

# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

---

## **Draft Certification of Nonattainment New Source Review and Clean Fuels for Boilers Compliance Demonstration for 2015 8-hour Ozone Standard**

**APRIL 2021**

### **Deputy Executive Officer**

Planning, Rule Development, and Area Sources  
Sarah L. Rees, Ph.D.

### **Planning and Rules Manager**

Planning, Rule Development, and Area Sources  
Zorik Pirveysian

---

Authors: Jong Hoon Lee, Ph.D., Air Quality Specialist, South Coast AQMD  
Kalam Cheung, Ph.D., Program Supervisor, South Coast AQMD

Contributors: David Ono, Senior Air Quality Engineering Manager, South Coast AQMD  
George Illes, Supervising Air Quality Engineer, South Coast AQMD

Reviewed by: Barbara Baird, Chief Deputy Counsel, South Coast AQMD

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
GOVERNING BOARD**

Chairman: DR. WILLIAM A. BURKE  
Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT  
Mayor Pro Tem, Wildomar  
Cities of Riverside County

**MEMBERS:**

LISA BARTLETT  
Supervisor, Fifth District  
County of Orange

JOE BUSCAINO  
Council Member, 15<sup>th</sup> District  
City of Los Angeles Representative

MICHAEL A. CACCIOTTI  
Mayor Pro Tem, South Pasadena  
Cities of Los Angeles County/Eastern Region

VANESSA DELGADO  
Senate Rules Committee Appointee

GIDEON KRACOV  
Governor's Appointee

SHEILA KUEHL  
Supervisor, Third District  
County of Los Angeles

LARRY MCCALLON  
Mayor Pro Tem, Highland  
Cities of San Bernardino County

V. MANUEL PEREZ  
Supervisor, Fourth District  
County of Riverside

REX RICHARDSON  
Vice Mayor, City of Long Beach  
Cities of Los Angeles County/Western Region

CARLOS RODRIGUEZ  
Mayor Pro Tem, Yorba Linda  
Cities of Orange County

JANICE RUTHERFORD  
Supervisor, Second District  
County of San Bernardino

**EXECUTIVE OFFICER:**

WAYNE NASTRI

## Table of Contents

<b>Background</b> .....	1
<b>Nonattainment New Source Review Compliance Demonstration</b> .....	2
<i>Nonattainment NSR SIP Provisions</i> .....	2
<i>Nonattainment NSR SIP Optional Provisions</i> .....	12
<b>Clean Fuel for Boilers Compliance Demonstration</b> .....	15
<b>Summary and Conclusions</b> .....	18

## Background

In 2015, U.S. EPA strengthened the National Ambient Air Quality Standard (NAAQS or standard) for 8-hour ozone from 75 parts per billion (ppb) to 70 ppb. Effective August 3, 2018, the South Coast Air Basin (Basin) is classified as an Extreme nonattainment area and the Coachella Valley is classified as a Severe-15 nonattainment area for the 2015 ozone standard (83 Federal Register (FR) 25776). The Clean Air Act (CAA) requires that nonattainment areas submit a nonattainment new source review (NSR) plan or plan revision. Nonattainment NSR is a pre-construction review permit program for new or modified sources located in a nonattainment area. The requirements for nonattainment NSR for the ozone NAAQS are included in Code of Federal Regulations (CFR) § 51.165. In summary, all nonattainment NSR programs have to require (1) installation of the lowest achievable emission rate (LAER), (2) emission offsets and (3) opportunity for public involvement. In addition, for Extreme nonattainment areas, the use of clean fuels or advanced control technologies are required for electric utility and industrial and commercial boilers emitting more than 25 tons per year of NO<sub>x</sub>, as set forth in § 182(e)(3) of the CAA (the requirement is herein referred as Clean Fuels for Boilers). According to the U.S. EPA's 2018 final rule detailing the nonattainment area State Implementation Plan (SIP) implementation requirements for the 2015 ozone NAAQS (83 FR 62998), the SIP submittal addressing these two requirements must be submitted to the U.S. EPA no later than August 3, 2021.

This document is developed to certify that South Coast AQMD's existing SIP-approved rules and regulations meet the requirements for nonattainment NSR and clean fuels for boilers. This document consists of two demonstrations: (1) Nonattainment NSR Compliance Demonstration for the South Coast Air Basin and the Coachella Valley and (2) Clean Fuels for Boilers Compliance Demonstration for the South Coast Air Basin.

## Nonattainment New Source Review Compliance Demonstration

### *Nonattainment NSR SIP Provisions*

South Coast AQMD's existing NSR program implements the federal statutory and regulatory requirements for NSR and ensures that construction and operation of new, relocated, and modified stationary sources does not interfere with progress towards attainment of the national ambient air quality standards. South Coast AQMD's NSR rules (Regulation XIII) were first adopted in 1979, significantly amended in 1990, and again amended in 1995. The U.S. EPA approved the 1995 amendments of the NSR rules in the SIP in December 1996 (61 FR 64291). The U.S. EPA's approval concluded that the South Coast AQMD's NSR program meets the requirements of the CAA with regard to NSR for nonattainment areas of NAAQS. In 2017, South Coast AQMD submitted a certification of the nonattainment NSR program demonstrating that the NSR regulations meet the nonattainment NSR requirements for the 2008 ozone NAAQS, which the U.S. EPA subsequently approved in 2018 (83 FR 64026).

As specified in the U.S. EPA's final implementation rule for the 2015 ozone standard (83 FR 62998), nonattainment areas must submit "a nonattainment NSR plan or plan revision for the 2015 ozone NAAQS." Via this document, the South Coast AQMD is certifying that the existing South Coast AQMD's nonattainment NSR program, covering the South Coast Air Basin and the Coachella Valley nonattainment areas, is at least as stringent as the requirements at 40 CFR 51.165 for ozone and its precursors, as amended by the final rule titled *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements* (83 FR 62998). The certification includes an analysis of the South Coast AQMD's NSR rules (Regulation XIII), Permit requirements (Regulation II), and the NSR requirements under the South Coast AQMD's RECLAIM (REgional CLean Air Incentives Market) program (Regulation XX).

Table 1 is a checklist of ozone nonattainment NSR plan requirements and the corresponding South Coast AQMD's NSR rules that satisfy these requirements with respect to the 2015 ozone NAAQS.

**Table 1**  
**2015 Ozone NAAQS Nonattainment NSR SIP Requirements**

<b>40 CFR 51.165 Checklist</b>		<b>Compliance Demonstration</b> <b>South Coast AQMD Regulations II, XIII, and XX<sup>1</sup></b>
1.	(a)(1)(iv)(A)(I)(i)-(iv) and (2): Major source thresholds for ozone – VOC and NO <sub>x</sub>	Rule 1302(p), and Rule 2000(c)(45)
2.	(a)(1)(iv)(A)(3): Change constitutes a major source by itself	Rule 1302(s), Rule 1303(a)(1) & (b)(2), Rule 2000(c)(48), and Rule 2005 (b) & (c)
3.	(a)(1)(v)(E): Significant net emissions increase of NO <sub>x</sub> is significant for ozone	Rule 1302(s), (u) & (aa), Rule 1303(a)(1) & (b)(2), and Rule 2005
4.	(a)(1)(v)(F): Any emissions change of VOC in Extreme area triggers NNSR	Rule 1302(o), (u) & (aa), and Rule 1303(a)(1) & (b)(2)
5.	(a)(1)(x)(A)-(C) and (E): Significant emissions rates for VOC and NO <sub>x</sub> as ozone precursors	Rule 1302(o), Rule 1303(a)(1), Rule 2000(c)(44), and Rule 2005
6.	(a)(3)(ii)(C)(I)-(2): Provisions for emissions reduction credits	Rule 1309, Rule 2002, and 2016 AQMP Appendix III
7.	(a)(8): Requirements for VOC apply to NO <sub>x</sub> as ozone precursors	1302(u) & (aa), and Rule 1303
8.	(a)(9)(ii)-(iv) <sup>2</sup> : Offset ratios for VOC and NO <sub>x</sub> for ozone nonattainment areas	Rule 1303(b)(2)(A), Rule 1315, and Rule 2005(b), (c), & (f)
9.	(i): Public participation requirements	Rule 212(g)

As outlined in Table 1, the requirements at 40 CFR 51.165 for ozone and its precursors are addressed in the South Coast AQMD’s NSR (Regulation XIII, Regulation XX and Regulation II) program.

The section below describes the provisions that demonstrate how the South Coast AQMD’s existing NSR program satisfies the requirements with respect to the 2015 ozone NAAQS.

<sup>1</sup> The references in this table refer to SIP-approved versions of the rules, which can be found at the following U.S. EPA’s webpage. <https://www.epa.gov/sips-ca/epa-approved-south-coast-air-district-regulations-california-sip>.

<sup>2</sup> Please note that subparagraphs (a)(9)(i)-(iii) were changed to (a)(9)(ii)-(iv) when the U.S. EPA added new subparagraph (a)(9)(i) under the 2008 PM<sub>2.5</sub> Implementation Rule.

1. 40 CFR 51.165 (a)(1)(iv)(A)(I)(i)-(iv) and (2) provide the definitions of “major stationary source” for ozone. In any extreme ozone nonattainment area, a stationary source that emits, or has the potential to emit, 10 tons per year of VOC or NO<sub>x</sub> is considered a major stationary source. For severe ozone nonattainment areas, the thresholds are set at 25 tons per year of VOC or NO<sub>x</sub>.

South Coast AQMD Rule 1302 (Definitions) consists of the definitions for all terms relating to pre-construction review requirements for new and modified sources in the South Coast AQMD’s NSR program. For the South Coast Air Basin as an Extreme nonattainment area, Rule 1302 defines “major polluting facility” as any facility in the Basin that emits or has the potential to emit 10 tons per year or more of NO<sub>x</sub> or VOC. For the Coachella Valley, as a Severe nonattainment area for the 2015 ozone standard, the SIP-approved version of Rule 1302 defines “major polluting facility” as any facility that emits or has the potential to emit 25 tons per year or more of NO<sub>x</sub> or VOC. In July 2019, the Coachella Valley was reclassified from Severe to Extreme nonattainment for the 1997 8-hour ozone standard. As a consequence, Rule 1302 was amended on December 4, 2020 to change the definition of Major Polluting Facility for Coachella Valley as any facility that emits or has potential to emit 10 tons per year or more of NO<sub>x</sub> or VOC. The 2020 version of Rule 1302 has been submitted to the U.S. EPA for inclusion in the SIP. Major stationary source under the South Coast AQMD’s RECLAIM program<sup>3</sup> is defined under Rule 2000(c)(45) as any facility which emits or has the potential to emit 10 tons per year or more of NO<sub>x</sub>. These thresholds are as least as stringent as the requirements in 40 CFR 51.165.

2. 40 CFR 51.165 (a)(1)(iv)(A)(3) provides additional definition of “major stationary source”, stating that it also includes “Any physical change that would occur at a stationary source not qualifying under paragraphs (a)(1)(iv)(A)(I) or (2) of this section as a major stationary source, if the change would constitute a major stationary source by itself.”

South Coast AQMD’s Rule 1303 (Requirements) requires the Executive Officer or designee to “deny the Permit to Construct for any relocation or for any new or *modified* source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless Best Available Control Technology (BACT) is employed for the new or relocated source or for the actual modification to an existing source” (Rule 1303(a)(1); emphasis added). BACT is defined to be at least as stringent as LAER for major sources (Rules 1303(a) and 1302(f)). It also requires that facilities with a net increase in emissions of any pollutant offset their emissions for that pollutant, unless the new or modified facility has a potential to emit less than 4 tons per year of NO<sub>x</sub> or VOC (Rule 1304(d)). South Coast AQMD Rule 1302 (Definitions) defines “modification” as “any physical change in equipment, change in method of operation, or an addition to an existing facility, which may cause the issuance of air contaminants” (Rule 1302(s)).

---

<sup>3</sup> RECLAIM is an emissions cap and trade program that was developed to reduce NO<sub>x</sub> and SO<sub>x</sub> emissions in South Coast AQMD.

Thus, the applicability of the South Coast AQMD NSR program goes beyond the definition of “major stationary source” in 40 CFR 51.165.<sup>4</sup>

South Coast AQMD Rule 2005 (New Source Review for RECLAIM) sets forth pre-construction review requirements for new facilities subject to the RECLAIM program, for modifications to RECLAIM facilities, and for facilities which increase their allocation to a level greater than their starting Allocation plus non-tradable credits (Rule 2005(b) and (c)). Rule 2000(c)(48) defines “modification” as “any physical change or change in the method of operation of a source.” As such, the NSR requirements for the RECLAIM program satisfy 40 CFR 51.165 (a)(1)(iv)(A)(3).

3. 40 CFR 51.165 (a)(1)(v) concerns “major modifications” in an NSR program. Part (E) of this section requires that for purposes of “applying the requirements of (a)(8) of this section to modifications at major stationary sources of nitrogen oxides located in ozone nonattainment areas or in ozone transport regions, whether or not subject to subpart 2, part D, title I of the Act, any significant net emissions increase of nitrogen oxides is considered significant for ozone.”<sup>5</sup>

South Coast AQMD’s NSR program requires that any relocation, new, or modified source resulting in an emission increase of any nonattainment air contaminant apply BACT (Rule 1303(a)(1)). BACT is defined as at least as stringent as LAER for major sources (see Rules 1303 and 1302). It also requires that facilities with a net increase in emissions of any nonattainment air contaminant offset their emissions for that pollutant (Rule 1303(b)(2)). South Coast AQMD Rule 1302 defines “modification” as “any physical change in equipment, change in method of operation, or an addition to an existing facility, which may cause the issuance of air contaminants” (Rule 1302(s)). Rule 1302 defines the term “nonattainment air contaminant” to include “any air contaminant for which there is a national or state ambient air quality standard, or precursor to such air contaminant” (Rule 1302(u)). VOC and NO<sub>x</sub> are identified as precursors of ozone in the NSR program (Rule 1302(aa)). As such, any net emissions increase of nitrogen oxides is subject to NSR, not just “significant” levels. (See Item 5 below.)

RECLAIM facilities are subject to South Coast AQMD Rule 2005 (New Source Review for RECLAIM), in accordance with a market-based approach. Specifically, RECLAIM facilities must provide (hold), prior to the start of operation, sufficient RECLAIM Trading Credits (RTCs) to offset the annual increase in potential emissions (Rule 2005(b)(2)(A) and (c)(2)). All new RECLAIM facilities that received South Coast AQMD Permits to Construct on or after October 15, 1993, as well as all other RECLAIM facilities that increase their annual allocations above the level of their starting allocations plus non-tradable/non-usable credits, must provide sufficient

---

<sup>4</sup> Sources using the Priority Reserve and other exempt sources are discussed under item 8.

<sup>5</sup> Section (a)(8) referenced above states that “the requirements of this section applicable to major stationary sources and major modifications of volatile organic compounds shall apply to nitrogen oxides emissions from major stationary sources and major modifications of nitrogen oxides in an ozone transport region or in any ozone nonattainment area, except in ozone nonattainment areas or in portions of an ozone transport region where the Administrator has granted a NO<sub>x</sub> waiver ....”

RTCs to offset the annual potential emissions increase from new or modified source(s) at the commencement of each compliance year after the start of operation of the new or modified source(s) (Rule 2005(c)(4)(B) and (f)). Sources causing emissions increases must be equipped with BACT (Rule 2005(b)(1)(A), (c)(1)(A), and (c)(4)).

4. 40 CFR 51.165 (a)(1)(v) concerns “major modifications” in an NSR program. Part (F) of this section requires that “Any physical change in, or change in the method of operation of, a major stationary source of volatile organic compounds that results in any increase in emissions of volatile organic compounds from any discrete operation, emissions unit, or other pollutant emitting activity at the source shall be considered a significant net emissions increase and a major modification for ozone, if the major stationary source is located in an extreme ozone nonattainment area that is subject to subpart 2, part D, title I of the Act.”

South Coast AQMD’s NSR program requires that any relocation, new, or modified source resulting an emission increase of any nonattainment air contaminant apply BACT (Rule 1303(a)(1)). It also requires that facilities with a net increase in emissions of any pollutant offset their emissions for that pollutant (Rule 1303(b)(2)). South Coast AQMD Rule 1302 defines “modification” as “any physical change in equipment, change in method of operation, or an addition to an existing facility, which may cause the issuance of air contaminants.” Rule 1302 defines the term “major modification” to include any physical change in equipment, change in method of operation, or an addition to an existing facility that will cause an increase of one pound per day or more, of the facility’s potential to emit NO<sub>x</sub> and VOC, provided the facility is located in the South Coast Air Basin (Rule 1302(o)(1)). For an existing major polluting facility located in the Coachella Valley, the SIP-approved version of Rule 1302 defines major modification as any modification that will cause an increase of 25 tons per year or more, of the facility’s potential to emit NO<sub>x</sub> or VOC. On December 4, 2020, Rule 1302 was amended to change the definition of Major Modification for Coachella Valley as an increase of one pound per day or more, of the facility’s potential to emit NO<sub>x</sub> or VOC. The 2020 version of Rule 1302 has been submitted to U.S. EPA for inclusion in the SIP. Rule 1302 defines the term “nonattainment air contaminant” to include “any air contaminant for which there is a national or state ambient air quality standard, or precursor to such air contaminant” (Rule 1302(u)). VOC are identified as precursors of ozone (Rule 1302(aa)). As such, any relocation, new, or modified source resulting an emission increase of VOC triggers nonattainment NSR, including BACT and offsets, in the South Coast Air Basin.

5. 40 CFR 51.165 (a)(1)(x) addresses what it means to be a “significant” net emissions increase in an NSR program. The significant emission rate outlined in § 51.165 (a)(1)(x)(A) for ozone is 40 tons per year of VOC or NO<sub>x</sub> pollutant.

Notwithstanding the rate discussed above, per (a)(1)(x)(B), significant means “any increase in actual emissions of volatile organic compounds that would result from any physical change in, or change in the method of operation of, a major stationary

source locating in a serious or severe ozone nonattainment area ... if such emissions increase of volatile organic compounds exceeds 25 tons per year.”

Section (a)(1)(x)(C) states that for the purposes of applying the requirements of paragraph (a)(8) to modifications at major stationary sources of nitrogen oxides, “the significant emission rates and other requirements for volatile organic compounds ... shall apply to nitrogen oxides emissions.”

Finally, per section (a)(1)(x)(E), notwithstanding the significant emissions rates for ozone discussed above, “any increase in actual emissions of volatile organic compounds from any emissions unit at a major stationary source of volatile organic compounds ... shall be considered a significant net emissions increase.”

In the South Coast AQMD’s NSR program, any new or modified source which results in an emission increase of any nonattainment air contaminant (i.e., NO<sub>x</sub> or VOC) is subject to the BACT and offset (except for Priority Reserve and exempt sources, discussed below in Item 8) requirements, thus the threshold is anything greater than zero (Rule 1303(a)(1)). The SIP-approved version of Rule 1302 defines the term “major modification” to include any physical change in equipment, change in method of operation, or an addition to an existing facility that will cause an increase of one pound per day or more, of the facility’s potential to emit NO<sub>x</sub> and VOC, provided the facility is located in the South Coast Air Basin (Rule 1302(o)(1)). For an existing major polluting facility located in Coachella Valley, the SIP-approved version of Rule 1302 defines major modification as any modification that will cause an increase of 25 tons per year or more, of the facility’s potential to emit NO<sub>x</sub> or VOC (Rule 1302(o)).<sup>6</sup>

For the RECLAIM NSR program, “major modification” is defined under the SIP-approved version of Rule 2000(c)(44) as any modification at an existing major polluting facility that will cause an increase of one or more pounds per day in the facility’s potential to emit NO<sub>x</sub> or VOC, provided the facility is located in the South Coast Air Basin; or any modification that will cause an increase of 25 tons per year or more, in the facility’s potential to emit NO<sub>x</sub> or VOC, provided the facility is located in the Coachella Valley.<sup>7</sup>

Overall, the thresholds of “major modification” in Rule 1302 and Rule 2000 are equal to or lower than those listed in § 51.165 (a)(1)(x)(A). South Coast AQMD’s NSR program (Regulation XIII and Rule 2005) applies to any new or modified source which results in an emission increase of NO<sub>x</sub> or VOC. Thus, the requirements in § 51.165 (a)(1)(x)(B), (C), and (E) are satisfied.

---

<sup>6</sup> On December 4, 2020, Rule 1302 was amended to change the definition of Major Modification for Coachella Valley as an increase of one pound per day or more, of the facility’s potential to emit NO<sub>x</sub> or VOC. The 2020 version of Rule 1302 has been submitted to U.S. EPA for inclusion in the SIP.

<sup>7</sup> On December 4, 2020, Rule 2000 was amended to change the definition of Major Modification for Coachella Valley as any modification at an existing major polluting facility that will cause an increase of one pound per day or more of the facility’s potential to emit NO<sub>x</sub>. The 2020 version of Rule 2000 has been submitted to the U.S. EPA for inclusion in the SIP.

6. 40 CFR 51.165 (a)(3)(ii)(C)(1)-(2) describes provisions for emissions reduction credits.

Section (a)(3)(ii)(C)(1) provides that the SIP shall provide that emissions reductions achieved by shutting down an existing emission unit or curtailing production or operating hours may be credited for offsets if they meet the following requirements:

- Such reductions are surplus, permanent, quantifiable, and federally enforceable;
- The shutdown or curtailment occurred after the last day of the base year for the SIP planning process. A reviewing authority may choose to consider a prior shutdown or curtailment to have occurred after the last day of the base year “if the projected emissions inventory used to develop the attainment demonstration explicitly includes the emissions from such previously shutdown or curtailed emission units.”

Section (a)(3)(ii)(C)(2) provides that the emissions reductions that do not meet the requirements in paragraph (a)(3)(ii)(C)(1)(i) may be generally credited only if:

- The shutdown or curtailment occurred on or after the date the construction permit application is filed; or
- The applicant can establish that the proposed new emissions unit is a replacement for the shutdown or curtailed emissions unit, and the emissions reductions achieved by the shutdown or curtailment met the requirements of paragraph (a)(3)(ii)(C)(1)(i).

South Coast AQMD Rule 1309 (Emission Reduction Credits) addresses the application, eligibility, registration, use, and transfer of Emission Reduction Credits (ERCs) that are used as offsets for emission increases at new or modified facilities subject to Rule 1303(b)(2). Under Rule 1309, all stationary and mobile source reductions must be demonstrated to be: (A) real; (B) quantifiable; (C) permanent; (D) federally enforceable, and (E) not greater than the equipment would have achieved if operating with current BACT to be eligible as ERCs (i.e., surplus) (Rule 1309 (b)(4)(A)-(E)). Thus, the provisions in Rule 1309 satisfy the federal statutory requirements for emission reduction credits in an NSR program.

Evaluation of the pre-base year offsets is found in the 2016 Air Quality Management Plan (2016 AQMP Appendix III, Page III-2-74<sup>8</sup>). Shutdowns and curtailments that occurred prior to the last day of the base year are explicitly included in the projected emissions inventory as growth. As the AQMP explains, the growth of point and area sources subject to NSR offset requirements necessarily comes from pre-base year offsets that were shut down before the base year. This is

---

<sup>8</sup> <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-iii.pdf?sfvrsn=6>.

because emissions offsets derived from sources that shutdown after the base year are accounted for in the baseline inventory. When those sources shut down, the most their offsets can do is replace the emissions from that shutdown source. Any growth above that base year is therefore supported from the offsets derived from the pre-base year reductions. Appendix III of the 2016 AQMP (Table III-2-20) shows that the growth projection for sources subject to NSR consists of emissions from pre-base year shutdowns. South Coast AQMD's NSR program is thus consistent with the requirements of 40 CFR 51.165 (a)(3)(i)(C)(1)-(2).

South Coast AQMD Rule 2002 (Allocations for Oxides of Nitrogen (NO<sub>x</sub>) and Oxides of Sulfur (SO<sub>x</sub>)) addresses the treatment of emissions reduction credits for the RECLAIM program. For NO<sub>x</sub> RECLAIM facility shutdowns, RTCs are reduced to the equivalent of the average emissions of the highest 2 years from the previous 5 years of operation, less the emissions that would have occurred if the most stringent Best Available Retrofit Control Technology (BARCT) were applied. More details regarding applicability and RTC availability upon facility shutdowns can be found in Rule 2002(i).

7. 40 CFR 51.165 (a)(8) states that requirements applicable to “major stationary sources and major modifications of volatile organic compounds shall apply to nitrogen oxides emissions from major stationary sources and major modifications of nitrogen oxides.”

Any nonattainment air contaminant, including NO<sub>x</sub> and VOC as ozone precursors, are subject to South Coast AQMD Rule 1303 (Requirements) provisions (Rule 1302(u) and (aa)). RECLAIM facilities are subject to RECLAIM NSR (Rule 2005) in accordance with a market-based approach. Thus, the NSR requirements applicable to major stationary sources and major modifications of VOC (including provisions regarding major modifications, significant emission rates, and offsets) also apply to NO<sub>x</sub> emissions.

8. 40 CFR 51.165 (a)(9)(ii)-(iv) describes the requirements of offset ratios for VOC and NO<sub>x</sub> for ozone nonattainment areas. For severe and extreme nonattainment areas, § 51.165 (a)(9)(ii) requires the offset ratio to be “at least 1.2:1 if the approved plan also requires all existing major sources in such nonattainment area to use BACT for the control of VOC”. § 51.165 (a)(9)(ii)(D) and (E).

The offset ratios for the South Coast AQMD's NSR program are described in Rule 1303(b)(2). Unless a source is exempt from the offset requirements, it must offset its emission increase by either (1) ERCs (Rule 1309); or (2) allocations from the South Coast AQMD's Priority Reserve (Rule 1309.1) (Rule 1303(b)(2)). Offset ratios must be 1.2-to-1.0 for ERCs, and 1.0-to-1.0 for allocations from the Priority Reserve. South Coast AQMD requires that all existing major sources employ BARCT, which is defined similarly to federal BACT (Health & Safety Code § 40406), therefore, sources within the South Coast AQMD can use a 1.2-to-1.0 offset ratio for ozone precursors (i.e., NO<sub>x</sub> and VOC).

With respect to sources that are exempt from the South Coast AQMD's offset requirements pursuant to Rule 1304 or qualify for offsets from the South Coast AQMD's Priority Reserve, which has an emission offset ratio of 1.0-to-1.0, Rule 1315 (Federal New Source Review Tracking System) maintains the South Coast AQMD's ability to issue permits to these sources (77 FR 31200). The South Coast AQMD's computerized emission tracking system is utilized to demonstrate equivalence with federal offset requirements on an aggregate basis. Each year, a status report<sup>9</sup> is prepared by the South Coast AQMD staff to demonstrate compliance with federal NSR requirements by establishing aggregate equivalence with federal offset requirements for sources that were not exempt from federal offset requirements, but were either exempt by the South Coast AQMD from offsets or obtained their offsets from the Priority Reserve. Federal debit and credit accounting for South Coast AQMD's offset accounts is conducted pursuant to the same procedures previously agreed to by the U.S. EPA and as delineated in Rule 1315. For federal equivalency demonstrations, an offset ratio of 1.2-to-1.0 is used for extreme nonattainment air pollutants (ozone and ozone precursors, i.e., VOC and NO<sub>x</sub>). That is, 1.2 pounds are deducted from South Coast AQMD's offset accounts for each pound of maximum allowable permitted potential to emit VOC or NO<sub>x</sub> increase at a federal source. More details about the debit and credit accounting, as well as the detailed listing of actual final withdrawals, deposits, and sum of withdrawals and deposits can be found in the yearly Status Report on Regulation XIII (New Source Review).<sup>10</sup> Overall, South Coast AQMD's NSR program is considered to provide equivalent or greater offsets of emissions as required by federal requirements for each subject pollutant provided the balance of offsets left in the South Coast AQMD's federal offset account for each pollutant remains positive, indicating that there were adequate offsets available.

South Coast AQMD Rule 2005 (New Source Review for RECLAIM), implements the NSR requirements in the context of a cap and trade program. There are three requirements for RECLAIM that provide NSR programmatic equivalency. First, RECLAIM facilities must provide (hold), prior to the start of operation, sufficient RECLAIM Trading Credits to offset the annual increase in potential emissions for the first year of operation at a 1.0-to-1.0 ratio (Rule 2005(b)(2)(A) and (c)(2)). All new RECLAIM facilities that received all South Coast AQMD Permits to Construct on or after October 15, 1993, as well as all other RECLAIM facilities that increase their annual allocations above the level of their starting allocations plus non-tradable/non-usable credits, must provide sufficient RTCs to offset the annual potential emissions increase from new or modified source(s) at a 1.0-to-1.0 ratio at the commencement of each compliance year after the start of operation of the new or modified source(s) (Rule 2005(c)(4)(B) and (f)). Second, the facility must demonstrate by modeling that the operation will not result in a significant increase in the air quality concentration of NO<sub>x</sub> if the facility's total emissions exceed its 1994 starting allocation plus non-tradable credits (Rule 2005(b)(1)(B) and (c)(1)(B)). Third, sources causing

---

<sup>9</sup> South Coast AQMD demonstrates compliance through two reports (Preliminary Determination of Equivalency and Final Determination of Equivalency) for a single reporting period.

<sup>10</sup> The most recent Status Report on Regulation XIII (New Source Review) can be found at: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-feb5-016.pdf?sfvrsn=2>.

emissions increases must be equipped with BACT (Rule 2005(b)(1)(A), (c)(1)(A), and (c)(4)). Although RECLAIM allows a 1-to-1 offset ratio for emissions increases, RECLAIM complies with the federal 1.2-to-1 offset requirement for NO<sub>x</sub> on an aggregate basis. If aggregate RECLAIM emissions do not exceed aggregate allocations, all unused allocations are available to provide offsets beyond the 1-to-1 ratio for NSR emission increases. Each year, an annual program audit report is provided to assess NSR permitting activities to verify that programmatic compliance of RECLAIM with federal and state NSR requirements has been maintained. In the most recent Annual RECLAIM Audit Report for Compliance Year 2019, RECLAIM demonstrated federal equivalency with a programmatic NO<sub>x</sub> offset ratio of 1,504-to-1 based on the compliance year's total unused allocations and total NSR emission increases for NO<sub>x</sub>.<sup>11</sup> Overall, RECLAIM complies with the federal 1.2-to-1 offset requirement for NO<sub>x</sub> on an aggregate basis, as verified yearly through the Annual RECLAIM Audit Report.

9. 40 CFR 51.165 (i) states that the reviewing authority shall notify the public of a draft permit by a method described in either paragraph (i)(1) or (2) of this section. The selected method, known as the "consistent noticing method," shall comply with the public participation procedural requirements of § 51.161 of this chapter and be used for all permits issued under this section 51.165 and may, when appropriate, be supplemented by other noticing methods on individual permits.

South Coast AQMD's SIP-approved version of Rule 212 (Standards for Approving Permits) requires the process for public notification and comment for new or modified sources subject to Regulation XX, RECLAIM facilities, or Outer Continental Shelf Facilities located within 25 miles of the State's seaward boundary and for which the South Coast AQMD has been designated as the corresponding onshore area, which undergo construction or modifications resulting in an emissions increase exceeding the daily maximums (30 pounds of VOC per day or 40 pounds of NO<sub>x</sub> per day). The process for public notification and comment shall include all of the applicable provisions of 40 CFR 51.161(b) and 40 CFR 124.10. The federal public notice and comment procedures, as described in Rule 212(g), require that the public notice be distributed to the broadest possible scope of interested parties, and include, at a minimum, the following:

- (1) Availability of information submitted by the owner or operator, and of South Coast AQMD's analyses of the effect on air quality for public inspection in at least one location in the area effected;
- (2) Notice by prominent advertisement in the area affected of the location of the source information and the South Coast AQMD's analyses of the effect on air quality;

---

<sup>11</sup> Annual RECLAIM Audit Report for 2019 Compliance Year.  
<http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-mar5-033.pdf?sfvrsn=2>.

- (3) Mailing a copy of the notice required in paragraph (2) to the following persons: The applicant the Administrator of U. S. EPA through Region 9, the Air Resources Board, affected local air pollution control districts, the chief executives of the city and county or the onshore area that is geographically closest to where the major stationary source or major modification would be located, any comprehensive regional land use planning agency, and State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the regulated activity; and
- (4) A 30-day period for submittal of public comments.

As such, South Coast AQMD Rule 212 satisfies the public participation requirements, as set forth in 40 CFR 51.165 (i).

### *Nonattainment NSR SIP Optional Provisions*

In addition to the mandatory requirements described in the section above, the nonattainment NSR SIP may include discretionary programs allowing the use of (i) project emissions accounting (PEA) and (ii) interpollutant trading (IPT). Table 2 is a checklist of Nonattainment NSR optional SIP requirements for the 2015 8-hour ozone NAAQS.

**Table 2**  
2015 Ozone NAAQS Nonattainment NSR SIP Optional Provisions

<b>40 CFR 51.165 Checklist</b>		<b>Compliance Demonstration South Coast AQMD Regulation XIII</b>
1.	(a)(2)(ii)(G): Allows use of PEA	Not Applicable
2.	(a)(11): Allow use of IPT for Ozone	Rule 1309(h)

- 1. 40 CFR 51.165 (a)(2)(ii)(G) requires that the “sum of the difference” as used in paragraphs (C), (D) and (F) of this section shall include both increases and decreases in emissions calculated in accordance with those paragraphs.

The basis for calculating applicability of South Coast AQMD NSR program is defined in Rule 1306 (Emission Calculations). In general, South Coast AQMD’s NSR applicability is determined on a per equipment basis, which is different from the requirements in the project based federal NSR applicability test. South Coast AQMD’s existing NSR program does not implement the optional provision of project emission accounting for NSR applicability determination.

2. 40 CFR 51.165 (a)(11) describes provisions for the use of interpollutant offsetting, or interpollutant trading or interprecursor trading or interprecursor offset substitution for ozone. The NSR plan shall require that in meeting the emissions offsets requirements of paragraph (a)(3) of this section, the emissions offsets obtained shall be for the same regulated NSR pollutant unless interprecursor offsetting is permitted for a particular pollutant as specified in this paragraph.

South Coast AQMD Rule 1309 (Emission Reduction Credits) addresses the application, eligibility, registration, use and transfer of emission reduction credits. Rule 1309(h) provides a provision that allows the use of interpollutant offset for ozone, contingent upon the U.S. EPA's review and approval on a case by case basis:

*For the use of interpollutant offsets, stating that the Executive Officer or designee may approve interpollutant offsets on a case-by-case basis, provided that the trade results in an equivalent or greater offset of the new, modified, or relocated source's nonattainment pollutants; and that the applicant demonstrates, to the satisfaction of the Executive Officer or designee, that the emissions from the new or modified source will not cause or significantly contribute to the violation of an ambient air quality standard as specified in Table A-2. All interpollutant trading shall be subject to EPA's review and approval.*

As described above, Rule 1309(h) allows for interpollutant offset trades on a case-by-case basis, and all trading are subject to the U.S. EPA's review and approval. In the past years, due to the extensive resources and modeling involved with the interpollutant trading process, the IPT provision has not been utilized since 1990s in the South Coast AQMD's NSR program.

The 2018 Implementation Rule for the 2015 ozone standard (83 FR 62998) allows the use of interpollutant trading for offset. However, a recent court decision<sup>12</sup> ruled that the interpollutant trading program violates the Clean Air Act's anti-backsliding provision that plainly prohibits interprecursor trading. As a result of this court decision, the U.S. EPA will no longer approve any interpollutant trading. Given that Rule 1309 already requires the U.S. EPA's review and approval of all interpollutant trading, the IPT provision in Rule 1309 satisfies the recent court decision for the 2015 ozone standard. Nevertheless, South Coast AQMD commits to remove the IPT provision from Rule 1309 as it relates to ozone and its precursors in the upcoming rule amendment. Currently, South Coast AQMD's NSR program is going through a rulemaking process to address the NSR requirements related to the transition of RECLAIM facilities from a cap-and-trade program to a command-and-control regulatory structure. As part of the NSR amendment for the RECLAIM transition, the IPT provision in Rule 1309 will be removed to be consistent with the recent court ruling. Furthermore, South Coast AQMD commits to not implement the IPT provision in Rule 1309(h) as it relates to ozone and its precursors until Rule 1309(h) is updated and approved

---

<sup>12</sup> Sierra Club, et al. v. EPA, No. 15-14654 (D.C. Cir. Jan. 29, 2021).

in the SIP. As such, we conclude that Rule 1309 meets the nonattainment NSR requirements for the 2015 ozone standard.

## Clean Fuel for Boilers Compliance Demonstration

The South Coast Air Basin is classified as an Extreme ozone nonattainment area for the 2015 ozone standard. For Extreme nonattainment areas, section 182(e)(3) of the CAA requires the use of clean fuels or advanced control technologies for electric utility and industrial and commercial boilers. Specifically, each new, modified, and existing electric utility and industrial and commercial boiler which emits more than 25 tons per year of NO<sub>x</sub> must either (A) burn as its primary fuel<sup>13</sup> natural gas, methanol, or ethanol (or a comparably low polluting fuel), or (B) use advance control technology (such as catalytic control technology or other comparably effective control methods) for reduction of NO<sub>x</sub> emissions.

Currently, within the South Coast Air Basin, boilers that are subject to the requirements of CAA section 182(e)(3) fall into two broad categories: (1) boilers subject to the RECLAIM Program (Regulation XX) and (2) boilers subject to Rule 1146. As to the boilers subject to RECLAIM program, Rule 2004 (Requirements) of Regulation XX requires that each new, modified and existing electric utility and industrial and commercial boiler emitting more than 25 tons of NO<sub>x</sub> per year (1) burn clean fuel (i.e., burn as their primary fuel, natural gas, methanol, or ethanol (or a comparably low polluting fuel), or (2) use advanced control technology. In addition, Rule 2002 (Allocations for NO<sub>x</sub> and SO<sub>x</sub>) establishes the methodology for calculating facility allocations and adjustments to RTC holdings for NO<sub>x</sub> and SO<sub>x</sub>. The RTC allocation is updated periodically to reflect the implementation of BARCT for equipment in the RECLAIM program. As to the boilers that are not subject to RECLAIM, the requirements of CAA section 182(e)(3) are fulfilled through implementation of South Coast AQMD's Rule 1146 (Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers Steam Generators, and Process Heaters) for existing boilers and through implementation of Rule 1303 (Requirements) for new or modified boilers. Below is a brief description of the SIP approved version of each rule.

- Rule 2002 (Allocations for NO<sub>x</sub> and SO<sub>x</sub>)

Rule 2002 (amended October 7, 2016) was approved in the SIP on September 14, 2017 (82 FR 43176). Rule 2002 establishes the methodology for calculating facility allocations and adjustments to RTC holdings for NO<sub>x</sub> and SO<sub>x</sub>. The RTC allocation is updated periodically to reflect the implementation of BARCT for equipment in the RECLAIM program.

- Rule 2004 (Requirements for RECLAIM)

Rule 2004 (adopted April 6, 2007) was approved in the SIP in July 3, 2008 (73 FR 38122), and establishes the requirements for operating under the RECLAIM program, including

---

<sup>13</sup> For purposes of this subsection, the term "primary fuel" means the fuel which is used 90 percent or more of the operating time. This paragraph shall not apply during any natural gas supply emergency (as defined in title III of the Natural Gas Policy Act of 1978 [15 U.S.C. 3361 et seq.]).

provisions pertaining to permits, allocations, reporting, variances, and breakdowns. Rule 2004 requires, effective November 15, 1998, that each new, modified and existing electric utility and industrial and commercial boiler emitting more than 25 tons of NO<sub>x</sub> per year (1) burn clean fuel (i.e., burn as their primary fuel, natural gas, methanol, or ethanol (or a comparably low polluting fuel), or (2) use advanced control technology.

- Rule 1146 (Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters)

Rule 1146 (adopted in November 1, 2013) was approved in the SIP in September 25, 2014 (79 FR 57442), and applies to boilers, steam generators, and process heaters of equal to or greater than 5 million British thermal unit (Btu) per hour rated heat input capacity used in all industrial, institutional, and commercial operations. It regulates large boilers not covered in the RECLAIM program. NO<sub>x</sub> emission limits range from 5 to 30 ppm depending on equipment size, fuel, and type of burner. Rule 1146 requires that Group I boilers, using natural gas equal to or greater than 75 million Btu per hour, have a NO<sub>x</sub> limit of 5 ppm. Group II boilers, using natural gas equal to or greater than 20 but lower than 75 million Btu per hour, are required to have a NO<sub>x</sub> limit of 9 ppm depending on compliance schedule. Group III boilers, using natural gas equal to or greater than 5 million Btu per hour but lower than 20 million Btu per hour are required a NO<sub>x</sub> limit of 9 ppm. Rule 1146 allows for combustion of fuel that may not necessarily be natural gas, methanol, ethanol or other comparably low polluting fuel. The emission limits for these other fuels, including units fired on digester or landfill gas, are 15 ppm and 25 ppm, respectively. According to the South Coast AQMD's most recent Annual Emissions Reports, aside from the refinery boilers currently regulated under the RECLAIM program, there was only one boiler emitting more than 25 tons per year of NO<sub>x</sub> using other fuels. This boiler is located in the Los Angeles County Sanitation District Landfill in Puente Hills, which combusts recovered landfill gas as the primary fuel and is equipped with flue gas recirculation, which is a highly effective technique used for lowering NO<sub>x</sub> emissions from burners. The boiler is subject to the 25 ppm NO<sub>x</sub> emission limits for landfill gas-fired units. It should however be noted that on February 5, 2021, Rule 1150.3 (Emissions of Oxides of Nitrogen from Combustion Equipment at Landfills) was adopted to regulate NO<sub>x</sub> emissions from combustion equipment at municipal solid waste landfills and landfill gas to energy facilities. A BARCT assessment was conducted as part of the rulemaking effort. The analysis revealed that considering technological and economic feasibilities, the emission limit of 25 ppm reflects BARCT for boilers using landfill gas in the Basin. This NO<sub>x</sub> emission limit is consistent with Rule 1146. Based on the cost-effectiveness analysis, a lower NO<sub>x</sub> limit of 9 ppm was also established with a compliance date of January 1, 2031.

- Rule 1303 (Requirements for NSR)

Rule 1303 (amended in May 10, 1996) was approved in the SIP in December 4, 1996 (61 FR 64291). Under Rule 1303, a new or modified boiler is required to employ BACT, which must be at least as stringent as the LAER as defined in CAA section 171(3) for major sources (Rules 1303(a) and 1302(f)). Rule 1303 requires the Executive Officer or designee to “deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless Best Available Control Technology (BACT) is employed for the new or relocated source or for the actual modification to an existing source” (Rule 1303(a)(1)). As such, new or modified boilers are subject to BACT which by definition requires the use of the Best Available Control Technology. For example, the BACT emissions limits for boilers using natural gas equal to or greater than 75 million Btu per hour is 5 ppm, which would require the use of advanced control technology such as Selective Catalytic Reduction (SCR).<sup>14</sup>

Given the information above, the requirements in the Rules 1146, 2002, 2004, and 1303 (and recently Board approved Rule 1150.3) are at least as stringent as those described in section 182(e)(3) of the CAA.

---

<sup>14</sup> The latest amendments to South Coast AQMD BACT Guidelines. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-feb5-025.pdf?sfvrsn=2>.

## Summary and Conclusions

The South Coast Air Basin and the Coachella Valley are designated as Extreme and Severe nonattainment areas, respectively, for the 2015 8-hour ozone standard. For these nonattainment areas, the U.S. EPA requires submittal of a nonattainment NSR plan or plan revision. As described in the Nonattainment NSR Compliance Demonstration, South Coast AQMD's current SIP-approved Nonattainment NSR program, which covers both the South Coast Air Basin and the Coachella Valley, applies to new major stationary sources or major modifications to existing sources, and is at least as stringent as the requirements at the Code of Federal Regulations (40 CFR 51.165) for ozone and its precursors. Therefore, no changes are necessary to comply with the 2015 ozone standard nonattainment NSR requirements. For Extreme nonattainment areas, the CAA requires the use of clean fuels or advanced control technologies for large electric utility, industrial, and commercial boilers. This requirement is fulfilled through South Coast AQMD's Rule 1146, Rule 2002, Rule 2004, and Rule 1303, which regulate NO<sub>x</sub> emissions from existing, new or modified boilers. As such, the South Coast AQMD is hereby certifying that the current SIP-approved NSR rules satisfy the 2015 ozone standard nonattainment NSR requirements, and that the current SIP-approved Rules 1146, 2002, 2004, and 1303 satisfy the 2015 ozone standard requirements for the use of clean fuels or advanced control technology for new, modified and existing boilers.