Space Heating (Total)	2.59	2.34	3.62	9.50	0.136
Area, Space Heat, Wood	2.43	0.40	0.08	9.29	0.091
Area, Space Heat, Oil	0.06	1.72	3.42	0.10	0.003
Area, Space Heat, Coal	0.08	0.05	0.10	0.11	0.013
Area, Space Heat, Other	0.01	0.16	0.02	0.01	0.028
Area, Other ¹	0.22	1.72	0.03	2.27	0.045

¹⁶ The inventory is based on emissions estimated during the two 2008 episodes that represent weather conditions when exceedances of the 2006 24-hour PM_{2.5} NAAQS typically occur. The inventory is an average of emissions across all days in the two episodes. It represents the average season-day emissions, in which the emission inventory season is the wintertime episodes of cold and calm weather that coincide with exceedances of the standard (82 FR 9035, February 2, 2017).

On-Road Mobile	0.27	3.36	0.02	4.07	0.054
Non-Road Mobile ²	0.15	0.86	6.10	0.41	0.000
TOTALS	4.46	18.73	17.00	16.48	0.286

Source: Fairbanks Serious Plan, Chapter III.D.7.6, Table 7.6-10

¹ The “Area, Other” category includes minor stationary sources (e.g., asphalt plants, coffee roasters, etc.)

² The “non-road mobile” category includes recreational vehicles, logging equipment, agricultural equipment, etc.

3. EPA’s Evaluation and Proposed Action

The 2013 base year emissions inventory meets the requirements of CAA section 172(c)(3) and 40 CFR 51.1008. Calendar year 2013 is an appropriate base year for the Fairbanks Serious Plan because it is one of the three years used in the reclassification from a Moderate area to a Serious area. The base year emissions inventory is a seasonal inventory, based on two meteorological episodes exemplifying the range of meteorological conditions that lead to exceedances of the 24-hour NAAQS. This is an appropriate temporal scope for a base year emissions inventory where anthropogenic exceedances of the 24-hour NAAQS are exclusively in winter.

The emissions inventory is of actual emissions in 2013, as required in the PM_{2.5} SIP Requirements Rule and guidance.¹⁷ The emissions inventory also includes separate reporting for filterable and condensable PM_{2.5} for the relevant emissions sectors and SCC codes. The base year 2013 emissions inventory is based on methodologies used by the State and vetted by EPA in the Fairbanks Moderate Plan and applied to the new year 2013. Therefore, the inventory reports emissions of point sources consistent with the Air Emissions Reporting Rule (AERR) and contains the detail and data elements required by 40 CFR part 51, subpart A. For these reasons, we are proposing to approve the 2013 base year emissions inventory in the Fairbanks Serious Plan as meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008.

¹⁷ 40 CFR 51.1008(a)(1)(ii).

B. PM_{2.5} Precursor Demonstration

1. Statutory and Regulatory Requirements

Under subpart 4 of part D, title I of the CAA and the PM_{2.5} SIP Requirements Rule, each state containing a PM_{2.5} nonattainment area must evaluate all PM_{2.5} precursors for regulation unless, for any given PM_{2.5} precursor, the state demonstrates to the Administrator's satisfaction that such precursor does not contribute significantly to PM_{2.5} levels that exceed the NAAQS in the nonattainment area.¹⁸ The provisions of subpart 4 do not define the term "precursor" for purposes of PM_{2.5}, nor do they explicitly require the control of any specifically identified PM_{2.5} precursor. The statutory definition of "air pollutant," however, provides that the term "includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term 'air pollutant' is used."¹⁹ EPA has identified SO₂, NO_x, VOCs, and ammonia as precursors to the formation of PM_{2.5}.²⁰ Accordingly, the attainment plan requirements of subpart 4 apply to emissions of all four precursors and direct PM_{2.5} from all types of stationary, area, and mobile sources, except as otherwise provided in the Act (e.g., CAA section 189(e)).

A large number of chemical reactions, often non-linear in nature, can convert gaseous SO₂, NO_x, VOCs, and ammonia to PM_{2.5}, making them precursors to PM_{2.5}.²¹ Formation of secondary PM_{2.5} also depends on atmospheric conditions, including solar radiation, temperature, and relative humidity, and the interactions of precursors with particles and with cloud or fog droplets.²² According to the Fairbanks Serious Plan, total wintertime PM_{2.5} concentrations in the Fairbanks PM_{2.5} Nonattainment Area are a function of both primary PM_{2.5} emissions and secondary PM_{2.5} formed from precursors (see Chapter III.D.7.8.1-7).

¹⁸ 40 CFR 51.1006; See 81 FR 58010, August 24, 2016, at pp. 58017–58020.

¹⁹ CAA section 302(g).

²⁰ 81 FR 58010, August 24, 2016, at p. 58015.

²¹ "Air Quality Criteria for Particulate Matter" (EPA/600/P-99/002aF), EPA, October 2004, Ch. 3.

²² "Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter" (EPA/452/R-12-005), EPA, December 2012), 2-1.

Section 189(e) of the Act requires that the control requirements for major stationary sources of direct PM₁₀²³ also apply to major stationary sources of PM₁₀ precursors, except where the Administrator determines that such sources do not contribute significantly to PM₁₀ levels that exceed the standard in the area. Section 189(e) contains the only express exception to the control requirements under subpart 4 (e.g., requirements for reasonably available control measures (RACM) and reasonably available control technology (RACT), BACM and BACT, Most Stringent Measures (MSM), and New Source Review (NSR) for sources of direct PM_{2.5} and PM_{2.5} precursor emissions). Although section 189(e) explicitly addresses only major stationary sources, EPA interprets the Act as authorizing it also to determine, under appropriate circumstances, that regulation of specific PM_{2.5} precursors from other source categories in a given nonattainment area is not necessary.²⁴ For example, under EPA's longstanding interpretation of the control requirements that apply to stationary, area, and mobile sources of PM₁₀ precursors in the nonattainment area under CAA section 172(c)(1) and subpart 4,²⁵ a state may demonstrate in a SIP submission that control of a certain precursor pollutant is not necessary in light of its insignificant contribution to ambient PM₁₀ levels in the nonattainment area.²⁶

Under the PM_{2.5} SIP Requirements Rule, a state may elect to submit to EPA a “comprehensive precursor demonstration” for a specific nonattainment area to show that emissions of a particular precursor from all existing sources located in the nonattainment area do not contribute significantly to PM_{2.5} levels that exceed the NAAQS at issue in the nonattainment in the area.²⁷ If EPA determines that the contribution of the precursor to PM_{2.5} levels in the area

²³ The requirements for attainment plans for the 2006 24-hour PM_{2.5} NAAQS include the general nonattainment area planning requirements in CAA section 172 of title I, part D, subpart 1 and the additional planning requirements specific to particulate matter in CAA sections 188 and 189 of title I, part D, subpart 4. 81 FR 58010, August 24, 2016, at pp. 58012-58014.

²⁴ 81 FR 58010, August 24, 2016, at pp. 58018-58019.

²⁵ General Preamble, 57 FR 13498, April 16, 1992, at pp. 13539-42.

²⁶ Courts have upheld this approach to the requirements of subpart 4 for PM₁₀. See, e.g., *Assoc. of Irrigated Residents v. EPA, et al.*, 423 F.3d 989 (9th Cir. 2005).

²⁷ 40 CFR 51.1006(a)(1).

is not significant and approves the demonstration, the state is not required to control emissions of the relevant precursor from existing sources in the attainment plan.²⁸

In addition, in May 2019, EPA issued the “PM_{2.5} Precursor Demonstration Guidance” (“PM_{2.5} Precursor Guidance”), which provides recommendations to states for analyzing nonattainment area PM_{2.5} emissions and developing such optional precursor demonstrations, consistent with the PM_{2.5} SIP Requirements Rule.²⁹

EPA evaluated the Fairbanks Serious Plan in accordance with the presumption embodied within subpart 4 that the State must address all PM_{2.5} precursors in the evaluation and implementation of potential control measures, unless the State adequately demonstrates that emissions of a particular precursor or precursors do not contribute significantly to ambient PM_{2.5} levels that exceed the PM_{2.5} NAAQS in the nonattainment area. In reviewing any determination by the state to exclude a PM_{2.5} precursor from the required evaluation of potential control measures, we considered both the magnitude of the precursor’s contribution to ambient PM_{2.5} concentrations in the nonattainment area and the sensitivity of ambient PM_{2.5} concentrations in the area to reductions in emissions of that precursor.³⁰

2. Summary of State’s Submission

Alaska includes its PM_{2.5} precursor analysis in Chapter III.D.7.8, section 7.8.12, of the Fairbanks Serious Plan. The State provides both concentration-based and sensitivity-based analyses of precursor contributions to ambient PM_{2.5} concentrations in the Fairbanks PM_{2.5} Nonattainment Area. These analyses led the State to conclude that SO₂ and ammonia emissions contribute significantly to ambient PM_{2.5} levels that exceed the PM_{2.5} NAAQS in the Fairbanks PM_{2.5} Nonattainment Area, while NO_x and VOCs do not contribute significantly to such exceedances, as discussed below. Consistent with this conclusion, the State focused the control

²⁸ 40 CFR 51.1006(a)(1).

²⁹ “PM_{2.5} Precursor Demonstration Guidance,” EPA-454/R-19-004, May 2019, including Memo dated May 30, 2019 from Scott Mathias, Acting Director, Air Quality Policy Division and Richard Wayland, Director, Air Quality Assessment Division, Office of Air Quality Planning and Standards (OAQPS), EPA to Regional Air Division Directors, Regions 1-10, EPA.

³⁰ 40 CFR 51.1006(a)(1)(i) and (ii).

strategy and attainment demonstration on sources of PM_{2.5}, SO₂, and ammonia emissions. Importantly, Alaska's precursor analysis did not address nonattainment NSR requirements. The State made the prior determination to regulate all four EPA-identified legal precursors to PM_{2.5} in the nonattainment NSR regulations applicable to the Fairbanks PM_{2.5} Nonattainment Area. The EPA approved Alaska's October 25, 2018, SIP revision as meeting the nonattainment NSR requirements triggered upon reclassification of the area to Serious (August 29, 2019, 84 FR 45419).

Alaska applied a tiered approach to the precursor demonstrations in the Fairbanks PM_{2.5} Nonattainment Area. The tiered analysis included: (1) a concentration-based analysis of ambient data; (2) a concentration-based analysis using air quality modeling (zero-out); and (3) sensitivity-based analysis using air quality modeling. For the concentration-based analysis using ambient data, Alaska assessed the contribution of SO₂, NO_x, and ammonia for all four monitor sites between 2011 and 2015 on the highest concentration days. Alaska did not perform a concentration-based analysis using ambient data for VOCs. Through these analyses, Alaska identified that ammonia was a significant precursor in the Fairbanks PM_{2.5} Nonattainment Area.

For the concentration-based analysis using air quality modeling, Alaska utilized version 4.7.1 of the Community Multiscale Air Quality (CMAQ) photochemical model. The modeling relied on many elements from the precursor analysis provided by the State in the Fairbanks Moderate Plan (e.g., meteorological inputs, emissions processing methods, nested modeling grids).

Alaska performed modeling analyses using both the base year emissions inventory (2013) and the future year emissions inventory (2019) for VOCs and NO_x. First, the State evaluated precursor significance using a zero-out approach that compared a baseline model run with a model run where a precursor's emissions were set to zero in order to determine the influence of that precursor on PM_{2.5} formation. For VOCs, Alaska performed a single analysis where it zeroed out all anthropogenic VOC emissions. For NO_x, Alaska performed two zero-out analyses:

one where all anthropogenic NO_x emissions were zeroed out and one where only major stationary source NO_x emissions were zeroed out. Next, Alaska further evaluated NO_x precursor significance through a 75% sensitivity analysis. In this analysis, the State compared a baseline model run with a model run where all anthropogenic NO_x emissions were reduced by 75%. Alaska concluded that these analyses showed that VOCs and NO_x were not significant precursors in the Fairbanks PM_{2.5} Nonattainment Area.

Alaska performed two SO₂ precursor analyses using modeling elements from the Moderate Area Plan and updated baseline and future year emission inventories, as described previously in this preamble for the VOC and NO_x modeling. Alaska first performed a zero-out analysis where it zeroed out major stationary source SO₂ emissions. To address concerns about model underprediction of secondary sulfate, Alaska next performed an analysis that incorporated the base case model performance evaluation to estimate the impact of removing all major stationary source SO₂ emissions. Based on these analyses, Alaska concluded that SO₂ was a significant precursor in the Fairbanks PM_{2.5} Nonattainment Area.

Additionally, on March 18, 2020, Alaska provided clarifications on the precursor analyses, included in the docket for this action. Included in these clarifications were further calculations projecting NO_x significance at a 50% sensitivity level (i.e., the comparison of a baseline model run with a model run including a 50% reduction of all anthropogenic NO_x emissions).

3. EPA's Evaluation and Proposed Action

EPA has evaluated the State's precursor demonstration for the Serious area nonattainment plan consistent with the PM_{2.5} SIP Requirements Rule and the recommendations in the PM_{2.5} Precursor Guidance. Additional details of EPA's evaluation of Alaska's precursor PM_{2.5} analyses are included in a Technical Support Document included in the docket for this

action.³¹ Based on this evaluation, EPA agrees that SO₂ and ammonia emissions contribute significantly to ambient PM_{2.5} levels that exceed the 2006 PM_{2.5} NAAQS in the Fairbanks PM_{2.5} Nonattainment Area and that SO₂ and ammonia emission sources, therefore, remain subject to control requirements under subparts 1 and 4 of part D, title I of the Act.

For the reasons provided in this preamble and further detailed in the Technical Support Document, EPA proposes to approve the State's demonstration that NO_x and VOC emissions do not contribute significantly to ambient PM_{2.5} levels that exceed the 2006 PM_{2.5} NAAQS in the Fairbanks PM_{2.5} Nonattainment Area. Our proposed approval of Alaska's precursor demonstration does not extend to nonattainment NSR requirements for the area. The State did not address the issue of precursors for purposes of nonattainment NSR requirements in the Fairbanks Serious Plan because Alaska previously determined that it was appropriate to regulate NO_x, SO₂, VOCs, and ammonia as precursors to PM_{2.5} with respect to nonattainment NSR and submitted rule changes to that effect on October 25, 2018. The EPA approved the submitted revised program as meeting nonattainment NSR requirements triggered upon reclassification of the Fairbanks PM_{2.5} Nonattainment Area to Serious (84 FR 45419, August 29, 2019).

Regarding the State's analytical approach, EPA proposes to find that the State used the appropriate methods and data to evaluate PM_{2.5} formation in the Fairbanks PM_{2.5} Nonattainment Area from precursor emissions. Alaska began with concentration-based analyses for the precursors and proceeded with sensitivity-based analyses if necessary, which is an acceptable progression of analyses under the PM_{2.5} SIP Requirements Rule. The State utilized the appropriate threshold recommended in the EPA's guidance (1.5 µg/m³) in evaluating the significance of precursor emissions to the formation of 24-hour PM_{2.5} and utilized data from all four monitors in the Fairbanks PM_{2.5} Nonattainment Area.

³¹ "Review of Fairbanks Nonattainment Area Precursor Demonstrations for Volatile Organic Compounds and Nitrogen Oxides in the 2019 State Implementation Plan Submission." Nicole Briggs and Robert Kotchenruther, November 4, 2020.

Regarding the results of the State's analysis, the concentration-based modeling (Alaska's second tier precursor) analysis of VOC emissions demonstrates that anthropogenic VOCs have impacts on PM_{2.5} concentrations in the Fairbanks PM_{2.5} Nonattainment Area that are well below the 1.5 µg/m³ significance threshold. Therefore, we propose to concur with the State's conclusion that VOCs are not significant for PM_{2.5} formation in the Fairbanks PM_{2.5} Nonattainment Area.

Further, we propose to find that the weight of evidence presented in the Fairbanks Serious Plan and Alaska's March 18, 2020, clarification document suggests that NO_x emitted from all sources is an insignificant contributor to local PM_{2.5} concentrations, based on the following evidence. First, the NO_x 100% major stationary source reduction analysis demonstrated that NO_x emissions are insignificant contributors to PM_{2.5} concentrations at the four monitor locations. Second, the NO_x 75% all source reduction sensitivity analysis demonstrated that only 10% of the modeled days showed significant contributions of NO_x to PM_{2.5} concentrations at the Fairbanks monitors, and no days with significant contributions at the North Pole monitors. Third, the 75% all source reduction sensitivity analysis was conservative given that EPA guidance recommends evaluation of 30-70% reductions of the pollutant for analytical purposes.³² Lastly, Alaska's projected 50% reduction of NO_x from all sources sensitivity analysis suggested there would be insignificant contributions from NO_x to PM_{2.5} concentrations on all modeled days at all monitors. Most of these days would have NO_x contributions to PM_{2.5} concentrations well below the 1.5 µg/m³ significance threshold.

C. SIP Strengthening Measures

1. Summary of State's Submission

³² "PM_{2.5} Precursor Demonstration Guidance," EPA-454/R-19-004, May 2019, including Memo dated May 30, 2019 from Scott Mathias, Acting Director, Air Quality Policy Division and Richard Wayland, Director, Air Quality Assessment Division, Office of Air Quality Planning and Standards (OAQPS), EPA to Regional Air Division Directors, Regions 1-10, EPA. Page 29.

In the October 25, 2018, November 28, 2018, and December 13, 2019 submissions, Alaska requested EPA approval of specific changes to Alaska Administrative Code Title 18, Environmental Conservation, Chapter 50, Air Quality Control (18 AAC 50) State effective September 15, 2018, January 8, 2019, and January 12, 2020. The requests included in the October 25, 2018 and November 28, 2018 SIP submissions (i.e., not the Fairbanks Serious Plan submission (December 13, 2019)) are noted below. The State adopted these regulatory revisions to strengthen the existing Alaska SIP and to meet the new Serious area planning requirements for BACM for certain source categories.

This evaluation section discusses how the submitted rule revisions strengthen the current, Federally-approved SIP and why the EPA believes the rules are approvable. As such, our discussion focuses on the most recently submitted change to any particular rule provision. EPA is proposing to approve the submitted revisions to 18 AAC 50 and Volume III, Section III.D.7.12 of the State Air Quality Control Plan (the Fairbanks Emergency Episode Plan) as SIP strengthening and is not proposing to determine whether the submitted revisions satisfy, in whole or in part, the control strategy requirements in CAA section 189 and 40 CFR 51.1010 nor the contingency measure requirements in CAA section 172(c)(9) and 40 CFR 51.1014.³³

2. EPA's Evaluation and Proposed Action

a. State Air Quality Control Plan

In the submissions, Alaska repealed and readopted 18 AAC 50.030, the rule section into which all State air quality control provisions are adopted by reference. The revised version of the rule section contains two distinct paragraphs: paragraph (a) adopts the State Air Quality Control Plan by reference into State rules; and paragraph (b) requires that sources subject to specific control measures and technologies in the State Air Quality Control Plan comply with those

³³ As noted previously, EPA is proposing approval of the Fairbanks Emergency Episode Plan that was submitted on December 15, 2020, and is included in the docket. A version of the Fairbanks Emergency Episode Plan was submitted as part of the Fairbanks Serious Plan on December 13, 2019, but this has been superseded by the version submitted December 15, 2020, as part of the revised plan.

requirements. Alaska only submitted paragraph (b) to EPA for SIP approval.³⁴

Paragraph (b) makes clear that any source subject to Reasonably Available Control Technology (RACT), Best Available Control Measures (BACM), and Best Available Control Technology (BACT) under the State Air Quality Control Plan must comply with those applicable requirements. RACT, BACM, and BACT are terms defined in the Clean Air Act and in the EPA's implementing regulations, and Alaska has adopted these Federal definitions by reference into State regulation at 18 AAC 50.990.³⁵ Please see Section D.2.G in this preamble for further discussion.

The addition of paragraph (b) improves the enforceability of State-adopted control measures, including those adopted for sources subject to RACT, BACM, and BACT in the Fairbanks PM_{2.5} Nonattainment Area. This enables Alaska to ensure that emission control measures as RACT, BACM, and BACT in the State Air Quality Control Plan are adopted and implemented. However, EPA's proposed approval of 18 AAC 50.030(b) does not constitute a proposed determination regarding whether the control measures the State identified as BACM or BACT in the Fairbanks Serious Plan satisfy, in whole or in part, the control strategy requirements in CAA section 189 and 40 CFR 51.1010. Therefore, we are proposing to approve and incorporate 18 AAC 50.030(b) by reference into the Alaska SIP.

b. Emission Standards for Solid Fuel-Fired Heating Devices

Solid fuel-fired heating device visible emissions standards are found in 18 AAC 50.075. Alaska submitted revisions to paragraph (e) that clarify and strengthens the compliance requirements associated with PM_{2.5} air episode declaration that prohibits operation of solid fuel-fired heating devices. To comply, operators must withhold fuel from the device and ensure that burning has ceased within three hours of the effective time of the declaration. The changes to

³⁴ Paragraph (a) of 18 AAC 50.030 is not appropriate for SIP approval because the EPA acts directly, as appropriate, on the specific provisions in the State Air Quality Control Plan that have been submitted by Alaska.

³⁵ Alaska requested approval of this new regulation in the November 28, 2018, SIP submission. This submission is included in the docket of this action.

paragraph (e) make clear how to comply with such an air episode declaration and thus strengthen this rule section. Therefore, we propose to approve and incorporate by reference this change to 18 AAC 50.075.

Alaska also added paragraph (f) to 18 AAC 50.075. Paragraph (f) establishes a 20 percent opacity limit applicable in the Fairbanks PM_{2.5} Nonattainment Area, regardless of whether the State has called an air episode. This limit is similar to the 20 percent opacity limit established in Fairbanks North Star Borough ordinance 2015-01, adopted into the Alaska SIP and approved by the EPA as part of the Fairbanks Moderate Plan on September 8, 2017 (82 FR 42457). We are deferring action on paragraph (f) because we intend to address it in a separate action.

c. Requirements for Wood Sellers

The current version of 18 AAC 50.076 in the Alaska SIP requires commercial wood sellers serving the Fairbanks North Star Borough to register with Alaska Department of Environmental Conservation, if the Fairbanks PM_{2.5} Nonattainment Area is reclassified from Moderate to Serious. On May 10, 2017, the EPA reclassified the Fairbanks PM_{2.5} Nonattainment Area to Serious, effective June 9, 2017, therefore mandating wood seller registration. Because this provision has been triggered by the reclassification to Serious and is now in effect, Alaska removed the trigger language.

The revisions to this rule section also require that registered commercial wood sellers serving the Fairbanks North Star Borough conduct moisture testing in accordance with this rule. Furthermore, the requirements become more stringent on October 1, 2021. Upon that date and going forward, commercial wood sellers serving the Fairbanks North Star Borough must ensure all dry wood is processed and monitored so as to remain dry, and may sell wet wood only if certain conditions designed to prevent burning of the wet wood are met. These conditions include minimum size requirements, moisture disclosure requirements, and a confirmation from the seller in writing that a buyer is capable of drying the wood by the next winter season. Wood sellers must document and report periodically on these practices and those that fail to comply

will be subject to remedial training, a notice of violation, revocation of their registration, and/or enforcement action. Non-commercial wood sellers are prohibited from selling wet wood in the Fairbanks PM_{2.5} Nonattainment Area. These rule revisions constitute more stringent requirements for wood sellers, so we are approving these revisions as SIP strengthening.

Consistent with our prior action on September 8, 2017, we propose to approve but not incorporate by reference the enforcement provision at paragraph (g)(11) to avoid conflict with the EPA's independent authorities (82 FR 42457).

d. Standards for Wood-Fired Heating Devices

Wood-fired heating device standards are found in 18 AAC 50.077. The State submitted changes to this section that require removal of unapproved and uncertified wood-fired heating devices when residences are sold and leased, prevent the installation of wood-fired heating devices as the primary heat source in new construction, and restrict the sale and advertising of devices that do not meet the stricter standards. In addition, Alaska revised the regulations regarding non-certified device removal upon sale of property and a mandatory dry wood compliance program. Prior to these revisions, these regulations became effective only upon an EPA determination that, among other things, the Fairbanks PM_{2.5} Nonattainment Area failed to attain the 2006 PM_{2.5} NAAQS by the Moderate area attainment date. EPA made such a determination on May 10, 2017 (82 FR 21711). Accordingly, Alaska revised the regulation to remove the now-irrelevant contingency language and to make these regulations fully effective.

Within the new wood-fired heating device standards, Alaska included a new rule section, 18 AAC 50.077(n) that adopted two contingency measures that will be triggered upon any of the determinations listed in 40 CFR 51.1014(a). The first measure requires owners of older EPA-certified wood fired heating devices with an emission rating above 2.0 grams per hour (g/hr), manufactured 25 years prior to the effective date of an EPA finding that triggers this measure, to remove the device upon the sale of a property or by December 31, 2024, whichever is earlier. The second measure requires owners of EPA-certified devices that were manufactured less than

25 years prior to the EPA finding to remove the device prior to reaching 25 years from the date of manufacture. Control measures targeting the older EPA certified devices will provide additional emission reduction benefits beyond Alaska's current home heating control measures. Estimates of the projected emissions reductions attributable to these measures are included in the docket for this proposed action. These measures impose more stringent requirements on owners of solid-fuel heating devices in the Fairbanks PM_{2.5} Nonattainment Area, so we propose to approve these measures as SIP strengthening.

Therefore, we propose to approve and incorporate 18 AAC 50.077(n) by reference into the Alaska SIP. As stated previously, however, we are not proposing to determine whether the submitted revisions to this rule satisfy, in whole or in part, the control strategy requirements in CAA section 189 and 40 CFR 51.1010 or the contingency measure requirements in CAA section 172(c)(9) and 40 CFR 51.1014. Upon final approval, the Alaska SIP will incorporate 18 AAC 50.077 by reference, State effective January 8, 2020, except paragraphs (g) and (q). These paragraphs were not submitted for approval.

e. Limits on Sulfur Content of Fuel Oil

Alaska submitted a new rule section, 18 AAC 50.078, designed to limit the sulfur content of fuel oil used in oil-fired equipment such as residential space heaters. This limit applies after September 1, 2022. We propose to approve and incorporate 18 AAC 50.078(a) and (b) by reference into the Alaska SIP because these measures constitute more stringent standards on fuel sulfur content in the Fairbanks PM_{2.5} Nonattainment Area than what is currently in the SIP. In addition, 18 AAC 50.078(c) and 18 AAC 50.078(d) include new requirements for small area sources of PM_{2.5} including commercial charbroilers, commercial incinerators, commercial used oil burners, and commercial coffee roasters. We are deferring action on 18 AAC 50.078(c) and 18 AAC 50.078(d).

f. Provisions for Coal-Fired Heating Devices

Alaska added a new rule section, 18 AAC 50.079, to address emissions from coal-fired

heating devices and submitted follow-up revisions to this rule section. The regulation at 18 AAC 50.079 prohibits a person who owns or operates a coal-fired heating device from installing or reinstalling, supplying, selling, leasing, distributing, conveying, or advertising for sale within the nonattainment area. Coal-fired heating devices must be rendered inoperable when properties change hands or no later than December 31, 2024.

We note that this provision includes two exemptions, at paragraphs (d) and (e). Alaska submitted paragraph (d) for approval. This paragraph exempts devices that have passed approved wintertime emission source tests from certain requirements. The emission source test must be approved by ADEC, use a Federally approved method (40 CFR part 60, appendix A-3, Method 5), and the maximum emission rate for any individual test run does not exceed 18 g/hr of total particulate matter. We have reviewed the exemption under 18 AAC 50.079(d) and find it to be appropriately bounded, with specific criteria for an exemption. Alaska did not submit paragraph 18 AAC 50.079(e) for approval.

In this action, we propose to approve and incorporate the submitted revisions to 18 AAC 50.079 by reference into the Alaska SIP. These revisions constitute more stringent standards for owners and operators of coal-fired heating devices than what is currently in the SIP.

Accordingly, EPA proposes to approve these measures as SIP strengthening. Upon final approval, the Alaska SIP will include 18 AAC 50.079, except paragraph (e).

g. Definitions

The submissions revised 18 AAC 50.990 to update several air quality definitions. Alaska clarified the definition of “particulate matter” for the purpose of meeting the wood-fired heating device emissions standards established in 18 AAC 50.077.³⁶ For this purpose, “particulate matter” corresponds with the definition in 40 CFR 60.531, subpart AAA Standards of Performance for New Residential Wood Heaters, and includes total particulate matter, as defined

³⁶ Alaska requested approval of this revised regulation in the November 28, 2018, SIP submission. This submission is included in the docket of this action.

in that federal provision. Alaska DEC also revised the definition of “solid fuel-fired heating device” to make clear that certain dual-purpose centralized heat distribution systems are excluded from this definition.³⁷

As discussed previously in this document, the submissions revised the Alaska SIP to adopt by reference the federal definitions of “RACT”, “BACM”, and “BACT”, as of July 1, 2017.³⁸ “RACT” is defined as the federal definition in 40 CFR 51.100(o), “BACM” is defined as the definition in 40 CFR 51.1000, and “BACT” is defined as the definition in 40 CFR 52.21(b), except that it is limited to the nonattainment pollutant and its defined precursors as they apply in the Fairbanks PM_{2.5} Nonattainment Area.

Alaska DEC also added definitions for the terms “catalytic oxidizer”, “charbroiler”, “chain-driven charbroiler”, and “used oil” to support the new information collection requirements for small area sources in 18 AAC 50.078.³⁹

The added and revised definitions in 18 AAC 50.990 are consistent with Clean Air Act requirements, therefore, we propose to approve and incorporate the submitted revised definitions by reference into the Alaska SIP.

h. Emergency Episode Plan

EPA approved the Fairbanks Emergency Episode Plan as meeting certain Moderate area control strategy requirements on September 8, 2017 (82 FR 42457). EPA subsequently approved the plan for purposes of CAA section 110(a)(2)(G) requirements for the 2006 24-hour PM_{2.5} NAAQS (November 28, 2018, 83 FR 60769). Alaska revised the Fairbanks Emergency Episode Plan and submitted the updated plan as part of the Fairbanks Serious Plan submission on December 13, 2019. However, EPA did not act on the Fairbanks Serious Plan version, and Alaska has since revised the Emergency Episode Plan and submitted the updates for approval on

³⁷ Alaska requested approval of this revised regulation in the November 28, 2018, SIP submission. This submission is included in the docket of this action.

³⁸ Alaska requested approval of this new regulation in the November 28, 2018, SIP submission. This submission is included in the docket of this action.

³⁹ Alaska requested approval of this new regulation in the Fairbanks Serious Plan submission.

December 15, 2020. EPA's most recent approval of the Fairbanks Emergency Episode Plan (Volume II, Section III.D.5.11) occurred on June 5, 2019 (84 FR 26019).

As noted previously, on December 15, 2020, Alaska submitted an updated Fairbanks Emergency Episode Plan as it applies to the Fairbanks PM_{2.5} Nonattainment Area (Volume II, Section III.D.7.12). Generally, the submitted plan strengthens the solid fuel burning device curtailment program implemented via 18 AAC 50.075(e) and makes the control measures within this emissions source category more stringent. The submitted plan includes lower (more stringent) thresholds for air quality episodes and advisory/ alerts, along with updated exceptions that have a limited duration and incentivize upgrading heating devices.

In particular, Alaska revised the Air Quality Episode Thresholds and Exceptions used to declare the two-stage curtailment program. Both of the alert stages were lowered by 5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in this submission. The Stage 1 Air Alert requires solid fuel burning devices to cease operation once PM_{2.5} concentrations exceed 20 $\mu\text{g}/\text{m}^3$.⁴⁰ The Emergency Episode Plan provides an exception during periods of power outage (Volume II, Section III.D.7.12, Table 7.12-1). Otherwise, operation of a solid fuel burning device during an air quality episode is prohibited unless the device qualifies for a temporary waiver. Operation of a solid fuel burning device during the Stage 1 Air Alert is allowed only if the device meets certain qualifications and conditions (see Volume II, Section III.D.7.12, Table 7.12-6 of the Fairbanks Serious Plan). Specifically, the waiver is limited in duration and requires older devices to be replaced in order to maintain the waiver. The Stage 2 Air Alert requires solid fuel burning devices to cease operation once PM_{2.5} concentrations rise above 30 micrograms per cubic meter

⁴⁰ According to the Emergency Episode Plan, ADEC air quality specialists use an air quality forecasting tool called the AQ Alert Model to issue forecasted curtailments by 2:00 pm local time. Before declaring a curtailment on the operation of solid fuel-fired heating devices, DEC reviews the relevant and available meteorological data, weather forecasts, affected area, strength of the inversion, and potential duration of the inversion. Other inputs include the afternoon forecast of dispersion conditions issued by the National Weather Service forecasting office in Fairbanks and the assessment by ADEC personnel of many factors based on their long-standing experience in observing air quality in Fairbanks, including the rate of change in concentrations at the monitors and the location and movement of weather fronts seen in satellite photos. DEC sometimes calls an Alert that does not include a curtailment if weather conditions indicate a clearing prior to any impact of a curtailment taking effect.

($\mu\text{g}/\text{m}^3$). Waivers for Stage 1 and Stage 2 Alerts are provided for a device owner or operator that qualifies for a No Other Adequate Source of Heat (NOASH) waiver (see Volume II, Section III.D.7.12, Table 7.12-5 of the Fairbanks Serious Plan), but these waivers are also limited in duration and require older devices to be replaced in order to maintain the waiver. The Fairbanks Emergency Episode Plan included in the December 15, 2020, submission includes a control measure that will take effect upon an EPA finding under 40 CFR 51.1014(a) (“Stage 2 Air Alert Contingency Measure”). If triggered, the control measure will lower the Stage 2 Air Alert threshold from $30 \mu\text{g}/\text{m}^3$ to $25 \mu\text{g}/\text{m}^3$. See Table 1 below.

Table 1—Alaska’s Table 7.12-1 Air Quality Episode Thresholds and Exceptions

Episode Feature	Stage 1 Air Alert	Stage 2 Air Alert	Stage 2 Air Alert Contingency Measure
PM _{2.5} Threshold, micrograms per cubic meter, ($\mu\text{g}/\text{m}^3$)	20	30	25
Exceptions During a Power Outage	Yes	Yes	Yes

The Fairbanks Emergency Episode Plan also includes Air Advisories that allow Alaska to request voluntary curtailment actions prior to reaching PM_{2.5} concentrations that trigger the Air Alerts and mandatory curtailment requirements. Air Advisories are declared when PM_{2.5} concentrations exceed $15 \mu\text{g}/\text{m}^3$ (24-hour rolling average). The Air Advisory was lowered by $5 \mu\text{g}/\text{m}^3$ in this submission. See Table 2 below.

Table 2—Alaska’s Table 7.12-3 Advisory/ Alert Level

Type	24-hour Average PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
Advisory Alert	15

Alaska’s revisions to the Fairbanks Emergency Episode Plan improve the State’s ability to implement the solid fuel burning device curtailment program via 18 AAC 50.075(e) and make

the related control measures more stringent. Specifically, the revised PM_{2.5} thresholds for the two-stage program will result in reduced emissions from solid fuel burning devices, particularly during the winter months. Therefore, we propose to approve and incorporate Volume II, Section III.D.7.12 of the State Air Quality Control Plan by reference into the Alaska SIP. As stated earlier, EPA is proposing to approve the Fairbanks Emergency Episode Plan as SIP strengthening and is not proposing to determine whether the Plan satisfies, in whole or in part, the control strategy requirements in CAA section 189 and 40 CFR 51.1010 or the contingency measure requirements in CAA section 172(c)(9) and 40 CFR 51.1014.

IV. Summary of Proposed Action

In this action, EPA is proposing to approve the submitted revisions to the Alaska SIP as meeting the following Serious Plan required elements for the 2006 24-hour PM_{2.5} NAAQS Fairbanks Nonattainment Area:

- The 2013 base year emissions inventory (CAA section 172(c)(3); 40 CFR 51.1008(b)(1));
- The State's PM_{2.5} precursor demonstration for NO_x and VOC emissions (CAA section 189(e) 40 CFR 51.1006(a)); and

The EPA is proposing to approve the submitted sections of the Alaska Air Quality Control Plan for the Fairbanks PM_{2.5} Nonattainment Area, State effective January 8, 2020:

- Volume II Section III.D.7.06 and Volume III Section III.D.7.06 Emissions Inventory for purposes of the 2013 base year emissions inventory;
- Volume II Section III.D.7.08 Precursor Demonstration, for the purposes of NO_x and VOC emissions as it relates to BACM/BACT control measure requirements; and

Further, the EPA is proposing to approve the submitted section of the Alaska Air Quality Control Plan for the Fairbanks PM_{2.5} Nonattainment Area, State effective December 25, 2020:

- Volume II Section III.D.7.12, Emergency Episode Plan.⁴¹

⁴¹ Submitted on December 15, 2020 and included in the docket. EPA is not at this time proposing to determine whether this updated planning chapter, in conjunction with the associated regulatory changes, meets other Serious

EPA is also proposing to approve and incorporate by reference submitted regulatory changes into the Alaska SIP. EPA is not at this time proposing to determine whether these provisions also meet other Serious area nonattainment plan requirements for the 2006 24-hour PM_{2.5} NAAQS in the Fairbanks PM_{2.5} Nonattainment Area. Upon final approval, the Alaska SIP will include:

- 18 AAC 50.030, except (a), State effective January 12, 2018;
- 18 AAC 50.075, except (d)(2) and (f), State effective January 8, 2020;
- 18 AAC 50.076, except (g)(11), State effective January 8, 2020;
- 18 AAC 50.077, except (g) and (q), State effective January 8, 2020;
- 18 AAC 50.078, except (c) and (d), State effective January 8, 2020;
- 18 AAC 50.079, except (e), State effective January 8, 2020; and
- 18 AAC 50.990(71), (138), (149), (150), (151), (152), (153), (154), and (155), State effective January 8, 2020.

EPA is soliciting public comments on these proposed actions.

V. Incorporation by Reference

In this document, EPA is proposing to include regulatory text in an EPA final rule that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference the regulations described in Section IV of this preamble.

EPA has made, and will continue to make, these materials generally available through <https://www.regulations.gov> and at the EPA Region 10 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

VI. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely proposes to approve State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this proposed action:

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP obligations discussed herein do not apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. This proposed action does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: February 9, 2021.

Michelle L. Pirzadeh,
Acting Regional Administrator,
Region 10.

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