



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R08-OAR-2020-0098; FRL-10016-53-Region 8]

Approval and Promulgation of Implementation Plans; State of Utah; Salt Lake City and Provo, Utah PM_{2.5} Redesignations to Attainment and Utah State Implementation Plan Revisions

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing the redesignation of the Salt Lake City, Utah and Provo, Utah nonattainment areas (NAAs) to attainment for the 2006 24-hour fine particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 microns (PM_{2.5}) National Ambient Air Quality Standard (NAAQS), and also acting on multiple related State Implementation Plan (SIP) submissions. We are proposing to approve SIP revisions submitted by the State of Utah on January 19, 2017; April 19, 2018; February 4 and 15, 2019; and January 13, May 21, and July 21, 2020. These SIP submissions include revisions to Utah Administrative Code (UAC) Sections R307-110, R307-200, and R307-300 Series; revisions to Utah SIP Sections X.B and E; revisions to Utah SIP Sections IX.H.11, 12, and 13; best available control measures/best available control technologies (BACM/BACT) PM_{2.5} determinations for Salt Lake City and Provo; maintenance plans for the Salt Lake City and Provo areas for PM_{2.5}; and the request for redesignation under the 2006 24-hour PM_{2.5} standard. Additionally, the EPA is proposing to approve, through parallel processing, a request to remove startup and shutdown emission limits for Kennecott's Power Plant in the Utah SIP and the accompanying R307-110-17

revisions (draft dated October 9, 2020). The EPA is taking this action pursuant to the Clean Air Act (CAA or the Act).

DATES: Written 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-R08-OAR-2020-0098, to the Federal Rulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from www.regulations.gov. The 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 whose disclosure 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. The 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 <http://www2.epa.gov/dockets/commenting-epa-dockets>.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically in www.regulations.gov. To reduce the risk of COVID-19 transmission, for this action we do not plan to offer hard copy review of the docket. Please email or call the person

listed in the **FOR FURTHER INFORMATION CONTACT** section if you need to make alternative arrangements for access to the docket.

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SUPPLEMENTARY INFORMATION: Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

I. Background

A. Statutory and Regulatory Background for EPA’s Regulation of PM_{2.5}

Under section 109 of the Act, the EPA has promulgated NAAQS for certain pollutants, including PM_{2.5} (40 CFR 50.2(b)). Once the EPA promulgates a NAAQS, section 107 of the Act specifies a process for the designation of each area within a state, generally as either an attainment area (an area attaining the NAAQS) or as a NAA (an area not attaining the NAAQS, or that contributes to nonattainment of the NAAQS in a nearby area). For PM_{2.5}, certain areas have also been designated “unclassifiable.” These various designations, in turn, trigger certain state planning requirements.

For all areas, regardless of designation, section 110 of the Act requires that each state adopt and submit for EPA approval a plan to provide for implementation, maintenance, and enforcement of the NAAQS. This plan is commonly referred to as a SIP. Section 110 contains requirements that a SIP must meet to gain EPA approval.¹ For NAAs, SIPs must meet additional

¹ EPA’s approval of a SIP has several consequences. For example, after the EPA approves a SIP, the EPA and citizens may enforce the SIP’s requirements in federal court under section 113 and section 304 of the Act; in other words, the EPA’s approval of a SIP makes the SIP “federally enforceable.” Also, once the EPA has approved a SIP, a state cannot unilaterally change the federally enforceable version of the SIP. Instead, the state must first submit a SIP revision to the EPA and gain EPA’s approval of that revision.

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On October 17, 2006 (71 FR 61144), the EPA revised the level of the 24-hour PM_{2.5} NAAQS, lowering the primary and secondary standards from the 1997 standard of 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 35 $\mu\text{g}/\text{m}^3$. On November 13, 2009 (74 FR 58688), the

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EPA designated three NAAs in Utah for the 2006 24-hour PM_{2.5} NAAQS of 35 µg/m³. These are the Salt Lake City; Provo; and Logan, Utah-Idaho NAAs.

The EPA originally issued a rule in 2007³ regarding implementation of the 2006 24-hour PM_{2.5} NAAQS for the NAA requirements specified in CAA title I, part D, subpart 1. Under subpart 1, Utah was required to submit an attainment plan for each area no later than three years from the date of nonattainment designation. These plans needed to provide for the attainment of the PM_{2.5} standards as expeditiously as practicable, but no later than five years from the date the areas were designated nonattainment.

In 2013, the U.S. Court of Appeals for the District of Columbia held that the EPA should have implemented the 2006 PM_{2.5} 24-hour standards, as well as the other PM_{2.5} NAAQS, based on both subpart 1 and subpart 4 of CAA title I, part D.⁴ Under subpart 4, all NAAs are initially classified as Moderate, and Moderate area attainment plans must address the requirements of subpart 4 as well as subpart 1. Additionally, subpart 4 sets a different SIP submittal due date and attainment year. For a Moderate area, the attainment SIP is due 18 months after designation and the attainment year is as expeditiously as practicable, but no later than the end of the sixth calendar year after designation.

On June 2, 2014 (79 FR 31566), the EPA finalized the Identification of Nonattainment Classification and Deadlines for Submission of State Implementation Plan (SIP) Provisions for the 1997 Fine Particulate (PM_{2.5}) National Ambient Air Quality Standard (NAAQS) and 2006 24-hour PM_{2.5} NAAQS. This rule classified as Moderate the areas that were designated in 2009 as nonattainment and set the attainment SIP submittal due date for those areas at December 31,

³ 72 FR 20586 (Apr. 25, 2007).

⁴ *Nat. Res. Def. Council v. EPA*, 706 F.3d 428, 437 (D.C. Cir. 2013) (NRDC).

2014. Additionally, this rule established the Moderate area attainment date of December 31, 2015.

When an area is designated as a Moderate NAA under subpart 1 and subpart 4, the CAA requires the State to submit the following Moderate area SIP elements:

1. A comprehensive, accurate, current inventory of actual emissions from all sources of PM_{2.5} and PM_{2.5} precursors in the area (CAA section 172(c)(3)).

2. Provisions to assure that reasonably available control measures (RACM), including reasonably available control technologies (RACT), for the control of direct PM_{2.5} and PM_{2.5} precursors shall be implemented no later than four years after the area is designated (CAA sections 172(c)(1) and 189(a)(1)(C)).

3. A demonstration (including air quality modeling) that the plan provides for attainment as expeditiously as practicable but no later than the Moderate area attainment date (CAA section 188(c)(1)).

4. Plan provisions that require reasonable further progress (RFP) (CAA section 172(c)(2)).

5. Quantitative milestones, which are to be achieved every three years until the area is redesignated to attainment, and which demonstrate RFP toward attainment by the applicable date. The State is required to submit, not later than 90 days after the date on which a milestone applicable to the area occurs, a demonstration that all measures in the approved SIP have been implemented and the milestone has been met. These submissions are referred to as “quantitative milestone reports.” (CAA section 189(c)).

6. Provisions to assure that control requirements applicable to major stationary sources of PM_{2.5} also apply to major stationary sources of PM_{2.5} precursors, except where the

State demonstrates to the EPA's satisfaction that such sources do not contribute significantly to PM_{2.5} levels that exceed the standard in the area (CAA section 189(e)).

7. Contingency measures to be implemented if the area fails to meet RFP or fails to attain by the applicable attainment date (CAA section 172(c)(9)).

8. A revision to the Nonattainment New Source Review (NNSR) program to set the applicable "major stationary source" thresholds to 100 tons per year (tpy) (CAA section 302(j)).

Moderate area 2006 24-hour PM_{2.5} plans must also satisfy 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 CAA section 110(a)(2)(E), and the requirements concerning enforcement in CAA section 110(a)(2)(C).

On August 24, 2016 (81 FR 58010), the EPA finalized the Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements ("PM_{2.5} Requirements Rule"), which partially addressed the 2013 *NRDC* decision. The final PM_{2.5} Requirements Rule details how air agencies can meet the SIP requirements under subparts 1 and 4 that apply to areas designated nonattainment for any PM_{2.5} NAAQS, such as: general requirements for attainment plan due dates and attainment demonstrations; provisions for demonstrating RFP; quantitative milestones; contingency measures; NNSR permitting programs; and RACM (including RACT). The statutory attainment planning requirements of subparts 1 and 4 were established to ensure that the following goals of the CAA are met: (i) that states implement measures that provide for attainment of the PM_{2.5} NAAQS as expeditiously as practicable; and (ii) that states adopt emissions reduction strategies that will be the most effective at reducing PM_{2.5} levels in NAAs.

If an area is reclassified from Moderate to Serious, the area will then be subject to Serious PM_{2.5} CAA requirements. Serious area PM_{2.5} requirements are the same as those listed above for Moderate areas, except that BACM and BACT are required instead of RACM and RACT, the NNSR permit threshold drops to 70 tons, and the relevant attainment date is the Serious area attainment date (CAA section 188(c)(2)). Serious area PM_{2.5} plans must also satisfy the Moderate PM_{2.5} requirements discussed above, and 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 CAA section 110(a)(2)(E) and the requirements concerning enforcement in CAA section 110(a)(2)(C).

B. Utah's PM_{2.5} Attainment Status and SIP Development

After the November 13, 2009 designation of nonattainment for the 2006 24-hour PM_{2.5} NAAQS, Utah developed draft PM_{2.5} attainment plans intended to meet the requirements of subpart 1. The EPA submitted written comments dated November 1, 2012, to UDAQ on the draft PM_{2.5} SIP, technical support document (TSD), area source rules, and point source rules in Section IX, Part H.⁵ Utah submitted revised 2006 24-hour PM_{2.5} attainment plans for the Salt Lake City and Provo NAAs on December 14, 2012.

After the court's 2013 decision, Utah amended its attainment plans to address the requirements of subpart 4. On December 2, 2013, and October 30, 2014, the EPA provided comments on Utah's revised draft 2006 24-hour PM_{2.5} SIPs, including the TSD and emissions limits in Section IX, Part H. On December 16, 2014, UDAQ withdrew all prior Salt Lake City

⁵ An "area source" is "any small residential, governmental, institutional, commercial, or industrial fuel combustion operation; onsite solid waste disposal facility; motor vehicle], aircraft vessel or other transportation facilit[y] or other miscellaneous source identified" through specified inventory techniques. 40 CFR 51.100(l). A "point source" is any stationary source emitting above certain thresholds. 40 CFR 51.100(k).

and Provo 2006 24-hour PM_{2.5} Moderate SIP attainment plan submissions and submitted a subpart 1 and subpart 4 Salt Lake City and Provo 2006 24-hour PM_{2.5} Moderate SIP.

Additionally, the State of Utah submitted various revisions to the UAC Title R307 (Environmental Quality) area source rules in multiple submissions: February 2, 2012; May 9, 2013; June 8, 2013; February 18, 2014; April 17, 2014; May 20, 2014; July 10, 2014; and August 6, 2014. These area source rules were either new or revised to meet RACM/RACT for the Salt Lake City and Provo 2006 24-hour PM_{2.5} SIPs. The EPA acted on these submittals, along with the area source rule revisions in the December 16, 2014 submission, on February 25, 2016 (81 FR 9343), October 19, 2016 (81 FR 71988), October 2, 2019 (84 FR 52368), and February 26, 2020 (85 FR 10989).

On January 19, 2017, the State of Utah submitted revisions to their Part H.11, 12, and 13 emission limits section of the Utah 2006 24-hour PM_{2.5} SIP and revises R307-110-17. R307-110-17 incorporates by reference (IBR) Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits; which formally incorporates the Salt Lake City and Provo 2006 24-hour PM_{2.5} Part H.11, 12, and 13 emission limits into Utah's state regulations. This was undertaken by UDAQ to correlate any overlapping limits between the 2006 24-hour PM_{2.5} Part H.11, 12, and 13, to the coarse particulate matter (PM₁₀) Part H.1, 2, 3, and 4.

On May 10, 2017 (82 FR 21711), the EPA published a final rule reclassifying the Salt Lake City and Provo areas to "Serious" nonattainment status, based on the EPA's determination that the areas could not practicably attain the 2006 24-hour PM_{2.5} standards by the December 31, 2015 attainment date. This reclassification became effective on June 9, 2017. The reclassification was based on the EPA's evaluation of ambient air quality data from the 2013-2015 period, indicating that it was not practicable for some of the monitoring sites in the Salt Lake City and

Provo areas to show PM_{2.5} design values at or below the level of the 2006 24-hour PM_{2.5} NAAQS by December 31, 2015.

On March 23, 2018, the State of Utah submitted quantitative milestone reports for the Salt Lake City and Provo 2006 24-hour PM_{2.5} NAAs, meeting its due date of no later than 90 days after the December 31, 2017 milestone date. On October 24, 2018, the EPA determined that the 2017 quantitative milestone reports for the Salt Lake City and Provo 2006 24-hour PM_{2.5} NAAs were adequate.⁶

After the Serious reclassification, UDAQ revised certain area source rules in UAC Section R307-200 and R307-300 Series and submitted these revisions on April 19, 2018, May 21, 2020, and July 21, 2020. On February 4, 2019, the State of Utah submitted the BACM/BACT analysis for the Provo Serious 2006 24-hour PM_{2.5} NAA, which is based on the emission limits submitted on January 19, 2017 for only Part H.13. On February 15, 2019, Utah submitted the Serious 2006 24-hour PM_{2.5} SIP for the Salt Lake City NAA, which included revisions to Utah SIP Part H.11 and 12, and the accompanying BACM/BACT analysis. The February 4, 2019 and February 15, 2019 submissions included BACM/BACT analyses for on-road, off-road, and area source rules; some of these area source rules were revised and others were deemed BACM/BACT without revising. Our detailed discussion on the intricacies of these submissions can be found in Section II.B below of this document.

Applying the Clean Data Policy,⁷ on April 10, 2019 (84 FR 14267) and September 27, 2019 (84 FR 51055), the EPA finalized determinations that the obligation to submit any remaining attainment-related SIP revisions arising from classification of the Provo and Salt Lake

⁶ The state's quantitative milestone reports and the adequacy determination letter from the EPA Administrator to the Governor of Utah are in the docket for this action.

⁷ The EPA codified the Clean Data Policy in the PM_{2.5} SIP Requirements Rule for the implementation of current and future PM_{2.5} NAAQS. See 81 FR at 58161; 40 CFR 51.1015(a).

City areas, respectively, as Moderate NAAs and their subsequent reclassification as Serious NAAs for the 2006 24-hour PM_{2.5} NAAQS does not apply for so long as the area continues to attain the 2006 24-hour PM_{2.5} NAAQS.⁸ The attainment-related SIP revisions that were suspended include the requirements for the State to submit: an attainment demonstration (Moderate and Serious), provisions demonstrating timely implementation of RACM/RACT (Moderate), an RFP plan (Moderate and Serious), quantitative milestones and quantitative milestone reports (Moderate and Serious), and contingency measures (Moderate and Serious). The only remaining SIP elements for EPA action include baseline emission inventories, NNSR, and BACM/BACT. Our review of these remaining elements is in Section II.B below of this document and in our TSD found in the docket.

On October 9, 2020, the State of Utah submitted draft revisions to Kennecott's Power Plant startup/shutdown emission limits in Subsection IX.H.12.i.i.C. in Utah's SIP and revisions to R307-110-17, for the EPA to act on as a parallel process. UDAQ's BACM/BACT analysis submitted on February 15, 2019 for this source did not support these limits; therefore, UDAQ proposed with the October 9, 2020 draft revision to remove these limits. The parallel process is generally described in more detail in Section I.E below.

C. Redesignation Requests and Related Requirements

For a NAA to be redesignated to attainment, the following conditions in section 107(d)(3)(E) of the CAA must be met:

1. We must determine that the area has attained the NAAQS;
2. The applicable implementation plan for the area must be fully approved under section 110(k) of the Act;

⁸ 40 CFR 51.1015(a) and (b).

3. We must determine that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent and enforceable reductions;
4. We must fully approve a maintenance plan for the area as meeting the requirements of CAA section 175A; and
5. The state containing the area must meet all requirements applicable to the area under section 110 and part D of the CAA.

Our September 4, 1992 guidance entitled “Procedures for Processing Requests to Redesignate Areas to Attainment” (referred to in this action as the Calcagni Memorandum) outlines how to assess the adequacy of redesignation requests against the conditions listed above.

On January 13, 2020, the Governor of Utah submitted revisions to the SIP for R307-110-10, maintenance plans for the Salt Lake City (Utah SIP Section IX.A.36) and Provo (Utah SIP Section IX.A.27) areas, and a request that the EPA redesignate the areas to attainment for the 2006 24-hour PM_{2.5} NAAQS. R307-110-10 IBRs Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter; which formally incorporates the Salt Lake City and Provo 2006 24-hour PM_{2.5} Maintenance Plans (located within the Utah SIP at Sections IX.A.36 and 27, respectively) into Utah’s state regulations. In Section II.C below, we discuss our review of UDAQs maintenance plans and redesignation requests for the Salt Lake City and Provo 2006 24-hour PM_{2.5} NAAs.

D. SIP Submissions Supporting the Redesignation Request

Vehicle I/M programs help improve air quality by identifying cars and trucks with high emissions and that may need repairs. Owners or operators of vehicles with high emissions are

notified to make any repairs so that emissions are within legal limits. On July 17, 1997 (62 FR 38213), and September 14, 2005 (70 FR 54267), the EPA finalized approval of revisions to Utah's SIP Section X, Vehicle Inspection and Maintenance Program for Part B, Davis County, and Part E, Weber County, respectively. In these actions the EPA also approved into the SIP revisions to Utah's regulations at R307-110-32 and R307-110-35. These rules IBR the Utah SIP into state regulations: Rule R307-110-32 IBRs Utah SIP Section X, Vehicle Inspection and Maintenance Program, Part B, Davis County; and Rule R307-110-35 IBRs Utah SIP Section X, Vehicle Inspection and Maintenance Program, Part E, Weber County.⁹

E. What is Parallel Processing?

Parallel processing refers to a process that utilizes concurrent state and Federal proposed rulemaking actions. Generally, the state submits a copy of the proposed regulation or other revisions to the EPA before conducting its public hearing and completing its public comment process under state law. The EPA reviews this proposed state action and prepares a notice of proposed rulemaking under Federal Law. In some cases, the EPA's notice of proposed rulemaking is published in the *Federal Register* during the same time frame that the state is holding its public hearing and conducting its public comment process. The state and the EPA then provide for concurrent public comment periods on both the state action and Federal action. If, after completing its public comment process and after the EPA's public comment process has run, the state changes its final submittal from the proposed submittal, the EPA evaluates those changes and decides on whether to publish another notice of proposed rulemaking in light of those changes or to proceed to taking the final action on its proposed action and describe the

⁹ Since promulgating R307-110-32, Utah has renumbered its SIP. On February 14, 2006 (71 FR 7679), the EPA renumbered the Weber County I/M Program to R307-110-32. R307-110-35 was last approved on September 14, 2005. 70 FR 54267.

state's changes in its final rulemaking action. Any final rulemaking action by the EPA will occur only after the final submittal has been adopted by the state and formally provided to the EPA.

In this case, however, the EPA's and Utah's processes have not been perfectly concurrent. The State submitted the draft SIP revisions on October 9, 2020, with a public comment period starting October 1 and going through November 3, 2020, with a public hearing held online at 10am on November 3, 2020. Utah requested that the EPA parallel process these proposed revisions while the State finishes the comment period and public hearing, so as not to delay the 2006 24-hour PM_{2.5} redesignation of the Salt Lake City NAA. The State's intention is to submit its final SIP revisions in early January 2021. After Utah submits these formal SIP revisions, the EPA will evaluate the submittal. If the State changes the formal submittal from the proposed submittal, the EPA will evaluate those changes for significance. If the EPA finds any such changes to be significant, then the Agency intends to determine whether to re-propose the actions based on the revised submission or to proceed to take final action on the submittal as changed by the State. Although the EPA was unable to have a concurrent public comment process with the State, Utah's request for parallel processing allows the EPA to begin to take action on the State's proposed submittal in advance of a formal and final submission.

II. The EPA's Evaluation

A. Utah's SIP Revisions

When certain sections of the Utah SIP are amended by the Utah Air Quality Board (UAQB), those sections must be incorporated into the Utah Air Quality Rules. Utah incorporates SIP sections within the state's rule R307-110. These rules are amended as needed to change the effective dates to match the UAQB approval date of various amendments to the Utah SIP. For the Salt Lake City and Provo 2006 24-hour PM_{2.5} proposed action, we are acting on R307-110-

10, which IBRs Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter, and thus incorporates the Salt Lake City and Provo 2006 24-hour PM_{2.5} maintenance plans into state regulations (located within the Utah SIP at Sections IX.A.36 and 27, respectively). We are also proposing to approve into the SIP R307-110-17, which IBRs Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits, and thus incorporates all the emission limits in Utah SIP Section IX.H.11, 12, and 13, into state regulations. The state's R307-110-32 and R307-110-35 IBR Section X, Vehicle Inspection and Maintenance Program, Part B, Davis County, and Section X, Vehicle Inspection and Maintenance Program, Part E, Weber County, respectively. These two rules incorporate the I/M Programs of Davis and Weber Counties into the state regulations.

Utah Code 41-6a-1642 gives authority to each county in the State to design and manage a vehicle I/M program when necessary to attain or maintain any NAAQS. Section X of the Utah SIP incorporates these county programs. Section X, Part A summarizes I/M requirements that are common among all I/M programs, while Section X, Parts B through F contain the requirements for each county's unique I/M program. Below we discuss the revisions to Utah SIP Section X, Parts B and E, and to the related Rules R307-110-10, R307-110-32, and R307-110-35, along with our evaluation. We discuss the revisions done to Utah SIP Section X, Parts B and E, in greater detail within the TSD. Utah Rule R307-110-17 will be going through the parallel process based on the informal October 9, 2020 UDAQ submission revising Utah SIP Section IX.H.12.i.i.C, which requires a revision to R307-110-17 to incorporate the revisions into the Utah SIP. In Section I.E above, we discuss the process of this type of action.

1. R307-110-10

Section R307-110-10 incorporates amendments to Utah SIP Section IX.A into State regulations, thereby making them effective as a matter of State law. This is a ministerial provision, which only revises the effective date within the rule to December 4, 2019 and does not by itself include any SIP measures.

2. R307-110-17

Section R307-110-17 incorporates the amendments to Utah SIP Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits into State regulations, thereby making them effective as a matter of State law. This is a ministerial provision, which only revises the effective date within the rule to December 2, 2020, and does not by itself include any SIP control measures; however, this revision is being acted on as a parallel process due to revisions to Utah SIP Section IX.H.12.i.i.C. In Section I.E above, we discuss the process of this type of action.

3. R307-110-32

Section R307-110-32 incorporates the amendments to Utah SIP Section X, Vehicle Inspection and Maintenance Program, Part B, Davis County into State rules, thereby making them effective as a matter of State law. This is a ministerial provision, which only revises the effective date within the rule to March 4, 2020 and does not by itself include any control measures.

4. R307-110-35

Section R307-110-35 incorporates the amendments to Utah SIP Section X, Vehicle Inspection and Maintenance Program, Part E, Weber County into State regulations, thereby making them effective as a matter of State law. This is a ministerial provision, which only

revises the effective date within the rule to March 4, 2020 and does not by itself include any control measures.

5. SIP Section X, Vehicle Inspection and Maintenance Program, Part B, Davis County

The Davis County motor vehicle I/M program was last approved by the EPA on July 17, 1997 (62 FR 38213). The County has since made numerous improvements, updates and revisions to the I/M program ordinance, while removing unnecessary and obsolete provisions and sections. The version of the Davis County I/M program that we are now proposing to approve supersedes and replaces the July 17, 1997 version. The Davis County I/M Ordinance was enacted and adopted by the Davis County Commission on October 1, 2019 and became effective October 18, 2019, and the Ordinance was adopted into the SIP by the UAQB on March 4, 2020, at Section X, part B. This is the version that was submitted to the EPA and is discussed below.

Section X, Part B of the SIP contains two main components for the Davis County I/M program: (a) language addressing applicability, a general description of the Davis County I/M program, and the time frame for implementation of the I/M program; and (b) the Davis County Emission Inspection/Maintenance Program, as enacted in Davis County Ordinance 10.12.

a. State Language Addressing the Davis County I/M Program:

Under the heading “1. Applicability” is a description of the 2019 revised Davis County I/M program, and a history of the Salt Lake and Davis county federal ozone NAAQS attainment status and the development of the Davis County I/M program. The section also notes that the Davis County I/M program was included as a control measure in the 2006 24-hour PM_{2.5} NAAQS.

Under “2. Summary of Davis County I/M Program,” the state describes various aspects of the revised Davis County I/M program: Network Type, Test Convenience, Subject Fleet, Test Frequency, Station Inspector Audits, Waivers, Test Equipment, and Test Procedures.

Under the heading “3. I/M SIP Implementation,” the State notes that the Davis I/M program will continue to apply until a maintenance plan without an I/M program is approved by the EPA in accordance with Section 175 of the CAA.

b. Revisions to Davis County’s “Davis County Vehicle Emissions Inspection / Maintenance Program Ordinance” amend the Ordinance’s sections 10.12.020 Definitions, 10.12.030 Purpose, 10.12.040 Jurisdiction of the Division, 10.12.050 Powers and Duties, 10.12.060 Scope, 10.12.070 General Provisions, 10.12.080 Standards and Specifications for Emissions Inspection Analyzers and Span Gases for Equipment, 10.12.090 Requirements of the Vehicle Emissions Inspection/Maintenance Program Stations, 10.12.100 Requirements of the Certified Emissions Testers and/or Repair Technicians, 10.12.110 Official Inspection Procedures, 10.12.130 Emissions Standards for Motor Vehicles, 10.12.140 Certificates of Compliance and Waivers, 10.12.150 Engine Switching, 10.12.160 Right to Appeal, 10.12.170 Recall, 10.12.180 Penalty, 10.12.200 Quality Assurance, 10.12.210 Severability, 10.12.240 Fee Schedule, 10.12.250 Emissions Standards, 10.12.260 Waiver Cut Points, 10.12.270 Passing Versus Waiver Cut Point Comparison, 10.12.280 Penalty Schedule, and 10.12.290 Conflicts.

In addition, the State has submitted revisions to: Appendix A, involving the provisions and requirements for emission inspection analyzer specifications; Appendix B, involving the Two Speed Idle (TSI) emissions inspection procedures; Appendix C, involving the OBDII (On-Board Diagnostics Generation II) inspection procedures; Appendix D, involving the Davis

County Diesel I/M Program, which the EPA notes that we are not proposing to act on: and Appendix E, involving compressed natural gas vehicle emissions inspection procedures.

We have evaluated the Governor's May 21, 2020 submittal of the above revisions to the Utah SIP Section X Part B and the revised Davis County Ordinance, with respect to the applicable provisions and requirements in 40 CFR part 51, subpart S "Inspection/Maintenance Program Requirements," and are proposing approval. Additional information and the EPA's more detailed evaluation of the above materials are found in the accompanying TSD. The entire Davis County Ordinance is in the Docket for this action.

6. SIP Section X, Vehicle Inspection and Maintenance Program, Part E, Weber County

The Weber County motor vehicle I/M program was last approved by the EPA on September 14, 2005 (70 FR 54267). The County has since made numerous improvements, updates and revisions to the I/M program ordinance, while removing unnecessary and obsolete provisions and sections. The version of the Weber County I/M program that we are now proposing to approve supersedes and replaces the prior September 14, 2005 EPA-approved version. The Weber County I/M Regulation was enacted and adopted by the Weber-Morgan Board of Health on September 23, 2019, and the Weber-Morgan Health Department (WMHD) implements the I/M program on behalf of Weber County. The Regulation was adopted into the SIP by the UAQB on March 4, 2020. This is the version that was submitted to the EPA and is discussed below.

Section X, Part E of the Utah SIP addresses the provisions and requirements for the implementation of the motor vehicle I/M program in Weber County, Utah. Section X, Part E of the SIP contains two main components for the Weber County I/M program: (a) language for Section X Part E that addresses applicability, a general description of the Weber County I/M

program, and the time frame for implementation of the I/M program; and (b) the WMHD Motor Vehicle I/M Program Regulation.

a. State Language Addressing the Weber County I/M Program:

Under the heading “1. Applicability” is a description of the 2019 revised Weber County I/M program, a history of the Weber county federal ozone NAAQS attainment status and the development of the Weber County I/M program. The section also notes that the Weber County I/M program was included as a control measure in the 2006 24-hour PM_{2.5} NAAQS.

Under the heading “2. Summary of Weber County I/M Program,” the State describes certain aspects of the revised Weber County I/M program involving: Network Type, Test Convenience, Subject Fleet, Test Frequency, Station Inspector Audits, Waivers, Test Equipment, and Test Procedures.

Under the heading “3. I/M SIP Implementation” the State notes that the Weber I/M program will continue to apply until a maintenance plan without an I/M program is approved by the EPA in accordance with Section 175 of the CAA.

b. Revisions to Weber County’s “Weber-Morgan Health Department Regulation for Motor Vehicle Inspection and Maintenance Program” amend the regulation’s: Section 1 Title and Definitions, Section 2 Purpose, Section 4 Powers and Duties, Section 6 General Provisions, Section 7 Standards and Specifications for Analyzers and Calibration Gases, Section 8 Permit Requirements of the Vehicle Emissions Station, Section 9 Inspection Procedure, Section 10 Certificate of Waiver, Section 12 Certified Emissions Inspection and Repair Technician /Certified Emissions Inspection Only Technician Permit, Section 14 Certificate of Compliance, Certificate of Compliance Numbers, and Certificate of Waiver, Section 15 Adjudicative Proceedings, and Section 18 Effective Date.

In addition, the State has submitted revisions to Appendix A-Analyzer Specifications, Appendix B- Fee Schedule, Appendix C-Motor Vehicle Emissions Inspection and Maintenance Program, Appendix D-Penalty Schedule, Appendix E-OBD IM Test Procedures, Appendix F entitled “Diesel Fueled Vehicle Test Procedure,” which the EPA notes that we are not taking any action on this Appendix, and a new Appendix G entitled “Adjustment Procedures.”

We have evaluated the Governor’s May 21, 2020 submittal of the above revisions to the Utah SIP Section X Part E and the revised Weber County Regulation, with respect to the applicable provisions and requirements in 40 CFR part 51, subpart S “Inspection/Maintenance Program Requirements,” and are proposing approval. Additional information and the EPA’s more detailed evaluation of the above materials are found in the accompanying TSD. The entire Weber County Regulation is in the Docket for this action.

B. PM_{2.5} SIP Plan

On August 24, 2016 the EPA finalized the PM_{2.5} SIP Requirements Rule,¹⁰ which established regulatory requirements related to the statutory SIP requirements for areas designated nonattainment for the PM_{2.5} standards.

As discussed in the PM_{2.5} SIP Requirements Rule, sections 189(a), (c), and (e) of the CAA require that Moderate area attainment plans contain the following: (i) an approved permit program for construction of new and modified major stationary sources (CAA section 189(a)(1)(A)); (ii) a demonstration that the plan provides for attainment by no later than the applicable Moderate area attainment date or a demonstration that attainment by that date is impracticable (CAA section 189(a)(1)(B)); (iii) provisions for the implementation of RACM/RACT no later than 4 years after designation (CAA section 189(a)(1)(C)); (iv)

¹⁰ 81 FR 58010.

quantitative milestones that will be used to evaluate compliance with the requirements to demonstrate RFP (CAA section 189(c)); and (v) evaluation and regulation of PM_{2.5} precursors (in general to meet RACM/RACT and other attainment planning requirements, and also as specifically provided for major stationary sources under CAA section 189(e)).

Sections 189(b) and (c) of the CAA include the following requirements for Serious area attainment plan submissions: (i) an attainment demonstration (CAA section 189(b)(1)(A)); (ii) provisions for the implementation of BACM/BACT no later than 4 years after reclassification of the area to Serious (CAA section 189(b)(1)(B)); (iii) quantitative milestones that will be used to evaluate compliance with the requirement to demonstrate RFP (CAA section 189(c)); and (iv) regulation of PM_{2.5} precursors (in general to meet attainment and control strategy requirements, and as specifically required for major stationary sources by CAA section 189(e)).

Other subpart 1 requirements for attainment plans not otherwise superseded under subpart 4 also apply to Moderate and Serious areas for the 2006 24-hour PM_{2.5} NAAQS, including (i) a description of the expected annual incremental reductions in emission that will demonstrate RFP (CAA section 172(c)(2)); (ii) emissions inventories (CAA section 172(c)(3)); (iii) other control measures (besides RACM/RACT for Moderate areas and BACM/BACT for Serious areas) needed for attainment (CAA section 172(c)(6)); and (iv) contingency measures (CAA section 172(c)(9)).

In connection with the Moderate area SIP for the 2006 24-hour PM_{2.5} NAAQS, the EPA has previously acted on a number of Utah SIP revisions related to area sources. In particular, on February 2, 2012; May 9, 2013; June 8, 2013; February 18, 2014; April 17, 2014; May 20, 2014; July 10, 2014; and August 6, 2014, UDAQ submitted either new area source rules or revisions to rules found in UAC Title R307 (Environmental Quality). We acted on these rule revisions on

February 25, 2016 (81 FR 9343), October 19, 2016 (81 FR 71988), October 2, 2019 (84 FR 52368) and February 26, 2020 (85 FR 10989).

On December 16, 2014, UDAQ submitted additional Moderate 2006 24-hour PM_{2.5} SIP revisions for the Provo and Salt Lake City NAAs. CAA section 110(k)(1)(B) requires the EPA to determine whether a SIP submission is complete within 60 days of receipt. This section also provides that any plan that the EPA has not affirmatively determined to be complete or incomplete will become complete by operation of law six months after the date of submission. The EPA's SIP completeness criteria are in 40 CFR part 51, appendix V. The 2014 2006 24-hour PM_{2.5} plan became complete by operation of law on June 22, 2014. Additionally, UDAQ submitted revisions to the Utah SIP Part H.11, 12 and 13 of the Moderate 2006 24-hour PM_{2.5} SIPs for the Provo and Salt Lake City NAAs on January 19, 2017, which became complete by operation of law on July 20, 2017.

On May 10, 2017 (82 FR 21711), the EPA determined that the Provo and Salt Lake City NAAs failed to attain the 2006 24-hour PM_{2.5} NAAQS by the Moderate attainment date of December 31, 2015. With this determination, the Provo and Salt Lake City NAAs were reclassified as a "Serious" area for the 2006 24-hour PM_{2.5} NAAQS, with a new attainment date of December 31, 2019. This reclassification triggered an obligation for Utah to submit a new, Serious area attainment plan including the CAA elements listed above. Additionally, CAA section 189(b)(1) requires that "in addition" to the attainment plan requirements specific to Serious areas, states must also meet all Moderate area attainment plan requirements. The EPA interprets the statutory language of CAA section 189(b)(1) to require states with areas that are reclassified to Serious to meet Moderate area attainment plan requirements, including all areas that the EPA reclassifies through rulemaking under its discretionary authority, even if that occurs

before the area has met all of its Moderate area attainment plan requirements. The following section describes the EPA's final actions in this rule regarding Serious area attainment plan requirements in greater detail.

On April 10, 2019 (84 FR 14267) and September 27, 2019 (84 FR 51055), the EPA finalized clean data determinations (CDD) for the Provo and Salt Lake City NAAs, respectively. As provided at 40 CFR 51.1015(a) in the PM_{2.5} SIP Requirements Rule, this determination by the EPA that the Provo and Salt Lake City Moderate 2006 24-hour PM_{2.5} NAAs suspended the requirements for the State to submit an attainment demonstration, provisions demonstrating timely implementation of RACM/RACT, a RFP plan, quantitative milestones and quantitative milestone reports, and contingency measures. However, based on the EPA's longstanding policy, the BACM/BACT requirement of CAA section 189(b)(1)(B) is independent of attainment. Thus, the CDD did not suspend the obligation for UDAQ to submit any applicable outstanding BACM/BACT requirements or other requirements that are independent of attainment (NNSR and base-year emissions inventories).

On February 15, 2019, UDAQ submitted the Serious 2006 24-hour PM_{2.5} SIP for the Salt Lake City NAA. Under CAA section 110(k)(1)(B), the Salt Lake City Serious 2006 24-hour PM_{2.5} SIP became complete by operation of law on August 15, 2019. Additionally, UDAQ submitted BACM/BACT analyses on February 4, 2019 for the Provo NAA. The revisions to area source rules for the NAAs were submitted on April 19, 2018, May 21, 2020 and July 21, 2020, and revisions to the Utah SIP Section IX.H.11, 12 and 13 for the NAAs were submitted on December 16, 2014, January 19, 2017 and February 15, 2019. The revisions submitted on January 19, 2017 and February 15, 2019, for Utah SIP Section IX.H.11, 12 and 13, supersede the December 16, 2014 submission; therefore, we are not acting on the December 16, 2014

revisions, but are fully acting on Utah SIP Section IX.H.13 from the January 19, 2017 submission and Utah SIP Section IX.H.11 and 12 from the February 15, 2019 submission. Any reference to the December 16, 2014 submission for Utah SIP Sections IX.H.11, 12 and 13, and any reference to the January 19, 2017 submittal for Utah SIP Section IX.H.11 and 12, are for informational purposes only. Additionally, on October 9, 2020, UDAQ submitted draft revisions to Kennecott's Power Plant in Utah SIP Section IX.H.12.i.i.C and the accompanying R307-110-17 revisions for the EPA to parallel process.

We are acting on these remaining Serious 2006 24-hour PM_{2.5} SIP elements for the Salt Lake City and Provo NAAs, that were not suspended with the CDDs, to allow for our action on the 2006 24-hour PM_{2.5} redesignation requests discussed in Section II.C below of this document.

1. Base-Year Emissions Inventories

CAA section 172(c)(3) requires that each SIP include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the NAAs. This base-year emissions inventory should provide a state's best estimate of actual emissions from all sources of the relevant pollutants in the area, including all emissions that contribute to the formation of a particular NAAQS pollutant. For the 2006 24-hour PM_{2.5} NAAQS, the base-year inventory must include direct PM_{2.5} emissions, separately reported filterable and condensable PM_{2.5} emissions, 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).¹¹

The most current base year for emissions inventories for the Provo and Salt Lake City NAAs was for 2017, which was made available to the public for comment (and a public hearing

¹¹ 40 CFR 51.1008.

if requested) in the January 13, 2020 PM_{2.5} maintenance plans/redesignation requests submittal. The base-year inventories are based on the most current and accurate information available to UDAQ at the time of the submittal. The 2017 base-year inventories comprehensively address all source categories in the Provo and Salt Lake City NAAs and were developed consistent with the EPA's inventory guidance.

In Section II.C.4.a below, the EPA provides a detailed analysis of the 2017 base-year emissions inventories for the Provo and Salt Lake City NAAs, which were submitted for the 2006 24-hour PM_{2.5} maintenance plans. Direct PM_{2.5} and all PM_{2.5} precursors are included in the 2017 base-year emissions inventories, and filterable and condensable direct PM_{2.5} emissions are identified separately. For these reasons, and with the EPA's detailed analysis in Section II.C.4.a below, the EPA is proposing to approve the 2017 base-year emissions inventories for the Provo and Salt Lake City NAAs as meeting the requirements of CAA section 172(c)(3), 40 CFR 51.1008(a)(1) and 40 CFR 51.1008(b)(1).

2. NNSR

CAA section 172(c)(5) requires preconstruction and operating permits for new major stationary sources and major modifications locating in NAAs. Section 173 of the CAA outlines the minimum statutory requirements for a state's NNSR permit program and serves as the basis for the EPA's NNSR regulations for PM_{2.5} as promulgated in the 2008 PM_{2.5} NSR Rule published at 73 FR 28321, May 16, 2008.¹² The 2016 PM_{2.5} Regulatory Rule amended the definitions of (1) regulated NSR pollutant with regard to PM_{2.5} precursors, (2) major stationary source with regard to major sources locating in PM_{2.5} NAAs classified as Moderate and Serious, and (3) significant with regard to emissions of PM_{2.5} precursors. For Moderate 2006 24-hour

¹² 81 FR at 58107.

PM_{2.5} SIPs, CAA section 189(a)(1)(A) of subpart 4 applies, which requires states to include in their implementation plan a permit program addressing major stationary sources of the 2006 24-hour PM_{2.5} NAAQS that meets the requirements under CAA section 173 of subpart 1. For a Serious 2006 24-hour PM_{2.5} SIP, CAA section 189(b)(3) of subpart 4 applies, which requires that for any Serious Area the terms “major source” and “major stationary source” include any stationary source or group of stationary sources located within a contiguous area and under common control that emits, or has the potential to emit, at least 70 tpy of PM_{2.5}.

An approvable NNSR program in a state’s implementation plan must, at a minimum, meet the applicable program requirements set forth in the federal NNSR provisions at 40 CFR 51.165, which for PM_{2.5} have been based on changes to the section made by the 2008 PM_{2.5} NSR Rule.¹³ States with designated NAAs for a particular pollutant are required to adopt regulations consistent with those applicable plan requirements, including any subsequent rule changes that the EPA may make, and submit them to the EPA for approval as part of their SIP.

The Provo and Salt Lake City NAAs were classified as a Moderate NAA for the 2006 24-hour PM_{2.5} NAAQS on November 13, 2009 (74 FR 58688). On May 10, 2017 (82 FR 21711), the Provo and Salt Lake City areas were reclassified from Moderate to Serious 2006 24-hour PM_{2.5} NAAs. The major source permitting threshold for a Moderate 2006 24-hour PM_{2.5} NAA is 100 tpy of direct PM_{2.5} or any PM_{2.5} precursor, and 70 tpy for a Serious 2006 24-hour PM_{2.5} NAA.

On July 25, 2019 (84 FR 35831), the EPA approved revisions to UAC R307-403 (Permits: New and Modified Sources in Nonattainment Areas and Maintenance Areas), which

¹³ *Id.*

satisfies the outstanding NNSR requirement for the Provo and Salt Lake City Moderate and Serious 2006 24-hour PM_{2.5} NAAs.

3. BACM/BACT

a. Requirements for BACM/BACT

For any Serious 2006 24-hour PM_{2.5} NAA, section 189(b)(1)(B) of the Act requires that a state submit provisions to assure that BACM/BACT for the control of PM_{2.5} and PM_{2.5} precursors shall be implemented no later than four years after the date the area is reclassified as a Serious area. The EPA defines BACM (including BACT) as, among other things, the maximum degree of emissions reduction achievable for a source or source category, which is determined on a case-by-case basis considering energy, economic and environmental impacts, and other costs.¹⁴ We generally consider BACM a control level that goes beyond existing RACM-level controls, for example by expanding the use of RACM controls or by requiring preventative measures instead of remediation.¹⁵ Indeed, as implementation of BACM and BACT is required when a Moderate NAA is reclassified as Serious due to its inability to attain the NAAQS through implementation of “reasonable” measures, it is logical that “best” control measures should represent a more stringent and potentially more costly level of control.¹⁶ The level of stringency generally refers to the overall level of emissions reductions of a control measure or technology, or of such measures and technologies combined.

The PM_{2.5} SIP Requirements Rule explains that BACM/BACT are generally independent requirements, to be determined without regard to the specific attainment analysis (*i.e.*, attainment

¹⁴ State Implementation Plans for Serious PM₁₀ Nonattainment Areas, and Attainment Date Waivers for PM₁₀ Nonattainment Areas Generally; Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 (“Addendum”), August 16, 1994; 59 FR 41998, 42010, 42013 (Aug. 16, 1994). The General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 (“General Preamble”) was published at 57 FR 13498 (Apr. 16, 1992).

¹⁵ *Id.* at 42011, 42013.

¹⁶ *Id.* at 42009-42010.

demonstration) for the area.¹⁷ The EPA found it reasonable to interpret the statute as requiring a different analysis for determining BACM/BACT, *i.e.*, that while RACM emphasizes the attainment needs of the area, BACM has a greater emphasis on identifying measures that are feasible to implement. The Addendum noted that the test for BACM puts a “greater emphasis on the merits of the measure or technology alone,” rather than on “flexibility in considering other factors,” in contrast to the approach for RACM/RACT.¹⁸

Section 189(b)(1)(B) of the Act allows states, in appropriate circumstances, to delay implementation of BACM until four years after reclassification. Because the EPA reclassified the Provo and Salt Lake City areas as Serious NAAs for the 2006 24-hour PM_{2.5} NAAQS effective June 9, 2017 (82 FR 21711; May 10, 2017), the date four years after reclassification is June 9, 2021. In this case, however, all BACM for direct PM_{2.5} and PM_{2.5} precursors in the Provo and Salt Lake City areas must be implemented no later than December 31, 2019, which is the outermost statutory attainment date for the Provo and Salt Lake City areas under section 188(c)(2).¹⁹

Under the PM_{2.5} SIP Requirements Rule, control measures that can be implemented in whole or in part by the end of the fourth year after an area’s reclassification to Serious are considered BACM, and control measures that can only be implemented after this period but before the attainment date are considered “additional feasible measures.”²⁰ The EPA has defined

¹⁷ 81 FR at 58081.

¹⁸ 59 FR at 42011.

¹⁹ CAA section 189(b)(1)(B) establishes an outermost deadline (“no later than four years after the date the area is reclassified”) and does not preclude an earlier implementation deadline for BACM where necessary to satisfy the attainment requirements of the Act.

²⁰ 40 CFR 51.1010(a)(4)(ii). “Additional feasible measures” may be necessary in certain circumstances to implement the requirements of CAA section 172(c)(6), which states that NAA plans shall include enforceable emission limitations and such other control measures, means or techniques, as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for attainment of the NAAQS by the applicable attainment date.

“additional feasible measures” as “those measures and technologies that otherwise meet the criteria for BACM/BACT but that can only be implemented in whole or in part beginning 4 years after reclassification of an area, but no later than the statutory attainment date of the area.”²¹

Given that the statutory attainment date is less than three years from the effective date of the reclassification of the Provo and Salt Lake City areas, additional feasible measures are not required in this case.

The Addendum and the PM_{2.5} SIP Requirements Rule explain that the BACM/BACT selection process for implementation of the 2006 24-hour PM_{2.5} NAAQS is designed to take into account the local facts and circumstances and the nature of the air pollution problem in a given NAA. The following steps are used in determining BACM/BACT: (1) Develop a comprehensive emission inventory of the sources of directly emitted PM_{2.5} and PM_{2.5} precursors; (2) Identify existing and potential control measures for the sources in the inventory; (3) Evaluate the technological feasibility of potential control measures; (4) Evaluate the economic feasibility of potential control measures; and (5) Determine the earliest date by which a control measure or technology can be implemented in whole or in part.²²

Additionally, the EPA believes that BACT or lowest achievable emission rate (LAER) provisions for new sources (as distinct from BACT for existing sources), or best available retrofit technology (BART) for existing sources, could potentially qualify as BACM or BACT for purposes of meeting the Serious area attainment plan requirements.²³ However, as discussed further in the PM_{2.5} SIP Requirements Rule, the EPA does not believe it is appropriate for a state to assume that just because a certain control technology was determined to meet BACT, LAER

²¹ 40 CFR 51.1000.

²² Addendum at 42012-42014; 81 FR at 58084-58085.

²³ See 81 FR at 58086.

or BART criteria for a new source sometime in the past, that such a control will also automatically meet the criteria for BACM or BACT or additional feasible measures for attainment planning purposes, because the regulated pollutant or source applicability may differ and the analyses may be conducted years apart. Thus, a state may not simply rely on prior BACT, LAER or BART analyses for the purposes of showing that a source has also met BACT for the relevant 2006 24-hour PM_{2.5} NAAQS. Rather, the EPA expects that in Step 2 (discussed above) of the BACM/BACT determination process, the state would identify such measures as “existing measures” that should be further evaluated as potential BACM or BACT, or additional feasible measures. At the same time, the EPA notes that the presence of previously installed control technology, and the technical and economic considerations that would be associated with upgrading to a measure that achieves greater reductions, is something that should be considered in the assessments of technological and economic feasibility of the newer measure.²⁴

Once these analyses are complete, a state must use this information to develop enforceable control measures and submit them to the EPA for evaluation under CAA section 110. We use these steps as guidelines in our evaluation of the BACM measures and related analyses in the Provo and Salt Lake City 2006 24-hour PM_{2.5} Serious SIP.

b. Requirements for the Control of PM_{2.5} Precursors

The composition of PM_{2.5} is complex and highly variable due in part to the large contribution of secondary PM_{2.5} to total fine particle mass in most locations, and to the complexity of secondary particle formation processes. A large number of possible chemical reactions, often non-linear in nature, can convert gaseous SO₂, NO_x, VOC, and NH₃ to PM_{2.5}, making them precursors to PM_{2.5}.²⁵ Formation of secondary PM_{2.5} may also depend on

²⁴ *Id.*

²⁵ Air Quality Criteria for Particulate Matter (EPA/600/P-99/002aF, Oct. 2004), Chapter 3.

atmospheric conditions, including solar radiation, temperature, and relative humidity, and the interactions of precursors with preexisting particles and with cloud or fog droplets.²⁶

As explained in the PM_{2.5} SIP Requirements Rule, the Act requires that the state evaluate all PM_{2.5} precursors for regulation unless, for any given PM_{2.5} precursor, it demonstrates to the Administrator's satisfaction that the precursor does not contribute significantly to 2006 24-hour PM_{2.5} levels that exceed the NAAQS in the NAA.²⁷ The CAA does not define the term "precursor" for purposes of PM. 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."²⁸ The EPA has identified SO₂, NO_x, VOC, and NH₃ as precursors to the formation of PM_{2.5}. Accordingly, the BACM/BACT requirements of subpart 4 apply to emissions of all four precursor pollutants 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)).

Section 189(e)²⁹ of the Act requires that the control requirements for major stationary sources of PM_{2.5} also apply to major stationary sources of PM_{2.5} precursors, except where the Administrator determines that such sources do not contribute significantly to PM_{2.5} levels that exceed the standard in the area. Although section 189(e) explicitly addresses only major stationary sources, the EPA interprets the Act as authorizing it also to determine, under

²⁶ Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter (EPA/452/R-12-005, December 2012), at 2-1.

²⁷ See 81 FR at 51018-58019.

²⁸ See CAA section 302(g).

²⁹ On Jan. 4, 2013, in *NRDC v. EPA*, the D.C. Circuit held that the EPA erred in implementing the 1997 PM_{2.5} NAAQS pursuant only to the general implementation requirements of subpart 1, rather than also to the implementation requirements specific to particulate matter (PM₁₀) in subpart 4, part D of title I of the CAA. The court reasoned that the plain meaning of the CAA requires implementation of the 1997 PM_{2.5} NAAQS under subpart 4 because PM_{2.5} particles fall within the statutory definition of PM₁₀ and thus implementation of the PM_{2.5} NAAQS is subject to the same statutory requirements as the PM₁₀ NAAQS. See 81 FR at 58013.

appropriate circumstances, that regulation of specific PM_{2.5} precursors from other source categories in a given NAA is not necessary.³⁰

The PM_{2.5} SIP Requirements Rule recognizes that the treatment of PM_{2.5} precursors is important in developing a PM_{2.5} plan.³¹ The rule provides flexibility for areas where a particular PM_{2.5} precursor or precursors may not contribute significantly to PM_{2.5} levels that exceed the NAAQS. The rule provides for optional precursor demonstrations that a state may submit to the EPA to establish that sources of particular precursors need not be regulated for purposes of attainment planning or in an NNSR permitting program for a specific NAA.

The February 4, 2019 and February 15, 2019, submissions for the Provo and Salt Lake City discusses the five primary pollutants that contribute to the emissions in the NAAs (*i.e.*, NO_x, SO₂, VOC, NH₃, and directly emitted PM_{2.5}). The majority of ambient PM_{2.5} collected during a typical cold-pool episode of elevated concentration is secondary particulate matter, generated from gaseous precursor emissions. The results of speciation studies led UDAQ to the conclusion that the exceedances of the 2006 24-hour PM_{2.5} NAAQS were a result of the increased portion of the secondary PM_{2.5}, mainly ammonium nitrate, that was chemically formed in the air and not primary PM_{2.5} emitted directly into the troposphere.³² Because of the major role that precursors play within the Provo and Salt Lake City NAAs, UDAQ did not include any precursor demonstration. Thus, the requirement to ensure the implementation of BACM/BACT applies to direct PM_{2.5} and each of the four PM_{2.5} precursors listed above.

³⁰ 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).

³¹ *See, e.g.*, 81 FR at 58017.

³² The study results can be found in the TSD for the state's February 15, 2019 action (available in the docket for this action).

Based on the information provided in the Provo and Salt Lake City submissions and other information available to the EPA, we agree with UDAQ's conclusion that all four chemical precursors, including direct PM_{2.5}, must be regulated for purposes of attaining and maintaining the 2006 24-hour PM_{2.5} NAAQS in the Provo and Salt Lake City NAAs.

c. BACM/BACT Analysis in the Serious PM_{2.5} SIP

(1) Identifying the Sources of PM_{2.5} and PM_{2.5} Precursors

The first step in determining BACM is to develop a detailed emissions inventory of the sources of direct PM_{2.5} and PM_{2.5} precursors that can be used with modeling to determine the effects of these sources on ambient PM_{2.5} levels. As discussed above in Section II.B.1 of this proposed rule, Chapter 4 (Emission Inventory Data) of the Salt Lake City February 15, 2019 submission and the General Inventory section of the Provo, February 4, 2019 submission, contain the planning inventories for directly emitted PM_{2.5} and for all PM_{2.5} precursors (NO_x, SO₂, VOC, and NH₃) for the Salt Lake City and Provo NAAs, along with supporting documentation to support these inventories. Based on these inventories, four general categories were established: industrial point sources, on-road mobile sources, off-road mobile sources, and area sources. Area sources represent smaller, more numerous point sources, residential activities such as home heating, and some biogenic emissions.

Based on this identification of stationary, area, and mobile sources of direct PM_{2.5}, NO_x, VOC, SO₂, and NH₃ in the Provo and Salt Lake City areas, we conclude that the February 4, 2019 and February 15, 2019 submissions, respectively, appropriately identify all emission sources and source categories that must be subject to evaluation for potential control measures consistent with the requirements of subpart 4.

(2) Identification and Implementation of BACM/BACT

As part of its process for identifying candidate BACM/BACT and considering the technical and economic feasibility of additional control measures, UDAQ reviewed the EPA's guidance documents on BACM, guidance documents on control measures for direct PM_{2.5}, NO_x, VOC, NH₃, and SO₂ emissions sources,³³ and control measures implemented in other PM_{2.5} NAAs in other states. UDAQ's evaluations of potential BACM/BACT for each source category identified above are found in "Section 8. Control Strategies" in the February 4, 2019 Provo submission and in the TSD supporting the February 15, 2019 Salt Lake City submission. In the following sections, we review key components of UDAQ's demonstrations concerning BACM/BACT for the identified sources of direct PM_{2.5}, NO_x, VOC, SO₂, and NH₃ emissions in the Provo and Salt Lake City NAAs. We provide a more detailed evaluation of our review of UDAQ's regulations in our TSD, which is in the docket.

The UDAQ's BACM/BACT process and control measure evaluations are described in detail in the February 4, 2019 submission, "Section 8. Control Strategies" for the Provo NAA and in the State's February 15, 2019 TSD for the Salt Lake City NAA. For each identified source category, UDAQ identified its adopted control measures and potential additional control measures based on measures implemented in other areas, measures identified in EPA regulations or guidance (*e.g.*, in control technique guidelines (CTGs), alternative control technique documents (ACTs), new sources performance standards (NSPSs), or in the EPA's "Cost Analysis Models/Tools for Air Pollution Regulations"), or measures identified in prior EPA rulemaking documents (*e.g.*, recommendations in SIP actions).³⁴ UDAQ evaluated these

³³ This is not an exhaustive list. Please refer to UDAQ's submittal for detailed references: Control Techniques Guidelines (CTG); Alternative Control Techniques (ACT); New Source Performance Standards (NSPS); Ozone Transport Commission's (OTC) model rules; PM_{2.5} Requirements Rule, 81 FR 58010; US EPA Fugitive Dust Background Document and Technical Information Document for BACM (September 1992); General Preamble, 57 FR 13498; and Addendum, 59 FR 41998.

³⁴ The Cost Analysis Models/Tools for Air Pollution Regulations can be found at <https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-analysis-modelstools-air-pollution>.

potential additional control measures to determine whether implementation of the measures would be technologically and economically feasible in the Provo and Salt Lake City areas.

On April 19, 2018, May 21, 2020 and July 21, 2020, UDAQ submitted revisions and new rules to its area source rules R307-208, Outdoor Wood Boilers; R307-230, NO_x Emission Limits for Natural Gas-Fired Water Heaters; R307-304, Solvent Cleaning; R307-335, Degreasing; R307-343, Emissions Standards for Wood Furniture Manufacturing Operations; R307-344, Paper, Film, & Foil Coating; R307-345, Fabric & Vinyl Coating; R307-346, Metal Furniture Surface Coating; R307-347, Large Appliance Surface Coating; R307-348, Magnet Wire Coating; R307-349, Flat Wood Panel Coating; R307-350, Miscellaneous Metal Parts & Products Coating; R307-351, Graphic Arts; R307-352, Metal Containers, Closure & Coating; R307-353, Plastic Parts Coating; R307-354, Auto Body Refinishing; and R307-355, Control of Emissions from Aerospace Manufacture & Rework Facilities. Additionally, UDAQ provided BACM analysis for area source rules that were not revised, which include: R307-302, Solid Fuel Burning Devices; R307-303, Commercial Cooking; R307-307, Road Salting & Sanding; R307-309, Nonattainment and Maintenance Areas for PM₁₀ and PM_{2.5}; Fugitive Emissions and Fugitive Dust; R307-312, Aggregate Processing Operations; R307-328, Gasoline Transfer and Storage; R307-341, Cutback Asphalt; R307-342, Adhesive and Sealants; R307-356, Appliance Pilot Light; R307-357, Consumer Products; and R307-361, Architectural Coatings. Our detailed analysis of these area source rule revisions submitted on April 19, 2018, May 21, 2020, and July 21, 2020, and the BACM analyses for these area sources submitted on February 4, 2019 and February 15, 2019 for the Provo and Salt Lake City Serious 2006 24-hour PM_{2.5} NAAs can be found in our TSD in the docket.

On February 15, 2019, Utah submitted revisions to SIP Section IX.H.11 (General Requirements: Control Measures for Area and Point Sources, Emission Limits and Operating Practices, PM_{2.5}). This section of Utah's SIP applies to all sources addressed in Utah SIP sections IX.H.12 and 13, except as otherwise outlined in individual conditions in Sections IX.H.12 and 13. Our detailed analysis of the revisions submitted on February 15, 2019, for the Utah SIP Section IX.H.11, along with our analysis of UDAQs BACM/BACT analyses specific to Utah SIP Section IX.H.11, submitted on February 4, 2019 and February 15, 2019 can be found in our TSD in the docket.

On February 15, 2019, Utah submitted revisions to SIP Section IX.H.12 (Source-Specific Emission Limitations in Salt Lake City – UT PM_{2.5} Nonattainment Area), which sets emission limits and control measures for major stationary sources in the Salt Lake City 2006 24-hour PM_{2.5} Serious NAA. These sources, which fall above the 70 tpy threshold for Serious 2006 24-hour PM_{2.5} major sources³⁵ defined in Utah R307-403 (Permits: New and Modified Sources in Nonattainment Areas and Maintenance Areas), include: (1) ATK Launch Systems Inc. Promontory; (2) Big West Oil Refinery; (3) Chemical Lime Company (Lhoist North America); (4) Chevron Products Company – Salt Lake Refinery; (5) Compass Minerals Ogden Inc.; (6) Hexel Corporation: Salt Lake Operations; (7) Holly Corporation: Holly Refining & Marketing Company (Holly Refinery); (8) Kennecott Utah Copper (KUC): Mine; (9) Kennecott Utah Copper (KUC): Power Plant; (10) Kennecott Utah Copper (KUC): Smelter and Refinery; (11) Nucor Steel Mills; (12) PacifiCorp Energy: Gadsby Power Plant; (13) Tesoro Refining and Marketing Company: Salt Lake City Refinery; (14) The Proctor & Gamble Paper Products Company; (15) Utah Municipal Power Association: West Valley Power Plant; (16) University of

³⁵ 81 FR at 58152.

Utah: University of Utah Facilities; and (17) Hill Air Force Base. On February 15, 2019, UDAQ submitted the BACM/BACT analyses for each of these 17 sources. All other sources fall below the 70 tpy threshold and are covered in the multiple area source rules discussed above. Our detailed analysis of the revisions submitted on February 15, 2019, for the Utah SIP Section IX.H.12, along with our analysis of UDAQs BACM/BACT analyses submitted on February 15, 2019, specific to Utah SIP Section IX.H.12, can be found in our TSD in the docket.

Additionally, UDAQ submitted draft revisions on October 9, 2020, specific to Utah SIP Section IX.H.12.i.i.C (Kennecott Power Plant), which the state has asked the EPA to act on through parallel processing. This draft revision removes the startup/shutdown limits for the Kennecott Power Plant that was not supported within the BACM/BACT analysis submitted on February 15, 2019. The detailed analysis of our parallel process on the October 9, 2020, submission of draft revisions to Utah SIP Section IX.H.12.i.i.C (Kennecott Power Plant), can be found in our TSD in the docket, and our detailed discussion of how parallel processing works can be found in Section I.E above.

On January 19, 2017, Utah submitted revisions to SIP Section IX.H.13 (Source-Specific Emission Limitations in Provo – UT PM_{2.5} Nonattainment Area), which sets emission limits and control measures for major stationary sources in the Provo 2006 24-hour PM_{2.5} Serious NAA. The sources in Section IX.H.13 include: (1) Brigham Young University: Main Campus; (2) Geneva Nitrogen Inc.: Geneva Nitrogen Plant; (3) McWane Ductile – Utah; (4) PacifiCorp Energy: Lake Side Power Plant; (5) Payson City Corporation: Payson City Power; (6) Provo City Power: Power Plant; and (7) Springville City Corporation: Whitehead Power Plant. UDAQ submitted BACM/BACT analyses for only two of these sources, McWane Ductile – Utah and PacifiCorp Energy: Lake Side Power Plant. The other five sources listed above fall below the 70

typical threshold for Serious 2006 24-hour PM_{2.5} major stationary sources,³⁶ which is defined in Utah R307-403 (Permits: New and Modified Sources in Nonattainment Areas and Maintenance Areas) rule. These remaining five sources (Brigham Young University, Geneva Nitrogen Plant, Payson City Power, Provo City Power, and Whitehead Power Plant) were either shut down (Geneva Nitrogen Plant) or have reduced their emissions to be minor sources (Brigham Young University, Payson City Power, Provo City Power, and Whitehead Power Plant). UDAQ uses Utah SIP Section IX.H. only for major stationary source emission limits or control measures; therefore, UDAQ has requested that EPA not act on the Utah SIP Section IX.H.13 portions for these facilities because the limits/measures are out of date and will be removed in future rulemakings. Since we have never approved these limits or sources into Utah SIP Section IX.H.13, and this section was only created in the December 16, 2014 submittal, UDAQ does not need to complete a 110(l) demonstration. We will only be acting on the McWane Ductile – Utah and PacifiCorp Energy: Lake Side Power Plant sections of Utah SIP Section IX.H.13, and on these sources' BACM/BACT determinations submitted by UDAQ on February 4, 2019. Our detailed analysis of the revisions submitted on January 19, 2017, along with our analysis of UDAQ's BACM/BACT analyses submitted on February 4, 2019, can be found in our TSD in the docket.

As to the other facilities originally submitted within Utah SIP Section IX.H.13, no additional discussion or action is necessary for the Geneva Nitrogen Plant due to its shutdown. The BACM/BACT analyses for the other facilities (Brigham Young University, Payson City Power, Provo City Power, and the Whitehead Power Plant) are now included in the individual BACM/BACT analyses for each area source rule. No additional discussion is needed as to these

³⁶ *Id.*

limits in Utah SIP Section IX.H.13, which as noted above are outdated, or on these facilities as individual sources. Our detailed analysis of the area source rules, along with our analysis of UDAQ's BACM/BACT analyses submitted on February 4, 2019 and February 15, 2019, can be found in our TSD in the docket.

Additionally, on February 4, 2019 and February 15, 2019, UDAQ submitted BACM/BACT analyses for on-road and non-road mobile sources for the Provo and Salt Lake City Serious 2006 24-hour PM_{2.5} NAAs, respectively. Our detailed analysis of these analyses can be found in our TSD in the docket.

(3) The EPA's Evaluation and Conclusion

We have reviewed UDAQ's determination in the February 4, 2019 and February 15, 2019 submissions that the major stationary and area source control measures represent BACM/BACT for direct PM_{2.5} and PM_{2.5} precursors within the Provo and Salt Lake City NAAs, respectively. In our review, we also considered our previous evaluations of UDAQ's rules in connection with our approval of revisions for Utah's R307 area source rules and RACM demonstration for the Provo and Salt Lake City Moderate 2006 24-hour PM_{2.5} SIPs that were acted on.³⁷ Based on this review, we believe that UDAQ's area source rules and the Utah SIP Part H emission limits provide for the implementation of BACM/BACT for major stationary sources and area sources of direct PM_{2.5} and PM_{2.5} precursors.

With respect to mobile sources, we believe that the programs developed and administered by UDAQ, along with the identified Federal requirements, provide for the implementation of BACM/BACT for direct PM_{2.5} and PM_{2.5} precursors in the Provo and Salt Lake City NAAs.

³⁷ See 81 FR 9343 (Feb. 25, 2016); 81 FR 71988 (Oct. 19, 2016); 84 FR 52368 (Oct. 2, 2019); and 85 FR 10989 (Feb. 26, 2020).

For these reasons we propose to approve the revisions submitted on January 19, 2017, April 19, 2018, February 4, 2019, February 15, 2019, May 21, 2020 and July 21, 2020. We also propose to find that these submissions provide for the implementation of BACM/BACT for all sources of direct PM_{2.5} and PM_{2.5} precursors as expeditiously as practicable, for purposes of the 2006 24-hour PM_{2.5} NAAQS in the Provo and Salt Lake City areas, in accordance with the requirements of CAA section 189(b)(1)(B) and 40 CFR 51.1010. We are also proposing to approve, through parallel processing, the October 9, 2020 draft submission of revisions to Utah SIP Section IX.H.12.i.i.C to remove the startup/shutdown limits that were not supported in the BACM/BACT determination of the Kennecott Power Plant. Additionally, we are proposing to approve the area source rule revisions submitted on April 19, 2018, May 21, 2020 and July 21, 2020, and to approve the BACM/BACT analyses submitted on February 4, 2019 and February 15, 2019. We are also proposing to approve the revisions to Utah SIP Sections IX.H.11 and 12, submitted on February 15, 2019; revisions to Utah SIP Section IX.H.13, submitted on January 19, 2017; and draft revisions submitted on October 9, 2020, for the Provo and Salt Lake City Serious 2006 24-hour PM_{2.5} NAAs. Our detailed analyses can be found in the EPA TSD in the docket.

C. Do the Redesignation Requests and Maintenance Plans Meet CAA Requirements?

For a NAA to be redesignated to attainment, the following conditions in section 107(d)(3)(E) of the CAA must be met: (1) We must determine that the area has attained the NAAQS; (2) The applicable implementation plan for the area must be fully approved under section 110(k) of the Act; (3) We must determine that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other

permanent and enforceable reductions; (4) We must fully approve a maintenance plan for the area as meeting the requirements of CAA section 175A; and (5) The state containing such area must meet all requirements applicable to the area under section 110 and part D of the CAA.

The September 4, 1992 Calcagni Memorandum outlines how to assess the adequacy of redesignation requests against the conditions listed above. On January 13, 2020, the Governor of Utah submitted revisions to the SIP for R307-110-10, submitted maintenance plans for the Salt Lake City and Provo areas (located within Utah SIP Sections IX.A.36 and 27, respectively), and requested that the EPA redesignate the area to attainment for 2006 24-hour $PM_{2.5}$.

The sections below discuss how Utah's redesignation requests and maintenance plans meet the requirements of the Act for redesignation of the Provo and Salt Lake City areas to attainment for the 2006 24-hour $PM_{2.5}$ NAAQS.

1. Attainment of the 2006 24-Hour $PM_{2.5}$ NAAQS

To redesignate an area from nonattainment to attainment, the EPA must determine that the area has attained the applicable NAAQS. See CAA section 107(d)(3)(E)(i). A state must demonstrate that an area has attained the 2006 24-hour $PM_{2.5}$ NAAQS through submittal of ambient air quality data from an ambient air monitoring network representing maximum $PM_{2.5}$ concentrations. The data, which must be quality assured, quality-controlled, and certified in the EPA's Air Quality System (AQS), must show that the most recent three years (2017-2019) of valid $PM_{2.5}$ 98th percentile mass concentrations are below the 2006 $PM_{2.5}$ 24-hour NAAQS (35 $\mu\text{g}/\text{m}^3$), pursuant to 40 CFR 50.13. In making this showing, three consecutive years of complete air quality data must be used.

Between 2017 and 2019, Utah operated two and five $PM_{2.5}$ monitors in the Provo and Salt Lake City NAAs, respectively. The EPA reviewed the $PM_{2.5}$ ambient air monitoring data

from the Provo monitors, Lindon (AQS site 49-049-4001) and Spanish Fork (AQS site 49-049-5010),³⁸ and from the Salt Lake City monitors, Bountiful (AQS site 49-011-0004), Rose Park (AQS site 49-035-3010), Hawthorn (AQS site 49-035-3006), Herriman #3 (AQS site 49-035-3013), and Erda (AQS site 49-045-0004).³⁹

As part of the redesignation requests for the Provo and Salt Lake City NAAs, UDAQ submitted ambient air quality data from the monitoring sites, which had been quality-assured and placed in AQS on a quarterly basis. The 98th percentile 2017-2019 design values for the monitors in the Provo and Salt Lake City NAAs are found in Table 1 below, and support the conclusion that the areas have attained the 2006 24-hour PM_{2.5} NAAQS.

Table 1. Provo and Salt Lake City 2006 24-Hour PM_{2.5} NAAs 2017-2019 98th Percentiles and Design Values (µg/m³)⁴⁰

NAA	Monitoring Site	AQS ID	98 th Percentiles (µg/m ³)			2017-2019 Design Value (µg/m ³)
			2017	2018	2019	
Provo	Lindon	49-049-4001	28.9	28.4	21.2	26
	Spanish Fork	49-049-5010	27.6	49.6	17.5	32
Salt Lake City	Bountiful	49-011-0004	35.2	25.7	19.3	27
	Rose Park	49-035-3010	32.4	29.2	27.9	30
	Hawthorn	49-035-3006	35.7	26.2	27.3	30
	Herriman #3	49-035-3013	28.2	29.0	18.8	25

³⁸ The Provo NAA had one monitor (North Provo, 49-049-0002) shut down near the end of 2018 due to safety issues at the site, and UDAQ is working to reestablish the monitor at a new site.

³⁹ The Salt Lake City NAA had two monitors shut down due to the loss of each site, and UDAQ is working to reestablish the monitors at new sites. These monitors are Brigham City (49-003-0003), which shutdown in June 2019, and Ogden 2 (49-057-0002), which shut down in May 2019. A new site for Ogden 2 was established in Weber County (Harrisville, 49-057-1003) in September 2019. UDAQ is still working with Box Elder County on new potential sites.

⁴⁰ The Salt Lake City near-road PM_{2.5} monitoring site (AQS ID 49-035-4002) was established and began recording data on January 1, 2019. The 98th percentile daily average concentration for 2019 at this PM_{2.5} near-road monitor was 31.0 µg/m³; however, the one year of available data is not sufficient for calculating a design value. Additional discussion of the EPA's position as to Salt Lake City's PM_{2.5} near-road monitor can be found in the final rule signed by the Region 8 Regional Administrator on October 29, 2020, determining that the Salt Lake City Serious 2006 24-hour PM_{2.5} NAA attained by the Serious attainment date.

	Erda	49-045-0004	20.9	30.6	22.9	25
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As explained above, quality-assured, quality-controlled, and certified air quality monitoring data were collected for each year from 2017 through 2019 in accordance with an approved annual monitoring network plan (AMNP) for each year. The EPA has reviewed this data and concluded that it shows that the areas attained by the Serious attainment date of December 31, 2019.⁴¹

Further information on PM_{2.5} monitoring is in Subsections IX.A.27.b(1) and IX.A.36.b(1) of the Provo and Salt Lake City maintenance plans, respectively. Additionally, on October 29, 2020, the Region 8 Regional Administrator signed the final rule, which finalized a determination that the Provo and Salt Lake City NAAs attained by the Serious attainment date of December 31, 2019. We have evaluated the ambient air quality data and believe that Utah has adequately demonstrated that the 2006 24-hour PM_{2.5} NAAQS has been attained in the Provo and Salt Lake City areas and that the two areas attained by their Serious 2006 24-hour PM_{2.5} attainment date.

2. State Implementation Plan Approval

Section 107(d)(3)(E)(ii) of the CAA states that for an area to be redesignated to attainment, it must be determined that the Administrator has fully approved the applicable implementation plan for the area under section 110(k).

Those states containing Moderate 2006 24-hour PM_{2.5} NAAs were required to submit a SIP by December 31, 2014, demonstrating attainment of the 2006 24-hour PM_{2.5} NAAQS by December 31, 2015. UDAQ submitted the Moderate 2006 24-hour PM_{2.5} SIPs for the Provo and Salt Lake City NAAs on December 16, 2014, with additional revisions submitted on January 19, 2017. On May 10, 2017 (82 FR 21711), the EPA published a final rule reclassifying the Salt

⁴¹ The final determination of attainment by the Serious 2006 24-hour PM_{2.5} attainment date was signed by the Region 8 Regional Administrator on October 29, 2020.

Lake City and Provo areas as “Serious” nonattainment under subpart 4, based on the EPA’s determination that the area could not practicably attain the 2006 24-hour PM_{2.5} standards by the December 31, 2015 attainment date. This reclassification became effective on June 9, 2017. The reclassification was based on the EPA’s evaluation of ambient air quality data from the 2013-2015 period, indicating that it was not practicable for certain monitoring sites within the Salt Lake City and Provo areas to show PM_{2.5} design values at or below the level of the 2006 24-hour PM_{2.5} NAAQS by December 31, 2015.

Section 107(d)(3)(E)(ii) of the CAA states that for NAAs to be redesignated to attainment, it must be determined that the Administrator has fully approved the applicable implementation plan for the areas under section 110(k). On February 25, 2016 (81 FR 9343), October 19, 2016 (81 FR 71988), October 2, 2019 (84 FR 52368) and February 26, 2020 (85 FR 10989) the EPA approved revisions to several area source rules, and approved new rules for the 2006 24-hour PM_{2.5} NAAs into the Utah SIP. Additionally, we completed a CDD for the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs on April 10, 2019 (84 FR 14267) and on September 27, 2019 (84 FR 51055), respectively. With these final rules, the EPA suspended the obligation for Utah to make submissions to meet certain CAA requirements related to attainment of the 2006 24-hour PM_{2.5} NAAQS for Moderate and Serious NAAs. These suspended CAA requirements are: (1) attainment demonstration (Moderate and Serious); (2) projected emissions inventory (Moderate and Serious); (3) RACM/RACT (Moderate); (4) RFP (Moderate and Serious); (5) motor vehicle emission budgets (MVEB) (Moderate and Serious); (6) contingency measures (Moderate and Serious); and (7) quantitative milestones (Moderate and Serious).

The CDD did not suspend Utah’s obligation to submit CAA requirements not related to demonstrating attainment, which includes the base-year emission inventory, NNSR revisions,

and BACM/BACT for the Provo and Salt Lake City NAAs. The base-year emission inventory requirement for the Moderate and Serious Provo and Salt Lake City NAAs, will be based on our approval of the base-year inventory submitted in the January 13, 2020 submittal of the maintenance plans. Our analysis of the base-year inventory is discussed in Section II.C.4.a below and in Section II.B.1 above.

On July 25, 2019 (84 FR 35831), the EPA approved revisions to UAC R307-403 (Permits: New and Modified Sources in Nonattainment Areas and Maintenance Areas), which satisfies the outstanding NNSR requirement for the Provo and Salt Lake City Moderate and Serious 2006 24-hour PM_{2.5} NAAs and is discussed above in Section II.B.2. above.

The remaining CAA requirement that was not suspended with the April 10, 2019 (84 FR 14267) and the September 27, 2019 (84 FR 51055), CDD for the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs, respectively, is BACM/BACT for the Serious 2006 24-hour PM_{2.5} SIPs. Our analysis that completes this remaining requirement is discussed in our TSD, with a brief discussion in Section II.B.3. above.

We have evaluated the actions above and have determined that through these actions, the State of Utah has a fully approved Provo and Salt Lake City 2006 24-hour PM_{2.5} SIP under section 110(k).

3. Improvement in Air Quality Due to Permanent and Enforceable Measures.

Section 107(d)(3)(E)(iii) of the CAA provides that for an area to be redesignated to attainment, the Administrator must determine that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan, implementation of applicable Federal air pollutant control regulations, and other permanent and enforceable reductions.

As briefly discussed above in Section II.B.3 and in further detail in our TSD, Utah has implemented multiple area source rules, I/M Programs, and emission limits for stationary sources in the Provo and Salt Lake City NAAs.

Additionally, within Section IX.A.27.b.1.c. and IX.A.36.b.3.a. of the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plan, respectively, UDAQ provides an assessment of the ambient air quality data collected at the monitors in these two NAAs from the year monitoring began (2000) to 2018 (the last year of valid data before the maintenance plan was submitted), which shows an observable decrease in the monitored PM_{2.5}. UDAQ observed the 98th percentile average of the 24-hour data in the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs, as well as the annual arithmetic mean, which assisted in understanding the trends. The Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs were only designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS, however, the annual arithmetic mean is useful information in showing the decrease in emissions. The cold-pool temperature inversions during winter, which drive and trap secondary PM_{2.5}, vary in strength and duration from year to year, and the PM_{2.5} concentrations measured during these periods reflect this variability more than they reflect the gradual changes in emissions of direct PM_{2.5} and the PM_{2.5} precursors. This variability is evident in UDAQ's assessment, but the 24-hour data trend is downward, indicating improvement of a little less than 1 µg/m³ per year for both the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs. Episodic variability is reduced when reviewing the annual mean values of PM_{2.5} concentrations from 2000 – 2018. Graphing the annual mean PM_{2.5} concentration data reveals a decreasing trend, which indicates an improvement of 3 µg/m³ and 4.3 µg/m³ over this 18-year span for the Provo and Salt Lake City NAAs, respectively.

We have evaluated the various state and federal control measures, historical emissions inventories, and the emission trends of the PM_{2.5} 98th percentiles and annual PM_{2.5} mean concentrations presented by UDAQ from 2000 to 2018, and believe that the improvement in air quality in the Provo and Salt Lake City NAAs has resulted from emission reductions that are permanent and enforceable.

4. Fully Approved Maintenance Plan Under Section 175A of the Act

Section 107(d)(3)(E) of the Act requires that, for a NAA to be redesignated to attainment, we must fully approve a maintenance plan which meets the requirements of section 175A of the Act. The plan must demonstrate continued attainment of the relevant NAAQS in the area for at least 10 years after our approval of the redesignation. Eight years after our approval of a redesignation, a state must submit a revised maintenance plan demonstrating attainment for the 10 years following the initial 10-year period. The maintenance plan must also contain a contingency plan to ensure prompt correction of any violation of the NAAQS.⁴² The EPA's interpretations of the CAA section 175A maintenance plan requirements are generally provided in the General Preamble⁴³ and the Calcagni Memorandum referenced above. The Calcagni Memorandum outlines five core elements necessary to ensure maintenance of the relevant NAAQS in an area seeking redesignation from nonattainment to attainment. Those elements, as well as guidelines for subsequent maintenance plan revisions, are explained in detail below.

a. Attainment Inventory

PM_{2.5} maintenance plans should include an attainment emission inventory to identify the level of emissions in the area that is sufficient to maintain the NAAQS. An emissions inventory was developed and submitted with the Provo and Salt Lake City 2006 24-hour PM_{2.5}

⁴² Sections 175A(b) and (d).

⁴³ 57 FR 13498, at 13563.

maintenance plans for the two NAAs on January 13, 2020. This submittal contains a base year inventory for 2017, interim-year projection inventory for 2026, and a projected maintenance inventory of 2035. The emissions in the inventories include sources of direct $PM_{2.5}$ and $PM_{2.5}$ precursor emissions located within a regional area called a modeling domain. UDAQ modeled two different domain sizes and grid resolutions: a 4 kilometer (km) coarse grid and a 1.33 km fine grid.⁴⁴ The 4 km coarse domain covered the entire State of Utah, a significant portion of Eastern Nevada (including Las Vegas), and smaller portions of Idaho, Wyoming, Colorado and Arizona, and was used to show movement of pollutants at the boundaries of the nested fine grid domain.

Since the coarse domain was so large, the 1.33 km fine domain or a “core area” within this domain was identified, within which a greater degree of accuracy was applied. Within this core area (which includes Weber, Davis, Salt Lake, Utah, Box Elder, Tooele, Cache and Franklin, ID counties), SIP-specific inventories were prepared to include seasonal adjustments and forecasting to represent each of the projection years. In the bordering region, outside the core area, the 2014 National Emissions Inventory (NEI) was used in the analysis. There were four general categories of sources included in these inventories: point sources, area sources, on-road mobile sources and non-road mobile sources.

For each of these source categories, the pollutants that were inventoried were $PM_{2.5}$, SO_2 , NO_x , VOC and NH_3 . More detailed descriptions of the 2017 base-year inventory and the 2026 and 2035 projection inventories can be found in Sections IX.A.27.c and IX.A.36.c. Maintenance Plan, Subsection (2) Attainment Inventory, for the Provo and Salt Lake City NAAs, respectively,

⁴⁴ See January 13, 2020 State of Utah submittal for Provo and Salt Lake City 2006 24-hour $PM_{2.5}$ Maintenance Plans; Figures IX.A.27.4. and IX.A.36.4, respectively, titled “CAMx Photochemical Modeling Domain in Two-Way Nested Configuration.”

and in the State of Utah’s TSD. Utah’s submittal contains detailed emission inventory information that was prepared in accordance with the EPA’s emission inventory guidance.⁴⁵

Summary of emission figures from the 2017 base year and emission projections for 2026 and 2035 are provided in Table 2 and Table 3, below, for the Provo and Salt Lake City, respectively.

Table 2. Provo NAA; Actual Emissions from 2017 and Emission Projections for 2026 and 2035 [tons per day (tpd)]

Year	Source Category	PM _{2.5} Filterable	PM _{2.5} Condensable	PM _{2.5} Total	NO _x	VOC	NH ₃	SO ₂
2017 Baseline	Area Sources	1.75	0.29	2.04	5.01	13.32	6.54	0.06
	Mobile Sources	-	-	0.83	15.4	9.07	0.43	0.09
	Non-Road	-	-	0.21	3.07	1.66	0	0.01
	Point Sources	0.18	0.12	0.3	1.12	0.18	0.42	0.05
	2017 Total			3.38	24.6	24.23	7.39	0.22
2026	Area Sources	1.89	0.32	2.21	3.56	14.2	6.38	0.05
	Mobile Sources	-	-	0.42	5.79	4.58	0.36	0.05
	Non-Road	-	-	0.14	2.14	1.65	0.01	0.01
	Point Sources	0.19	0.12	0.31	0.97	0.17	0.44	0.06
	2026 Total			3.08	12.46	20.6	7.19	0.17
2035	Area Sources	2.06	0.35	2.41	3.67	16.32	6.24	0.05
	Mobile Sources	-	-	1.41	5.74	6.49	0.44	0.05
	Non-Road	-	-	0.13	1.84	1.8	0.01	0.01

⁴⁵ Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations (EPA-454/B-17-002, May 2017) (available at https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf).

	Point Sources	0.19	0.12	0.31	0.97	0.17	0.44	0.06
	2035 Total			4.26	12.22	24.78	7.13	0.17

Table 3. Salt Lake City NAA; Actual Emissions from 2017 and Emission Projections for 2026 and 2035 [tons per day (tpd)]

Year	Source Category	PM_{2.5} Filterable	PM_{2.5} Condensable	PM_{2.5} Total	NO_x	VOC	NH₃	SO₂
2017 Baseline	Area Sources	5.02	1.11	6.13	13.55	45.98	14.21	0.21
	Mobile Sources	-	-	2.28	44.21	30.12	1.28	0.31
	Non-Road	-	-	0.96	18.12	8.89	0.02	0.35
	Point Sources	2.97	0.97	3.94	17.01	6.52	0.34	3.78
	2017 Total			13.31	92.89	91.51	15.85	4.65
2026	Area Sources	5.19	1.15	6.34	8.54	43.99	14.19	0.2
	Mobile Sources	-	-	1.34	19.63	15.96	1.09	0.16
	Non-Road	-	-	0.72	14.64	8.85	0.02	0.44
	Point Sources	4.19	1.38	5.57	22.61	7.26	0.48	3.5
	2026 Total			13.97	65.42	76.06	15.78	4.3
2035	Area Sources	5.37	1.19	6.56	8.69	47.17	14.21	0.2
	Mobile Sources	-	-	1.39	18.91	18.93	1.19	0.15
	Non-Road	-	-	0.67	13.32	9.7	0.03	0.51
	Point Sources	4.19	1.38	5.57	22.62	7.26	0.48	3.5
	2035 Total			14.19	63.54	83.06	15.91	4.36

Based on our review, we have determined that Utah prepared an adequate attainment inventory for the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs. Additionally, the 2017 base-year inventory satisfies the outstanding requirement for the Serious Provo and Serious Salt Lake City NAAs that were not suspended with the CDDs finalized on April 10, 2019 (84 FR 14267) and September 27, 2019 (84 FR 51055), respectively.

b. Maintenance Demonstration

The Calcagni Memorandum explains that where modeling was relied on to demonstrate maintenance, the plan must contain a summary of the air quality concentrations expected to result from the application of the control strategies. Also, the plan should identify and describe the dispersion model or other air quality model used to project ambient concentrations. The maintenance demonstration for the Provo and Salt Lake City areas used a regional photochemical model.

Before the development of the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plans, UDAQ conducted a technical analysis to support the development of the Serious SIP for the Salt Lake City 2006 24-hour PM_{2.5} NAA. The analysis included preparation of emissions inventories and meteorological data, and the evaluation and application of a regional photochemical model. Part of this process included episode selection to determine the episode that most accurately replicates the photochemical formation of ambient PM_{2.5} during a persistent cold air pool episode in the airshed. For the Provo and Salt Lake City maintenance plans, UDAQ used the same episode that was used for the Serious SIP modeling.

The Comprehensive Air Quality Model with Extensions (CAMx) version 6.30 for air quality modeling was used for the Provo and Salt Lake City maintenance plans, with enhancements that included snow chemistry and topographical and surface albedo refinements.

The emissions processing model that UDAQ used in conjunction with CAMx was the Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE) version 3.6.5,⁴⁶ which prepares the annual emissions inventory for use in the air quality model.

Activity profiles and their associated cross reference files from the EPA's 2011v6⁴⁷ modeling platform were used by UDAQ. For stationary non-point and mobile sources, UDAQ used spatial surrogates from the EPA Clearinghouse for Inventories and Emissions Factors (CHIEF),⁴⁸ which were used to distribute emissions in space across the modeling domain. Emissions from point sources were placed at the specific location of the sources. Additionally, if reliable local information was available, UDAQ modified or developed the profiles and surrogates to reflect this information.

Meteorological inputs were derived using the Weather Research and Forecasting⁴⁹ (WRF) Advanced Research WRF (WRF-ARW) model to prepare meteorological datasets for UDAQ to use with the photochemical model. WRF-ARW had reasonable ability to replicate the vertical temperature structure of the boundary layer (i.e., the temperature inversion); however, UDAQ found that WRF-ARW had difficulty reproducing the inversion when the inversion was shallow and strong (i.e., an 8-degree temperature increase over 100 vertical meters). UDAQ provides additional information on these models in their TSD.

Part of the modeling exercise that UDAQ completed for the Provo and Salt Lake City maintenance plans was to test whether the model could successfully replicate the PM_{2.5} mass and composition observed during prior episodes of elevated PM_{2.5} concentrations. The selection of an

⁴⁶ <https://www.cmascenter.org/smoke/>

⁴⁷ <https://www.epa.gov/air-emissions-modeling/2011-version-6-air-emissions-modeling-platforms>

⁴⁸ <https://www.epa.gov/chief>

⁴⁹ <https://www.mmm.ucar.edu/weather-research-and-forecasting-model>

appropriate episode(s) should determine the meteorological episode that helps produce the best air quality modeling performance.

Based on EPA guidance,⁵⁰ UDAQ selected three episodes: (1) January 1-10, 2011; (2) December 7-19, 2013; and (3) February 1-16, 2016. UDAQ examined the PM_{2.5} model performance for these three episodes and concluded that CAMx performed the best when using the January 2011 WRF-ARW output. UDAQ further confirmed this determination by using a linear regression analysis showing that modeled and measured PM_{2.5} at the Provo monitoring station (Lindon) was strongly correlated during the January 2011 episode ($R^2 = 0.89$) compared to the other episodes ($R^2 = 0.81$ for the December 2013 episode; and $R^2 = 0.05$ for the February 2016 episode). The Salt Lake City monitoring station (Hawthorne) linear regression analysis showed similar results to the Provo monitoring site, in that the performance of the January 2011 episode was strongly correlated ($R^2 = 0.80$) compared to the other episodes ($R^2 = 0.54$ for the December 2013 episode and $R^2 = 0.69$ for the February 2016 episode). Therefore, UDAQ selected the January 2011 episode to conduct the modeled maintenance demonstration work for the Provo and Salt Lake City areas. A comprehensive discussion of the meteorological model performance for all three of these episodes can be found in the TSD submitted by UDAQ.

UDAQ completed a comparison of the 24-hour average modeled and observed PM_{2.5} during the January 1-10, 2011 episode at the Provo monitoring station (Lindon) and at the Salt Lake City monitoring station (Hawthorne), and the results showed that the model overall captured the daily 24 hour average temporal variation in PM_{2.5} well. A more detailed analysis of this episode for both the Provo and Salt Lake City monitoring sites (Lindon and Hawthorne, respectively) can be found in the TSD submitted by UDAQ.

⁵⁰ Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze (EPA, Apr. 2007).

Overall, UDAQ concluded that the model performed well in replicating the buildup and dispersal of PM_{2.5} in the Provo and Salt Lake City NAAs, and thus the model could be used for air quality planning purposes. UDAQ then developed a 2017 baseline model simulation using 2017 emissions data, but using the WRF-ARW meteorological data for the 2011 episode. The 2017 baseline modeling and the 2017 baseline monitoring data design values are used to simulate possible future PM_{2.5} levels by projecting from the 2017 emissions to future year emissions. The results of the future year modeling are described below.

With acceptable model performance, the model can be used to make future-year attainment projections. For each future year, an attainment projection is made by calculating a concentration termed the Future Design Value (FDV). This calculation is made for each monitor included in the analysis, and then compared to the NAAQS (35 µg/m³). When the FDV is smaller than the NAAQS at every monitor in the NAA, this would demonstrate attainment for the area in that specific future year. A maintenance plan must demonstrate continued attainment of the NAAQS for a span of ten years. Since this ten-year span is measured from the time that the EPA finalizes action of the plan, the ten-year end date is uncertain. To be conservative, UDAQ projected an attainment date of 2035, which is fifteen years after Utah submitted the Provo and Salt Lake City maintenance plans. Additionally, UDAQ modeled a “spot-check” assessment of 2026.

For any monitor, the FDV is greatly influenced by the existing air quality at the specific location. This can be quantified and expressed as a Baseline Design Value (BDV). The BDV is consistent with the form of the 2006 24-hour PM_{2.5} NAAQS, which is the 98th percentile value averaged over a three-year period. The quantification of the BDV for each monitor in Provo and Salt Lake City, is included in the TSD submitted by UDAQ.

Several values were excluded when UDAQ calculated the BDVs in the Provo NAA. UDAQ utilized the EPA's "Exceptional Events Rule,"⁵¹ which allows states to exclude certain air quality data due to exceptional events (e.g., wildfires, dust storms, etc.). Two large local wildfires were observed during the summer of 2018 that affected the PM_{2.5} values at the Spanish Fork monitor in the Provo NAA, but even when the atypical wildfire data is included in the baseline design value the level is still below the 2006 24-hour PM_{2.5} NAAQS, at 35.4 µg/m³. Since the design value complies with the NAAQS, the wildfire events are not considered regulatorily significant exceptional events under the Exceptional Events Rule because they did not cause an exceedance or a violation of the NAAQS.⁵²

Although the wildfires did not cause exceptional events, which would have needed the EPA's concurrence under the Exceptional Events Rule, Utah excluded the values from those days from its modeling, so as to produce more representative projections of future air quality. This exclusion was consistent with EPA guidance on addressing instances where air quality data is influenced by atypical, extreme, or unrepresentative.⁵³ This Additional Methods Guidance identifies the most common determinations and analyses not covered by the Exceptional Events Rule, and clarifies for each of them whether there is a separate, existing mechanism under which the exclusion, selection, or adjustment of air quality monitoring data may be appropriate. One example is certain modeling analyses under EPA's Guideline on Air Quality Models⁵⁴ including modeling analyses used for estimating base and future year design values for ozone and PM_{2.5} attainment demonstrations.

⁵¹ 81 FR 68216 (Oct 3, 2016).

⁵² 40 CFR 50.14.

⁵³ See Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Events (EPA, Apr. 4, 2019) (the "Additional Methods Guidance," available at https://www.epa.gov/sites/production/files/2019-04/documents/clarification_memo_on_data_modification_methods.pdf).

⁵⁴ 40 CFR part 51, appendix W.

Table 4 below details the atypical, potentially wildfire-influenced values recorded at the Spanish Fork monitor, with the specific date the monitor was impacted and what the potential source could be.

Table 4. 2018 Atypical Event Values Excluded from the Baseline Design Value at the Spanish Fork Monitor

Date	Value, $\mu\text{g}/\text{m}^3$	Potential Wildfire Sources
8/7/2018	37.8	Coal Hollow
8/9/2020	50.8	Coal Hollow and other western state(s) fire(s)
8/10/2018	68.8	Coal Hollow and other western state(s) fire(s)
8/11/2018	49.6	Coal Hollow and other western state(s) fire(s)
8/13/2018	58.1	Coal Hollow and other western state(s) fire(s)
9/14/2018	71.5	Pole Creek and Bald Mountain
9/15/2018	42.6	Pole Creek and Bald Mountain
9/17/2018	74.5	Pole Creek and Bald Mountain
9/18/2018	57.7	Pole Creek and Bald Mountain
9/19/2020	76.3	Pole Creek and Bald Mountain
9/21/2018	39.3	Pole Creek and Bald Mountain

UDAQ worked with the EPA to determine whether these atypical values could be excluded under the approach described in the Additional Methods Guidance, and based on the specific modeling analysis conducted in accordance with EPA’s Air Quality Models Guideline. We have reviewed historical data for the area and the HYSPLIT “back trajectory analysis”⁵⁵ in which the State presented an analysis of the direction and sources of air pollution at the receptor site.⁵⁶ Based on our review, and considering the provisions of Utah SIP Section IX.A.27.c.1.d., the EPA agrees with UDAQ’s assessment that the atypical baseline design value of $35.4 \mu\text{g}/\text{m}^3$

⁵⁵ The HYSPLIT model is a complete system for computing simple air parcel trajectories, as well as complex transport, dispersion, chemical transformation, and deposition simulations. A common application of this model is a back trajectory analysis to determine the origin of air masses and establish source-receptor relationships. Detailed information on the HYSPLIT model can be found at: <https://www.arl.noaa.gov/hysplit/hysplit/>

⁵⁶ See “2018 Wildfire Atypical Event Report” within the Utah TSD (presenting HYSPLIT back trajectory analysis); the AQS report containing the historical data can be found in our docket.

was exacerbated by local wildfire emissions, and the atypical monitoring data listing in Table 4 above should be removed, which would set the BDV for modeling projected design values at 28.4 $\mu\text{g}/\text{m}^3$. This determination is only for the Spanish Fork monitor in the Provo 2006 24-hour $\text{PM}_{2.5}$ NAA; no other monitor in the Provo $\text{PM}_{2.5}$ NAA or the Salt Lake City $\text{PM}_{2.5}$ NAA was affected by the local wildfires. Additionally, this determination is not an official EPA concurrence based on the Exceptional Events Rule. The atypical data discussed in Table 4 were fully considered in evaluating whether the area had attained the NAAQS, and were *only* excluded to provide a more accurate modeled projected design value – that is, the FDV – for the Spanish Fork monitor.

The modeled FDV is used as a part of the maintenance plan demonstration to show that the NAAs will maintain the NAAQS at a future date. In making future-year projections of $\text{PM}_{2.5}$ concentrations and attainment status for this purpose, the output from the CAMx model for the future years is not considered the final answer. That is, the model future year results are not used in an absolute sense, but in a relative sense to correct for model errors and bias. UDAQ performed model simulations for the 2017 baseline emissions and for the projected future year emissions, and the fractional change was calculated in the future year model relative to the baseline year model for the concentrations of each $\text{PM}_{2.5}$ species⁵⁷. These fractional changes are called the model Relative Response Factor (RRF). The RRF approach is based on the assumption that, while the model may have errors in predicting absolute concentrations, the model is reliable for predicting the relative changes in $\text{PM}_{2.5}$ concentration as emissions change in the future. An RRF greater than one indicates that the model predicted $\text{PM}_{2.5}$ is greater in the future year than in

⁵⁷ $\text{PM}_{2.5}$ species includes nitrate (NO_3), sulfate (SO_4), ammonium (NH_4), organic carbon (OC), elemental carbon (EC), chloride (Cl), sodium (Na), crustal material (CM), and other species (other mass). Additional detail can be found at figures IX.A.27.13 and IX.A.36.13 for the Provo and Salt Lake City NAAs, respectively.

the 2017 base year, and typically is a result of increased emissions in the future year associated with projected population growth. (Additional discussion of the RRF can be found in EPA guidance⁵⁸ and in the maintenance plans and TSD submitted by UDAQ.) The model RRF for each PM_{2.5} species is multiplied by the 2017 BDV species concentrations to estimate the FDV for each species. The FDVs are compared to the NAAQs to determine whether attainment is predicted at each monitoring location. Table 5 below provides FDV results for the Provo and Salt Lake City monitoring sites, projection years and shows that no FDV exceeds the NAAQS. Therefore, continued attainment is demonstrated in the Provo and Salt Lake City NAAs.

Table 5. Baseline Design Value, Relative Response Factors, and Future Design Values for all Monitors and Future Projection Years (units of design values are µg/m³, while RRFs are dimensionless)

NAA	Monitor	AQS Site	2016-2018 BDV	2026 RRF	2026 FDV	2035 RRF	2035 FDV
Provo	Lindon	49-049-4001	31.1	0.94	29.3	0.95	29.5*
	Spanish Fork	49-049-5010	28.4**	1	28.4	1	28.4*
Salt Lake City	Brigham City	49-003-0003	32.4	0.85	27.5	1	27.5***
	Bountiful	49-011-0004	28.5	0.99	28.1	1	28.2***
	Hawthorne	49-035-3006	33.4	0.95	31.8	1	32.1***
	Rose Park	49-035-3010	34.9	0.96	33.5	1	33.6***
	Ogden 2	49-057-0002	30.2	0.95	28.8	1	28.9***
	Erda****	49-045-0004	25.5	0.90	23.0	1	23.1***

*This value includes additional emissions added to the MAG MVEB from the safety margin. The safety margin is discussed further in Section II.D.2 below.

**This value excludes data from atypical events discussed above.

***These values include additional emissions added to the WFRC MVEB from the safety margin. The safety margin is discussed further in Section II.D.2 below.

****Erda site uses 2016 speciation data instead of 2011 like the other Salt Lake City NAA monitors because Erda was a new site starting in 2016.

⁵⁸ Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze (EPA, Nov. 2018).

As explained in the Calcagni memorandum, any assumptions concerning emission rates must reflect permanent, enforceable measures. A state cannot take credit in the maintenance demonstration for reductions, unless there are regulations in place requiring those reductions or the reductions are otherwise shown to be permanent. States are expected to maintain implemented control strategies despite redesignation to attainment, unless equivalent reduction measures are adopted. Emission reductions from source shutdowns can be considered permanent and enforceable, to the extent that those shutdowns have been reflected in the SIP and all applicable permits have been modified accordingly.

For a maintenance demonstration, permanent and enforceable measures must be implemented and acted on before the EPA may act on the maintenance plan or redesignation request.⁵⁹ Therefore, the EPA is taking concurrent action on these remaining attainment-related portions of the Moderate and Serious 2006 24-hour PM_{2.5} SIPs for the Provo and Salt Lake City NAAs. Our proposed approval of these remaining attainment-related portions of the Moderate and Serious 2006 24-hour PM_{2.5} Salt Lake City and Provo SIPs for area sources rules, mobile source controls, and stationary source emission limits in Utah's Part H section in their SIP to control direct PM_{2.5} and PM_{2.5} precursors is discussed in Section II.B.3 above. Additionally, the BACM/BACT analysis for area source rules, on-road mobile sources, off-road mobile sources, and stationary sources is discussed in Section II.B.3 above and in our TSD.

Based on the information described above and in our TSD, the EPA proposes to find that Utah has adequately demonstrated that the Provo and Salt Lake City areas will maintain the 2006 24-hour PM_{2.5} NAAQS for the next fifteen years.

c. Monitoring Network

⁵⁹ See Calcagni Memorandum at 4.

Once a NAA has been redesignated to attainment, a state must continue to operate an appropriate air quality monitoring network, in accordance with 40 CFR part 58, to verify the attainment status of the area. For verification, the maintenance plans should contain provisions for continued operation of air quality monitors. We approve these sites annually, and any future change would require discussion and approval from the EPA. In its January 13, 2020 submittal, Utah commits to continuing to maintain an ambient monitoring network for PM_{2.5} in the Provo and Salt Lake City areas, in accordance with 40 CFR part 58 and the Utah SIP.

d. Verification of Continued Attainment

Utah's maintenance plan submittal for the Provo and Salt Lake City areas must indicate how the State will track the progress of the maintenance plans. This is necessary because the emissions projections made for the maintenance demonstrations depend on assumptions of point and area source growth. In Section IX.A.27.c.(7) and Section IX.A.36.c.(7) of the Provo and Salt Lake City maintenance plans, respectively, Utah commits to track and document measured mobile source parameters (e.g., vehicle miles traveled, congestion, fleet mix) and changes in new and modified stationary source permits. If these and the resulting emissions change significantly over time, the State will perform appropriate studies to determine whether additional and/or re-sited monitors are necessary, and whether mobile and stationary source emission projections are on target.

e. Contingency Plan

Section 175A(d) of the Act requires that a maintenance plan include contingency provisions, as necessary, to promptly correct any violation of the NAAQS that occurs after redesignation of the area. For the maintenance plans to be approved under section 175A, a state is not required to have fully adopted contingency measures that will take effect without further

action by the state. However, the contingency plan is an enforceable part of the SIP and should ensure that contingency measures are adopted expeditiously once they are triggered. The plan should discuss the measures to be adopted and a schedule and procedure for adoption and implementation. The contingency plan must require that the state will implement all measures in the Part D nonattainment plan for the area prior to redesignation. The state should also identify the specific indicators, or triggers, that will be used to determine when the contingency plan will be implemented.

As stated in Section IX.A.27.c.(8) and Section IX.A.36.c.(8), of the Provo and Salt Lake City maintenance plans, respectively, triggering the contingency plan does not automatically require a revision to the SIP, nor does it necessarily mean the area will be redesignated once again to nonattainment. Instead, a state will normally have an appropriate timeframe to correct the potential violation with implementing one or more adopted contingency measures. If violations continue to occur, additional contingency measures will be adopted until the violations are corrected.

Upon monitoring a potential violation of the 2006 24-hour PM_{2.5} NAAQS, including exceedances flagged as exceptional events but not concurred with by the EPA, a state will identify a means of corrective action within six months after a potential violation. The state will require implementation of the corrective action no later than one year after the violation is confirmed, and any contingency measures adopted and implemented will become part of the next revised maintenance plan submitted for EPA approval.

The Provo maintenance plan list of contingency measures consists of:

(1) Measures to address emissions from residential wood combustion (i.e., emissions from fireplaces under the existing R307-302 rule), including re-evaluating the thresholds at

which red or yellow burn days are triggered. Residential wood combustion represents a large emissions inventory source category at 43.6% of direct PM_{2.5} emissions in the 2017 county-wide inventory;

(2) Measures to address fugitive dust from area sources. Fugitive dust represents 28.1% of direct PM_{2.5} emissions in the 2017 county-wide inventory; and

(3) Additional measures to address other PM_{2.5} sources identified in the emissions inventory, such as on-road vehicles, non-road vehicles and engines, and industrial sources.

The Salt Lake City maintenance plan list of contingency measures consists of:

(1) Measures to address emissions from residential wood combustion (i.e., emissions from fireplaces under the existing R307-302 rule), including re-evaluating the thresholds at which red or yellow burn days are triggered. Residential wood combustion represents a large emissions inventory source category at 35.4% of direct PM_{2.5} emissions in the 2017 county-wide inventory;

(2) Measures to address fugitive dust from area sources. Fugitive dust represents 31.2% of direct PM_{2.5} emissions in the 2017 county-wide inventory; and

(3) Additional measures to address other PM_{2.5} sources identified in the emissions inventory, such as on-road vehicles, non-road vehicles and engines, and industrial sources.

Based on the above, we propose to find that the contingency measures provided in the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plans are sufficient and meet the requirements of section 175A(d) of the CAA.

f. Subsequent Maintenance Plan Revisions

In accordance with section 175A(b) of the Act, Utah is required to submit a revision to the maintenance plans eight years after the redesignation of the Provo and Salt Lake City areas to

attainment for the 2006 24-hour PM_{2.5} NAAQS. This revision is to provide for maintenance of the NAAQS for an additional ten years following the first ten-year period. In the Provo and Salt Lake City maintenance plans, Utah committed to submit a revised maintenance plan eight years after the approval of the redesignation request and maintenance plan.

5. Meeting Applicable Requirements of Section 110 and Part D of the Act

In order for an area to be redesignated to attainment, section 107(d)(3)(E) requires that it must have met all applicable requirements of section 110 and part D of the Act. We interpret this to mean that, for a redesignation request to be approved, the state must have met all requirements that applied to the subject area prior to, or at the time of, submitting a complete redesignation request. In our evaluation of a redesignation request, we do not need to consider other requirements of the CAA that became due after the date of the submission of a complete redesignation request.

a. Section 110 Requirements

Section 110(a)(2) contains general requirements for nonattainment plans. For purposes of redesignation, the Utah SIP was reviewed to ensure that all applicable requirements under the amended Act were satisfied. On September 21, 2010, Utah submitted an Infrastructure SIP to the EPA demonstrating compliance with the requirements of section 110 applicable to the 2006 24-hour PM_{2.5} NAAQS. We approved this submittal on November 25, 2013 (78 FR 63883), for all section 110 requirements applicable to redesignation.

b. Part D Requirements

Before a PM_{2.5} NAA may be redesignated to attainment, Utah must have fulfilled the applicable requirements of part D. Subpart 1 of part D establishes the general requirements applicable to all NAAs, while subpart 4 of part D establishes specific requirements applicable to

PM₁₀/PM_{2.5} NAAs. The PM_{2.5} SIP Requirements Rule provides that the applicable requirements of CAA section 172 are subsections 172(c)(3) (emissions inventory), 172(c)(5) (NSR permitting program), 172(c)(7) (the section 110(a)(2) air quality monitoring requirements), and 172(c)(9) (contingency measures). We have interpreted the requirements of section 172(c)(2) (RFP) and 172(c)(6) (other measures) as being irrelevant to a redesignation request because they only have meaning for an area that is not attaining the standard. Finally, Utah has not sought to exercise the options that would trigger sections 172(c)(8) (equivalent techniques). Thus, these provisions are also not relevant to this redesignation request.

The requirements of section 172(c), 189(a), and 189(b) regarding attainment of the 2006 24-hour PM_{2.5} NAAQS, have been satisfied through our February 25, 2016 (81 FR 9343), October 19, 2016 (81 FR 71988), October 2, 2019 (84 FR 52368), and February 26, 2020 (85 FR 10989) actions approving portions of the Moderate 2006 24-hour PM_{2.5} Provo and Salt Lake City SIPs. On April 10, 2019 (84 FR 14267) and September 27, 2019 (84 FR 51055), the EPA approved CDDs for the Provo and Salt Lake City NAAs, respectively. As specified at 40 CFR 51.1015(a) in the PM_{2.5} SIP Requirements Rule, upon this determination by the EPA that the Moderate PM_{2.5} NAAs have attained the 2006 24-hour PM_{2.5} NAAQS, the requirements for Utah to submit an attainment demonstration, provisions demonstrating timely implementation of RACM/RACT, a RFP plan, quantitative milestones and quantitative milestone reports, and contingency measures were suspended. Additionally, under 40 CFR 51.1015(b), upon this determination from the EPA that the Serious PM_{2.5} NAAs have attained the 2006 24-hour PM_{2.5} NAAQS, the requirements for the State to submit an attainment demonstration, RFP plan, quantitative milestones and quantitative milestone reports, and contingency measures for the areas were suspended. However, the CDDs for the Provo and Salt Lake City NAAs did not

suspend requirements that were independent of attainment: BACM/BACT, NNSR, and base-year emissions inventories. The BACM/BACT analysis, including any accompanying rule or limit revision, is discussed in Section II.B.3 above and completes this element.

We approved the requirements of the part D NSR permit program for Utah on July 25, 2019 (84 FR 35831), which is briefly discussed above in Section II.B.2. Once the Provo and Salt Lake City areas are redesignated to attainment, the prevention of significant deterioration (PSD) requirements of part C of the Act will apply. We must ensure that the State has made any needed modifications to its PSD regulations so that they will apply in the Provo and Salt Lake City areas after redesignation. Utah's PSD regulations, R307-405 (Permits: Major Sources in Attainment or Unclassified Areas (PSD)), which we approved as meeting all applicable Federal requirements on July 15, 2011 (76 FR 41712) and January 29, 2016 (81 FR 4957), apply to any area designated unclassifiable or attainment, and thus will become fully effective in the Provo and Salt Lake City areas upon redesignation of the areas to attainment.

Additionally, the remaining element that is independent of attainment is the base-year emissions inventories for the Provo and Salt Lake City, which is being acted on in Section II.C.4.a above and is briefly discussed in Section II.B.1 above.

D. Have Transportation Conformity Requirements Been Met?

1. Requirements for Transportation Conformity and Motor Vehicle Emissions Budgets (MVEBs)

Transportation conformity is required by section 176(c) of the CAA. The EPA's conformity rule at 40 CFR part 93, subpart A requires that transportation plans, programs, and projects conform to SIPs, and establishes the criteria and procedures for determining whether or not they conform. Conformity to a SIP means that transportation activities will not produce new

air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. To effectuate its purpose, the EPA's conformity rule requires a demonstration that emissions from a Metropolitan Planning Organization's (MPO) Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval, are consistent with the MVEB(s) contained in a control strategy SIP revision or maintenance plan (40 CFR 93.101, 93.118, and 93.124). An MVEB is defined as the level of mobile source emissions of a pollutant relied on in the attainment or maintenance demonstration to attain or maintain compliance with the NAAQS in the nonattainment or maintenance area. Further information concerning the EPA's interpretations regarding MVEBs can be found in the preamble to the EPA's November 24, 1993, transportation conformity rule.⁶⁰

A 2006 24-hour PM_{2.5} maintenance plan should identify MVEBs for direct PM_{2.5}, NO_x, and all other PM_{2.5} precursors whose on-road mobile source emissions are determined to significantly contribute to PM_{2.5} levels in the area. For both the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plan SIP revisions, the UDAQ also identified VOCs as a precursor to the formation of PM_{2.5} in both areas. For direct PM_{2.5} SIP MVEBs, the MVEB should include direct PM_{2.5} motor vehicle emissions from tailpipes, brake wear, and tire wear. In addition, a state must also consider whether re-entrained road dust is a significant contributor and should be included in the direct PM_{2.5} MVEB.⁶¹ With respect to this requirement, the EPA reviewed information, data, and an analysis from the UDAQ that sufficiently documented that re-entrained road dust emissions were negligible and meet the criteria of 40 CFR 93.102(b)(3) for not needing

⁶⁰ See 58 FR 62193 – 62196.

⁶¹ 40 CFR 93.102(b) and 93.122(f); *see also* conformity rule preamble at 69 FR 40004, 40031-40036 (July 1, 2004).

to be included in the direct PM_{2.5} MVEB. The EPA has concurred with the State's analysis as to re-entrained road dust.⁶²

For maintenance plans that do not identify MVEBs for any other year than the last year of the maintenance plan, the demonstration of consistency with the MVEBs by the applicable MPO must be accompanied by a qualitative finding that there are no factors that would cause or contribute to a new violation or exacerbate an existing violation in the years before the last year of the maintenance plan.⁶³

2. MVEBs Identified in the Provo Maintenance Plan SIP

Utah's Provo 2006 24-hour PM_{2.5} maintenance plan SIP revision specified the maximum mobile source emissions of PM_{2.5}, NO_x and VOC allowed in 2035, the final maintenance year. These mobile source emissions were then initially identified by the State as the maintenance plan's MVEBs. However, through sensitivity dispersion modeling, the state was able to demonstrate that for 2035, additional mobile source emissions could be included such that the Provo area could continue to demonstrate maintenance. These additional direct PM_{2.5}, NO_x, and VOC mobile source emissions were then identified as a "safety margin"⁶⁴ and were added to the initial MVEBs to arrive at the final MVEBs. This process of identifying an additional "safety margin" was correctly followed by the UDAQ and is allowed by 40 CFR 93.124(a). The derivation of the MVEBs, with "safety margin," is described in Section 4 (Mobile Source Budget for Purposes of Conformity) of the maintenance plan, and Section 3.e. (On-road Mobile Baseline and Projection Inventories), ii. (On-Road MVEB Derivation) of the TSD submitted by UDAQ.

⁶² Email from Tim Russ, EPA, to Bill Reiss, UDAQ, subject "PM_{2.5} Re-entrained Road Dust – Utah Request for Deletion from PM_{2.5} Motor Vehicle Emissions Budget (MVEB): EPA Concurrence" (July 20, 2011).

⁶³ 40 CFR 93.118(b)(2)(i).

⁶⁴ 40 CFR 93.101.

As presented in Table IX.A.27.11 of the maintenance plan, the final 2035 MVEBs were 1.5 tpd direct PM_{2.5}, 6.5 tpd NO_x, and 7.0 tpd VOCs.

3. MVEB Trading for Demonstrating Transportation Conformity in the Provo 2006 24-hour PM_{2.5} Maintenance Area

The EPA's transportation conformity regulations allow trading between the direct PM_{2.5} and NO_x and VOC precursor MVEBs where the SIP establishes an appropriate mechanism.⁶⁵ The State of Utah has established an MVEB trading mechanism to allow future increases in on-road mobile sources direct PM_{2.5} emissions to be offset by future decreases in NO_x precursor emissions or future decreases in VOC precursor emissions from on-road mobile sources. The basis for the trading mechanism is each maintenance plan's dispersion modeling demonstration for the year 2035, which established the relative contribution of the NO_x and VOC precursor pollutants. These ratios were developed using data from the air quality maintenance plan's dispersion modeling. Section 4(a)(ii) of the maintenance plan and Section 6.a. (Trading Ratio) of the maintenance plan's TSD provide the following modeling-derived trading ratios: future increases in on-road mobile sources' direct PM_{2.5} emissions may be offset with future decreases in NO_x emissions from on-road mobile sources at a NO_x to PM_{2.5} ratio of 5.8 to 1, and future increases in on-road mobile sources' direct PM_{2.5} emissions may be offset with future decreases in VOC emissions from on-road mobile sources at a VOC to PM_{2.5} ratio of 27.9 to 1.

The maintenance plan also notes that this trading mechanism will only be used by the Mountainland Association of Governments (MAG), the MPO for Utah County, for transportation conformity determination analyses for years after 2035. The maintenance plan further notes that to ensure that the trading mechanism does not impact the ability to meet the NO_x budget and

⁶⁵ 40 CFR 93.124(b).

VOC budgets, the NO_x and VOC emission reductions available to supplement the direct PM_{2.5} MVEB will only be those remaining after the 2035 NO_x and VOC MVEBs have been met. The maintenance plan further articulates that clear documentation of the calculations used in the MVEB trading is to be included in the conformity determination analysis as prepared by the MAG MPO.

4. MVEBs Identified in the Salt Lake City Maintenance Plan SIP

Utah's Salt Lake City 2006 24-hour PM_{2.5} maintenance plan SIP revision specified the maximum mobile source emissions of PM_{2.5}, NO_x and VOC allowed in the final maintenance year which is 2035. These mobile source emissions were then initially identified by the State as the maintenance plan's MVEBs. However, as with the Provo NAA, through sensitivity dispersion modeling the State was able to demonstrate that for 2035, additional mobile sources emissions could be included such that the Salt Lake City area could continue to demonstrate maintenance. These additional direct PM_{2.5}, NO_x, and VOC mobile source emissions were then identified as a "safety margin"⁶⁶ and were then added to the initial MVEBs to arrive at the final MVEBs. This process of identifying an additional "safety margin" was correctly followed by the UDAQ and is as allowed by 40 CFR 93.124(a). The derivation of the MVEBs, with "safety margin," is described in Section 4 (Mobile Source Budget for Purposes of Conformity) of the maintenance plan, and Section 3.e. (On-road Mobile Baseline and Projection Inventories), ii. (On-Road MVEB Derivation) of the TSD submitted by UDAQ. As presented in Table IX.A.36.11 of the maintenance plan, the final 2035 MVEBs were 1.38 tpd direct PM_{2.5}, 21.63 tpd NO_x, and 20.57 tpd VOCs.

⁶⁶ 40 CFR 93.101.

5. MVEB Trading for of Demonstrating Transportation Conformity, in the Salt Lake City 2006 24-hour PM_{2.5} Maintenance Area

As discussed above, the EPA transportation conformity regulations allow trading between direct PM_{2.5} and NO_x and VOC precursor MVEBs, if the SIP establishes an appropriate mechanism.⁶⁷

The State has established an MVEB trading mechanism to allow for future increases in on-road mobile sources direct PM_{2.5} emissions to be offset by future decreases in NO_x precursor emissions or future decreases in VOC precursor emissions from on-road mobile sources. The basis for the trading mechanism is the maintenance plan's dispersion modeling demonstration for the year 2035, which established the relative contribution of the NO_x and VOC precursor pollutants. These ratios were developed from data from the air quality maintenance plan's dispersion modeling. Section 4(a)(ii) of the maintenance plan and Section 6.a. (Trading Ratio) of the maintenance plan's TSD provide the following modeling-derived trading ratios: Future increases in on-road mobile sources' direct PM_{2.5} emissions may be offset with future decreases in NO_x emissions from on-road mobile sources at a NO_x to PM_{2.5} ratio of 6.3 to 1, and future increases in on-road mobile sources' direct PM_{2.5} emissions may be offset with future decreases in VOC emissions from on-road mobile sources at a VOC to PM_{2.5} ratio of 20.9 to 1.

The maintenance plan also notes that this trading mechanism will only be used by the Wasatch Front Regional Council (WFRC), the MPO for Salt Lake City 2006 24-hour PM_{2.5} maintenance area counties, for transportation conformity determination analyses for years after 2035. The maintenance plan further notes that to ensure that the trading mechanism does not impact the ability to meet the NO_x budget and VOC budgets, the NO_x and VOC emission

⁶⁷ 40 CFR 93.124(b)

reductions available to supplement the direct PM_{2.5} MVEB shall only be those remaining after the 2035 NO_x and VOC MVEBs have been met. The maintenance plan further articulates that clear documentation of the calculations used in the MVEB trading are to be included in the conformity determination analysis as prepared by the WFRC MPO.

6. EPA's Evaluation of Mobile Source Emissions and MVEBs

The EPA has evaluated the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plan's emission inventories and maintenance demonstration modeling as described above, and have determined that the direct PM_{2.5}, NO_x, and VOC MVEBs have been appropriately derived for each maintenance plan and are acceptable. We have also evaluated the description and derivation of the MVEB NO_x and VOC trading mechanisms, the supporting modeling data maintenance demonstration, and the TSDs submitted by UDAQ. We find the trading mechanisms acceptable. Therefore, we are proposing to approve the Provo 2006 24-hour PM_{2.5} maintenance plan's 2035 MVEBs of direct PM_{2.5} of 1.5 tpd, NO_x of 6.5 tpd, and VOC of 7.0 tpd. We are also proposing to approve the Salt Lake City 2006 24-hour PM_{2.5} maintenance plan's 2035 MVEBs of direct PM_{2.5} of 1.38 tpd, NO_x of 21.63 tpd, and VOC of 20.57 tpd. In addition, we are also proposing to approve the NO_x/VOC-to-direct PM_{2.5} MVEB trading mechanisms as described above and documented in Section 4(a)(ii) of each respective maintenance plan.

E. Did Utah Follow the Proper Procedures for Adopting this Action?

Section 110(k) of the CAA addresses our actions on submissions of revisions to a SIP. The Act also requires states to observe procedural requirements in developing implementation plans and plan revisions for submission. Section 110(a)(2) of the Act provides that each implementation plan submitted by a state must be adopted after reasonable notice and public hearing. Section 110(l) of the Act similarly provides that each revision to an implementation plan

submitted by a state under the Act must be adopted by the state after reasonable notice and public hearing.

We also must determine whether a submittal is complete and therefore warrants further review and action.⁶⁸ Our completeness criteria for SIP submittals are set out at 40 CFR part 51, appendix V. We attempt to make completeness determinations within 60 days of receiving a submission. However, a submittal is deemed complete by operation of law under section 110(k)(1)(B) of the Act if a completeness determination is not made within six months after receipt of the submission.

On July 11, 2012, the UAQB approved for public comment a new Rule R307-208 (Outdoor Wood Boiler Prohibition), with a comment period from August 1 to August 31, 2012, and a public hearing on August 15, 2012. UDAQ received comments from industry, environmental groups, and citizens, and based on these comments, UDAQ made significant changes to the rule, and on November 7, 2012, requested the UAQB proposed the revised rule for a second comment period. This comment period was held from December 1 through 31, 2012, and no public hearing was requested. Comments were submitted by industry during this second comment period and UDAQ made significant changes to the rule where another comment period was required. On February 6, 2013, the UAQB approved these revisions for a third comment period from March 1 through April 1, 2013. The UAQB approved, and the rule became effective on April 10, 2013 and UDAQ submitted this new rule to the EPA on July 21, 2020.

On September 3, 2014, the UAQB approved the Salt Lake City and Provo Moderate 2006 24-hour PM_{2.5} SIP revisions for public comment, which took place from October 1 through October 31, 2014, with a public hearing on October 20, 2014. Comments were submitted by

⁶⁸ CAA section 110(k)(1); 57 FR 13565.

industry, environmental groups, and the EPA. UDAQ responded to all comments and made insignificant changes that did not warrant a second comment period. The UAQB approved the 2006 24-hour PM_{2.5} Moderate SIP for submission to the EPA on December 3, 2014, and the SIP became effective on December 4, 2014. UDAQ submitted the Moderate 2006 24-hour PM_{2.5} SIPs on December 16, 2014.

On May 3, 2017, the UAQB approved the new rule R307-230 (NO_x Emission Limits for Natural Gas-Fired Water Heaters) for public comment from June 1, 2017 to July 3, 2017; no public hearing was requested. No comments were received, and the rule was approved by the UAQB on August 2, 2017, and it became effective on August 3, 2017. UDAQ submitted the rule to the EPA on July 21, 2020.

On September 7, 2016, the UAQB approved Utah SIP Section IX.H.13 (Source-Specific Emission Limitations in Provo – UT PM_{2.5} Nonattainment Area) for the PM_{2.5} SIPs for public comment, which was accepted from October 1 through October 31, 2016, with a public hearing on October 26, 2016. Comments were submitted by industry and environmental groups. UDAQ responded to all comments and made insignificant changes that did not warrant a second comment period. The UAQB approved Utah SIP Section IX.H.13 for submission to the EPA on December 7, 2016, and the rule became effective on December 8, 2016. UDAQ submitted the revisions on January 19, 2017.

On June 7, 2017, the UAQB approved a new rule, R307-304 (Solvent Cleaning) for the PM_{2.5} SIPs for public comment, which extended from July 1 through August 15, 2017, with a public hearing on July 27, 2017. Comments were submitted by industry and environmental groups. UDAQ responded to all comments and made insignificant changes that did not warrant a second comment period. The UAQB approved the new rule, R307-304 (Solvent Cleaning)] for

submission to the EPA on December 6, 2017, and the rule became effective on December 6, 2017. UDAQ submitted the new rule on May 21, 2020.

On June 7, 2017, the UAQB approved revisions to the following area source rules: R307-335 (Degreasing); R307-343 (Wood Furniture Manufacturing Operations); R307-344 (Paper, Film, and Foil Coatings); R307-345 (Fabric and Vinyl Coatings); R307-346 (Metal Furniture Surface Coatings); R307-347 (Large Appliance Surface Coatings); R307-348 (Magnet Wire Coatings); R307-349 (Flat Wood Panel Coatings); R307-350 (Miscellaneous Metal Parts and Products Coatings); R307-351 (Graphic Arts); R307-352 (Metal Container, Closure, and Coil Coatings); R307-353 (Plastic Parts Coatings); and R307-354 (Automotive Refinishing Coatings). Public comment was accepted from July 1 through August 15, 2017, with a public hearing on July 27, 2017. Comments were submitted by industry and environmental groups. UDAQ responded to all comments and made insignificant changes that did not warrant a second comment period. The UAQB approved these rules, except R307-350, R307-353, and R307-355, to be submitted to the EPA on October 4, 2017. Additionally, on October 4, 2017, the UAQB requested revisions to R307-350, R307-353, and R307-355. UDAQ presented these revisions to the UAQB on December 6, 2017, which required a second comment period, from January 1 through January 31, 2018. Industry submitted comments and UDAQ provided responses within the submittal and made insignificant changes to these rules during the second comment period. R307-335 became effective on October 29, 2017, and R307-343, R307-344, R307-345, R307-346, R307-347, R307-348, R307-349, R307-350, R307-351, R307-352, R307-353, R307-354, and R307-355 became effective on December 6, 2017. UDAQ submitted these rules to the EPA on April 19, 2018.

On June 6, 2018, the UAQB approved the revisions to Utah SIP Sections IX.H.11 and 12, with the accompanying BACM/BACT analysis. Additionally, the BACM/BACT analyses for on-road mobile, off-road mobile, and area source rules were approved for public comment. The comment period was held from July 1 to August 15, 2018, and no public hearing was requested. Comments were received by industry, environmental groups and the EPA. UDAQ responded to these comments and held two follow-up comment periods. The first was held from October 1 through October 31, 2018. This comment period was for the Salt Lake City Serious 2006 24-hour PM_{2.5} SIP, including the potential for UDAQ to complete a major stationary source precursor demonstration for the SIP. The second follow-up comment period was held from November 1 through November 30, 2018. This comment period was for significant revisions to Utah SIP Sections IX.H.11, 12, and BACM/BACT demonstration. Comments were submitted by industry, environmental groups, and the EPA in these second-round comment periods. UDAQ responded to all the comments and took the final SIP package to the January 2, 2019 UAQB meeting which approved the SIP elements to be submitted to the EPA. The SIP became effective on January 3, 2019 and was submitted to the EPA on February 15, 2019.

On May 15, 2018, UDAQ published a Notice of Public Comment Period for the Provo Serious 2006 24-hour PM_{2.5} SIP elements that were not suspended with the April 10, 2019 CDD (84 FR 14267). These elements included: base-year emissions inventory and provisions to ensure BACM/BACT for area sources, major stationary sources, on-road mobile sources, and off-road mobile sources. These documents did not need to go through the UAQB, because no portion of the Utah SIP was revised; UDAQ completed a detailed analysis and supporting inventory for what is currently within the Utah SIP for the Provo 2006 24-hour PM_{2.5} NAA. The comment period was held from May 16, 2018 to June 16, 2018, and a public hearing was not requested.

UDAQ received comments from industry, environmental groups, and the EPA. UDAQ responded to all submitted comments and made only insignificant revisions that did not warrant a second comment period; therefore, UDAQ submitted these remaining Provo Serious 2006 24-hour PM_{2.5} SIP elements to the EPA on February 4, 2019.

On September 4, 2019, the UAQB proposed for public comment the Provo and Salt Lake City maintenance plans and redesignation request and revisions to R307-110-10. The public comment period was held from October 1 to October 31, 2019. UDAQ received comments from industry and citizens, and no public hearing was requested. The comments were minimal and did not prompt UDAQ to substantively revise any documents. UDAQ made minor revisions to the plan once the data and modeling were verified. On December 4, 2019, the UAQB adopted R307-110-10 and the Provo and Salt Lake City maintenance plans/redesignation requests, effective December 5, 2019. UDAQ submitted these revisions and the TSD to the EPA on January 13, 2020.

On November 20, 2019, the UAQB proposed amendments to Utah SIP Section X, Vehicle Inspection and Maintenance Program, Parts B and E; R307-110-32; and R307-110-35. The comment period was held from January 1 to 31, 2020. A public hearing was held on Monday February 3, 2020; however, due to severe weather, a second public hearing was held on Wednesday February 5, 2020. No comments were received, and no one attended either public hearing. On March 4, 2020, the UAQB adopted revisions to R307-110-32; R307-110-35 and to Utah SIP Section X, Vehicle Inspection and Maintenance Program, Parts B and E. These revisions became effective on March 5, 2020, and UDAQ submitted these revisions to the EPA on May 21, 2020.

On October 9, 2020, UDAQ submitted a draft SIP revision to the Utah SIP Section IX.H.12.i.i.C (Kennecott Power Plant), which will remove the startup/shutdown emission limits from this Utah SIP section, to the EPA for parallel processing. The comment period at the State level began October 1 and will end November 3, 2020, with a public hearing being held on November 3, 2020. UDAQ requested this parallel processing so as not to delay action on the 2006 24-hour PM_{2.5} redesignations for the Salt Lake City and Provo NAAs. UDAQ is planning on submitting this SIP revision early in January 2021. After the State formally submits these revisions, the EPA will evaluate the submittal for any changes between the proposed and final versions. As discussed above in Section I.E, the EPA will determine if any changes to the draft submission would warrant another proposed rule, or if on the other hand the agency may proceed with a final action. This formal submission from the State of Utah will accompany either the final rule or the new proposed rule under this docket number.

III. Proposed Action

We are proposing to redesignate the Salt Lake City and Provo 2006 24-hour PM_{2.5} NAAs, and to approve multiple related SIP submissions. We are proposing to approve the Governor of Utah's submittal of January 13, 2020, containing revisions to R307-110-10, and the Provo and Salt Lake City 2006 24-hour PM_{2.5} maintenance plans and redesignation requests. We are also proposing to approve the Governor of Utah's submittal of May 21, 2020, with revisions to R307-110-32, R307-110-35, Utah SIP Section X.B., and Utah SIP Section X.E, which are the I/M programs for Davis and Weber Counties. We are proposing to approve both maintenance plans' 2035 MVEBs. In addition, we are proposing to approve the NO_x and VOC to direct PM_{2.5} MVEB trading mechanisms in each maintenance plan. We are proposing approval of these submissions because UDAQ has adequately addressed all of the requirements of the Act for the

SIP revisions and the redesignation to attainment applicable to the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs. We are using 2017-2019 ambient air quality data from the Provo and Salt Lake City NAAs as the basis for our decision. Upon the effective date of a subsequent final action, the designation status of the Provo and Salt Lake City areas under 40 CFR part 81 will be revised to attainment.

Additionally, we are proposing to approve SIP revisions submitted on January 19, 2017 (Utah SIP Section IX.H.13), and February 15, 2019 (Utah SIP Section IX.H.11 and 12).

Additionally, we are proposing to approve, through parallel processing, Utah's draft October 9, 2020 submission removing the startup/shutdown emission limits for the Kennecott Power Plant found in Utah SIP Section IX.H.12.i.i.C, and the accompanying R307-110-17.

The EPA is proposing to approve the Utah UAC section R307-200 and R307-300 Series revisions and new rules submitted by UDAQ on April 19, 2018, May 21, 2020 and July 21, 2020, which are intended to strengthen the SIP and to serve as BACM for certain area sources for the Utah PM_{2.5} SIP. These rules are R307-208, R307-230, R307-304, R307-335, R307-343, R307-344, R307-345, R307-346, R307-347, R307-348, R307-349, R307-350, R307-351, R307-352, R307-353, R307-354 and R307-355. Additionally, the EPA is proposing to approve the area sources, major stationary sources, on-road mobile sources, and non-road mobile sources BACM/BACT analyses for the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs that were submitted on February 4, 2019 and February 15, 2019.

IV. Incorporation by Reference

In this document, the 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, the EPA is proposing to incorporate by reference revisions to: R307-110-10; R307-110-17; R307-

110-32; R307-110-35; R307-208; R307-230; R307-304; R307-335; R307-343; R307-344; R307-345; R307-346; R307-347; R307-348; R307-349; R307-350; R307-351; R307-352; R307-353; R307-354; R307-355; Utah SIP Section X.B.; Utah SIP Section X.E.; Utah SIP Section IX.H.11, 12, and 13; Utah SIP Section IX.A.27 (Provo 2006 24-hour PM_{2.5} Maintenance Plan); Utah SIP Section IX.A.36 (Salt Lake City 2006 24-hour PM_{2.5} Maintenance Plan); and the redesignation requests for the Provo and Salt Lake City 2006 24-hour PM_{2.5} NAAs to attainment. The EPA has made, and will continue to make, these materials generally available through www.regulations.gov and at the EPA Region 8 Office (please contact the person identified in the **FOR FUTURE INFORMATION CONTACT** section of this preamble for more information).

V. Statutory and Executive Order Reviews

Under the CAA, 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, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this 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 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);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- 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 CAA; and
- Does not provide 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).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule 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

40 CFR Part 52

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

40 CFR Part 81

Environmental protection, Air pollution control, National parks, and Wilderness areas.

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

Dated: October 29, 2020.

Gregory Sopkin,
Regional Administrator,
EPA Region 8.

[FR Doc. 2020-24444 Filed: 11/5/2020 8:45 am; Publication Date: 11/6/2020]