



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2018-0535; FRL-9983-00-Region 9]

Clean Air Plans; 2008 8-Hour Ozone Nonattainment Area Requirements; San Joaquin Valley, California

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve portions of three state implementation plan (SIP) revisions submitted by the State of California to meet Clean Air Act (CAA or “the Act”) requirements for the 2008 8-hour ozone national ambient air quality standards (NAAQS or “standards”) in the San Joaquin Valley, California ozone nonattainment area. First, the EPA is proposing to approve the portions of the *2016 Ozone Plan for the 2008 8-Hour Ozone Standard* (“2016 Ozone Plan”) that address the requirements to demonstrate attainment by the applicable attainment date and implementation of reasonably available control measures, among other requirements. Second, the EPA is proposing to approve the portions of the *Revised Proposed 2016 State Strategy for the State Implementation Plan* (“2016 State Strategy”) related to the ozone control strategy for San Joaquin Valley for the 2008 ozone standards, including a specific aggregate emissions reduction commitment. Lastly, the EPA is proposing to approve an air district rule addressing the emission statement requirement for ozone nonattainment areas. The EPA is not taking action at this time on the portions of the San Joaquin Valley 2016 Ozone Plan that address the requirements for a reasonable further progress (RFP) demonstration, motor vehicle emissions budgets (MVEBs), a base year emissions

inventory, and contingency measures for failure to attain or to meet reasonable further progress milestones. We intend to address these remaining elements in a forthcoming proposal.

DATES: Written comments must arrive 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-R09-OAR-2018-0535 at <https://www.regulations.gov>. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from 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, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Laura Lawrence, EPA Region IX, (415) 972-3407, lawrence.laura@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, “we,” “us” and “our” refer to the EPA.

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I. Regulatory Context

A. Ozone Standards, Area Designations and SIPs

Ground-level ozone pollution is formed from the reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the presence of sunlight.¹ These two pollutants, referred to as ozone precursors, are emitted by many types of sources, including on-and off-road motor

¹ The State of California typically refers to reactive organic gases (ROG) in its ozone-related submissions since VOC in general can include both reactive and unreactive gases. However, since ROG and VOC inventories pertain to common chemical species (*e.g.*, benzene, xylene, *etc.*), we refer to this set of gases as VOC in this proposed rule.

vehicles and engines, power plants and industrial facilities, and smaller area sources such as lawn and garden equipment and paints.

Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and adults with lung disease. Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases.²

Under section 109 of the CAA, the EPA promulgates NAAQS for pervasive air pollutants, such as ozone. The EPA has previously promulgated NAAQS for ozone in 1979 and 1997.³ In 2008, the EPA revised and further strengthened the ozone NAAQS by setting the acceptable level of ozone in the ambient air at 0.075 parts per million (ppm) averaged over an 8-hour period.⁴ Although the EPA further tightened the 8-hour ozone NAAQS to 0.070 ppm in 2015, this action relates to the requirements for the 2008 ozone NAAQS.⁵

Following promulgation of a new or revised NAAQS, the EPA is required under CAA section 107(d) to designate areas throughout the country as attaining or not attaining the NAAQS. The San Joaquin Valley was designated as nonattainment for the 2008 ozone standards on May 21, 2012, and classified as Extreme.⁶

Under the CAA, after the EPA designates areas as nonattainment for a NAAQS, states with nonattainment areas are required to submit SIP revisions that provide for, among other

² See “Fact Sheet – 2008 Final Revisions to the National Ambient Air Quality Standards for Ozone” dated March 2008.

³ The ozone NAAQS promulgated in 1979 was 0.12 parts per million (ppm) averaged over a 1-hour period. See 44 FR 8202 (February 8, 1979). The ozone NAAQS promulgated in 1997 was 0.08 ppm averaged over an 8-hour period. See 62 FR 38856 (July 18, 1997).

⁴ See 73 FR 16436 (March 27, 2008).

⁵ Information on the 2015 ozone NAAQS is available at 80 FR 65292 (October 26, 2015).

⁶ See 77 FR 30088 (May 21, 2012).

things, attainment of the NAAQS within certain prescribed periods that vary depending on the severity of nonattainment. Areas classified as Extreme must attain the NAAQS within 20 years of the effective date of the nonattainment designation.⁷

In California, the California Air Resources Board (CARB or “State”) is the state agency responsible for the adoption and submission to the EPA of California SIPs and SIP revisions, and it has broad authority to establish emissions standards and other requirements for mobile sources. Local and regional air pollution control districts in California are responsible for the regulation of stationary sources and are generally responsible for the development of regional air quality plans. In the San Joaquin Valley, the San Joaquin Valley Air Pollution Control District (SJVAPCD or “District”) develops and adopts air quality management plans to address CAA planning requirements applicable to that region. Such plans are then submitted to CARB for adoption and submittal to the EPA as revisions to the California SIP.

B. The San Joaquin Valley Ozone Nonattainment Area

The San Joaquin Valley nonattainment area for the 2008 ozone standards consists of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, and Kings counties, and the western portion of Kern County. The San Joaquin Valley nonattainment area stretches over 250 miles from north to south, averages a width of 80 miles, and encompasses over 23,000 square miles. It is partially enclosed by the Coast Mountain range to the west, the Tehachapi Mountains to the south, and the Sierra Nevada range to the east.⁸

⁷ See CAA section 181(a)(1), 40 CFR 51.1102 and 51.1103(a).

⁸ For a precise definition of the boundaries of the San Joaquin Valley 2008 ozone nonattainment area, see 40 CFR 81.305.

The population of the San Joaquin Valley in 2015 was estimated to be nearly 4.2 million people, and is projected to increase by 25.3 percent in 2030 to over 5.2 million people.⁹ Ambient 8-hour ozone concentrations in the San Joaquin Valley are above the level of the 2008 8-hour ozone NAAQS. The maximum design value for the area, based on certified data at the Parlier monitor (Air Quality System ID: 06-019-4001), is 0.092 ppm for the 2015-2017 period.¹⁰

C. CAA and Regulatory Requirements for 2008 8-Hour Ozone Nonattainment Area SIPs

States must implement the 2008 ozone standards under Title 1, part D of the CAA, which includes section 172 (“Nonattainment plan provisions in general”) and sections 181-185 of subpart 2 (“Additional Provisions for Ozone Nonattainment Areas”). To assist states in developing effective plans to address ozone nonattainment problems, in 2015 the EPA issued a SIP Requirements Rule (SRR) for the 2008 ozone standards (“2008 Ozone SRR”) that addresses *e.g.*, attainment dates, requirements for emissions inventories, attainment and RFP demonstrations, and the transition from the 1997 8-hour ozone standards to the 2008 8-hour ozone standards and associated anti-backsliding requirements.¹¹ The 2008 Ozone SRR is codified at 40 CFR part 51, subpart AA. We discuss each of the CAA and regulatory requirements for 2008 8-hour ozone plans in more detail below.

The EPA’s 2008 Ozone SRR was challenged, and on February 16, 2018, the U.S. Court of Appeals for the D.C. Circuit (“D.C. Circuit”) published its decision in *South Coast Air Quality*

⁹ The population estimates and projections include all of Kern County, not just the portion of Kern County within the jurisdiction of the SJVAPCD. *See* Chapter 1 and table 1-1 of the District’s 2016 Ozone Plan for the 2008 8-Hour Ozone Standard.

¹⁰ *See* Air Quality System (AQS) Design Value Report, 20180621_DVRpt_SJV_2008-8hrO3_2015-2017.pdf in the docket for this proposed action. The AQS is a database containing ambient air pollution data collected by the EPA and state, local, and tribal air pollution control agencies from over thousands of monitors.

¹¹ *See* 80 FR 12264, March 6, 2015.

*Management District v. EPA*¹² vacating portions of the 2008 Ozone SRR. The 2008 Ozone SRR required the baseline emissions inventory for RFP plans to be the emissions inventory for the most recent calendar year for which a triennial inventory is required to be submitted to the EPA under subpart A (“Air Emissions Reporting Requirements”) of 40 CFR part 51, and it allowed states to use an alternative year, between 2008 and 2012, for the baseline emissions inventory provided the state demonstrates why the alternative baseline year is appropriate. In the *South Coast* decision, the D.C. Circuit vacated the provisions of the 2008 Ozone SRR that allowed states to justify and use an alternative baseline year for demonstrating RFP. The RFP demonstrations in several California ozone plans developed to address nonattainment area requirements for the 2008 ozone standards, including the ozone plan for the South Coast Air Basin and San Joaquin Valley, are based on the alternative baseline year of 2012. In response to the *South Coast* decision regarding alternative baseline years, the South Coast Air Quality Management District filed a petition in the D.C. Circuit requesting rehearing on the RFP baseline year issue to clarify that nonattainment areas may use the year of the nonattainment designation (*i.e.*, 2012 for the 2008 ozone standards) as the baseline year for calculating RFP.¹³ Because the D.C. Circuit has not yet issued a response to the petitions filed for rehearing, the EPA is not proposing action at this time on the San Joaquin Valley’s RFP demonstration for the 2008 ozone standards.¹⁴ Several required attainment plan elements are related to the RFP demonstration, namely the MVEBs, the base year emissions inventory, and contingency measures. Therefore,

¹² *South Coast Air Quality Management District v. EPA*, 882 F.3d 1138 (D.C. Cir. 2018) (“*South Coast*”).

¹³ See Petition for Panel Rehearing of South Coast Air Quality Management District, D.C. Cir., No. 15-1115, docket item #1727571, filed April 20, 2018.

¹⁴ The EPA also filed a petition for rehearing in the D.C. Circuit but did not request rehearing of the RFP baseline year issue.

the EPA is also not proposing action at this time on these three elements. For completeness, however, in this proposed action, we provide a summary of all the required elements, including those for which we will be proposing action at a later time.

II. Submissions from the State of California to Address 2008 Ozone Requirements in the San Joaquin Valley

A. Summary of Submissions

On August 24, 2016, in response to the area's designation as nonattainment and classification of Extreme for the 2008 ozone NAAQS, CARB submitted the 2016 Ozone Plan to the EPA as a revision to the California SIP.¹⁵ Prior to submittal to the EPA, CARB approved the 2016 Ozone Plan, which had previously been adopted by the District and forwarded to CARB for approval and submittal to the EPA.

The 2016 Ozone Plan submittal consists of documents originating from the District (*e.g.*, the 2016 Ozone Plan with Appendices and the District Governing Board Resolution) and CARB (*e.g.*, the CARB Staff Report and Appendices, and the CARB Resolution adopting the 2016 Ozone Plan and CARB Staff Report as a SIP revision).¹⁶ The 2016 Ozone Plan addresses the requirements for base year and projected future year emissions inventories, air quality modeling demonstrating attainment of the 2008 ozone NAAQS by the applicable attainment year, provisions demonstrating implementation of reasonably available control measures (RACM),

¹⁵ See letter from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX, dated August 24, 2016.

¹⁶ See four enclosures to the August 24, 2016 letter from CARB to EPA Region 9: (I) District Submittal, including letter from Sheraz Gill, Director of Strategies and Incentives for the District, to Richard Corey, Executive Officer, CARB, and five appendices titled: (1) ARB SIP Completeness Checklist, (2) 2016 Ozone Plan with Appendices, (3) Governing Board Resolution Adopting the 2016 Ozone Plan, (4) Governing Board Memo, and (5) Evidence of Public Hearing; (II) CARB Evidence of Public Notice and Transcript; (III) CARB Staff Report; (IV) CARB Resolution 16-8 adopting the 2016 Ozone Plan and CARB Staff Report.

provisions for advanced technology/clean fuels for boilers, provisions for transportation control strategies and measures, a demonstration of RFP, and contingency measures for failure to make RFP or attain, among other requirements.

The 2016 Ozone Plan discusses compliance with the emission statement requirement under CAA section 182(a)(3)(B) in terms of District Rule 1160, “Emission Statements.” District Rule 1160 was adopted by the District on November 18, 1992, and submitted to the EPA by CARB on January 11, 1993, as a revision to the California SIP.¹⁷ The EPA has not yet taken action on the January 11, 1993 submittal of District Rule 1160 but is proposing to do so as part of today’s proposed action.

In approving the 2016 Ozone Plan, CARB anticipated the subsequent adoption of a commitment by CARB to achieve an aggregate emission reduction of 8 tons per day (tpd) of NO_x in San Joaquin Valley by 2031. On March 23, 2017, CARB approved the 2016 State Strategy as a revision to the California SIP and submitted the 2016 State Strategy to the EPA on April 27, 2017.¹⁸ The 2016 State Strategy, as approved and submitted by CARB, includes an 8 tpd NO_x emission reduction commitment for San Joaquin Valley. The 2016 State Strategy commits to certain regulatory initiatives (*e.g.*, new California low-NO_x standards for on-road heavy-duty engines and low-emission diesel requirements for off-road equipment) in addition to aggregate emissions reductions by certain years in specific areas, such as San Joaquin Valley.¹⁹

B. Clean Air Act Procedural Requirements for Adoption and Submission of SIP Revisions

¹⁷ See letter from Michael H. Scheible, Executive Officer, CARB, to Daniel W. McGovern, Regional Administrator, EPA Region 9, dated January 11, 1993.

¹⁸ See letter from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX, dated April 27, 2017.

¹⁹ See table 5 of the 2016 State Strategy.

CAA sections 110(a)(1) and (2) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submission of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with the EPA's implementing regulations in 40 CFR 51.102.

Both the District and CARB have satisfied the applicable statutory and regulatory requirements for reasonable public notice and hearing prior to the adoption and submittal of the 2016 Ozone Plan, the 2016 State Strategy, and District Rule 1160. With respect to the 2016 Ozone Plan, the District conducted a public workshop on May 23, 2014, and held two additional workshops on March 22, 2016, on the Draft 2016 Ozone Plan. On May 11, 2016, the District published notices in several local newspapers of a public hearing to be held on June 16, 2016, for the adoption of the 2016 Ozone Plan.²⁰ On June 16, 2016, the District held the public hearing, and, through Resolution No. 16-6-20, adopted the 2016 Ozone Plan and directed the Executive Officer to forward the plan to CARB for inclusion in the California SIP.

CARB also provided the required public notice and opportunity for public comment on the 2016 Ozone Plan. On June 17, 2016, CARB released for public review its staff report for the 2016 Ozone Plan and published a notice of public meeting to be held on July 21, 2016, to consider approval of the 2016 Ozone Plan.²¹ On July 21, 2016, CARB held the hearing and approved the staff report and directed its Executive Officer to submit the CARB staff report and the 2016 Ozone Plan to the EPA for approval into the California SIP.²² On August 24, 2016, the

²⁰ See the August 24, 2016 SIP submittal package, item I.E, "Evidence of Public Hearing."

²¹ See <https://www.arb.ca.gov/regact/nonreg/2016/sjvsip2016.pdf>.

²² See CARB Resolution 16-8.

Executive Officer of CARB submitted the 2016 Ozone Plan to the EPA and included the transcript of the hearing held on July 21, 2016.²³ On December 19, 2016, the EPA determined that the submittal was complete.²⁴

With respect to the 2016 State Strategy, on May 17, 2016, CARB circulated for public review and comment the Proposed State SIP Strategy, provided a 60-day comment period, and provided notice of a public hearing by the CARB Board to be held on September 22, 2016. On March 7, 2017, in response to comments received during the public comment period and later during public workshops, and based on Board direction provided to staff during the September 22, 2016 CARB Board meeting, CARB released a Revised Proposed State SIP Strategy. On March 23, 2017, through Resolution 17-7, CARB adopted the Revised Proposed State SIP Strategy (herein referred to as the “2016 State Strategy”) after a duly-noticed public hearing. On April 27, 2017, CARB submitted the 2016 State Strategy to the EPA as a revision to the California SIP.

With respect to District Rule 1160, the District conducted four public workshops to receive comment, and published notices in several local newspapers of a public hearing to be held on November 18, 1992. The District adopted the rule on November 18, 1992, and forwarded the rule to CARB for approval and submittal to the EPA as a revision to the California SIP.

CARB did so by letter dated January 11, 1993.²⁵

Based on information provided in each SIP revision and summarized above, the EPA has determined that all hearings were properly noticed. Therefore, we find that the submittals of the

²³ See transcript of the July 21, 2016 Meeting of the State of California Air Resources Board.

²⁴ See letter from Elizabeth J. Adams, EPA Region IX to Richard W. Corey, CARB, dated December 19, 2016.

²⁵ See CARB submittal “State of California Implementation Plan for Achieving and Maintaining the National Ambient Air Quality Standards, Exhibit A,” January 11, 1993.

2016 Ozone Plan, the 2016 State Strategy, and District Rule 1160 meet the procedural requirements for public notice and hearing in CAA sections 110(a) and 110(l) and 40 CFR 51.102.

III. Evaluation of the 2016 Ozone Plan

A. Emissions Inventories

1. Statutory and Regulatory Requirements

CAA sections 172(c)(3) and 182(a)(1) require states to submit for each ozone nonattainment area a “base year inventory” that is a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the area. In addition, the 2008 Ozone SRR requires that the inventory year be selected consistent with the baseline year for the RFP demonstration, which is usually the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the Air Emissions Reporting Requirements.²⁶ The EPA has issued guidance on the development of base year and future year emissions inventories for 8-hour ozone and other pollutants.²⁷ Emissions inventories for ozone must include emissions of VOC and NO_x and represent emissions for a typical ozone season weekday.²⁸ States should include documentation explaining how the emissions data were

²⁶ See 2008 Ozone SRR at 40 CFR 51.1115(a) and the Air Emissions Reporting Requirements at 40 CFR part 51 subpart A.

²⁷ See “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” (“EI Guidance”), EPA-454/B-17-002, May 2017. At the time the 2016 Ozone Plan was developed, the following EPA emissions inventory guidance applied: “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations” (“EI Guidance”), EPA-454-R-05-001, November 2005.

²⁸ 40 CFR 51.1115(a) and (c), and 40 CFR 51.1100(bb) and (cc).

calculated. In estimating mobile source emissions, states should use the latest emissions models and planning assumptions available at the time the SIP is developed.²⁹

2. Summary of State's Submission

The base year and future year baseline inventories for NO_x and VOC for the San Joaquin Valley 2008 ozone nonattainment area, together with additional documentation for the inventories, are found in Chapter 3 and Appendix B of the 2016 Ozone Plan. Because ozone levels in San Joaquin Valley are typically higher from May through October, these inventories represent average summer day emissions. The 2016 Ozone Plan includes a base year inventory for 2012 and future year inventories for the RFP milestone years. The inventories reflect reductions from adopted federal, state, and district measures. All inventories include emissions from point, area, on-road, and non-road sources. Both base year and projected future year inventories use the most current version of California's mobile source emissions model, EMFAC2014, for estimating on-road motor vehicle emissions.³⁰

The emissions inventories in the 2016 Ozone Plan were developed jointly by CARB and the District, based on data from these two agencies, combined with data from the California Department of Transportation, the Department of Motor Vehicles, the Department of Pesticide Regulation, the California Energy Commission and regional transportation agencies. The emissions inventories reflect actual emission reports for point sources, and estimates for mobile and area-wide sources are based on the most recent models and methodologies. CARB and the District also reviewed the growth profiles for point and area-wide source categories and updated

²⁹ See 80 FR 12264, at 12290 (March 6, 2015).

³⁰ EMFAC is short for EMISSION FACTOR.

them as necessary to ensure that the emission projections are based on data that reflect historical trends, current conditions, and recent economic and demographic forecasts.

CARB developed the emissions inventory for on-road and off-road mobile sources. On-road mobile source emissions, which include passenger vehicles, buses, and trucks, were estimated using CARB’s EMFAC2014 model. The on-road emissions were calculated by applying EMFAC2014 emission factors to the transportation activity data provided by the local San Joaquin Valley transportation agencies from their 2014 adopted Regional Transportation Plan. The EPA has approved this model for use in SIPs and transportation conformity analyses.³¹ Non-road mobile source emissions were estimated using either newer category-specific models or, where a new model was not available, the OFFROAD2007 model.

The 2012 inventory was projected to 2015 and future years using CARB’s California Emission Projection Analysis Model (CEPAM). The District identified several measures that achieve emissions reductions from stationary sources in and after 2012, including rules for open burning, boilers, flares, solid fuel boilers, and glass melting furnaces, among others.³² Table 1 provides a summary of the emission estimates prepared for the 2016 Ozone Plan for the base year (2012) and the attainment year (2031).

Table 1. San Joaquin Valley Base Year and Attainment Year Emissions Inventory Summary (Summer Average tons per day)

Category	NO _x (2012)	NO _x (2031)	VOC (2012)	VOC (2031)
Stationary Sources	42.4	29.5	85.3	100.0
Area Sources	4.7	4.9	147.0	152.7
On-road Mobile	187.7	45.1	60.5	18.3
Off-road Mobile	104.7	52.4	44.5	25.7
Total	339.6	131.9	337.3	296.7

Source: 2016 Ozone Plan, Appendix B (note that because of rounding conventions, the totals may not reflect total of all categories).

³¹ See 80 FR 77337 (December 14, 2015).

³² See table 5-1 of the 2016 Ozone Plan. All the rules listed in table 5-1 have been approved as revision to the SIP.

3. The EPA's Review of the State's Submission

As described elsewhere, the 2008 Ozone SRR requires the base year inventory to be consistent with the RFP baseline year inventory; accordingly, the 2016 Ozone Plan uses the year 2012 for the base year inventory and the RFP baseline year inventory. The EPA has evaluated the 2012 base year inventory and the methodologies used by the District and CARB, and we find them to be comprehensive, accurate, and current. However, as discussed elsewhere, we are not taking action at this time to approve the base year emissions inventory or the emissions inventories for any of the RFP milestone years in the 2016 Ozone Plan. We intend to take action on the base year emissions inventory at a later time, together with the RFP demonstration, and other elements affected by the *South Coast* decision.

However, we note that the attainment demonstration and VMT offset demonstration rely on the 2012 base year inventory. As discussed in section III.D of this proposed action, the EPA's draft modeling guidance states that the EPA does not require a particular year to be used for the base year for modeling purposes. The most appropriate base year may be the most recent year of the National Emissions Inventory, or it may be selected in view of unusual meteorology, transport patterns, or other factors that may vary from year to year.³³ Based on our review of the emissions inventories provided in the 2016 Ozone Plan, we find that the 2012 base year emissions inventory and future year emissions inventories that are derived therefrom provide an acceptable basis for the attainment demonstration and VMT offset demonstration in the 2016 Ozone Plan.

³³ See section 2.7.1 of *Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze*, December 2014 Draft, EPA OAQPS; available at <https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance>.

B. Emission Statement

1. Statutory and Regulatory Requirements

Section 182(a)(3)(B)(i) of the Act requires states to submit a SIP revision requiring owners or operators of stationary sources of VOC or NO_x to provide the state with statements of actual emissions from such sources. Statements must be submitted at least every year and must contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Section 182(a)(3)(B)(ii) of the Act allows states to waive the emission statement requirement for any class or category of stationary sources that emit less than 25 tons per year (tpy) of VOC or NO_x, if the state provides an inventory of emissions from such class or category of sources as part of the base year or periodic inventories required under CAA sections 182(a)(1) and 182(a)(3)(A), based on the use of emission factors established by the EPA or other methods acceptable to the EPA.

The preamble of the 2008 Ozone SRR states that if an area has a previously approved emission statement rule for the 1997 ozone NAAQS or the 1-hour ozone NAAQS that covers all portions of the nonattainment area for the 2008 ozone NAAQS, such rule should be sufficient for purposes of the emission statement requirement for the 2008 ozone NAAQS.³⁴ The state should review the existing rule to ensure it is adequate and, if so, may rely on it to meet the emission statement requirement for the 2008 ozone NAAQS. Where an existing emission statement requirement is still adequate to meet the requirements of this rule, states can provide the rationale for that determination to the EPA in a written statement in the SIP to meet this requirement. States should identify the various requirements and how each is met by the existing emission

³⁴ See 80 FR 12264, at 12291 (March 6, 2015).

statement program. Where an emission statement requirement is modified for any reason, states must provide the revisions to the emission statement as part of their SIP.

2. Summary of the State's Submission

The District adopted Rule 1160, "Emission Statements," on November 18, 1992, to address the SIP submittal requirements for emission statements for areas such as San Joaquin Valley that were designated as nonattainment for the 1-hour ozone NAAQS under the CAA Amendments of 1990. CARB submitted District Rule 1160 to the EPA on January 11, 1993.

District Rule 1160 applies to all owners and operators of any stationary source category that emits or may emit VOC or NO_x, but allows the District to waive the requirements for any class or category of stationary sources that emit less than 25 tpy of VOC or NO_x under certain circumstances. Under District Rule 1160, owners or operators must provide the District, on an annual basis, with a written statement in such form as the District prescribes, showing actual emissions of VOC and NO_x from the source. Owners or operators may comply with the requirement by completing and returning either an Emission Statement or an Emission Data Survey Form. Both the emission statement and the data survey form are intended to provide an estimate of actual emissions from the given stationary source. Lastly, District Rule 1160 requires certification by the responsible official that the information is accurate to the best knowledge of the individual certifying the information.

The 2016 Ozone Plan concludes that District Rule 1160 continues to meet the emission statement requirements of CAA section 182(a)(3)(B) and relies on that rule to meet the emission statement requirements for the 2008 ozone standards.³⁵

³⁵ See section 3.11.2 ("Emission Reporting Programs") in the 2016 Ozone Plan.

3. The EPA's Review of the State's Submission

As noted previously, the EPA has not taken action on CARB's January 11, 1993 submittal of District Rule 1160 but is proposing to do so herein. First, we have evaluated District Rule 1160 for compliance with the specific requirements for emission statements under CAA section 182(a)(3)(B)(i). We find that District Rule 1160 applies within the entire ozone nonattainment area; applies to all permitted sources of VOC and NO_x; requires the submittal, on an annual basis, of the types of information necessary to estimate actual emissions from the subject stationary sources; and requires certification by the responsible officials representing the owners and operators of stationary sources. As such, we find that District Rule 1160 meets the requirements of CAA section 182(a)(3)(B)(i).

We also note that, while District Rule 1160 provides authority to the District to waive the requirement for any class or category of stationary sources that emit less than 25 tpy, such a waiver is allowed under CAA section 182(a)(3)(B)(ii) so long as the state includes estimates of such class or category of stationary sources in base year emissions inventories and periodic inventories submitted under CAA sections 182(a)(1) and 182(a)(3)(A), based on EPA emissions factors or other methods acceptable to the EPA. We recognize that emissions inventories developed by CARB for San Joaquin Valley routinely include actual emissions estimates for all stationary sources or classes or categories of such sources, including those less than 25 tpy, and that such inventories provide the basis for inventories submitted to meet the requirements of CAA sections 182(a)(1) and 182(a)(3)(A). By approval of emissions inventories as meeting the requirements of CAA sections 182(a)(1) and 182(a)(3)(A), the EPA is implicitly accepting the methods and factors used by CARB to develop those emissions estimates. Our most recent

approval of a base year emissions inventory for San Joaquin Valley is found at 77 FR 12652 (March 1, 2012) (approval of base year emissions inventory for the 1997 ozone NAAQS).

Thus, for the reasons stated above, we propose to approve District Rule 1160, which CARB submitted on January 11, 1993, as meeting the emission statement requirements under CAA section 182(a)(3)(B). For more detailed information concerning our evaluation of District Rule 1160, please see the related technical support document.³⁶

C. Reasonably Available Control Measures Demonstration and Control Technology

1. Statutory and Regulatory Requirements

CAA section 172(c)(1) requires that each attainment plan provide for the implementation of all RACM as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through implementation of reasonably available control technology), and also provide for attainment of the NAAQS. The 2008 Ozone SRR requires that, for each nonattainment area required to submit an attainment demonstration, the state concurrently submit a SIP revision demonstrating that it has adopted all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements.³⁷

The EPA has previously provided guidance interpreting the RACM requirement in the General Preamble for the Implementation of the Clean Air Act Amendments of 1990 and in a memorandum entitled “Guidance on the Reasonably Available Control Measure Requirement

³⁶ EPA, Region IX, Technical Support Document for EPA’s Rulemaking for the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District Rule 1160 Emission Statements.

³⁷ See 40 CFR 51.1112(c).

and Attainment Demonstration Submissions for Ozone Nonattainment Areas.”³⁸ In summary, to address the requirement to adopt all RACM, states should consider all potentially reasonable control measures for source categories in the nonattainment area to determine whether they are reasonably available for implementation in that area and whether they would, if implemented individually or collectively, advance the area’s attainment date by one year or more.³⁹ Any measures that are necessary to meet these requirements that are not already either federally promulgated, or part of the state’s SIP, or otherwise creditable in the SIP, must be submitted in enforceable form as part of the state’s attainment plan for the area.⁴⁰

CAA section 172(c)(6) requires that nonattainment area plans include enforceable emission limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for timely attainment of the NAAQS.⁴¹ Under the 2008 Ozone SRR, all control measures needed for attainment must be implemented no later than the beginning of the attainment year ozone

³⁸ See General Preamble, 57 FR 13498 at 13560 (April 16, 1992) and Memorandum dated November 30, 1999, from John Seitz, Director, OAQPS, to Regional Air Directors, titled “Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas.”

³⁹ *Ibid.* See also 44 FR 20372 (April 4, 1979), and memorandum dated December 14, 2000, from John S. Seitz, Director, OAQPS, to Regional Air Directors, titled “Additional Submission on RACM From States with Severe One-Hour Ozone Nonattainment Area SIPs.”

⁴⁰ For ozone nonattainment areas classified as Moderate or above, CAA section 182(b)(2) also requires implementation of RACT for all major sources of VOC and for each VOC source category for which the EPA has issued a Control Techniques Guideline (CTG). CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_x. In Extreme areas, a major source is a stationary source that emits or has the potential to emit at least 10 tpy of VOC or NO_x (see CAA section 182(e) and (f)). Under the 2008 Ozone SRR, states were required to submit SIP revisions meeting the RACT requirements of CAA sections 182(b)(2) and 182(f) no later than 24 months after the effective date of designation for the 2008 Ozone NAAQS and to implement the required RACT measures as expeditiously as practicable but no later than January 1 of the 5th year after the effective date of designation (see 40 CFR 51.1112(a)). California submitted the CAA section 182 RACT SIP for San Joaquin Valley on July 18, 2014, and the EPA fully approved this submission on July 12, 2018. See 83 FR 41006 (August 17, 2018). We are not addressing the section 182 RACT requirements in today’s proposed rule.

⁴¹ See also CAA section 110(a)(2)(A).

season.⁴² The attainment year ozone season is defined as the ozone season immediately preceding a nonattainment area's maximum attainment date.⁴³

2. Summary of the State's Submission

For the 2016 Ozone Plan, the District, CARB, and the local metropolitan planning organizations (MPOs) each undertook a process to identify and evaluate potential RACM that could contribute to expeditious attainment of the 2008 Ozone NAAQS in the San Joaquin Valley. We describe each agency's efforts below.

a. District's RACM Analysis

The District's RACM demonstration and control strategy for the 2008 ozone NAAQS focuses on stationary and area source controls and is described in Chapter 5, Chapter 6 and Appendix C of the 2016 Ozone Plan. To identify potential RACM, the District reviewed 59 control measures for a number of source categories and compared its measures against federal requirements and regulations implemented by the State and other air districts. In the years prior to the adoption of the 2016 Ozone Plan, the District developed and implemented comprehensive plans to provide for attainment of the NAAQS for fine particulate matter (PM_{2.5}) (*e.g.*, the 2012 PM_{2.5} Plan for the 2006 PM_{2.5} NAAQS) and ozone (*e.g.*, the 2004 Ozone Plan for the 1-hour ozone NAAQS, the 2007 Ozone Plan for the 1997 ozone NAAQS, and the 2013 Ozone Plan for the 1-hour ozone NAAQS).⁴⁴ These plans have resulted in the District's adoption of many new rules and amendments to existing rules for stationary and area sources. In addition, although the

⁴² See 40 CFR 51.1108(d).

⁴³ See 40 CFR 51.1100(h).

⁴⁴ See the EPA's approval of the 2012 PM_{2.5} Plan at 81 FR 59876 (August 31, 2016), the EPA's approval of the 2004 Ozone Plan and 2013 Ozone Plan at 75 FR 10420 (March 8, 2010) and 81 FR 2140 (January 15, 2016), and the EPA's approval of the 2007 Ozone Plan at 77 FR 12652 (March 1, 2012).

District does not have authority to directly regulate emissions from mobile sources, the District has implemented control strategies to indirectly reduce emissions from mobile sources.⁴⁵

Table 2 identifies the District control measures listed in table 5-1 of the 2016 Ozone Plan, which contribute toward attainment of the 2008 ozone NAAQS by 2031. The EPA has approved all of these measures into the California SIP.

Table 2. District Rules Achieving Emissions Reductions In or After 2012

Rule #	Rule Title	Date Adopted or Last Amended ^a	Citation for EPA Approval into SIP
4103	Open Burning	4/15/10	77 FR 214 (1/4/12)
4307	Boilers, Steam Generators, and Process Heaters 2 to 5 MMBtu per hour ^b	4/21/16	82 FR 37817 (8/14/17)
4308	Boilers, Steam Generators, and Process Heaters 0.075 to less than 2 MMBtu per hour	11/14/13	80 FR 7803 (2/12/15)
4311	Flares	6/18/09	76 FR 68106 (11/3/11)
4306 / 4320	Boilers, Steam Generators, and Process Heaters greater than 5 MMBtu per hour	10/16/08	75 FR 1715 (1/13/2010)/ 76 FR 16696 (3/25/11)
4352	Solid Fuel Boilers, Steam Generators, and Process Heaters	12/15/11	77 FR 66548 (11/6/12)
4354	Glass Melting Furnaces	5/19/11	78 FR 6740 (1/31/13)
4565	Biosolids, Animal Manure, Poultry Litter Operations	3/15/07	77 FR 2228 (1/17/12)
4566	Organic Material Composting Operations	8/18/11	77 FR 71129 (11/29/12)
4601	Architectural Coatings	12/17/09	76 FR 69135 (11/8/11)
4605	Aerospace Assembly and Component Coating Operations	6/16/11	76 FR 70886 (11/16/11)
4653	Adhesives and Sealants	9/16/10	77 FR 7536 (2/13/12)
4682	Polystyrene, Polyethylene, and Polypropylene Products Manufacturing	9/20/07	77 FR 58312 (9/20/12)
4684	Polyester Resin Operations	8/18/2011	77 FR 5709 (2/6/12)
4702	Internal Combustion Engines	11/14/13	81 FR 24029 (4/25/16)
4905	Natural Gas-Fired, Fan-Type Residential Central Furnaces	1/22/15	81 FR 17390 (3/29/16)
9610	State Implementation Plan Credit for Emission Reductions Generated Through Incentive Programs	6/20/13	80 FR 19020 (4/9/15)

^a Reflects more recent submittals for rules 4307, 4605, 4684 and 4702 than reflected in table 5-1 of the 2016 Ozone Plan.

^b Million British Thermal Units (MMBtu).

Source: Table 5-1 of the 2016 Ozone Plan.

⁴⁵ See, e.g., Rule 9410 (Employer-Based Trip Reduction), approved into the California SIP at 81 FR 6761 (February 9, 2016); Rule 9510 (Indirect Source Review), approved into the California SIP at 89 FR 26609 (May 9, 2011); and Rule 9310 (School Bus Fleets), approved into the California SIP at 75 FR 10420 (March 8, 2010).

The District provides a more comprehensive evaluation of its RACM control strategy in Appendix C of the 2016 Ozone Plan, which provides the following:

- Description of the sources within the category or sources subject to the rule;
- Base year and projected baseline year emissions for the source category affected by the rule;
- Discussion of the current requirements of the rule; and
- Discussion of potential additional control measures, including, in many cases, a discussion of the technological and economic feasibility of the additional control measures. This includes comparison of each District rule to analogous control measures adopted by other agencies (including the EPA, the South Coast Air Quality Management District, and the Bay Area Air Quality Management District).

We provide more detailed information about these control measures in our technical support document.⁴⁶

Based on its evaluation of all of these measures, the District concludes that it is implementing all RACM for sources under the District's jurisdiction.

b. CARB's RACM Analysis

Chapters 5 and 6 of the 2016 Ozone Plan contain CARB's evaluation of mobile source and other statewide control measures that reduce emissions of NO_x and VOC in the San Joaquin Valley. Source categories for which CARB has primary responsibility for reducing emissions in

⁴⁶ EPA, Region IX, Technical Support Document: Proposed Approval of Portions of the San Joaquin Valley 2016 Ozone Plan: District Stationary and Area Source Control Strategy.

California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. The California Department of Pesticide Regulation is responsible for regulating the application of pesticides, which is a significant source of VOC emissions in the San Joaquin Valley.

Given the need for substantial emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, the State of California has been a leader in the development of stringent control measures for on-road and off-road mobile sources and the fuels that power them. California has unique authority under CAA section 209 (subject to a waiver by the EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines.

Historically, the EPA has allowed California to take into account emissions reductions from CARB regulations for which the EPA has issued waiver or authorizations under CAA section 209, notwithstanding the fact that these regulations have not been approved as part of the California SIP. However, in response to the decision by the United States Court of Appeals for the Ninth Circuit (“Ninth Circuit”) in *Committee for a Better Arvin v. EPA*, the EPA has since approved mobile source regulations for which waiver authorizations have been issued as revisions to the California SIP.⁴⁷

CARB’s mobile source program extends beyond regulations that are subject to the waiver or authorization process set forth in CAA section 209 to include standards and other requirements to control emissions from in-use heavy-duty trucks and buses, gasoline and diesel

⁴⁷ See, e.g., 81 FR 39424 (June 16, 2016), 82 FR 14447 (March 21, 2017), and 83 FR 8404 (February 27, 2018). See also *Committee for a Better Arvin*, 786 F.3d 1169 (9th Cir. 2015).

fuel specifications, and many other types of mobile sources. Generally, these regulations have been submitted and approved as revisions to the California SIP.⁴⁸

While all of the identified State control measures contribute to some degree to attainment of the 2008 ozone standards in the San Joaquin Valley, some measures are identified in particular in the 2016 Ozone Plan as providing significant emissions reductions relied upon for attainment of the 2008 ozone standards. These measures include the On-Road Heavy-Duty Diesel In-Use Regulation, the Low Emission Vehicle III and Zero Emission Vehicle Regulation, and the Heavy-Duty Truck Idling Requirements.⁴⁹

The 2016 Ozone Plan concludes that, in light of the comprehensiveness and stringency of CARB's mobile source program, all RACM for mobile sources under CARB's jurisdiction are being implemented, and that no additional measure would advance attainment of the 2008 ozone NAAQS by at least a year.

c. Local Jurisdictions' RACM Analysis and Transportation Control Measures (TCMs)

The local jurisdictions' RACM analysis was conducted by the eight MPOs in the San Joaquin Valley and is provided in Appendix D of the 2016 Ozone Plan.⁵⁰ This analysis focuses on the MPOs' efforts to implement Transportation Control Measures (TCMs) as part of the adopted Congestion Mitigation and Air Quality cost-effectiveness policy and in the development

⁴⁸ See, e.g., the EPA's approval of standards and other requirements to control emissions from in-use heavy-duty diesel-powered trucks, at 77 FR 20308 (April 4, 2012), revisions to the California on-road reformulated gasoline and diesel fuel regulations at 75 FR 26653 (May 12, 2010), and revisions to the California motor vehicle I/M program at 75 FR 38023 (July 1, 2010).

⁴⁹ See action approving into the SIP the On-Road Heavy-Duty Diesel Regulation, the Low Emission Vehicle and Zero Emission Vehicle Regulation, and the Heavy-Duty Truck Idling Requirements at 81 FR 39424 (June 16, 2016).

⁵⁰ These eight MPOs represent the eight counties in the San Joaquin Valley nonattainment area: The San Joaquin Council of Governments, the Stanislaus Council of Governments, the Merced County Association of Governments, the Madera County Transportation Commission, The Council of Fresno County Governments, The Kings County Association of Governments, the Tulare County Association of Governments, and the Kern Council of Governments.

of each Regional Transportation Plan (RTP). The RTPs include improvements to each component of the transportation system including: transit, passenger rail, goods movement, aviation and airport ground access, and highways; and include TCM projects that reduce vehicle use, or change traffic flow or congestion conditions. The 2016 Ozone Plan concludes that no additional local RACM measures, beyond those measures already adopted, would advance attainment of the 2008 ozone NAAQS by at least a year.

3. The EPA's Review of the State's Submission

The process followed by the District in the 2016 Ozone Plan to identify RACM is generally consistent with the EPA's recommendations in the General Preamble. The process included compiling a comprehensive list of potential control measures for sources of NO_x and VOC in the San Joaquin Valley.⁵¹ As part of this process, the District evaluated potential controls for all relevant source categories for economic and technological feasibility and provided justifications for the rejection of certain identified measures. The District concluded in its RACM evaluation that no additional measures, individually or in combination, could advance attainment by one year.

We have reviewed the District's determination in the 2016 Ozone Plan that its stationary and area source control measures represent RACM for NO_x and VOC. In our review, we also considered our previous evaluations of the District's rules in connection with our approval of the San Joaquin Valley Reasonably Available Control Technology (RACT) SIP demonstration for

⁵¹ See Appendix C of the 2016 Ozone Plan.

the 2008 ozone NAAQS.⁵² Based on this review, we believe the District's rules provide for the implementation of RACM for stationary and area sources of NO_x and VOC.

With respect to mobile sources, we recognize CARB as a leader in the development and implementation of stringent control measures for on-road and off-road mobile sources, and its current program addresses the full range of mobile sources in the San Joaquin Valley through regulatory programs for both new and in-use vehicles. With respect to transportation controls, we note that the MPOs have a program to fund cost-effective TCMs. Overall, we believe that the programs developed and administered by CARB and the MPOs provide for the implementation of RACM for NO_x and VOC in the San Joaquin Valley.

In the 2016 Ozone Plan, the District estimated that it would take a reduction of 2.7 tpd of NO_x to advance attainment by one year from 2031 to 2030.⁵³ Based on our review of the results of these RACM analyses, we agree with the State's and District's conclusion that there are no additional reasonably available measures that would advance attainment of the 2008 ozone standards in the San Joaquin Valley by at least one year. For the foregoing reasons, we propose to find that the 2016 Ozone Plan provides for the implementation of all RACM as required by CAA section 172(c)(1) and 40 CFR 51.1112(c).

D. Attainment Demonstration

1. Statutory and Regulatory Requirements

Section 182(c)(2)(A) of the Clean Air Act requires that a plan for an ozone nonattainment area classified Serious or above include a "demonstration that the plan ... will provide for attainment of the ozone [NAAQS] by the applicable attainment date. This attainment

⁵² See 83 FR 41006 (August 17, 2018).

⁵³ See 2016 Ozone Plan, Chapter 6, section 6.2.1.

demonstration must be based on photochemical grid modeling or any other analytical method determined ... to be at least as effective.” The attainment demonstration predicts future ambient concentrations for comparison to the NAAQS, making use of available information on measured concentrations, meteorology, and current and projected emissions inventories of ozone precursors, including the effect of control measures in the plan.

Areas classified Extreme for the 2008 ozone NAAQS must demonstrate attainment as expeditiously as practicable, but no later than 20 years after the effective date of designation as nonattainment. The San Joaquin Valley was designated nonattainment effective July 20, 2012, and the area must demonstrate attainment of the standards by July 20, 2032.⁵⁴ An attainment demonstration must show attainment of the standards for a full calendar year before the attainment date, so in practice, Extreme nonattainment areas must demonstrate attainment in 2031.

The EPA’s recommended procedures for modeling ozone as part of an attainment demonstration are contained in *Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze* (“Modeling Guidance”).⁵⁵ The Modeling Guidance includes recommendations for a modeling protocol, model input preparation, model performance evaluation, use of model output for the numerical NAAQS attainment test, and modeling documentation. Air quality modeling is performed using meteorology and emissions

⁵⁴ See 80 FR 12264.

⁵⁵ *Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze*, December 2014 Draft, EPA OAQPS; available at <https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance>. This updates, but is largely consistent with, the earlier *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8-Hour Ozone and PM_{2.5} NAAQS and Regional Haze*, EPA-454/B-07-002, April 2007. Additional EPA modeling guidance can be found in 40 CFR 51 Appendix W, *Guideline on Air Quality Models*, 82 FR 5182, January 17, 2017; available at <https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance>.

from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance. At a minimum, a model performance evaluation should include an *operational* evaluation, with statistics and graphical plots assessing the ability of the model to replicate observed ozone concentrations. Where possible, performance of other chemical species participating in ozone formation chemistry, such as NO₂ and peroxyacetyl nitrate, should also be examined.

To ensure that the model achieves accurate results based on relevant atmospheric phenomena, without errors that compensate each other to give just the appearance of accuracy, and to guide refinement of model inputs, it is also recommended to assess, at least to some extent, if the model correctly represents the underlying physical and chemical processes. This can be done via *diagnostic* evaluation, such as assessing model sensitivity to changes in inputs and process analysis. It can also be done via *dynamic* evaluation, such as assessing the modeled concentration change between different historical periods. Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a Relative Response Factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS. The Modeling Guidance also recommends supplemental air quality analyses, which may be used as part of a Weight of Evidence (WOE) analysis. A WOE analysis corroborates the attainment demonstration by considering evidence other than the main air quality modeling attainment test, such as trends and additional monitoring and modeling analyses.

Unlike the RFP demonstration and the emissions inventory requirements, the 2008 SRR does not specify that a specific year must be used for the modeled base year for the attainment

demonstration. The Modeling Guidance also does not require a particular year to be used as the base year for 8-hour ozone plans.⁵⁶ The Modeling Guidance explains that the most recent year of the National Emissions Inventory may be appropriate for use as the base year for modeling, but that other years may be more appropriate when considering meteorology, transport patterns, exceptional events, or other factors that may vary from year to year.⁵⁷ Therefore, the base year used for the attainment demonstration need not be the same year used to meet the requirements for emissions inventories and RFP.

2. Summary of the State's Submission

CARB performed the air quality modeling for the 2016 Ozone Plan with assistance from the District. The modeling relies on a 2012 base year and demonstrates attainment in 2031. The Plan's modeling protocol is in Appendix I of the 2016 Ozone Plan and contains all the elements recommended in the Modeling Guidance. Those include: selection of model, time period to model, modeling domain, and model boundary conditions and initialization procedures; a discussion of emissions inventory development and other model input preparation procedures; model performance evaluation procedures; selection of days and other details for calculating RRFs; and provisions for archival and access to raw model inputs and outputs.

The modeling and modeled attainment demonstration are described in Chapter 4 of the 2016 Ozone Plan and in more detail in Appendix H, which provides a description of model input preparation procedures and various model configuration options. Appendix J of the 2016 Ozone Plan provides the coordinates of the modeling domain and thoroughly describes the development of the modeling emissions inventory, including its chemical speciation, its spatial and temporal

⁵⁶ See Modeling Guidance at section 2.7.1.

⁵⁷ *Ibid.*

allocation, its temperature dependence, and quality assurance procedures. The modeling analysis used version 5 of the Community Multiscale Air Quality (CMAQ) photochemical model, developed by the EPA. The 2007 version of the State-wide Air Pollution Research Center chemical mechanism (SAPRC07) was used within CMAQ. SAPRC07 is an update to a mechanism that has been used for the San Joaquin Valley and other areas of the US, and it has been peer-reviewed as discussed in the protocol. To prepare meteorological input for CMAQ, the Weather and Research Forecasting model version 3.6 (WRF) from the National Center for Atmospheric Research was used. The overall WRF meteorological modeling domain covers California's neighboring states, and major portions of the next outer ring of states, with 36-kilometer (km) resolution (*i.e.*, grid cell size); it has nested domains with 12 km and 4 km resolution, with the latter, innermost covering the entire State of California; and it has 30 vertical layers extending up to 16 km. The overall CMAQ air quality modeling domain includes the entire State of California with 12 km resolution and a nested domain with finer 4 km resolution covering California's Central Valley, including the San Joaquin Valley; and it has 18 vertical layers that overlap the WRF layers. The WRF modeling uses routinely available meteorological and air quality data collected during 2012. Those data cover May through September, a period that spans the period of highest ozone concentrations in the San Joaquin Valley. Two analyses in the WOE analysis in Appendix K section 4 provide the justification for the choice of 2012 as model base year, based on ozone concentrations and various meteorological measures of the ozone forming potential of candidate years 2010 – 2013. CMAQ and WRF are both recognized in the Modeling Guidance as technically sound, state-of-the-art models. The areal extent and the horizontal and vertical resolution used in these models were adequate for modeling San Joaquin Valley ozone.

The WRF meteorological model results and performance statistics are described in Appendix H, section 3.2. Supplemental figures S.1 - S.20 provide hourly time series graphs of wind speed, direction, and temperature for the Northern, Central, and Southern sub-regions of the San Joaquin Valley for each month that was modeled. The modeling shows a positive bias in wind speed, and various biases in temperature (negative in Southern & Central, positive in Northern) and in humidity (opposite direction to temperature).⁵⁸ These biases are also seen in the hourly supplemental figures. For example, peak wind speeds are often higher than observed (positive bias) but the overprediction decreases at moderate and low wind speeds and in the later months of the simulation, while the overall diurnal pattern matches consistently. At first glance the biases in wind speed and in relative humidity seem large relative to their base values.⁵⁹ However, the 2016 Ozone Plan states that the bias and error are relatively small and are comparable to those seen in previous meteorological modeling of central California and cited in the 2016 Ozone Plan. The 2016 Ozone Plan compared statistics for wind speed, relative humidity, and temperature to benchmarks from a study cited in the Modeling Guidance. The comparison shows that the mean bias in the 2016 Ozone Plan's meteorological modeling is on the high side but within the benchmarks, the mean error is lower, and the Index of Agreement⁶⁰ is quite good, especially for temperature. The Modeling Guidance cautions against using comparisons to performance benchmarks as pass/fail tests, and stresses their use in assessing general confidence and in guiding refinement of model inputs when statistics fall outside

⁵⁸ See Appendix H, table H-7, Figures H-3 and H-5.

⁵⁹ See, e.g., table H-7 Southern San Joaquin Valley wind speed bias of 0.5 relative to base speed 2.4 meters per second, and relative humidity bias of 18 percent relative to 55 percent.

⁶⁰ The Index of Agreement is a statistical metric. See page 47 of the Modeling Protocol to the 2016 Ozone Plan.

benchmark ranges.⁶¹ In summary, the 2016 Ozone Plan's meteorological modeling performance statistics appear satisfactory.

As recommended in the Modeling Guidance, the 2016 Ozone Plan also provided a phenomenological evaluation of the meteorological modeling, assessing its ability to replicate qualitative features of the area's meteorological phenomena that could be important for ozone concentrations. The 2016 Ozone Plan's evaluation confirmed that the model was able to capture important phenomena such as up-slope and down-slope flows in the mountain ranges surrounding the Central Valley, and the split in flow toward north and south as winds enter the Central Valley through the Sacramento River delta area.

Ozone model performance statistics are described in the 2016 Ozone Plan at Appendix H, section 5.2. That section includes tables of statistics recommended in the Modeling Guidance for 8-hour and 1-hour daily maximum ozone for the three San Joaquin Valley sub-regions. Supplemental figures S.21 - S.102 provide frequency distributions, scatterplots, and hourly time series graphs of ozone concentrations for each of the 25 monitors located in the San Joaquin Valley. The supplemental hourly time series show generally good performance, though many individual daily ozone peaks are underpredicted. This is confirmed by the ozone frequency distributions (*e.g.*, figure S.1), scatter plots (*e.g.*, figure S.22), and plots of bias against concentration (*e.g.*, figure S.25). The highest concentrations also have the largest negative bias. The 2016 Ozone Plan states that the performance statistics are comparable to those seen in previous modeling of ozone in central California and cited in the 2016 Ozone Plan. It also found the statistics to be within the ranges for other modeling applications discussed in a study cited by

⁶¹ See page 30 of the Modeling Guidance.

the Modeling Guidance. The 2016 Ozone Plan's corresponding graphic (figure 11) shows that for negative bias (underprediction), the 2016 Ozone Plan's modeling is among the poorer performing in the range, but for overall error it is among the best performing. Note that, because only relative changes are used from the modeling, the underprediction of absolute ozone concentrations does not mean that future concentrations will be underestimated.

As noted in the 2016 Ozone Plan's modeling protocol, the Modeling Guidance recognizes that limited time and resources can constrain the extent of the diagnostic and dynamic evaluation of model performance undertaken.⁶² No diagnostic evaluation, as that term is used in the Modeling Guidance, was described in the 2016 Ozone Plan. Appendix H to the 2016 Ozone Plan includes section 5.2.1 entitled "Diagnostic Evaluation," though it actually describes a *dynamic* evaluation in which model predictions of ozone concentrations for weekdays and weekends were compared to each other and to observed concentrations. Since NO_x emissions are substantially less on weekends, these comparisons provide useful information on how the model responds to emission changes. The 2016 Ozone Plan notes that for the modeled year 2012, the model-predicted relationship of weekday and weekend concentrations tends to match the observed (*i.e.*, the predicted amount of "weekend effect," or increase in weekend ozone despite decrease in NO_x emissions, matches the observed concentrations). The modeled weekend response is also consistent with an independent analysis cited in the 2016 Ozone Plan of the historical response of ozone to reductions in NO_x.⁶³ The dynamic evaluation provides strong

⁶² See page 51 of the Modeling Protocol to the 2016 Ozone Plan, and page 63 of the Modeling Guidance.

⁶³ See 2016 Ozone Plan Appendix K, Weight of Evidence, section 7 "Weekend Effect in the San Joaquin Valley" provides additional information on the observed concentrations and how the weekday-weekend difference has changed over the years. Section 9 "Corroborating Studies" provides additional information on the trend in ozone formation regime.

evidence that the model is working well at simulating ozone and how it responds to emission changes.

As for meteorological performance, the Modeling Guidance cautions against pass/fail tests, in favor of an overall confidence assessment and identification of causes of poor performance to help guide refinement of model input.⁶⁴ Confidence in the model's ability to correctly simulate emission changes would have been enhanced if the 2016 Ozone Plan had discussed any input refinement and performance improvement process that was undertaken, and if it had provided some performance assessment of non-ozone chemical species participating in ozone formation chemistry. The 2016 Ozone Plan contains a good operational evaluation showing good model performance, and also a useful dynamic evaluation. Some diagnostic evaluations as described in the Modeling Guidance would have provided additional confidence in the model. The information provided in the 2016 Ozone Plan supports the adequacy of the modeling for the attainment demonstration.

After model performance for the 2012 base case was accepted, the model was applied to develop RRFs for the attainment demonstration.⁶⁵ This entailed running the model with the same meteorological inputs as before, but with adjusted emissions inventories to reflect the expected changes between 2012 and the 2031 attainment year. These modeling inventories excluded “emissions events which are either random and/or cannot be projected to the future ... wildfires, ... and the [San Francisco Bay Area] Chevron refinery fire.”⁶⁶ The base year or “reference year” modeling inventory was the same as the inventory for the modeling base case except for these

⁶⁴ See Modeling Guidance, pages 62-63.

⁶⁵ See 2016 Ozone Plan, section 4.4, and Appendix H, section 4.2.

⁶⁶ See 2016 Ozone Plan, Appendix H, page H-11.

exclusions. The 2031 inventory projects the base year with these exclusions into the future by including the effect of economic growth and emissions control measures.⁶⁷ To include the fires in the base year but not the future year would effectively credit the 2016 Ozone Plan's control measures with eliminating emissions from the fire; therefore, it makes more sense to treat the base year and future year consistently with respect to fire or other unpredictable emissions events. The Modeling Guidance recommends that day-specific wildfire emissions be used in modeling of both base and future years, possibly with spatial and temporal averaging to create "average" fire emissions that avoid acute effects from large fires, but it also notes that other approaches may be appropriate.⁶⁸ The 2016 Ozone Plan's approach of excluding wildfires altogether avoids uncertainties in fire emissions and meteorology. It has the drawback that the model response to 2012 – 2031 emission changes does not reflect the effect of wildfires, which occur in most years and could affect the atmospheric chemistry and its response to those emission changes. The approach used in the 2016 Ozone Plan is reasonable, but would be stronger with a more complete rationale in the modeling protocol or the Plan documentation.

The 2016 Ozone Plan carried out the attainment test procedure consistent with the Modeling Guidance. The RRFs were calculated as the ratio of future to base year concentrations. This was done for each monitor using the top 10 ozone days over 0.060 ppm,⁶⁹ using the base year concentration in the highest of the three by three modeling grid cells centered on the monitor, and the future concentration from the same day and grid cell, with some exclusions,

⁶⁷ In general, the "reference year" could be a different calendar year than the modeling base case. The base case modeling replicates a particular year's measured concentrations using that same year's meteorology and emissions. Modeling of *e.g.*, a regulatorily required year used as the reference year would still use the same meteorology, but emissions from the required year.

⁶⁸ See Modeling Guidance, page 53.

⁶⁹ The Modeling Guidance and the 2016 Ozone Plan state concentrations in terms of parts per billion.

e.g., if there were too few days above 0.060 ppm. The resulting RRFs were then applied to 2012 weighted base year design values⁷⁰ for each monitor to arrive at 2031 future year design values.⁷¹ The highest 2031 ozone design value is 0.074 ppm, which occurs at the Clovis-N Villa Avenue site; this is below the 2008 8-hr ozone NAAQS of 0.075 ppm, thus demonstrating attainment.

The 2016 Ozone Plan includes an additional attainment demonstration using “banded” RRFs.⁷² The banded approach is described more fully in a study cited in the 2016 Ozone Plan. The underlying idea is to divide ozone concentrations into ranges or bands and compute RRFs for each band separately. This allows different ozone concentrations to respond differently to emission changes. The Modeling Guidance procedure instead assumes that the relative response is the same for all ozone concentrations. The banded RRF approach is a reasonable refinement, since higher concentrations generally are more responsive to emissions changes.⁷³ This approach was used in the 2013 1-hour Ozone San Joaquin Valley Plan approved by the EPA, and it is cited by the Modeling Guidance as an alternative approach.⁷⁴ In this case, the banded approach increased design values for some monitors and decreased them for others; for Clovis, the site with the highest 2031 design value, the design value decreased from 0.074 ppm to 0.072 ppm. This provides corroboration for the attainment demonstration.

⁷⁰ The Modeling Guidance recommends that RRFs be applied to the average of three three-year design values centered on the base year, in this case the design values for 2010-2012, 2011-2013, and 2012-2015. This amounts to a 5-year weighted average of individual year 4th high concentrations, centered on the base year of 2012, and so is referred to as a weighted design value.

⁷¹ See 2016 Ozone Plan, tables 4-4 and H-13.

⁷² *Id.* Appendix H, section 5.5 and Appendix K, section 8.2

⁷³ See Modeling Guidance, page 100.

⁷⁴ 81 FR 19492, April 5, 2016; see also proposal 81 FR 2140, January 15, 2016 at 2151. See also Modeling Guidance section 4.1.2, page 99.

Finally, the 2016 Ozone Plan modeling includes an “Unmonitored Area Analysis” to assess the attainment status of locations other than monitoring sites.⁷⁵ The Modeling Guidance describes a “gradient adjusted spatial fields” procedure along with the EPA software (“Modeled Attainment Test Software” or MATS) used to carry it out.⁷⁶ This procedure uses a form of interpolation, combining monitored concentrations and modeled gradients (modeled changes in concentration with distance from a monitor) to estimate future concentrations at locations without a monitor. The 2016 Ozone Plan states that an Unmonitored Area Analysis was carried out using software developed by CARB. The procedure was described to be the same as that outlined in the Modeling Guidance, with the exception that it was restricted to locations spanned by monitors (*i.e.*, within a convex shape enclosing the monitors) rather than extrapolating beyond to the full rectangular modeling domain as in the EPA procedure. The stated reason for this restriction is that it avoids the inherent uncertainty associated with extrapolation outside the monitoring network. Most of the nonattainment area is nevertheless covered in the analysis, since there are monitors outside the San Joaquin Valley nonattainment area. However, a strip along the eastern edge, from the foothills to the crest of the Sierra Nevada mountains, is not included in the analysis.⁷⁷ The method used is an improvement over the simpler interpolation used in some previous plans. The 2016 Ozone Plan states that the results showed concentrations below the NAAQS for all locations, with concentrations under 70 ppb except for small regions near Tracy and Fresno. This Unmonitored Area Analysis supports the demonstration that all locations in the San Joaquin Valley will attain the NAAQS by 2031.

⁷⁵ See 2016 Ozone Plan, Appendix H, section 5.4.

⁷⁶ See section 4.7 of the Modeling Guidance.

⁷⁷ See 2016 Ozone Plan, figure J-14.

In addition to the formal attainment demonstration, the Plan also contains a WOE analysis in Appendix K. Some of the contents of Appendix K have already been discussed above, *e.g.*, section 4 “Suitability of 2012 as a Base Year for Modeling”, section 7 “Weekend Effect in the San Joaquin Valley,” section 8 “Modeled Attainment Projections” with a comparison of the standard attainment demonstration RRFs and the band RRFs emissions reductions. These all add support and corroboration for the modeling used in the attainment demonstration and the credibility of attainment in 2031. Other sections also add support to the attainment demonstration, mainly by showing long term downward trends that continue through 2014, the latest year available prior to 2016 Ozone Plan development. Downward trends are demonstrated for measured ozone concentrations, number of days above the ozone NAAQS, measured concentrations of the ozone precursors NO_x and VOC, and emissions of NO_x and VOC. The downward measured ozone trends are seen even when they are adjusted for meteorology (using Classification and Regression Trees to identify the meteorological variables that affect ozone, followed by multiple regression of ozone on those variables). These all show the substantial air quality progress made in the San Joaquin Valley and add support to the attainment demonstration for 2031.

3. The EPA’s Review of the State’s Submission

The modeling shows that existing CARB and District control measures are sufficient to attain the 2008 8-hour Ozone NAAQS by 2031 at all monitoring sites in the San Joaquin Valley. Given the extensive discussion of modeling procedures, tests, and performance analyses called for in the Modeling Protocol and the good model performance, the EPA finds that the modeling is adequate for purposes of supporting the attainment demonstration. The EPA finds that the

State has demonstrated attainment of the NAAQS by the applicable attainment date, and we propose to approve the attainment demonstration provided in the 2016 Ozone Plan.

E. Rate of Progress Plan and Reasonable Further Progress Demonstration

1. Statutory and Regulatory Requirements

Requirements for RFP are specified in CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B). CAA section 172(c)(2) requires that plans for nonattainment areas provide for RFP, which is defined as such annual incremental reductions in emissions of the relevant air pollutant as are required under part D (“Plan Requirements for Nonattainment Areas”) or may reasonably be required by the EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable date. CAA section 182(b)(1) specifically requires that ozone nonattainment areas that are classified as Moderate or above demonstrate a 15 percent reduction in VOC between the years of 1990 and 1996. The EPA has typically referred to section 182(b)(1) as the Rate of Progress (ROP) requirement. For ozone nonattainment areas classified as Serious or higher, section 182(c)(2)(B) requires reductions averaged over each consecutive 3-year period beginning 6 years after the baseline year until the attainment date of at least 3 percent of baseline emissions per year. The provisions in CAA section 182(c)(2)(B)(ii) allow an amount less than 3 percent of such baseline emissions each year if the state demonstrates to the EPA that the plan includes all measures that can feasibly be implemented in the area in light of technological achievability.

The 2008 Ozone SRR considers areas classified Moderate or higher to have met the ROP requirements of CAA section 182(b)(1) if the area has a fully approved 15 percent ROP plan for

the 1-hour or 1997 8-hour ozone standards, provided the boundaries of the ozone nonattainment areas are the same.⁷⁸ For such areas, the RFP requirements of CAA section 172(c)(2) require areas classified as Moderate to provide a 15 percent emission reduction of ozone precursors within 6 years of the baseline year. Areas classified as Serious or higher must meet the RFP requirements of CAA section 182(c)(2)(B) by providing an 18 percent reduction of ozone precursors in the first 6-year period, and an average ozone precursor emission reduction of 3 percent per year for all remaining 3-year periods thereafter.⁷⁹ Under the CAA 172(c)(2) and CAA 182(c)(2)(B) RFP requirements, NO_x emissions reductions may be substituted for VOC reductions.⁸⁰

Except as specifically provided in CAA section 182(b)(1)(C), emissions reductions from all SIP-approved, federally promulgated, or otherwise SIP-creditable measures that occur after the baseline are creditable for purposes of demonstrating that the RFP targets are met. Because the EPA has determined that the passage of time has caused the effect of certain exclusions to be *de minimis*, the RFP demonstration is no longer required to calculate and specifically exclude reductions from measures related to motor vehicle exhaust or evaporative emissions promulgated by January 1, 1990; regulations concerning Reid vapor pressure promulgated by November 15, 1990; measures to correct previous RACT requirements; and, measures required to correct previous inspection and maintenance (I/M) programs.⁸¹

The 2008 Ozone SRR requires the RFP baseline year to be the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA (*i.e.*, 2011), but it

⁷⁸ See 70 FR 12264 at 12271 (March 6, 2015).

⁷⁹ *Ibid.*

⁸⁰ See 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); and 70 FR 12264 at 12271 (March 6, 2015).

⁸¹ See 40 CFR 51.1110(a)(7).

also allows states to use an alternative baseline year between 2008 and 2012 if the state demonstrates why the alternative baseline year is appropriate.⁸² As discussed previously, in the *South Coast* decision issued on February 16, 2018, the D.C. Circuit upheld the EPA's RFP baseline year based on the year of the most recent triennial emissions inventory (*i.e.*, 2011), but it vacated the provisions of the 2008 Ozone SRR that allowed states to justify and use an alternative baseline year between 2008 and 2012 for demonstrating RFP because the EPA had not provided a statutory basis for allowing use of alternative baseline years. On April 20, 2018, the South Coast Air Quality Management District submitted a petition for rehearing on the RFP baseline year issue, arguing that 2012 has a valid statutory basis because it was the year of designation for the 2008 Ozone NAAQS.⁸³

2. Summary of the State's Submission

The 2016 Ozone Plan addresses the 15 percent ROP requirement by noting that the EPA approved a 15 percent ROP plan for the 1-hour ozone NAAQS for the San Joaquin Valley in 1997, and that the 1-hour ozone nonattainment area covers the entire nonattainment area for the 2008 ozone standards.⁸⁴

To address the RFP requirements, the 2016 Ozone Plan selected 2012 as the RFP baseline year and provided emissions inventories for the RFP baseline, milestone and attainment years.⁸⁵ The RFP demonstration in the 2016 Ozone Plan uses NO_x substitution beginning in

⁸² See 40 CFR 51.1110(b).

⁸³ See Petition for Panel Rehearing of South Coast Air Quality Management District, D.C. Cir., No. 15-1115, docket item #1727571, filed April 20, 2018.

⁸⁴ See Chapter 6 of the 2016 Ozone Plan. See also 62 FR 1150 (January 8, 1997).

⁸⁵ See the discussion beginning on page 6-10 and table 6-3.

milestone year 2018 to meet VOC emission targets and concluded that the RFP demonstration meets the applicable requirements for each milestone year and the attainment year.

3. The EPA's Review of the State's Submission

We have reviewed the 2016 Ozone Plan and agree that the EPA has approved a 15 percent ROP demonstration for the 1-hour ozone NAAQS, fulfilling the requirements of CAA section 182(b)(1).⁸⁶

For the RFP requirements under CAA sections 172(c)(2) and 182(c)(2)(B), the Ozone SRR established 2011 as the RFP baseline year. As discussed previously, the D.C. Circuit vacated provisions of the 2008 Ozone SRR allowing states to use an alternative RFP baseline year between 2008 and 2012 in lieu of 2011. Because the 2016 Ozone Plan used 2012 as the RFP baseline year, we are not taking action at this time on the RFP demonstration in the 2016 Ozone Plan.

F. Transportation Control Strategies and Measures to Offset Emissions Increases from Vehicle Miles Traveled

1. Statutory and Regulatory Requirements

Section 182(d)(1)(A) of the Act requires the state, if subject to its requirements for a given area, to submit a revision that identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled (VMT) or number of vehicle trips in such area.⁸⁷

⁸⁶ See 62 FR 1150, at 1183 (January 8, 1997).

⁸⁷ CAA section 182(d)(1)(A) includes three separate elements. In short, under section 182(d)(1)(A), states are required to adopt transportation control strategies and measures (1) to offset growth in emissions from growth in VMT, and, (2) in combination with other emission reduction requirements, to demonstrate RFP, and (3) to demonstrate attainment. For more information on the EPA's interpretation of the three elements of section

In *Association of Irrigated Residents v. EPA*, the Ninth Circuit ruled that additional transportation control measures are required whenever vehicle emissions are projected to be higher than they would have been had VMT not increased, even when aggregate vehicle emissions are actually decreasing.⁸⁸ In response to the Ninth Circuit’s decision, the EPA issued a memorandum titled “Guidance on Implementing Clean Air Act Section 182(d)(1)(A): Transportation Control Measures and Transportation Control Strategies to Offset Growth in Emissions Due to Growth in Vehicle Miles Travelled” (herein referred to as the “August 2012 guidance”).⁸⁹

The August 2012 guidance discusses the meaning of Transportation Control Strategies (TCSs) and Transportation Control Measures (TCMs) and recommends that both TCSs and TCMs be included in the calculations made for the purpose of determining the degree to which any hypothetical growth in emissions due to growth in VMT should be offset. Generally, TCSs encompass many types of controls including, for example, motor vehicle emissions limitations, I/M programs, alternative fuel programs, other technology-based measures, and TCMs, that would fit within the regulatory definition of “control strategy.”⁹⁰ Such measures include, but are not limited to, those listed in CAA section 108(f). TCMs generally refer to programs intended to reduce VMT, the number of vehicle trips, or traffic congestion, including, *e.g.*, programs for

182(d)(1)(A), please see 77 FR 58067, at 58068 (September 19, 2012) (proposed withdrawal of approval of South Coast VMT emissions offset demonstrations).

⁸⁸ See *Association of Irrigated Residents v. EPA*, 632 F.3d 584, at 596-597 (9th Cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012 (“*Association of Irrigated Residents*”).

⁸⁹ Memorandum from Karl Simon, Director, Transportation and Climate Division, Office of Transportation and Air Quality, to Carl Edlund, Director, Multimedia Planning and Permitting Division, EPA Region VI, and Deborah Jordan, Director, Air Division, EPA Region IX, August 30, 2012.

⁹⁰ See, *e.g.*, 40 CFR 51.100(n). TCMs are defined at 40 CFR 51.100(r) as meaning any measure that is directed toward reducing emissions of air pollutants from transportation sources.

improved public transit, designation of certain lanes for passenger buses and high-occupancy vehicles, and trip reduction ordinances.

The August 2012 guidance explains how states may demonstrate that the VMT emissions offset requirement is satisfied in conformance with the Ninth Circuit's ruling. The August 2012 guidance recommends that states estimate emissions for the nonattainment area's base year and attainment year. One emissions inventory is developed for the base year, and three different emissions inventory scenarios are developed for the attainment year. For the attainment year, the state would present three emissions estimates, two of which would represent hypothetical emissions scenarios that would provide the basis to identify the growth in emissions due solely to the growth in VMT, and one that would represent projected actual motor vehicle emissions after fully accounting for projected VMT growth and offsetting emissions reductions obtained by all creditable TCSs and TCMs. See the August 2012 guidance for specific details on how states might conduct the calculations.

The base year on-road VOC emissions should be calculated using VMT in that year, and should reflect all enforceable TCSs and TCMs in place in the base year. This would include vehicle emissions standards, state and local control programs, such as I/M programs or fuel rules, and any additional implemented TCSs and TCMs that were already required by or credited in the SIP as of that base year.

The first of the emissions calculations for the attainment year would be based on the projected VMT and trips for that year and assume that no new TCSs or TCMs beyond those already credited in the base year inventory have been put in place since the base year. This calculation demonstrates how emissions would hypothetically change if no new TCSs or TCMs were implemented, and VMT and trips were allowed to grow at the projected rate from the base

year. This estimate would show the potential for an increase in emissions due solely to growth in VMT and trips. This represents a “no action” scenario. Emissions in the attainment year in this scenario may be lower than those in the base year due to fleet turnover; however, if VMT and/or numbers of vehicle trips are projected to increase in the attainment year, emissions would still likely be higher than if VMT had held constant.

The second of the attainment year’s emissions calculations would assume that no new TCSs or TCMs beyond those already credited have been put in place since the base year, but it would also assume that there was no growth in VMT and trips between the base year and attainment year. This estimate reflects the hypothetical emissions level that would have occurred if no further TCMs or TCSs had been put in place and if VMT and trip levels had held constant since the base year. Like the “no action” attainment year estimate described above, emissions in the attainment year may be lower than those in the base year due to fleet turnover, but in this case emissions would not be influenced by any growth in VMT or trips. This emissions estimate would reflect a ceiling on the attainment emissions that should be allowed to occur under the statute as interpreted by the Ninth Circuit because it shows what would happen under a scenario in which no offsetting TCSs or TCMs have yet been put in place and VMT and trips are held constant during the period from the area’s base year to its attainment year. This represents a “VMT offset ceiling” scenario. These two hypothetical status quo estimates are necessary steps in identifying the target level of emissions from which states determine whether further TCMs or TCSs, beyond those that have been adopted and implemented in reality, would need to be adopted and implemented in order to fully offset any increase in emissions due solely to VMT and trips identified in the “no action” scenario.

Finally, the state would present the emissions that are actually expected to occur in the area's attainment year after taking into account reductions from all enforceable TCSs and TCMs that in reality were put in place after the baseline year. This estimate would be based on the VMT and trip levels expected to occur in the attainment year (*i.e.*, the VMT and trip levels from the first estimate) and all of the TCSs and TCMs expected to be in place and for which the SIP will take credit in the area's attainment year, including any TCMs and TCSs put in place since the base year. This represents the "projected actual" attainment year scenario. If this emissions estimate is less than or equal to the emissions ceiling that was established in the second of the attainment year calculations, the TCSs or TCMs for the attainment year would be sufficient to fully offset the identified hypothetical growth in emissions.

If, instead, the estimated projected actual attainment year emissions are still greater than the ceiling that was established in the second of the attainment year emissions calculations, even after accounting for post-baseline year TCSs and TCMs, the state would need to adopt and implement additional TCSs or TCMs to further offset the growth in emissions. The additional TCSs or TCMs would need to bring the actual emissions down to at least the "had VMT and trips held constant" ceiling estimated in the second of the attainment year calculations, in order to meet the VMT offset requirement of section 182(d)(1)(A) as interpreted by the Ninth Circuit.

2. Summary of the State's Submission

CARB prepared the San Joaquin Valley VMT emissions offset demonstration, which is included as section D.3 ("VMT Offsets") of Appendix D ("Mobile Source Control Strategy") of the 2016 Ozone Plan. For the demonstration, CARB used EMFAC2014, the latest EPA-approved motor vehicle emissions model for California. The EMFAC2014 model estimates the on-road emissions from two combustion processes (*i.e.*, running exhaust and start exhaust) and four

evaporative processes (*i.e.*, hot soak, running losses, diurnal losses, and resting losses). The EMFAC2014 model combines trip-based VMT data from the eight San Joaquin Valley MPOs (*e.g.*, Council of Fresno County Governments), starts data based on household travel surveys, and vehicle population data from the California Department of Motor Vehicles. These sets of data are combined with corresponding emission rates to calculate emissions.

Emissions from running exhaust, start exhaust, hot soak, and running losses are a function of how much a vehicle is driven. As such, emissions from these processes are directly related to VMT and vehicle trips, and CARB included emissions from them in the calculations that provide the basis for the San Joaquin Valley VMT emissions offset demonstration. CARB did not include emissions from resting loss and diurnal loss processes in the analysis because such emissions are related to vehicle population, not to VMT or vehicle trips, and thus are not part of “any growth in emissions from growth in *vehicle miles traveled or numbers of vehicle trips* in such area” (emphasis added) under CAA section 182(d)(1)(A).

The San Joaquin Valley VMT emissions offset demonstration uses 2012 as the base year and also includes the previously described three different attainment year scenarios (*i.e.*, no action, VMT offset ceiling, and projected actual). The San Joaquin Valley 2016 Ozone Plan provides a demonstration of attainment of the 2008 8-hour ozone standards in the San Joaquin Valley by December 31, 2031, based on emissions projections for year 2031 reflecting adopted controls. As described in section III.D of this notice, the EPA is proposing to approve this attainment demonstration. Accordingly, we find CARB’s selection of year 2031 as the attainment year for the VMT emissions offset demonstration for the 8-hour ozone NAAQS to be appropriate.

Table 3 summarizes the relevant distinguishing parameters for each of the emissions scenarios and shows CARB’s corresponding VOC emissions estimates for the demonstration for the 2008 8-hour ozone NAAQS.

Table 3. VMT Emissions Offset Inventory Scenarios and Results for the 2008 Ozone Standard

Scenario	VMT		Starts		Controls	VOC Emissions
	Year	1000/day	Year	1000/day	Year	tpd
Base Year	2012	96,934	2012	16,624	2012	50
No Action	2031	131,835	2031	20,572	2012	22
VMT Offset Ceiling	2031	96,934	2012	16,624	2012	17
Projected Actual	2031	131,835	2031	20,572	2031	14

Source: 2016 Ozone Plan for 2008 8-Hour Ozone Standard, Appendix D, pages D-22 and D-24. Year 2031 VMT is based on 2015 Federal Transportation Improvement Plans from the eight San Joaquin Valley MPOs.

For the base year scenario, CARB ran the EMFAC2014 model for the applicable base year (*i.e.*, 2012 for the 2008 8-hour ozone standards) using VMT and starts data corresponding to that year. As shown in table 3, CARB estimates the San Joaquin Valley VOC emissions at 50 tpd in 2012.

For the “no action” scenario, CARB first identified the on-road motor vehicle control programs (*i.e.*, TCSs or TCMs) put in place since the base year and incorporated into EMFAC2014 and then ran EMFAC2014 with the VMT and starts data corresponding to the applicable attainment year (*i.e.*, 2031 for the 2008 8-hour ozone standards) without the emissions reductions from the on-road motor vehicle control programs put in place after the base year. Thus, the no action scenario reflects the hypothetical VOC emissions that would occur in the attainment year in the San Joaquin Valley if CARB had not put in place any additional TCSs or TCMs after 2012. As shown in table 3, CARB estimates the no action San Joaquin Valley VOC emissions at 22 tpd in 2031.

For the “VMT offset ceiling” scenario, CARB ran the EMFAC2014 model for the attainment years but with VMT and starts data corresponding to base year values. Like the no action scenarios, the EMFAC2014 model was adjusted to reflect the VOC emissions levels in the attainment years without the benefits of the post-base-year on-road motor vehicle control programs. Thus, the VMT offset ceiling scenario reflects hypothetical VOC emissions in the San Joaquin Valley if CARB had not put in place any TCSs or TCMs after the base year and if there had been no growth in VMT or vehicle trips between the base year and the attainment year.

The hypothetical growth in emissions due to growth in VMT and trips can be determined from the difference between the VOC emissions estimates under the no action scenario and the corresponding estimates under the VMT offset ceiling scenario. Based on the values in table 3, the hypothetical growth in emissions due to growth in VMT and trips in the San Joaquin Valley would have been 5 tpd (*i.e.*, 22 tpd minus 17 tpd) for purposes of the revised VMT emissions offset demonstration for the 8-hour ozone standards. This hypothetical difference establishes the level of VMT growth-caused emissions that need to be offset by the combination of post-baseline year TCMs and TCSs and any necessary additional TCMs and TCSs.

For the “projected actual” scenario calculation, CARB ran the EMFAC2014 model for the attainment year with VMT and starts data at attainment year values and with the full benefits of the relevant post-baseline year motor vehicle control programs. For this scenario, CARB included the emissions benefits from TCSs and TCMs put in place since the base year. The most significant measures reducing VOC emissions during the 2012 to 2031 timeframe include the Advanced Clean Cars program, Low Emission Vehicles II and III standards, Zero Emissions

Vehicle standards, On-Board Diagnostics, Smog Check Improvements, and California Reformulated Gasoline Phase 3.⁹¹

As shown in table 3, the calculation of the projected actual attainment-year VOC emissions resulted in 14 tpd for the 2008 8-hour ozone NAAQS demonstration. CARB then compared this value against the corresponding VMT offset ceiling value to determine whether additional TCMs or TCSs would need to be adopted and implemented in order to offset any increase in emissions due solely to VMT and trips. Because the projected actual emissions are less than the corresponding VMT offset ceiling emissions, CARB concluded that the demonstration shows compliance with the VMT emissions offset requirement and that there are sufficient adopted TCSs and TCMs to offset the growth in emissions from the growth in VMT and vehicle trips in the San Joaquin Valley for the 2008 8-hour standards. In fact, taking into account the creditable post-baseline year TCMs and TCSs, CARB showed that they offset the hypothetical difference by 8 tpd for the 2008 8-hour standards, rather than the required 5 tpd, respectively.⁹²

3. The EPA's Review of the State's Submission

Based on our review of the San Joaquin Valley VMT emissions offset demonstration in Appendix D of the 2016 Ozone Plan, we find CARB's analysis to be acceptable and agree that CARB has adopted sufficient TCSs and TCMs to offset the growth in emissions from growth in

⁹¹ See attachment A of Appendix D to the 2016 Ozone Plan includes a list of transportation control strategies. See also EPA final action on CARB mobile source SIP submittals at 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

⁹² The offsetting VOC emissions reductions from the TCSs and TCMs put in place after the respective base year can be determined by subtracting the projected actual emissions estimates from the no action emissions estimates in table 3. For the purposes of the 2008 8-hour ozone demonstration, the offsetting emissions reductions (*i.e.*, 8 tpd based on 22 tpd minus 14 tpd) exceed the growth in emissions from growth in VMT and vehicle trips (*i.e.*, 5 tpd based on 22 tpd minus 17 tpd).

VMT and vehicle trips in the San Joaquin Valley for the purposes of the 2008 8-hour ozone standards. As such, we find that the San Joaquin Valley VMT emissions offset demonstration complies with the VMT emissions offset requirement in CAA section 182(d)(1)(A). Therefore, we propose approval of the San Joaquin Valley VMT emissions offset demonstration portion of the 2016 Ozone Plan.

G. Contingency Measures to Provide for RFP and Attainment

1. Statutory and Regulatory Requirements

Under the CAA, 8-hour ozone nonattainment areas classified under subpart 2 as Moderate or above must include in their SIPs contingency measures consistent with sections 172(c)(9) and 182(c)(9). Contingency measures are additional controls or measures to be implemented in the event the area fails to make reasonable further progress or to attain the NAAQS by the attainment date. The SIP should contain trigger mechanisms for the contingency measures, specify a schedule for implementation, and indicate that the measure will be implemented without significant further action by the state or the EPA.⁹³

Neither the CAA nor the EPA's implementing regulations establish a specific level of emissions reductions that implementation of contingency measures must achieve, but the EPA's 2008 Ozone SRR reiterates the EPA's policy that contingency measures should provide for emissions reductions approximately equivalent to one year's worth progress, amounting to reductions of 3 percent of the baseline emissions inventory for the nonattainment area.⁹⁴

It has been the EPA's longstanding interpretation of section 172(c)(9) that states may rely on federal measures (*e.g.*, federal mobile source measures based on the incremental turnover of

⁹³ See 70 FR 71612 (November 29, 2005). See also 2008 Ozone SRR, 80 FR 12264 at 12285 (March 6, 2015).

⁹⁴ 80 FR 12264 at 12285 (March 6, 2015).

the motor vehicle fleet each year) and local measures already scheduled for implementation that provide emissions reductions in excess of those needed to provide for RFP or expeditious attainment. The key is that the statute requires that contingency measures provide for additional emissions reductions that are not relied on for RFP or attainment and that are not included in the RFP or attainment demonstrations as meeting part or all of the contingency measure requirements. The purpose of contingency measures is to provide continued emissions reductions while the plan is being revised to meet the missed milestone.

The EPA has approved numerous SIPs under this interpretation – *i.e.*, SIPs that use as contingency measures one or more federal or local measures that are in place and provide reductions that are in excess of the reductions required by the attainment demonstration or RFP plan,⁹⁵ and there is case law supporting the EPA’s interpretation in this regard.⁹⁶ However, in *Bahr v. EPA*, the Ninth Circuit rejected the EPA’s interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures.⁹⁷ The Ninth Circuit concluded that contingency measures must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.⁹⁸ Thus, within the geographic jurisdiction of the Ninth Circuit, states cannot rely on early-implemented measures to comply with the contingency measure requirements under CAA section 172(c)(9).

2. Summary of the State’s Submission

⁹⁵ See, e.g., 62 FR 15844 (April 3, 1997) (direct final rule approving an Indiana ozone SIP revision); 62 FR 66279 (December 18, 1997) (final rule approving an Illinois ozone SIP revision); 66 FR 30811 (June 8, 2001) (direct final rule approving a Rhode Island ozone SIP revision); 66 FR 586 (January 3, 2001) (final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions); and 66 FR 634 (January 3, 2001) (final rule approving a Connecticut ozone SIP revision).

⁹⁶ See, e.g., *LEAN v. EPA*, 382 F.3d 575 (5th Cir. 2004) (upholding contingency measures that were previously required and implemented where they were in excess of the attainment demonstration and RFP SIP).

⁹⁷ *Bahr v. EPA*, 836 F.3d 1218, at 1235-1237 (9th Cir. 2016).

⁹⁸ *Id.* at 1235-1237.

In its 2016 Ozone Plan, the District set aside NO_x emissions reductions from the attainment demonstration and reserves those reductions to meet the contingency measure requirement for a failure to attain the 2008 ozone standards.⁹⁹ Similarly, to satisfy the requirement for RFP contingency measures, the 2016 Ozone Plan sets aside 3 percent excess emissions reductions in the first RFP milestone year and reserves those reductions for contingency measures for failure to make RFP.¹⁰⁰

3. The EPA's Review of the State's Submission

The magnitude of contingency measure reductions in the 2016 Ozone Plan is affected by the *South Coast* decision (regarding the appropriate baseline year for RFP) because, for ozone purposes, the required emission reductions are generally calculated as a portion of the baseline emissions inventory. For this reason, we are not taking action at this time on the contingency measures in the 2016 Ozone Plan.

H. Clean Fuels or Advanced Control Technology for Boilers

1. Statutory and Regulatory Requirements

CAA section 182(e)(3) provides that SIPs for Extreme nonattainment areas require each new, modified, and existing electric utility and industrial and commercial boiler that emits more than 25 tpy of NO_x to either burn as its primary fuel natural gas, methanol, or ethanol (or a comparably low-polluting fuel), or use advanced control technology, such as catalytic control technologies or other comparably effective control methods.

Additional guidance on this requirement is provided in the General Preamble at 13523. According to the General Preamble, a boiler should generally be considered as any combustion

⁹⁹ See 2016 Ozone Plan, Chapter 6, section 6.4.

¹⁰⁰ *Id.* at section 6.3.

equipment used to produce steam and generally does not include a process heater that transfers heat from combustion gases to process streams.¹⁰¹ In addition, boilers with rated heat inputs less than 15 million British Thermal Units (MMBtu) per hour that are oil- or gas-fired may generally be considered *de minimus* and exempt from these requirements because it is unlikely that they will exceed the 25 tpy NO_x emission limit.¹⁰²

2. Summary of the State's Submission

The 2016 Ozone Plan addresses the requirements of CAA section 182(e)(3) in section 3.17 ("Clean Fuels") of Chapter 3, and states that District Rules 4305, 4306, and 4352 address NO_x emission limits for boilers and that these rules meet the requirements of the CAA. Additional information on these rules is also provided in Appendix C of the 2016 Ozone Plan. Specifically, the 2016 Ozone Plan indicates that most of the boilers under District Rules 4305 and 4306 are fired on natural gas and, as such, meet the requirements of CAA section 182(e)(3) for those boilers subject to those rules. Liquid fuel-fired boilers are also addressed by Rule 4305 and 4306, and the 2016 Ozone Plan concludes that the applicable NO_x emissions in the rules necessitate use of advanced technology. The 2016 Ozone Plan concludes likewise for solid fuel-fired boilers addressed by Rule 4352.

3. The EPA's Review of the State's Submission

Rule 4305 (now titled "Boilers, Steam Generators, and Process Heaters – Phase 2") was adopted by the District in 1993 and was superseded by Rule 4306 ("Boilers, Steam Generators, and Process Heaters – Phase 3"). Both Rules 4305 and 4306 apply to any gaseous fuel- or liquid fuel-fired boiler, steam generator, or process heater with a rated heat input greater than 5 MMBtu

¹⁰¹ See General Preamble, 57 FR 13498 at 13523 (April 16, 1992).

¹⁰² *Id* at 13524.

per hour. Rule 4305, as amended on August 21, 2003, was approved by the EPA in 2004, and Rule 4306, as revised on October 16, 2008, was approved by the EPA in 2010.¹⁰³ The emission limits in Rule 4306 (5 ppm to 30 ppm for gaseous fuels and 40 ppm for liquid fuels) cannot be achieved without the use of advanced control technologies.¹⁰⁴ All units subject to Rule 4306 were required to comply with the limits in the rule no later than December 1, 2008.

Rule 4352, titled “Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters” was last approved by the EPA on November 6, 2012.¹⁰⁵ Rule 4352 applies to any boiler, steam generator, or process heater fired on solid fuel at a source that has the potential to emit more than 10 tpy of NO_x or VOC. All units subject to Rule 4352 were required to comply with the rule’s most stringent limits no later than January 1, 2013. In an EPA action on an earlier version of Rule 4352, we determined that all of the NO_x emission limits in Rule 4352 effectively require operation of selective noncatalytic reduction control technology, which, for the affected sources, is comparably effective to selective catalytic reduction, and comparable to the combustion of clean fuels at these types of boilers. Therefore, we concluded that Rule 4352 satisfied the requirements of section 182(e)(3) for solid fuel-fired boilers in the San Joaquin Valley.¹⁰⁶

In addition, new and modified boilers that will emit or have the potential to emit 25 tpy or more of NO_x are subject to the District’s new source permitting rule, Rule 2201, titled “New and Modified Stationary Source Review.” This rule requires new and modified sources to install and

¹⁰³ See 69 FR 28061 (May 18, 2004) (approval of Rule 4305) and 75 FR 1715 (January 13, 2010) (approval of Rule 4306).

¹⁰⁴ See “Alternative Control Techniques Document – NO_x Emissions from Industrial/Commercial/Institutional Boilers,” EPA, March 1994. See also 76 FR 57846 at 57864-57865 (September 11, 2011) and 77 FR 12652 at 12670 (March 1, 2012).

¹⁰⁵ 77 FR 66548 (November 6, 2012).

¹⁰⁶ See 74 FR 65042 (December 9, 2009) (proposed limited approval and limited disapproval of Rule 4352) and 75 FR 60623 (October 1, 2010) (final limited approval and limited disapproval of Rule 4352).

operate lowest achievable emission rate (LAER) technology. The EPA last approved Rule 2201 in 2014.¹⁰⁷ In previous actions on the 1-hour ozone NAAQS and the 1997 8-hour ozone NAAQS, the EPA reviewed Rules 4306, 4352, and 2201, and concluded that the rules satisfy the requirements for clean fuel or advanced control technology for boilers in CAA section 182(e)(3). We find that the emission limitations in the District's rules continue to meet the clean fuel or advanced control technology for boilers requirement in CAA section 182(e)(3), and thus, we propose to approve the Clean Fuels for Boilers portion of the 2016 Ozone Plan.

I. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Statutory and Regulatory Requirements

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, MPOs in nonattainment and maintenance areas coordinate with state and local air quality and transportation agencies, the EPA, the FHWA, and the FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP. This demonstration is

¹⁰⁷ 79 FR 55637 (September 17, 2014).

typically done by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEBs or “budgets”) contained in all control strategy SIPs. Budgets are generally established for specific years and specific pollutants or precursors. Ozone plans should identify budgets for on-road emissions of ozone precursors (NO_x and VOC) in the area for each RFP milestone year and the attainment year, if the plan demonstrates attainment.¹⁰⁸

For motor vehicle emissions budgets to be approvable, they must meet, at a minimum, the EPA's adequacy criteria (40 CFR 93.118(e)(4) and (5)) and be approvable under all pertinent SIP requirements. To meet these requirements, the MVEBs must be consistent with the approvable attainment and RFP demonstrations and reflect all of the motor vehicle control measures contained in the attainment and RFP demonstrations.¹⁰⁹

The EPA's process for determining adequacy of a MVEB consists of three basic steps: (1) providing public notification of a SIP submission; (2) providing the public the opportunity to comment on the MVEB during a public comment period; and, (3) making a finding of adequacy or inadequacy.¹¹⁰

2. Summary of the State's Submission

The 2016 Ozone Plan includes budgets for the 2018, 2021, 2024, 2027, and 2030 RFP milestone years, and the 2031 attainment year. The budgets were calculated using EMFAC2014, CARB's latest approved version of the EMFAC model for estimating emissions from on-road

¹⁰⁸ See 40 CFR 93.102(b)(2)(i).

¹⁰⁹ See 40 CFR 93.118(e)(4)(iii), (iv) and (v). For more information on the transportation conformity requirements and applicable policies on MVEBs, please visit our transportation conformity web site at: <http://www.epa.gov/otaq/stateresources/transconf/index.htm>.

¹¹⁰ See 40 CFR 93.118.

vehicles operating in California, and reflect average summer weekday emissions consistent with the RFP milestone years and the 2031 attainment year for the 2008 8-hour ozone NAAQS.¹¹¹

The conformity budgets for NO_x and VOC for each county in the nonattainment area are provided in table 4 below.

Table 4. Budgets in the 2016 Ozone Plan

Motor Vehicle Emissions Budgets (average summer weekday, tons per day)												
County	2018		2021		2024		2027		2030		2031	
	VOC	NO _x										
Fresno	8.0	27.7	6.4	22.2	5.4	14.1	4.9	13.2	4.5	12.6	4.3	12.5
Kern (SJV)	6.6	25.4	5.5	20.4	4.8	12.6	4.5	11.7	4.2	10.9	4.1	10.8
Kings	1.3	5.1	1.1	4.2	0.9	2.6	0.9	2.5	0.8	2.3	0.8	2.3
Madera	1.9	5.1	1.5	4.1	1.2	2.6	1.1	2.3	0.9	2.0	0.9	2.0
Merced	2.5	9.4	2.0	7.8	1.6	4.8	1.5	4.4	1.3	4.2	1.3	4.1
San Joaquin	5.9	13.0	4.9	10.3	4.2	6.9	3.8	6.2	3.5	5.7	3.3	5.5
Stanislaus	3.8	10.5	3.0	8.3	2.6	5.6	2.3	5.1	2.1	4.7	2.0	4.7
Tulare	3.7	9.5	2.9	7.2	2.4	4.7	2.2	4.1	1.9	3.8	1.9	3.7

Source: Tables D-4 through D-9 of Appendix D to the 2016 Ozone Plan.

3. The EPA’s Review of the State’s Submission

As discussed above, the MVEBs for 2018, 2021, 2024, 2027 and 2030 derive from the RFP baseline year and the associated RFP milestone years. As such, the budgets are affected by the *South Coast* decision, and therefore, the EPA is not taking action at this time on the budgets for these years. We plan to propose action for these MVEBs in a future rulemaking. However, in today’s notice we are proposing to approve the budgets for the 2031 attainment year for transportation conformity purposes.

The EPA has previously determined that the 2031 budgets in 2016 Ozone Plan are adequate for use for transportation conformity purposes. On February 23, 2017, the EPA

¹¹¹ The EPA announced the availability of the EMFAC2014 model for use in SIP development and transportation conformity in California on December 14, 2015 (80 FR 77337). The EPA’s approval of the EMFAC2014 emissions model for SIP and conformity purposes was effective on the date of publication of the notice in the **Federal Register**.

announced the availability of the 2016 Ozone Plan and budgets, which were available for a 30-day public comment period that ended on March 27, 2017.¹¹² The EPA received no comments from the public. On June 13, 2017, the EPA determined the 2018, 2021, 2024, 2027, 2030 and 2031 MVEBs were adequate.¹¹³ On June 29, 2017, the notice of adequacy was published in the **Federal Register**.¹¹⁴ The new budgets became effective on July 14, 2017. After the effective date of the adequacy finding, the new budgets must be used in future transportation conformity determinations in the San Joaquin Valley area. The EPA is not required under its transportation conformity rule to find budgets adequate prior to proposing approval of them, but in this instance, we have completed the adequacy review of these budgets prior to our final action on the 2016 Ozone Plan.

In today's notice, the EPA is proposing to approve only the 2031 budgets in the 2016 Ozone Plan for transportation conformity purposes. The EPA has determined through its review of the submitted 2016 Ozone Plan that the 2031 budgets are consistent with emission control measures in the SIP and attainment in 2031 for the 2008 8-hour ozone NAAQS. For the reasons discussed in section III.D of this proposed rule, we are proposing to approve the attainment demonstration in the 2016 Ozone Plan. The 2031 budgets, as given in table 5, are consistent with the attainment demonstration, are clearly identified and precisely quantified, and meet all other applicable statutory and regulatory requirements, including the adequacy criteria in 93.118(e)(4) and (5). For these reasons, the EPA proposes to approve the budgets in table 5.

Table 5. 2031 Motor Vehicle Emissions Budgets in the 2016 Ozone Plan for 2031

¹¹² See <http://www.epa.gov/otaq/stateresources/transconf/currships.htm>.

¹¹³ See June 13, 2017 letter from Elizabeth J. Adams, Acting Director, Air Division, EPA Region IX, to Richard W. Corey, Executive Officer, CARB.

¹¹⁴ See 82 FR 29547.

Motor Vehicle Emissions Budgets (average summer weekday, tons per day)		
County	VOC	NO_x
Fresno	4.3	12.5
Kern (SJV)	4.1	10.8
Kings	0.8	2.3
Madera	0.9	2.0
Merced	1.3	4.1
San Joaquin	3.3	5.5
Stanislaus	2.0	4.7
Tulare	1.9	3.7

Source: Table D-9 of Appendix D to the 2016 Ozone Plan.

CARB has requested that we limit the duration of our approval of the budgets only until the effective date of the EPA's adequacy finding for any subsequently submitted budgets.¹¹⁵ The transportation conformity rule allows us to limit the approval of budgets.¹¹⁶ However, we will consider a state's request to limit an approval of its MVEB only if the request includes the following elements:¹¹⁷

- An acknowledgement and explanation as to why the budgets under consideration have become outdated or deficient;
- A commitment to update the budgets as part of a comprehensive SIP update; and
- A request that the EPA limit the duration of its approval to the time when new budgets have been found to be adequate for transportation conformity purposes.

Because CARB's request does not include a commitment to update the budgets or an explanation of why the budgets have become outdated or deficient, we cannot at this time propose to limit the duration of our approval of the submitted budgets until new budgets have been found adequate. In order to limit the approval, we would need the information described

¹¹⁵ Letter, Richard W. Corey, Executive Officer, California Air Resources Board, to Alexis Strauss, Acting Regional Administrator, EPA Region IX, August 24, 2016.

¹¹⁶ 40 CFR 93.118(e)(1).

¹¹⁷ 67 FR 69141 (November 15, 2002), limiting our prior approval of MVEB in certain California SIPs.

above to determine whether such limitation is reasonable and appropriate in this case. Once CARB has adequately addressed that information, we intend to review it and take appropriate action. If we propose to limit the duration of our approval of the MVEB in the 2016 Ozone Plan, we will provide the public an opportunity to comment. The duration of the approval of the budgets, however, would not be limited until we complete such a rulemaking.

J. Other Clean Air Act Requirements Applicable to Extreme Ozone Nonattainment Areas

In addition to the requirements discussed above, title 1, subpart D of the CAA includes other provisions applicable to Extreme ozone nonattainment areas, such as the San Joaquin Valley. We describe these provisions and their current status below for informational purposes only.

1. Enhanced Vehicle Inspection and Maintenance Programs

Section 182(c)(3) of the CAA requires states with ozone nonattainment areas classified under subpart 2 as Serious or above to implement an enhanced motor vehicle I/M program in those areas. The requirements for those programs are provided in CAA section 182(c)(3) and 40 CFR part 51, subpart S.

Consistent with the 2008 Ozone SRR, the 2016 Ozone Plan states that no new I/M programs are currently required for nonattainment areas for the 2008 ozone standards.¹¹⁸ The EPA has previously approved California's I/M program in the San Joaquin Valley as meeting the requirements of the CAA and applicable EPA regulations for enhanced I/M programs.¹¹⁹

2. Reformulated Gasoline Program

¹¹⁸ See 2008 Ozone SRR, 80 FR 12264 at 12283 (March 6, 2015), and section 3.6 of Chapter 3 of the 2016 Ozone Plan.

¹¹⁹ See 75 FR 38023 (July 1, 2010).

In accordance with CAA section 211, the federal reformulated gasoline (RFG) program requires certain areas to use gasoline that has been reformulated to reduce emissions of ozone precursors. As an Extreme ozone nonattainment area for the 1-hour ozone NAAQS, the San Joaquin Valley was included in the federal RFG program.¹²⁰ As a nonattainment area for the 1997 and 2008 ozone standards, the San Joaquin Valley continues to be included in the program.¹²¹ California also has its own RFG program (*i.e.*, California Phase III RFG, or CaRFG3), which applies within the San Joaquin Valley. The EPA approved CaRFG3 into the SIP on May 12, 2010.¹²² In our action proposing approval of CaRFG3, we noted that the EPA had previously determined that emissions reductions from CaRFG3 would be equal to or greater than the emissions reductions from the corresponding federal RFG program.¹²³

3. New Source Review Rules

Section 182(a)(2)(C) of the CAA requires states to develop SIP revisions containing permit programs for each of its ozone nonattainment areas. The SIP revisions are to include requirements for permits in accordance with CAA sections 172(c)(5) and 173 for the construction and operation of each new or modified major stationary source for VOC and NO_x anywhere in the nonattainment area.¹²⁴ The 2008 Ozone SRR includes provisions and guidance for nonattainment new source review (NSR) programs.¹²⁵ The EPA has previously approved the District's NSR rules into the SIP based in part on a conclusion that the rules adequately

¹²⁰ See CAA section 211(k)(10)(D).

¹²¹ See 40 CFR 80.70(m)(1)(i) and 70 FR 71685 (November 29, 2005).

¹²² See 75 FR 26653 (May 12, 2010).

¹²³ See 74 FR 33196, at 33198 (July 10, 2009).

¹²⁴ See also CAA sections 182(e).

¹²⁵ See 80 FR 12264 (March 6, 2015).

addressed the NSR requirements specific to extreme areas.¹²⁶ On June 19, 2018, CARB submitted on behalf of the District a certification that the NSR program previously approved into the SIP is adequate to meet the requirements for the 2008 ozone standards.¹²⁷ The EPA is proposing to approve the District's NSR certification in a separate rulemaking.¹²⁸

4. Clean Fuels Fleet Program

Sections 182(c)(4)(A) and 246 of the CAA require California to submit to the EPA for approval into the SIP measures to implement a Clean Fuels Fleet Program. Section 182(c)(4)(B) of the CAA allows states to opt-out of the federal clean-fuel vehicle fleet program by submitting a SIP revision consisting of a program or programs that will result in at least equivalent long-term reductions in ozone precursors and toxic air emissions.

In 1994, CARB submitted a SIP revision to the EPA to opt-out of the federal clean-fuel fleet program, and included a demonstration that California's low-emissions vehicle program achieved emissions reductions at least as large as would be achieved by the federal program. The EPA approved the SIP revision to opt-out of the federal program on August 27, 1999.¹²⁹ There have been no changes to the federal Clean Fuels Fleet program since the EPA approved the California SIP revision to opt-out of the federal program, and thus, no corresponding changes to the SIP are required. Thus, we find that the California SIP revision to opt-out of the federal

¹²⁶ See 75 FR 26102 (May 11, 2010).

¹²⁷ See letter from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX, dated June 19, 2018.

¹²⁸ See EPA, "Revisions to California State Implementation Plan; South Coast Air Quality Management District, San Joaquin Valley Air Pollution Control District and Yolo-Solano Air Quality Management; Nonattainment New Source Review Requirements for the 2008 8-Hour Ozone Standard," pre-publication final rule signed August 8, 2018.

¹²⁹ See 64 FR 46849 (August 27, 1999).

program, as approved in 1999, meets the requirements of CAA sections 182(c)(4)(A) and 246 for San Joaquin Valley for the 2008 ozone standards.

5. Gasoline Vapor Recovery

Section 182(b)(3) of the CAA requires states to submit a SIP revision by November 15, 1992, that requires owners or operators of gasoline dispensing systems to install and operate gasoline vehicle refueling vapor recovery (“Stage II”) systems in ozone nonattainment areas classified as Moderate and above. California’s ozone nonattainment areas implemented Stage II vapor recovery well before the passage of the CAA Amendments of 1990.¹³⁰

Section 202(a)(6) requires the EPA to promulgate standards requiring motor vehicles to be equipped with onboard refueling vapor recovery (ORVR) systems. The EPA promulgated the first set of ORVR system regulations in 1994 for phased implementation on vehicle manufacturers, and since the end of 2006, essentially all new gasoline-powered light and medium-duty vehicles are ORVR-equipped.¹³¹ Section 202(a)(6) also authorizes the EPA to waive the SIP requirement under CAA section 182(b)(3) for installation of Stage II vapor recovery systems after such time as the EPA determines that ORVR systems are in widespread use throughout the motor vehicle fleet. Effective May 16, 2012, the EPA waived the requirement of CAA section 182(b)(3) for Stage II vapor recovery systems in ozone nonattainment areas regardless of classification. See 40 CFR 51.126(b). Thus, a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone standards.

While a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone standards, under California State law (*i.e.*, Health and Safety Code section 41954), CARB is

¹³⁰ See General Preamble, 57 FR 13498 at 13514 (April 16, 1992).

¹³¹ See 77 FR 28772, at 28774 (May 16, 2012).

required to adopt procedures and performance standards for controlling gasoline emissions from gasoline marketing operations, including transfer and storage operations. State law also authorizes CARB, in cooperation with local air districts, to certify vapor recovery systems, to identify defective equipment and to develop test methods. CARB has adopted numerous revisions to its vapor recovery program regulations and continues to rely on its vapor recovery program to achieve emissions reductions in ozone nonattainment areas in California.¹³²

In the San Joaquin Valley, the installation and operation of CARB-certified vapor recovery equipment is required and enforced by District Rules 4621 (“Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants”) and 4622 (“Gasoline Transfer into Motor Vehicle Fuel Tanks”). The most recent versions of Rules 4621 and 4622, amended on December 19, 2013, have been approved into the California SIP.¹³³

6. Enhanced Ambient Air Monitoring

Section 182(c)(1) of the CAA requires that all ozone nonattainment areas classified as Serious or above implement measures to enhance and improve monitoring for ambient concentrations of ozone, NO_x, and VOC, and to improve monitoring of emissions of NO_x and VOC. The enhanced monitoring network for ozone is referred to as the Photochemical Assessment Monitoring Station (PAMS) network. The EPA promulgated final PAMS regulations on February 12, 1993.¹³⁴

On November 10, 1993, CARB submitted to the EPA a SIP revision addressing the PAMS network for six ozone nonattainment areas in California, including the San Joaquin

¹³² See *e.g.*, Chapter 5, table 5-4 of the 2016 Ozone Plan.

¹³³ See 80 FR 7345 (February 10, 2015).

¹³⁴ See 58 FR 8452 (February 12, 1993).

Valley, to meet the enhanced monitoring requirements of CAA section 182(c)(1). The EPA determined that the PAMS SIP revision met all applicable requirements for enhanced monitoring and the EPA PAMS regulations and approved the PAMS submittal into the California SIP.¹³⁵

The 2016 Ozone Plan discusses compliance with the EPA's enhanced monitoring requirements in 40 CFR part 58, and concludes that, based on the EPA's approval of the District's air monitoring network plan, the San Joaquin Valley meets all federal ambient monitoring requirements.¹³⁶ Chapter 4 (section 4.2.2) of the 2016 Ozone Plan describes the San Joaquin Valley's PAMS network. The District's PAMS network is composed of two smaller networks located in the Fresno and Bakersfield Metropolitan Statistical Areas (MSAs). Each network in the MSA consists of three PAMS sites. The District's July 2017 Annual Air Quality Monitoring Network Plan (ANP) also provides more detail about the PAMS network.¹³⁷ The EPA has approved the District's PAMS network as part of our annual approval of the District's ANP.¹³⁸

The 2016 Ozone Plan reports that the Arvin-Bear Mountain PAMS monitoring site in the Bakersfield MSA was closed in 2010, and would resume once a permanent air monitoring site in the area was established. The closed monitoring site at Arvin-Bear Mountain was relocated to a new site at the Arvin-Di Giorgio elementary school. CARB's staff report for the 2016 Ozone Plan includes, for approval by the EPA, provisions to address ambient ozone monitoring in the

¹³⁵ See 82 FR 45191 (September 28, 2017).

¹³⁶ See section 3.12 (Ambient Monitoring Requirements) of the 2016 Ozone Plan.

¹³⁷ See San Joaquin Valley Air Pollution Control District 2017 Air Monitoring Network Plan (June 28, 2017).

¹³⁸ See letter from Gwen Yoshimura, EPA Region IX to Sheraz Gill, SJVAPCD, dated October 30, 2017.

Bakersfield MSA.¹³⁹ The EPA approved the relocation of the monitoring site and approved into the SIP these provisions of the 2016 Ozone Plan for ozone monitoring in Bakersfield.¹⁴⁰

Prior to 2006, the EPA's ambient air monitoring regulations in 40 CFR part 58 ("Ambient Air Quality Surveillance") set forth specific SIP requirements (*see* former 40 CFR 52.20). In 2006, the EPA significantly revised and reorganized 40 CFR part 58.¹⁴¹ Under revised 40 CFR part 58 SIP revisions are no longer required; rather, compliance with EPA monitoring regulations is established through review of required annual monitoring network plans.¹⁴² The 2008 Ozone SRR made no changes to these requirements.¹⁴³ As such, based on our review and approval of the most recent ANP for San Joaquin Valley, we find that the 2016 Ozone Plan adequately addresses the enhanced monitoring requirements under CAA section 182(c)(1), and we propose to approve that portion of the Plan.

7. CAA Section 185 Fee Program

Section 185 of the CAA requires that the SIP for each Severe and Extreme ozone nonattainment area provide that, if the area fails to attain by its applicable attainment date, each major stationary source of VOC and NO_x located in the area shall pay a fee to the state as a penalty for such failure for each calendar year beginning after the attainment date, until the area

¹³⁹ See section V-H of the *ARB Review of the San Joaquin Valley 2016 Plan for the 2008 8-Hour Ozone Standard*, July 21, 2016.

¹⁴⁰ See 82 FR 47145 (October 11, 2017).

¹⁴¹ See 71 FR 61236 (October 17, 2006).

¹⁴² 40 CFR 58.2(b) now provides: The requirements pertaining to provisions for an air quality surveillance system in the SIP are contained in this part.

¹⁴³ The 2008 ozone SRR addresses PAMS-related requirements at 80 FR 12264, at 12291, (March 6, 2015).

is redesignated as an attainment area for ozone. States are not yet required to submit a SIP revision that meets the requirements of CAA section 185 for the 2008 ozone NAAQS.¹⁴⁴

IV. Other Commitments to Reduce Emissions

The 2016 Ozone Plan relies on control measures, such as state and district rules and regulations, that have been adopted and are being implemented to demonstrate attainment of the 2008 ozone NAAQS by 2031. However, in the 2016 Ozone Plan, the District also notes that newer NAAQS, *e.g.*, the ozone NAAQS established in 2015, would require the development and submission of new plans with additional emissions reductions. In anticipation of these future requirements, the District included in the 2016 Ozone Plan commitments to amend two existing measures for flares and wine fermentation and storage tanks.¹⁴⁵ As summarized in table 6, the District committed to implement emission reduction technologies to the extent those controls are technologically achievable and economically feasible; therefore, any emissions reductions resulting from these evaluations, to the extent those evaluations have not yet been completed, are uncertain. Because of this uncertainty, and because these amended measures are not required to meet RACM or other plan requirements, the District did not project emissions reductions or implementation dates for these amended measures.

¹⁴⁴ See 40 CFR 51.1117. For San Joaquin Valley, a section 185 SIP revision for the 2008 ozone standards will be due on July 20, 2022.

¹⁴⁵ See Chapter 5, sections 5.2.1 and 5.2.2 of the 2016 Ozone Plan.

Table 6. District Committal Measures in 2016 Ozone Plan

Rule	Rule Title	District Commitment	Schedule
4311	Flares	<ol style="list-style-type: none"> 1. Amend Rule 4311 to include additional ultra-low NO_x flare emissions limitations for existing and new flaring activities to the extent that such controls are technologically achievable and economically feasible. 2. Amend Rule 4311 to include additional flare minimization requirements to the extent such controls are technologically achievable and economically feasible. 	By December 31, 2017
4694	Wine Fermentation and Storage Tanks	<ol style="list-style-type: none"> 1. Evaluate the technological achievability and economic feasibility of implementing emissions control technologies to reduce VOC emissions and potential benefits to help reduce ozone concentrations. 2. Upon completion of (1), amend Rule 4694 to include additional requirements to further reduce emissions from wine fermentation as appropriate. 	By December 31, 2018

Source: Table 5-3 and sections 5.2.1 and 5.2.2 of the 2016 Ozone Plan.

The District has committed to amend Rule 4311 for flares and Rule 4694 for wine fermentation and storage tanks to include additional requirements to reduce emissions to the extent those controls are technologically achievable or economically feasible; however, these commitments were made in the context of attainment of future ozone and PM_{2.5} standards. Although these commitments are not needed to meet any requirements for the 2008 ozone standards, the EPA is proposing to approve the commitments described in table 6 above, to further strengthen the San Joaquin Valley’s portion of the California SIP.

The 2016 Ozone Plan references additional reductions anticipated from CARB’s mobile source state strategy, a draft of which was released in October 2015.¹⁴⁶ The State Strategy was adopted by CARB in 2017, and in its resolution adopting the 2016 State Strategy, CARB adopted a commitment to bring to the Board for consideration a list of regulatory measures included as Attachment A to the resolution of adoption (*i.e.*, Resolution 17-7), according to the schedule set forth in Attachment A, and a commitment to achieve an aggregate emission

¹⁴⁶ See 2016 Ozone Plan, Chapter 5, section 5.4.2.

reduction of 8 tpd of NO_x in the San Joaquin Valley by 2031 to accelerate progress toward the 2008 ozone standards.¹⁴⁷ The 2016 State Strategy anticipates reducing emissions to meet the aggregate commitment through such measures as new California low-NO_x standards for on-road heavy-duty engines and more stringent diesel fuel requirements for off-road equipment.¹⁴⁸

As noted above, the attainment demonstration in the 2016 Ozone Plan relies on adopted measures, rather than committal measures. Thus, CARB's regulatory initiative commitment and aggregate emission reduction commitment for San Joaquin Valley are not needed as part of the control strategy for the 2008 ozone NAAQS in San Joaquin Valley. However, the commitments by CARB for San Joaquin Valley in the 2016 State Strategy will strengthen the SIP by providing emissions reductions that supplement the reductions from the adopted controls; therefore, we are proposing to approve the San Joaquin Valley portions of the 2016 State Strategy into the SIP.

V. Proposed Action

For the reasons discussed above, under CAA section 110(k)(3), the EPA is proposing to approve as a revision to the California SIP the following portions of the San Joaquin Valley 2016 Ozone Plan¹⁴⁹ submitted by CARB on August 24, 2016:

- RACM demonstration as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1112(c);
- ROP demonstration as meeting the requirements of CAA section 182(b)(1);

¹⁴⁷ See page 7, CARB Resolution 17-7, March 23, 2017.

¹⁴⁸ See table 5 (on page 34) of the 2016 State Strategy.

¹⁴⁹ As noted previously, the EPA has already approved the portions of the 2016 Ozone Plan (section 3.4 (“Reasonably Available Control Technology (RACT) Demonstration”) and Appendix C (“Stationary and Area Source Control Strategy Evaluations”)) that relate to the RACT requirements under CAA section 182(b)(2) and 40 CFR 51.1112.

- Attainment demonstration as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108;
- Enhanced monitoring as meeting the requirements of CAA section 182(c)(1) and 40 CFR 51.1102;
- Enhanced vehicle inspection and maintenance programs as meeting the requirements of CAA section 182(c)(3) and 40 CFR 51.1102
- Provisions for clean fuels or advanced control technology for boilers as meeting the requirements of CAA section 182(e)(3) and 40 CFR 51.1102;
- VMT emissions offset demonstration as meeting the requirements of CAA section 182(d)(1)(A) and 40 CFR 51.1102; and
- Motor vehicle emissions budgets for the attainment year of 2031 (see table 5, above) because they are consistent with the attainment demonstration proposed for approval herein and meet the other criteria in 40 CFR 93.118(e).

In addition, we are proposing to approve District Rule 1160 titled “Emission Statements” submitted by CARB on January 11, 1993, as a revision to the California SIP because it meets all the applicable requirements for emission statements and to approve the Emission Statement section of the 2016 Ozone Plan as meeting the requirements of CAA section 182(a)(3)(B) and 40 CFR 51.1102.

Finally, we are proposing to approve, as additional measures that strengthen the SIP, the San Joaquin Valley portions of the 2016 State Strategy and CARB’s aggregate emission reduction commitment of 8 tpd of NO_x by 2031 submitted on April 27, 2017, as a revision to the California SIP and the two commitments by the District in the 2016 Ozone Plan to amend Rules 4311 (Flares) and 4694 (Wine Fermentation and Storage).

We are not taking action at this time on the base year emissions inventory, the RFP demonstration, the motor vehicle emissions budgets for RFP milestone years, and contingency measures portions of the 2016 Ozone Plan. We intend to propose action on these elements at a later time.

The EPA is soliciting public comments on the issues discussed in this document. We will accept comments from the public on this proposal for the next 30 days and will consider comments before taking final action.

VI. Incorporation by Reference

In this action, the EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference District Rule 1160 as described in section III.B of this preamble. The EPA has made, and will continue to make, these materials available through www.regulations.gov and at the EPA Region IX Office (please contact the person identified in the “**FOR FURTHER INFORMATION CONTACT**” section of this preamble for more information).

VII. Statutory and Executive Order Reviews

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

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- 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 Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate

human health or environmental effects with practical, appropriate, 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 the 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 in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

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

Dated: August 20, 2018.

Deborah Jordan,
Acting Regional Administrator,
Region IX.

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