

# **Eastern Kern Air Pollution Control District**

### REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) STATE IMPLEMENTATION PLAN (SIP) FOR THE 2008 AND 2015 8-HOUR OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Board Adopted July 27, 2023

2700 "M" Street, Suite 302 Bakersfield CA 93301 (661) 862-5250 FAX: (661) 862-5251 <u>ekapcd@kerncounty.com</u>

### **TABLE OF CONTENTS**

|      |   | Page |
|------|---|------|
| I.   | INTRODUCTION  |      |
|      | A. Ozone  | 1    |
|      | B. Background   |      |
|      | C. Kern County Split  | 2    |
|      | D. District Name Change   | 2    |
| II.  | ATTAINMENT PLANS  | 3    |
|      | A. 1994 Attainment Plan   | 3    |
|      | B. 1997 Ozone NAAQS   | 3    |
|      | C. Indian Wells Valley Attainment Area                          | 4    |
|      | D. 2008 Ozone NAAQS   | 5    |
|      | E. 2015 Ozone NAAQS   | 5    |
| III. | CHALLENGES  | 6    |
|      | A. Geography  | 6    |
|      | B. Pollutant Transport  | 7    |
|      | C. Meteorology  |      |
|      | D. Ozone Trends   |      |
| IV.  | RACT SIP REQUIREMENTS   | 9    |
| V.   | DETERMINATION OF RACT AND FINDINGS                              | 10   |
|      | A. CTG Source Categories  |      |
|      | B. Non-CTG Major Sources  |      |
|      | C. Previous 2008 & 2015 RACT SIPs                               |      |
|      | D. Negative Declarations  | 11   |
| VI.  | RACT ANALYSIS   | 30   |
|      | A. Background   |      |
|      | B. RACT Evaluations for CTG Sources                             |      |
|      | C. RACT Evaluation for Non-CTG Major Sources                    |      |
|      | D. RACT SIP Evaluation Findings                                 |      |
| FIG  | URES  |      |
|      | re 1: California Air Districts                                  | ii   |
| Figu |   |      |
| •    | re 3: District Attainment/Nonattainment Area                    |      |
| 0    | re 4: Transport Corridors & Wind Patterns                       |      |
| 0    | re 5: O <sub>3</sub> Transport and Future DVs for 2026 and 2032 | 8    |
| TAI  | <u>BLES</u>   |      |
| Tabl | e 1: 1990 FCAAA   | 2    |
| Tabl |   |      |
| Tabl |   |      |
| Tabl |   |      |



Figure 1: California Air Districts

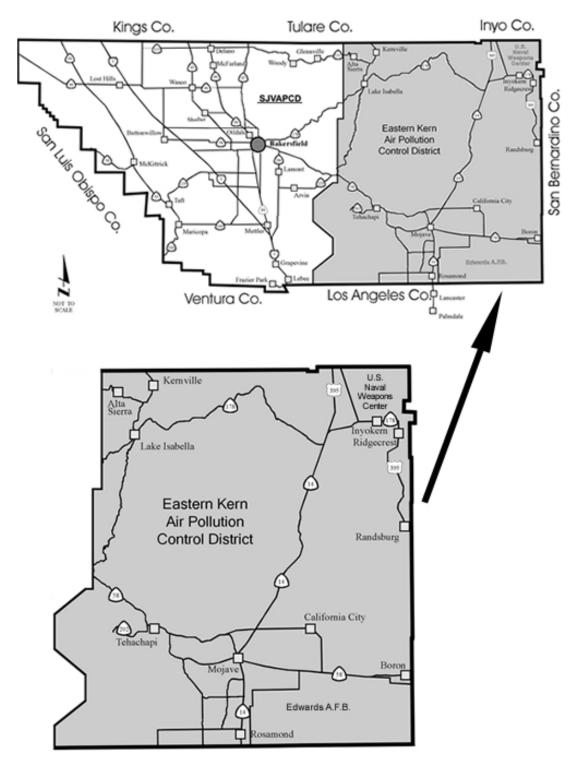


Figure 2: EKAPCD Boundary

### I. INTRODUCTION

#### A. Ozone

Stratospheric ozone occurs naturally and is beneficial in the upper atmosphere, shielding the earth from harmful ultraviolet radiation from the sun. However, ground-level (tropospheric) ozone  $(O_3)$  is a colorless gas with a pungent, irritating odor and is a highly reactive harmful air pollutant that can damage living tissues and man-made materials upon contact.

 $O_3$  is not directly emitted from sources, but formed in the air by reactions of the  $O_3$  precursor emissions volatile organic compounds (VOC) and oxides of nitrogen (NOx) in the presence of sunlight and heat. Accordingly, peak  $O_3$  levels occur during the sunnier, warmer times of the year, typically April through October and hit the highest levels during the hottest part of the day.

Health effects of  $O_3$  are focused on the respiratory tract. When inhaled,  $O_3$  can irritate and inflame the lining of the lungs, much like sunburn damage on skin. Potential health impacts include aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis. Individuals with respiratory problems are most vulnerable to  $O_3$ , but outdoor activities on "high"  $O_3$  days can also affect normally healthy people.

#### **B.** Background

The Federal Clean Air Act (CAA) of 1970 required the United States Environmental Protection Agency (EPA) to develop health-based National Ambient Air Quality Standards (NAAQS) for several categories of air pollutants, including O<sub>3</sub>. EPA periodically reviews the NAAQS and associated scientific basis in determining appropriate revisions. Accordingly, EPA establishes new standards following advances in scientific understanding of the pollutant and its potential health effects.

Section 110 (a)(1) of the Federal Clean Air Act Amendments (FCAAA) of 1977 required EPA to divide the United States into "Planning Areas" and designate these areas "attainment", "nonattainment", or "unclassified" within 3 years of adopting the NAAQS.

The FCAAA of 1990 gave states the primary responsibility for achieving the NAAQS. The principal mechanism for complying with the FCAAA is developing and adopting a State Implementation Plan (SIP). A SIP outlines the programs, actions, and commitments a state will carry out to implement its responsibilities under the FCAAA. The EPA must approve all SIPs before they can be implemented by state and local governments. Once approved by the EPA, a SIP becomes a legally binding document under both state and federal law, and may be enforced by either government. In 1990, EPA viewed all of Kern County as one "Planning Area" even though it was divided between two air basins. Unfortunately, there was not an O<sub>3</sub> monitoring station located in Eastern Kern County at that time and the only data available was from the San Joaquin Valley portion of Kern County. Consequently, all of Kern County was classified as Serious Nonattainment, with respect to the 1990 FCAAA. The statutory attainment date became November of 1999.

Table 1 below details the O<sub>3</sub> nonattainment classifications and mandatory attainment dates established in Section 181(a) of the FCAAA of 1990.

| -          |                                 |  |  |  |  |  |  |
|------------|---------------------------------|--|--|--|--|--|--|
| Area Class | Ozone Design Value <sup>1</sup> | Primary Standard<br>Attainment Date <sup>2</sup> |  |  |  |  |  |
| Marginal   | 0.121 up to 0.138               | 3 years after enactment                          |  |  |  |  |  |
| Moderate   | 0.138 up to 0.160               | 6 years after enactment                          |  |  |  |  |  |
| Serious    | 0.160 up to 0.180               | 9 years after enactment                          |  |  |  |  |  |
| Severe     | 0.180 up to 0.280               | 15 years after enactment                         |  |  |  |  |  |
| Extreme    | 0.280 and above                 | 20 years after enactment                         |  |  |  |  |  |

Table 1, 1990 FCAAA

### C. Kern County Split

In 1992, Kern County was split between two air districts delineated by the two air basins. The San Joaquin Valley portion of Kern County became part of the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the eastern portion that includes the Mojave Desert and mountain regions of the County remained the Kern County Air Pollution Control District (KCAPCD)<sup>3</sup>. Even though KCAPCD is located in a different air basin, EPA continued to consider it part of the San Joaquin Valley Federal Ozone Planning Area. In November 2001, upon formal request, EPA agreed to consider KCAPCD a separate O<sub>3</sub> planning area.

### **D.** District Name Change

On May 13, 2010, the District's Governing Board formally changed KCAPCD to the Eastern Kern Air Pollution Control District (EKAPCD). As a result, all references to KCAPCD contained in documents dated March 20, 1991 (formation date of the SJVUAPCD and KC split) or later, shall mean EKAPCD or District.

<sup>&</sup>lt;sup>1</sup> The design value is measured in parts per million (ppm).

<sup>&</sup>lt;sup>2</sup> The primary standard attainment date is measured from the date of the enactment of the Clean Air Amendments of 1990.

<sup>&</sup>lt;sup>3</sup> In 2010, KCAPCD appropriately changed its name to Eastern Kern Air Pollution Control District.

### **II. ATTAINMENT PLANS**

#### A. 1994 Attainment Plan

Section 182 (c) of the 1990 FCAAA prescribed requirements and schedules for attainment planning. In accordance, the following three plans were required:

- 1. A minus 15% VOC Rate-of-Progress (ROP) Plan by November 15, 1993;
- 2. A minus 3% Per Year VOC or NOx Reasonable Further Progress (RFP) Plan by November 15, 1994; and
- 3. An Attainment Plan by November 15, 1994.

The District prepared and submitted its ROP Plan by November 15, 1993, and submitted its RFP and Attainment Plans by November 15, 1994.

The District's *1994 Ozone Attainment Demonstration* (Attainment Plan) was approved by EPA on September 25, 1996<sup>4</sup>. The Attainment Plan was presented in two parts: I Transport Analysis and II Attainment Demonstration.

Part I showed that the District is overwhelmingly impacted by O<sub>3</sub> transport from both the San Joaquin Valley Air Basin and the South Coast Air Basin. Air pollutant emission sources within the District, by themselves, did not cause NAAQS or California Ambient Air Quality Standards (CAAQS) exceedances.

Part II showed that the District would attain  $O_3$  NAAQS but not CAAQS by 1999. This was achieved.  $O_3$  data collected from 1999-2002 at the  $O_3$  monitor located in Mojave showed attainment of the NAAQS.

| Ozone Data from 923 Poole Street (Mojave) Monitor |      |      |      |      |  |  |
|---|------|------|------|------|--|--|
| <b>Design Value Year:</b>                         | 1999 | 2000 | 2001 | 2002 |  |  |
| Ozone ppb:  | 96   | 97   | 96   | 95   |  |  |

#### Table 2, District 1990 FCAAA Attainment

#### B. 1997 Ozone NAAQS

A "new" 8-hour  $O_3$  NAAQS was established in 1997 at a level of 80 parts per billion (ppb). The 8-hour averaging time was selected to address the impacts of exposure to longer periods of elevated  $O_3$ . The NAAQS is attained when: Each monitor in the region shows a three-year average (of the annual fourth-highest daily maximum 8-hour average  $O_3$  concentration) is no more than 84 ppb based on the rounding convention dictated in federal regulation<sup>5</sup>. Three years of  $O_3$  concentrations are averaged due to the impacts of year-to-year variations in meteorology on  $O_3$  formation.

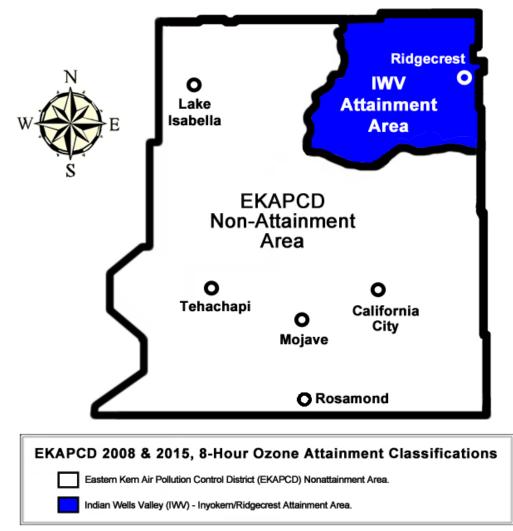
<sup>&</sup>lt;sup>4</sup> 62 Fed. Reg. 1150, January 8, 1997

<sup>&</sup>lt;sup>5</sup> Appendix I to 40 CFR 50, "Interpretation of the Eight-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone."

#### C. Indian Well Valley Attainment Area

In 2004, at request of the California Air Resources Board (CARB), EPA divided the District into two O<sub>3</sub> planning areas: The Indian Wells Valley (IWV), which attained the 1997 NAAQS (attainment area), and the remainder of the District (nonattainment area).

By 2011, the Design Value  $(DV)^6$  of the O<sub>3</sub> nonattainment area dropped from 98 ppb (2003 level) to 80-ppb. On December 3, 2012, EPA announced that they found the District's nonattainment area attained the 1997 NAAQS<sup>7</sup>. With this finding, the entire District was deemed to have "clean data" with respect to the 1997 8-hour O<sub>3</sub> NAAQS (effective January 3, 2013).



### Figure 3: District Attainment/Nonattainment Areas

<sup>&</sup>lt;sup>6</sup> The three year average of the fourth highest 8-hour ozone value for the target year and the two preceding years is the design value for that year. To determine attainment that design value is compared to the Ozone NAAQS.

<sup>&</sup>lt;sup>7</sup> 77 Federal Register 71551-71555; December 3, 2012

#### D. 2008 Ozone NAAQS

In 2008, EPA adopted a more stringent 8-hour  $O_3$  NAAQS of 75 ppb<sup>8</sup> (2008 NAAQS). Although the District showed a significant reduction in  $O_3$  levels by attaining the 1997  $O_3$  NAAQS, and the IWV<sup>9</sup> already met the 75 ppb standard, the remainder of the District had a DV higher than 75 ppb. On May 21, 2012, EPA classified the District's nonattainment area as "Marginal" nonattainment due to the DV exceeding 75 ppb.

CARB, in partnership with the District conducted photochemical modeling along with supplemental analyses to determine the anticipated attainment date of the 2008 NAAQS. Air monitoring data and modeling revealed the District would not attain the 2008 NAAQS by the Marginal (July 15, 2015) or Moderate (July 15, 2018) deadlines. However, modeling indicated the District could attain the 2008 NAAQS by the "Serious" deadline of July 15, 2021. Therefore, on July 27, 2017, the District adopted an attainment plan designed to address all required elements of Serious nonattainment pursuant to the 2008 NAAQS. The adopted O<sub>3</sub> plan identified emission control measures and associated emission reductions necessary to demonstrate attainment by 2021. Unfortunately, the District did not achieve attainment of the 2008 NAAQS by July 15, 2021, and was reclassified to "Severe" nonattainment (now required to attain by July 2027).

### E. 2015 Ozone NAAQS

On October 1, 2015, EPA revised the federal 8-Hour O<sub>3</sub> NAAQS again by lowering it from 75 ppb to 70 ppb<sup>10</sup> (2015 NAAQS). CARB performed analysis to determine appropriate designation recommendations throughout the State using the criteria outlined in EPA's guidance memorandum<sup>11</sup>. One of the first steps of determining attainment is to compare the O<sub>3</sub> DV to the level of the standard. The DV reflects a three-year average of the fourth highest 8-hour average concentration at each monitoring site. If the DV is 71 ppb or greater, it violates the 2015 NAAQS. These three-year average DVs are updated once the monitoring data from each calendar year are reviewed and certified.

Based on O<sub>3</sub> air quality monitoring data from years 2013-2015, nineteen areas did not meet the 2015 NAAQS. Sixteen of these areas were also designated nonattainment for the 2008 NAAQS (75 ppb). CARB recommended the boundaries of these sixteen nonattainment areas remain the same for both 8-hour O<sub>3</sub> NAAQS (2008 and 2015). The District's designated nonattainment area is the same for both standards (70 ppb and 75 ppb).

<sup>&</sup>lt;sup>8</sup> 73 FR 16436; 40 CFR 50.15, "National Primary and Secondary Ambient Air Quality Standards for Ozone."

<sup>&</sup>lt;sup>9</sup> The Indian Wells Valley portion of Eastern Kern Air Pollution Control District was found attainment/unclassified for the 2008 Ozone NAAQS by EPA in 2011.

<sup>&</sup>lt;sup>10</sup> 80 Federal Register 26594; October 26, 2015

<sup>&</sup>lt;sup>11</sup> February 25, 2016, Area Designations for the 2015 Ozone National Ambient Air Quality Standards, Memorandum from Janet G. McCabe, Acting Assistant Administrator, Office of Air and Radiation to Regional Administrators, Regions 1-10.

Nonattainment areas are classified as Marginal, Moderate, Serious, Severe, or Extreme, depending on the magnitude of the area's O<sub>3</sub> DV and EPA's guidance. On June 4, 2018, the EPA classified the District's nonattainment area as "Moderate" pursuant to the 2015 NAAQS<sup>12</sup>. However, photochemical modeling conducted by CARB indicated the District would not attain the 2015 NAAQS by the Moderate deadline of August 2024.

CAA §181(b)(3) "Voluntary Reclassification" states: "The Administrator shall grant the request of any State to reclassify a nonattainment area in that State in accordance with Table 1 of subsection (a) to a higher classification." The request for EPA to reclassify a nonattainment area to a higher classification will extend the attainment deadline, and although the requirements of the next higher classification will be more stringent, reclassification is an appropriate approach for areas that must rely on long-term strategies needed for achieving attainment.

On May 6, 2021, the District sent a letter to CARB requesting they formally submit a voluntary reclassification request to EPA to reclassify the District's nonattainment area from "Moderate" to "Serious" pursuant to the 2015 NAAQS. This reclassification would modify the attainment deadline from August 3, 2024 to August 3, 2027, which was believed to be sufficient time to attain.

On October 28, 2021, EPA granted the request and reclassified the District as Serious nonattainment<sup>13</sup>. Unfortunately, CARB's photochemical modeling conducted to show attainment with the 2008 NAAQS also showed that the District would not attain the 2015 NAAQS by August 3, 2027. However, the modeling did show that attainment could be achieved by 2033, which is the milestone date for "Severe" nonattainment.

On May 4, 2023, the District adopted the 2023 Ozone Attainment Plan for the 2008 & 2015, 8-Hour Ozone National Ambient Air Quality Standards (NAAQS). Within this plan, the District requests that CARB formally submit a request to the EPA for the voluntary reclassification of the District's nonattainment area from Serious to Severe nonattainment pursuant to the 2015 NAAQS. This reclassification will revise the attainment deadline from August 3, 2027, to August 3, 2033. The Weight of Evidence included in the attainment plan provides data showing attainment will achieve by 2033.

### **III. CHALLENGES**

### A. Geography

The District is located on the western edge of the Mojave Desert and comprised of unique geography, topography, and meteorology, which create a challenging environment for attaining the  $O_3$  NAAQS. The District is separated from populated valleys and coastal areas to the west and south by several mountain ranges.  $O_3$  and its precursor emissions (VOC and NOx) are transported from these valleys and coastal areas are the major factor affecting  $O_3$  exceedances in the District.

<sup>&</sup>lt;sup>12</sup> 83 Federal Register 25776; June 4, 2018

<sup>&</sup>lt;sup>13</sup> 86 Federal Register 59648-59651; October 28, 2021

The surrounding mountain ranges contain a limited number of passes that serve as transport corridors. Passes include Tehachapi Pass, which connects the western Mojave Desert to the southern San Joaquin Valley, and the Soledad Pass and Cajon Pass that connect to the South Coast Air Basin. The District is primarily influenced by transport through the Tehachapi Pass corridor with some potential influence through Soledad Pass. Soledad Pass and Cajon Pass mainly influence air quality in the eastern portion of the Mojave Desert due to prevailing wind directions.

### **B.** Pollutant Transport

It is common for air pollutants to transport between air basins. The District's air quality is overwhelmingly impacted from  $O_3$  and its precursor emissions being transported from SJVAPCD and SCAQMD (both designated Extreme Nonattainment). Transport can take place from the surface up to several thousand feet elevation. Transport occurs when winds are of sufficient magnitude, direction, and duration. Atmospheric chemistry also determines how transported pollutants may affect downwind  $O_3$  concentrations.

Analysis of Eastern Kern's wind data shows  $O_3$  and its precursors transport to the District when Prevailing wind originates from consistently high  $O_3$  concentration areas and wind is persistent with high enough velocity to move emissions from upwind areas. Data also demonstrated elevated  $O_3$  concentrations in the District coincide with high upwind  $O_3$  levels being transported. Figure 4 illustrates District transport corridors and wind flow patterns<sup>14</sup> from surrounding air basins.



Figure 4: Transport Corridors & Wind Flow Patterns

<sup>&</sup>lt;sup>14</sup> Reference from California Surface Wind Climatology published by Aerometric Projects and Laboratory Branch (Meteorology Section) from ARB from June to September. <u>https://www.arb.ca.gov/research/apr/reports/1013.pdf</u>

### C. Meteorology

Meteorological data from several ambient air monitoring stations<sup>15</sup> and airports<sup>16</sup> located in Kern, Los Angeles, and San Bernardino Counties along with data obtained from CARB were analyzed. Data analysis revealed relative humidity in the desert to be below 10 percent in the summer during the hottest part of the day. This combination of dry hot clear days results in intense solar radiation, instrumental in formation of photochemical O<sub>3</sub>. Concurrence of these meteorological conditions are favorable to overwhelming transport of O<sub>3</sub> into the District<sup>17</sup>.

### **D.** Ozone Trends

Although SJVAPCD and SCAQMD have been improving their local air quality and reducing O<sub>3</sub> and its precursor emissions, neither district have attained the 2008, or 2015 O<sub>3</sub> NAAQS. Concurrently, the District has been steadily improving its air quality since attaining the 1997 NAAQS (80 ppb). Figure 5 compares the District's interpolated DVs for future years 2026 and 2032, along with the areas of the District being impacted by O<sub>3</sub> transport emissions.

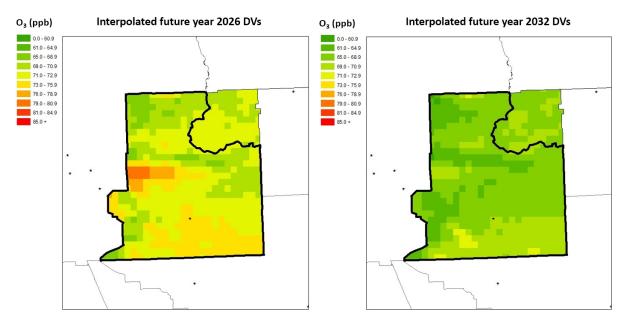


Figure 5: O<sub>3</sub> Transport and Future DVs for 2026 and 2032

<sup>&</sup>lt;sup>15</sup> Ambient air monitoring data was collected at air monitoring stations in Mojave (Eastern Kern APCD), Bakersfield, Edison, Oildale, and Arvin (San Joaquin Valley APCD); Lancaster (South Coast AQMD), and Barstow and Trona (Mojave Desert AQMD).

<sup>&</sup>lt;sup>16</sup> Meteorological data came from the following airports: Mojave Airport, Edwards Air Force Base, Meadows Field, Naval Air Weapons Station, Lancaster, Ontario, San Bernardino, and Daggett.

<sup>&</sup>lt;sup>17</sup> The following components were analyzed: surface winds, winds aloft, estimated transport time, daily streamlines, surface airflow types, air parcel trajectories and daily maximum temperature.

### **IV. RACT SIP REQUIREMENTS**

Sections 182(b)(2) and 182(f) of the FCAAA (42 U.S.C. §7511(a)) require O<sub>3</sub> nonattainment areas to implement Reasonably Available Control Technology (RACT) emission standards for "major sources" of VOCs and NOx (O<sub>3</sub> precursors). RACT is also required for sources of air pollution that are subject to Control Techniques Guidelines (CTGs) issued by EPA<sup>18</sup>. RACT is defined as the lowest emissions limitation that a particular source is capable of meeting, by the application of air pollution control technology that is reasonably available considering technological and economic feasibility<sup>19</sup>.

RACT requirements are included in the CAA to assure that significant source categories of O<sub>3</sub> precursor emissions are controlled to a "reasonable" extent, but not necessarily to the more stringent Best Available Control Technology (BACT) or Maximum Achievable Control Technology (MACT) levels expected for new or modified major stationary sources. An area classified as moderate nonattainment or higher must submit a demonstration that their current rules fulfill the 8-hour O<sub>3</sub> RACT requirement for all CTG categories and all non-CTG major sources as a revision to their O<sub>3</sub> SIP<sup>20</sup>. On May 18, 2006, EPA released an official guidance document for preparing RACT SIPs titled: *Questions Related to RACT in 8-hour Ozone Implementation*. In addition, EPA Region 9 issued a basic framework to be used for a RACT SIP revision<sup>21</sup>. The framework notes a RACT SIP revision should contain the following information:

- Describe efforts to identify all source categories within the District requiring RACT, including CTG sources (i.e., covered by an EPA Control Technique Guideline document) and major non-CTG sources.
- Submit negative declarations where there are no facilities (major or minor) within the District subject to a CTG.
- For all categories needing RACT, list the state/local regulation that implements RACT. It may also be helpful to list the date EPA approved these regulations as fulfilling RACT.

<sup>&</sup>lt;sup>18</sup> CTGs are guidance documents that define RACT for existing sources of air pollution. Emission sources subject to CTGs are called CTG sources. RACT controls are also required on major VOC and NOx stationary sources not covered by CTGs. Such sources are called non-CTG sources.

<sup>&</sup>lt;sup>19</sup> RACT requirements are included in the Clean Air Act to ensure that significant source categories at major sources of ozone precursor emissions are controlled to a "reasonable" extent, but not necessarily to the more stringent best available control technology (BACT) or maximum achievable control technology (MACT) levels expected for new or modified major stationary sources. (44 FR 53762; September 17, 1979)

<sup>&</sup>lt;sup>20</sup> SIP Requirements: (80 FR 12263; March 6, 2015)

<sup>&</sup>lt;sup>21</sup> The framework was contained in a March 9, 2006 letter from EPA Region 9 to California Air Resources Board (ARB)

- Describe the basis for concluding that the regulations fulfill RACT. Documents useful in establishing RACT include: CTGs, Alternative Control Technique guidance (ACTs), <sup>22</sup> MACT standards, New Source Performance Standards (NSPS), California Suggested Control Measures (SCM) and RACT/Best Available Retrofit Control Technology (BARCT) determinations, regulations adopted in other Districts, and guidance documents and rules developed by other state and local agencies.
- Some Districts may use CAPCOA's September 2003, *Potential All Feasible Measures (AFM) Report* to help demonstrate RACT. If so, the RACT SIP should certify that local regulations are equivalent to AFM, justify the assumption that the AFM fulfilled RACT in 2003, and include some sort of certification/ demonstration that no additional controls have become more reasonably available since then.

### V. DETERMINATION OF RACT AND FINDINGS

#### A. CTG Source Categories

EPA issued CTGs defining RACT for existing facilities that emit air pollutants. District staff reviewed the list of CTG source categories and compared them to existing District Rules for applicable permitted sources.

Table 3 lists CTG source categories, reference documents, existence of affected sources in the District, and applicable District Rules. Existence of affected sources operating in the District was determined by District permit records, the emissions inventory database, and District permitting and enforcement staff.

Table 4 lists all applicable CTGs and associated District rules. Table 4 includes Rule adoption dates, amendment dates, and EPA Rule approval dates along with CTG applicability threshold/emission limits and District Rule applicability threshold/emission limits.

#### **B.** Non-CTG Major Sources

Sources not subject to CTGs are referred to as non-CTG sources. RACT is required for non-CTG sources that collectively exceed the major source threshold at any permitted facility. This RACT SIP is based on a major source threshold of 25-tons per year (tpy) of either VOCs or NOx. This is because Severe nonattainment areas have a major source threshold of 25-tpy of either VOC or NOx (District is Severe nonattainment for 2008 NAAQS and anticipated to be classified as Severe nonattainment for 2015 NAAQS). Therefore, District staff examined non-CTG sources with a potential to emit (PTE) of 25tpy or more of either VOCs or NOx collectively at any individual facility.

<sup>&</sup>lt;sup>22</sup> CTG and ACT guidance documents can be found at: <u>https://www.epa.gov/ozone-pollution/control-techniques-guidelines-and-alternative-control-techniques-documents-reducing</u>.

Table 5 lists VOC and NOx emissions from all major sources located in the District's nonattainment area. Table 5 includes each facility's name, subject emission unit's permit number, process equipment name, pollutant, PTE, applicable District rules, and CTG source categories. Analysis determined that there are no major non-CTG sources of VOCs.

### C. Previous 2008 & 2015 RACT SIPs

The District previously adopted RACT SIPs in 2017 for the 2008 NAAQS and in 2020 for the 2015 NAAQS. At the time of adopting each RACT SIP, the District's nonattainment area was classified as "Serious" nonattainment for the 2008 NAAQS and "Moderate" nonattainment for the 2015 NAAQS. Both of those nonattainment classifications have a VOC and NOx threshold of 50-tpy. Therefore, each RACT SIP was prepared to satisfy the 50-tpy requirement. As stated in Section V.B. of this RACT SIP, this RACT SIP has been prepared to satisfy the 25-tpy requirement for the "Severe" nonattainment classification pursuant to the 2008 and 2015 8-hour O<sub>3</sub> NAAQS.

The District's 2017 RACT SIP fully addressed its stationary source VOC and NOx prohibitory rules pursuant to the 75 ppb 8-hour O<sub>3</sub> NAAQS. The RACT SIP evaluated District O<sub>3</sub> precursor control measures to determine compliance with federal RACT requirements for stationary sources covered by CTGs. The RACT SIP revealed deficiencies in the following three District rules designed to regulate NOx at major stationary sources:

425 (Cogeneration Gas Turbine Engines);

425.2 (Boilers, Steam Generators, and Process Heaters); and

425.3 (Portland Cement Kilns).

The District committed to amending the three deficient NOx rules in the 2017  $O_3$ Attainment Plan. The District correct the RACT deficiencies in all three rules and their governing Board adopted the amendments to Rule 425 on January 11, 2018, and Rules 425.2 and 425.3 March 8, 2018.

The District's 2020 RACT SIP fully addressed its stationary source VOC and NOx prohibitory rules pursuant to the 70 ppb 8-hour O<sub>3</sub> NAAQS. The RACT SIP evaluated District O<sub>3</sub> precursor control measures to determine compliance with federal RACT requirements for stationary sources covered by CTGs. All rules applicable to CTG source categories were determined to meet or exceed CTG requirements.

### **D.** Negative Declarations

The District is required to submit negative declarations for CTG source categories that have no applicable sources operating within the District's nonattainment area. Table 6 lists CTG source categories with no applicable source located within the District's nonattainment area. CTGs listed in Table 6 constitute Negative Declarations for the District's RACT SIP. Additionally, there are no non-CTG major sources of VOCs.

This has been determined by review of District permit records, emissions inventory database, and consult with permitting and enforcement staff. The District determined one or more of the following situations exist for each CTG source category listed in Table 6:

- There are no sources located within the District's nonattainment area of the specified CTG source category; or
- There are no sources located within the District's nonattainment area with emissions exceeding the specific applicability threshold of the specified CTG source category.

Remainder of Page Intentionally Left Blank

| CTG Source<br>Category  | CTG Reference Document <sup>17</sup>  | Applicability   | District<br>Source | District Rule  |
|---|---|---|--------------------|--|
| Gasoline Service<br>Stations  | Design Criteria for Stage I Vapor<br>Control Systems – Gasoline Service<br>Stations (EPA-450/R-75-102,<br>1975/11)  | Applies to filling of gasoline storage tanks from gasoline tank trucks.   | Yes                | Rule 412 – Gasoline Transfer<br>into Stationary Storage<br>Containers, Delivery Vessels,<br>and Bulk Plants              |
| Surface Coating of<br>Cans, Coils,<br>Paper, Fabrics,<br>Automobiles, and<br>Light-Duty<br>Trucks | Control of Volatile Organic<br>Emissions from Existing Stationary<br>Sources – Volume II: Surface<br>Coating of Cans, Coils, Paper,<br>Fabrics, Automobiles, and Light-<br>Duty Trucks (EPA-450-2-77-008,<br>1977/05) | Cans – applies to sheet basecoat and over<br>varnish, two-piece can exterior basecoat and over<br>varnish, two and three-piece can interior body<br>spray, two-piece can exterior end spray or roll<br>coat, three piece can side seam spray, and end<br>sealing compound.<br>Coils – applies to prime and topcoat or single<br>coat operations.<br>Paper and Fabrics – applies to all coatings put on<br>paper, fabric, or plastic film including decorative<br>coatings on metal foil such as gift wrap and<br>packaging.<br>Automobile & light truck – applies to all objects<br>surface coated in automotive and light duty truck<br>assembly plants (Does not apply to customizers,<br>body shops or other repainters) | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations<br>Rule 410.7 – Graphic Arts |
| Solvent Metal<br>Cleaning   | Control of Volatile Organic<br>Emissions from Solvent Metal<br>Cleaning<br>(EPA-450/2-77-022, 1977/11)  | Applies to cold cleaners, open top vapor<br>degreasers, and conveyorized degreasers which<br>use volatile solvents to clean metal parts.  | Yes                | Rule 410.3 – Organic Solvent<br>Degreasing Operations  |
| Petroleum<br>Refineries   | Control of Refinery Vacuum<br>Producing Systems, Wastewater<br>Separators, and Process Unit<br>Turnarounds (EPA-450/2-77-025,<br>1977/10)   | Applies to vacuum producing systems,<br>wastewater separators and process unit<br>turnarounds from petroleum refineries.  | None               | Rule 414 – Wastewater<br>Separators  |
| Tank Trucks<br>Gasoline Loading<br>Terminals  | Control of Hydrocarbons from Tank<br>Truck Gasoline Loading Terminals<br>(EPA-450/2-77-026, 1977/10)  | Applies to tank truck gasoline loading terminals<br>with daily throughputs greater than 76,000 liters<br>(20,064 gallons).  | None               | Rule 412 – Gasoline Transfer<br>into Stationary Storage<br>Containers, Delivery Vessels,<br>and Bulk Plants              |

| CTG Source<br>Category   | CTG Reference Document <sup>17</sup>  | Applicability   | District<br>Source | District Rule   |
|--|---|---|--------------------|---|
| Surface Coating of<br>Metal Furniture                              | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume III: Surface Coating of<br>Metal Furniture (EPA-450/2-77-032,<br>1977/12)                          | Applies to surface coating of metal furniture from metal furniture industry.  | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations                 |
| Surface Coating<br>for Insulation of<br>Magnet Wire                | Control of Volatile Organic<br>Emissions from Existing Stationary<br>Sources – Volume IV: Surface<br>Coating of Insulation of Magnet<br>Wire (EPA-450/2-77-033, 1977/12)    | Applies to wire coating curing ovens.   | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations                 |
| Surface Coating of<br>Large Appliances                             | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume V: Surface Coating of Large<br>Appliances (EPA-450/2-77-034,<br>1977/12)                           | Applies to any large appliance coating unit.  | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations                 |
| Bulk Gasoline<br>Plants  | Control of VOC Emissions from<br>Bulk Gasoline Plants (EPA-450/2-<br>77-035, 1977/12)   | Applies to bulk gasoline plants with daily throughputs of 76,000 liters (20,064 gallons) or less.   | None               | Rule 412 – Gasoline Transfer<br>into Stationary Storage<br>Containers, Delivery Vessels,<br>and Bulk Plants |
| Storage of<br>Petroleum Liquids<br>in Fixed-Roof<br>Tanks          | Control of VOC Emissions from<br>Storage of Petroleum Liquids in<br>Fixed-Roof Tanks (EPA-450/2-77-<br>036, 1977/12)  | Applies to storage vessels with capacities greater<br>than 150,000 liters containing petroleum liquids<br>with a true vapor pressure greater than 10.5 KPa.   | None               | Rule 411 – Storage of Organic<br>Liquids  |
| Cutback Asphalt<br>from Paving<br>Operation                        | Control of VOC Emissions from Use<br>of Cutback Asphalt (EPA-450/2-77-<br>037, 1977/12)   | Applies to use of cutback asphalt used in paving operation.   | None               | Rule 410.5 – Cutback, Slow<br>Cure, and Emulsified Asphalt,<br>Paving and Maintenance<br>Operations         |
| Surface Coating of<br>Miscellaneous<br>Metal Parts and<br>Products | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume VI: Surface Coating of<br>Miscellaneous Metal Parts and<br>Products (EPA-450/2-78-015,<br>1978/06) | Applies to industries that are not covered by<br>other specific CTGs (Specific CTGs have been<br>published for can, coil, automobile and light-duty<br>truck, metal furniture, magnet wire, and large<br>appliances). | Yes                | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations                 |

| CTG Source<br>Category   | CTG Reference Document <sup>17</sup>  | Applicability   | District<br>Source | District Rule   |
|--|---|---|--------------------|---|
| Surface Coating of<br>Flat Wood<br>Paneling                              | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume VII: Factory Surface<br>Coating of Flat Wood Paneling<br>(EPA-450/2-78-032, 1978/06) | Applies to printed interior wall panels made of<br>hardwood plywood and thin particle-board,<br>natural finish hardwood plywood panels and<br>Class II finishes for hardboard paneling.                                   | None               | Rule 410.9 – Wood Products<br>Surface Coating Operations  |
| Leaks from<br>Petroleum<br>Refinery<br>Equipment                         | Control of VOC Leaks from<br>Petroleum Refinery Equipment<br>(EPA-450/2-78-036, 1978/06)  | Applies to leaks from equipment such as pump<br>seals, compressor seals, seal oil degassing vents,<br>pipeline valves, flanges and other connections,<br>pressure relief devices, process drains and open<br>ended pipes. | None               | Rule 414.1 – Valves, Pressure<br>Relief Valves, Flanges,<br>Threaded Connections and<br>Process Drains at Petroleum<br>Refineries and Chemical Plants<br>Rule 414.5 – Pump and<br>Compressor Seals at Petroleum<br>Refineries and Chemical Plants |
| Synthesized<br>Pharmaceutical<br>Products                                | Control of Volatile Organic<br>Emissions from Manufacture of<br>Synthesized Pharmaceutical Products<br>(EPA-450/2-78-029, 1978/12)                            | Applies to manufacturer of synthesized pharmaceutical products.   | None               | N/A   |
| Manufacture of<br>Pneumatic<br>Rubber Tire                               | Control of Volatile Organic<br>Emissions from Manufacture of<br>Pneumatic Rubber Tires (EPA-<br>450/2-78-030, 1978/12)  | Applies to manufacturing processes; under tread<br>cementing, tread-end cementing, bead dipping,<br>and green tire spraying.  | None               | N/A   |
| Graphic Arts   | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume VIII: Graphic Arts-<br>Rotogravure and Flexography (EPA-<br>450/2-78-033, 1978/12)   | Applies to graphic arts operations that use<br>flexographic and rotogravure printing processes<br>as applied to both publication and packaging<br>printing.   | None               | Rule 410.7 – Graphic Arts   |
| Storage of<br>Petroleum Liquids<br>in External<br>Floating Roof<br>Tanks | Control of VOC Emissions from<br>Petroleum Liquid Storage in External<br>Floating Roof Tanks (EPA-450/2-78-<br>047, 1978/12)                                  | Applies to external floating roof tanks larger than 150,000 liters (39,600 gallons or 950 barrels) capacity storing petroleum liquids.  | None               | Rule 411 – Storage of Organic<br>Liquids  |

| CTG Source<br>Category  | CTG Reference Document <sup>17</sup>   | Applicability   | District<br>Source | District Rule   |
|---|--|---|--------------------|---|
| Gasoline Tank<br>Trucks and Vapor<br>Collection Systems   | Control of VOC Leaks from<br>Gasoline Tank Trucks and Vapor<br>Collection Systems (EPA-450/2-78-<br>051, 1978/12)                                      | Applies to gasoline tank trucks that are equipped<br>with vapor collection systems and the vapor<br>collection systems at bulk terminals, bulk plants<br>and service stations.  | Yes                | Rule 412 – Gasoline Transfer<br>into Stationary Storage<br>Containers, Delivery Vessels,<br>and Bulk Plants   |
| Large Petroleum<br>Dry Cleaners   | Control of VOC Emissions from<br>Large Petroleum Dry Cleaners<br>(EPA-450/3-82-009, 1982/09)   | Applies to petroleum solvent dry cleaning<br>facilities that consume 123,000 liters or more of<br>petroleum solvents, perchloroethylene (perc) and<br>trichlorotrifluoroethane per year.  | None               | Rule 410.6A – Petroleum<br>Solvent Dry Cleaning<br>Operations   |
| Polymers and<br>Resins<br>Manufacturing<br>Industry   | Control of VOC Emissions from<br>Manufacture of High-Density<br>Polyethylene, Polypropylene, and<br>Polystyrene Resins (EPA-450/3-83-<br>008, 1983/11) | Applies to manufacturing of high-density polyethylene, polypropylene, and polystyrene.  | None               | N/A   |
| Equipment Leaks<br>from Natural<br>Gas/Gasoline<br>Processing Plants  | Control of VOC Equipment Leaks<br>from Natural Gas/Gasoline<br>Processing Plants (EPA-450/3-83-<br>007, 1983/12)                                       | Applies to facilities engaged in the separation of<br>natural gas liquids from field gas and/or fraction<br>of the liquids into natural gas products such as<br>ethane, propane, butane and natural gasoline.<br>Not applicable to compressor stations,<br>dehydration units, sweetening units, field<br>treatment, underground storage facilities,<br>liquefied natural gas units and field gas gathering<br>systems unless they are located at a gas plant. | None               | Rule 414.1 – Valves, Pressure<br>Relief Valves, Flanges,<br>Threaded Connections and<br>Process Drains at Petroleum<br>Refineries and Chemical Plants<br>Rule 414.5 – Pump and<br>Compressor Seals at Petroleum<br>Refineries and Chemical Plants |
| Equipment Leaks<br>from Synthetic<br>Organic Chemical<br>Polymer and<br>Resin<br>Manufacturing<br>Equipment | Control of VOC Leaks from<br>Synthetic Organic Chemical Polymer<br>and Resin Manufacturing Equipment<br>(EPA-450/3-83-006, 1984/03)                    | Applies to leaks of process fluids (gaseous or<br>liquid) from plant equipment such as pumps,<br>compressors, in-line process valves, pressure<br>relief devices, open-ended valves, sampling<br>connections, flanges, agitators and cooling<br>towers.   | None               | Rule 414.1 – Valves, Pressure<br>Relief Valves, Flanges,<br>Threaded Connections and<br>Process Drains at Petroleum<br>Refineries and Chemical Plants<br>Rule 414.5 – Pump and<br>Compressor Seals at Petroleum<br>Refineries and Chemical Plants |

| CTG Source<br>Category   | <b>CTG Reference Document</b> <sup>17</sup>   | Applicability   | District<br>Source | District Rule   |
|--|---|---|--------------------|---|
| Synthetic Organic<br>Chemical<br>Manufacturing<br>Industry                                 | Control of VOC Emissions from Air<br>Oxidation Processes in Synthetic<br>Organic Chemical Manufacturing<br>Industry (EPA-450/3-84-015,<br>1984/12)  | Applies to air oxidation processes used in the synthetic organic chemical manufacturing industry.   | None               | N/A   |
| Synthetic Organic<br>Chemical<br>Manufacturing<br>Industry                                 | Control of VOC Emissions from<br>Reactor Processes and Distillation<br>Operations in Synthetic Organic<br>Chemical Manufacturing Industry<br>(EPA-450/4-91-031, 1993/08)                            | of VOC Emissions from<br>Processes and Distillation<br>ons in Synthetic Organic<br>al Manufacturing IndustryApplies to reactor processes that chemically<br>change feed stocks into products or intermediate<br>chemicals and distillation processes used to<br>separate chemicals in the synthetic organic |                    | N/A   |
| Wood Furniture<br>Manufacturing<br>Operations  | Control of VOC Emissions from<br>Wood Furniture Manufacturing<br>Operations (EPA-453/R-96-007,<br>1996/04)  | Applies to any facility that manufactures wood<br>and wood product furniture and its cleaning and<br>finishing operations.  | Yes                | Rule 410.9 – Wood Products<br>Surface Coating Operations                                    |
| Shipbuilding and<br>Ship Repair<br>Operations  | Control Techniques Guidelines for<br>Shipbuilding and Ship Repair<br>Operations (Surface Coating) (61 FR<br>44050 8/27/1996, 1996/08)   | Applies to coatings and solvents used for<br>building or repairing, repainting, converting, or<br>alteration of ships: any marine or fresh-water<br>vessel, including self-propelled by other craft<br>(barges), and navigational aids (buoys).   | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations |
| Surface Coating<br>Operations of<br>Aerospace<br>Manufacturing<br>and Rework<br>Operations | Control of VOC Emissions from<br>Coating Operations at Aerospace<br>Manufacturing and Rework<br>Operations (EPA-453/R-97-004,<br>1997/12), See also Aerospace MACT<br>(59 FR-29216 6/6/94, 1994/06) | Applies to aerospace coatings and cleaning<br>solvents used at aerospace manufacturing and<br>rework operations.  | Yes                | Rule 410.8 – Aerospace<br>Assembly and Coating<br>Operations                                |
| Industrial<br>Cleaning Solvents  | Control Techniques Guidelines for<br>Industrial Cleaning Solvents (EPA-<br>453/R-06-001, 2006/09)   | Applies to nine types of cleaning unit operations<br>(UO): Spray gun cleaning, Spray booth cleaning,<br>Large manufactured components cleaning, Parts<br>cleaning, Equipment cleaning, Line cleaning,<br>Floor cleaning, Tank cleaning, and Small<br>manufactured components cleaning.                      | Yes                | N/A   |

| CTG Source<br>Category                                | CTG Reference Document <sup>17</sup>  | Applicability  | District<br>Source | District Rule   |
|---|---|--|--------------------|---|
| Offset<br>Lithographic and<br>Letterpress<br>Printing | Control Techniques Guidelines for<br>Offset Lithographic Printing and<br>Letterpress Printing (EPA-453/R-06-<br>002, 2006/09) | Applies to the offset lithographic printing industry and the letterpress printing industry.  | Yes                | Rule 410.7 – Graphic Arts   |
| Flexible Package<br>Printing                          | Control Techniques Guidelines for<br>Flexible Package Printing (EPA-<br>453/R-06-003, 2006/09)                                | Applies to inks, coatings, adhesives and cleaning materials used in flexible packaging printing operations.  | None               | Rule 410.7 – Graphic Arts   |
| Flat Wood<br>Paneling Coatings                        | Control Techniques Guidelines for<br>Flat Wood Paneling Coatings (EPA-<br>453/R-06-004, 2006/09)                              | Applies to wood paneling products that are any<br>interior, exterior or tileboard (class I hardboard)<br>panel.  | None               | Rule 410.9 – Wood Products<br>Surface Coating Operations                                    |
| Paper, Film, and<br>Foil Coatings                     | Control Techniques Guidelines for<br>Paper, Film, and Foil Coatings<br>(EPA-453/R-07-003, 2007/09)                            | Applies to facilities where the total actual VOC<br>emissions from all paper, film and foil coating<br>operations, including cleaning activities, are at<br>least 6.8 kg/day (15 lb/day) of VOC before<br>consideration of controls.   | None               | N/A   |
| Large Appliance<br>Coatings                           | Control Techniques Guidelines for<br>Large Appliance Coatings (EPA-<br>453/R-07-004, 2007/09)                                 | Applies to the use of coatings in large appliance coating operations.  | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations |
| Metal Furniture<br>Coatings                           | Control Techniques Guidelines for<br>Metal Furniture Coatings (EPA-<br>453/R-07-005, 2007/09)                                 | Applies to the use of coatings in metal furniture surface coating operations.  | None               | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations |
| Miscellaneous<br>Metal and Plastic<br>Parts Coatings  | Control Techniques Guidelines for<br>Miscellaneous Metal and Plastic<br>Parts Coatings (EPA-453/R-08-003,<br>2008/09)         | Applies to the use of coatings in miscellaneous<br>metal products and miscellaneous plastic parts<br>surface coating operations.   | Yes                | Rule 410.4 – Metal, Plastic,<br>and Pleasure Craft Parts and<br>Products Coating Operations |
| Fiberglass Boat<br>Manufacturing                      | Control Techniques Guidelines for<br>Fiberglass Boat Manufacturing<br>Materials (EPA-453/R-08-004,<br>2008/09)                | Applies to facilities that manufacture hulls or<br>decks of boats from fiberglass, or build molds to<br>make fiberglass boat hulls or decks, where total<br>actual VOC emissions from all fiberglass boat<br>manufacturing operations, including cleaning<br>activities, covered by the CTG are at least 6.8<br>kg/day (15 lb/day) of VOC before consideration<br>of controls. | None               | N/A   |

| CTG Source<br>Category      | CTG Reference Document <sup>17</sup> | Applicability                                      | District<br>Source | District Rule               |
|-----------------------------|--------------------------------------|--|--------------------|-----------------------------|
| Miscellaneous               |                                      |  | None               | N/A                         |
| Industrial                  | Miscellaneous Industrial Adhesives   | adhesive application process at facilities where   |                    |                             |
| Adhesives                   | (EPA-453/R-08-005, 2008/09)          | total actual VOC emissions from all industrial     |                    |                             |
|                             |                                      | adhesive operations, including cleaning            |                    |                             |
|                             |                                      | activities, are at least 6.8 kg/day (15 lb/day) of |                    |                             |
|                             |                                      | VOC before consideration of controls.              |                    |                             |
| Automobile and              | Control Techniques Guidelines for    | For automobile and light truck coating, applies to | None               | Rule 410.4A – Motor Vehicle |
| Light-Duty Truck            | Automobile and Light-Duty Truck      | all objects surface coated in automotive and light |                    | and Mobile Equipment        |
| Assembly                    | Assembly Coatings (EPA-453/R-08-     | duty truck assembly plants. Does not apply to      |                    | Refinishing Operations      |
| Coatings                    | 006, 2008/09)                        | customizers, body shops or other repaints.         |                    |                             |
| Oil and Natural             | Control Techniques Guidelines for    | Applies to a tank or other vessel in the oil and   | None               | N/A                         |
| Gas Industry                | the Oil and Natural Gas Industry     | natural gas industry that contains an              |                    |                             |
| (EPA-453/B-16-001, 2016/10) |                                      | accumulation of crude oil, condensate,             |                    |                             |
|                             |                                      | intermediate hydrocarbon liquids, or produced      |                    |                             |
|                             |                                      | water, and that is constructed primarily of non-   |                    |                             |
|                             |                                      | earthen materials that provide structural support. |                    |                             |

Remainder of Page Intentionally Left Blank

| Applicable CTG<br>Source Category   | District Rule  | Adopted   | Last<br>Amended | EPA Rule<br>Approval | CTG Applicability<br>Threshold/Emission<br>Limit             | District Rule<br>Applicability<br>Threshold/Emission<br>Limit |
|---|--|-----------|-----------------|----------------------|--|---|
| Gasoline Service<br>Stations  | Rule 412 – Gasoline Transfer into<br>Stationary Storage Containers,<br>Delivery Vessels, and Bulk Plants | 4/18/1972 | 1/13/2022       | 2/15/1995            | N/A  | Transfer 250 Gallons of<br>Gasoline                           |
| Solvent Metal<br>Cleaning   | Rule 410.3 – Organic Solvent<br>Degreasing Operations  | 6/26/1979 | 5/7/1998        | 4/2/1999             | N/A  | N/A   |
| Surface Coating of<br>Miscellaneous Metal<br>Parts and Products                         | Rule 410.4 – Metal, Plastic, and<br>Pleasure Craft Parts and Products<br>Coating Operations              | 6/26/1979 | 3/13/2014       | 5/17/2016            | N/A  | Various VOC Content<br>Limits                                 |
| Gasoline Tank Trucks<br>and Vapor Collection<br>Systems                                 | Rule 412 – Gasoline Transfer into<br>Stationary Storage Containers,<br>Delivery Vessels, and Bulk Plants | 4/18/1972 | 1/13/2022       | 2/15/1995            | N/A  | Transfer 250 Gallons of<br>Gasoline                           |
| Wood Furniture<br>Manufacturing<br>Operations   | Rule 410.9 – Wood Products<br>Surface Coating Operations   | 3/13/2014 | N/A             | 6/16/2016            | N/A  | Various VOC Content<br>Limits                                 |
| Surface Coating<br>Operations of<br>Aerospace<br>Manufacturing and<br>Rework Operations | Rule 410.8 – Aerospace Assembly<br>and Coating Operations  | 3/13/2014 | 9/1/2022        | 5/17/2016            | CTG applicability<br>threshold of 25 tons per<br>year of VOC | Various VOC Content<br>Limits                                 |
| Miscellaneous Metal<br>and Plastic Parts<br>Coatings                                    | Rule 410.4 – Metal, Plastic, and<br>Pleasure Craft Parts and Products<br>Coating Operations              | 6/26/1979 | 3/13/2014       | 5/17/2016            | CTG applicability<br>threshold of 15 lb/day of<br>VOC        | Various VOC Content<br>Limits                                 |

## Table 4 – Applicable CTG Source Categories & Associated District Rules

Remainder of Page Intentionally Left Blank

| Facility Name                 | Permit No. | Process Equipment                       | Pollutant | РТЕ            | District Rule          | Source Category |
|-------------------------------|------------|---|-----------|----------------|------------------------|-----------------|
|                               | 1003020    | Gasoline Storage & Dispensing System    | VOC       | 0.04 lb/day    | Rule 412<br>Rule 412.1 | CTG             |
| California<br>Portland Cement | 1003026    | Pyroprocessing System                   | NOx       | 20,520 lb/day  | Rule 425.3             | Non-CTG         |
| Company                       | 1003062    | Paint Spray Operation                   | VOC       | 15 lb/day      | Rule 410.4             | CTG             |
|                               | 1003065    | Finish Mill System<br>(Heater)          | NOx       | 17.16 lb/day   | Rule 425.2             | Non-CTG         |
| National Cement               | 1128018    | Gasoline Storage &<br>Dispensing System | VOC       | 0.23 lb/day    | Rule 412<br>Rule 412.1 | CTG             |
| Company                       | 1128042    | Pyroprocessing System                   | NOx       | 11,560 lb/day  | Rule 425.3             | Non-CTG         |
| Tehachapi Cement              | 1221007    | Pyroprocessing System                   | NOx       | 6,752 lb/day   | Rule 425.3             | Non-CTG         |
| Plant                         | 1221022    | Gasoline Storage & Dispensing System    | VOC       | 0.12 lb/day    | Rule 412<br>Rule 412.1 | CTG             |
|                               | 1004005    | Heater                                  | NOx       | 12.37 lb/day   | Rule 425.2             | Non-CTG         |
|                               | 1004027    | Heater                                  | NOx       | 96 lb/day      | Rule 425.2             | Non-CTG         |
|                               | 1004040    | Boiler                                  | NOx       | 306.36 lb/day  | Rule 425.2             | Non-CTG         |
| U.S. Borax                    | 1004041    | Boiler                                  | NOx       | 255.30 lb/day  | Rule 425.2             | Non-CTG         |
|                               | 1004056    | Boiler                                  | NOx       | 159.63 lb/day  | Rule 425.2             | Non-CTG         |
|                               | 1004077    | Gas Turbine                             | NOx       | 1425.36 lb/day | Rule 425               | Non-CTG         |

| Facility Name     | Permit No. | Process Equipment                    | Pollutant | РТЕ          | District Rule            | Source Category |
|-------------------|------------|--------------------------------------|-----------|--------------|--------------------------|-----------------|
|                   | 1004089    | Gasoline Storage & Dispensing System | VOC       | 2.59 lb/day  | Rule 412<br>Rule 412.1   | CTG             |
|                   | 1004177    | Paint Spray Booth                    | VOC       | 13.87 lb/day | Rule 410.4               | CTG             |
| U.S. Borax        | 1004222    | Heater                               | NOx       | 3.46 lb/day  | Rule 425.2               | Non-CTG         |
|                   | 1004278    | Boiler                               | NOx       | 80.35 lb/day | Rule 425.2               | Non-CTG         |
|                   | 1004296    | Paint Spray Booth                    | VOC       | 13.87 lb/day | Rule 410.4               | CTG             |
|                   | 0127027    | Painting Operation                   | VOC       | 17.16 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0127028    | Paint Spray Booth                    | VOC       | 17.31 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0127187    | Paint Spray Booth                    | VOC       | 26.32 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
| Edwards Air Force | 0127188    | Paint Spray Booth                    | VOC       | 26.32 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
| Base              | 0127189    | Paint Spray Booth                    | VOC       | 26.32 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0127299    | Painting Operation                   | VOC       | 10.00 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0132013    | Painting Operation                   | VOC       | 33.18 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0132107    | Paint Spray Booth                    | VOC       | 46.73 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |

 Table 5 – Major Sources with Applicable District Rules (cont'd)

| Facility Name     | Permit No. | Process Equipment  | Pollutant | РТЕ          | District Rule            | Source Category |
|-------------------|------------|--------------------|-----------|--------------|--------------------------|-----------------|
|                   | 0132109    | Paint Spray Booth  | VOC       | 24.88 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0134050    | Steam Generator    | NOx       | 67.39 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0134051    | Steam Generator    | NOx       | 67.39 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0134065    | Steam Generator    | NOx       | 18.24 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0134066    | Steam Generator    | NOx       | 18.24 lb/day | Rule 425.2               | Non-CTG         |
| Edwards Air Force | 0134067    | Steam Generator    | NOx       | 18.24 lb/day | Rule 425.2               | Non-CTG         |
| Base              | 0134068    | Steam Generator    | NOx       | 18.24 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0134070    | Steam Generator    | NOx       | 5.93 lb/day  | Rule 425.2               | Non-CTG         |
|                   | 0134071    | Steam Generator    | NOx       | 17.14 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0134072    | Steam Generator    | NOx       | 17.14 lb/day | Rule 425.2               | Non-CTG         |
|                   | 0138057    | Painting Operation | VOC       | 18.50 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |
|                   | 0138063    | Painting Operation | VOC       | 24.05 lb/day | Rule 410.4<br>Rule 410.8 | CTG             |

 Table 5 – Major Sources with Applicable District Rules (cont'd)

| CTG Source<br>Category   | <b>CTG Reference Document</b> <sup>17</sup>   | Applicability   | District<br>Source | RACT<br>Analysis |
|--|---|---|--------------------|------------------|
| Surface Coating of<br>Cans, Coils, Paper,<br>Fabrics,<br>Automobiles, and<br>Light-Duty Trucks | Control of Volatile Organic<br>Emissions from Existing<br>Stationary Sources – Volume II:<br>Surface Coating of Cans, Coils,<br>Paper, Fabrics, Automobiles, and<br>Light-Duty Trucks (EPA-450-2-<br>77-008, 1977/05) | Cans – applies to sheet basecoat and over varnish,<br>two-piece can exterior basecoat and over varnish,<br>two and three-piece can interior body spray, two-<br>piece can exterior end spray or roll coat, three<br>piece can side seam spray, and end sealing<br>compound. Coils – applies to prime and topcoat or<br>single coat operations. Paper and Fabrics – applies<br>to all coatings put on paper, fabric, or plastic film<br>including decorative coatings on metal foil such as<br>gift wrap and packaging. Automobile & light truck<br>– applies to all objects surface coated in<br>automotive and light duty truck assembly plants<br>(Does not apply to customizers, body shops or<br>other re-painters) | None               | N/A              |
| Petroleum<br>Refineries  | Control of Refinery Vacuum<br>Producing Systems, Wastewater<br>Separators, and Process Unit<br>Turnarounds (EPA-450/2-77-<br>025, 1977/10)  | Applies to vacuum producing systems, wastewater<br>separators and process unit turnarounds from<br>petroleum refineries.  | None               | N/A              |
| Tank Trucks<br>Gasoline Loading<br>Terminals   | Control of Hydrocarbons from<br>Tank Truck Gasoline Loading<br>Terminals (EPA-450/2-77-026,<br>1977/10)   | Applies to tank truck gasoline loading terminals<br>with daily throughputs greater than 76,000 liters<br>(20,064 gallons).  | None               | N/A              |
| Surface Coating of<br>Metal Furniture  | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume III: Surface Coating of<br>Metal Furniture (EPA-450/2-77-<br>032, 1977/12)   | Applies to surface coating of metal furniture from metal furniture industry.  | None               | N/A              |
| Surface Coating<br>for Insulation of<br>Magnet Wire  | Control of Volatile Organic<br>Emissions from Existing<br>Stationary Sources – Volume IV:<br>Surface Coating of Insulation of<br>Magnet Wire (EPA-450/2-77-<br>033, 1977/12)  | Applies to wire coating curing ovens.   | None               | N/A              |

| CTG Source<br>Category   | <b>CTG Reference Document</b> <sup>17</sup>   | Applicability   | District<br>Source  | RACT<br>Analysis |
|--|---|---|---|------------------|
| Surface Coating of<br>Large Appliances   | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume V: Surface Coating of<br>Large Appliances (EPA-450/2-<br>77-034, 1977/12)  | Applies to any large appliance coating unit.  | None  | N/A              |
| Bulk Gasoline<br>Plants  | Control of VOC Emissions from<br>Bulk Gasoline Plants (EPA-<br>450/2-77-035, 1977/12)   | Applies to bulk gasoline plants with daily throughputs of 76,000 liters (20,064 gallons less.   | ,<br>   | N/A              |
| Storage of<br>Petroleum Liquids<br>in Fixed-Roof<br>Tanks                              | Control of VOC Emissions from<br>Storage of Petroleum Liquids in<br>Fixed-Roof Tanks (EPA-450/2-<br>77-036, 1977/12)  | Applies to storage vessels with capacities gr<br>than 150,000 liters containing petroleum liq<br>with a true vapor pressure greater than 10.5   | uids  | N/A              |
| Cutback Asphalt<br>from Paving<br>Operation  | Control of VOC Emissions from<br>Use of Cutback Asphalt (EPA-<br>450/2-77-037, 1977/12)   | Applies to use of cutback asphalt used in pa operation.   | ving None   | N/A              |
| Miscellaneous<br>Metal and Plastic<br>Parts Coatings s –<br>Motor Vehicle<br>Materials | Control Techniques Guidelines<br>for Miscellaneous Metal and<br>Plastic Parts Coatings (EPA-<br>453/R-08-003, 2008/09) – Only<br>the category of Motor Vehicle<br>Materials with limits from Table<br>6 | Motor Vehicle Materials used at facilities the not automobile or light-duty truck assembly coating facilities (Table 6).         Coating Category       Ibs VO Coating         Motor vehicle cavity wax       5.         Motor vehicle cavity wax       5.         Motor vehicle sealer       5.         Motor vehicle deadener       5.         Motor vehicle gasket/gasket sealing material       1.         Motor vehicle underbody coating       5.         Motor vehicle trunk interior coating       5.         Motor vehicle bedliner       1.         Motor vehicle lubricating wax/compound       5. | C/gal<br>g<br>4<br>4<br>4<br>7<br>4<br>4<br>7<br>4<br>4<br>7<br>8 | N/A              |
| Surface Coating of<br>Flat Wood<br>Paneling  | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume VII: Factory Surface<br>Coating of Flat Wood Paneling<br>(EPA-450/2-78-032, 1978/06)   | Applies to printed interior wall panels made<br>hardwood plywood and thin particle-board,<br>finish hardwood plywood panels and Class<br>finishes for hardboard paneling.   | natural   | N/A              |

| CTG Source<br>Category   | <b>CTG Reference Document</b> <sup>17</sup>  | Applicability   | District<br>Source | RACT<br>Analysis |
|--|--|---|--------------------|------------------|
| Leaks from<br>Petroleum Refinery<br>Equipment                            | Control of VOC Leaks from<br>Petroleum Refinery Equipment<br>(EPA-450/2-78-036, 1978/06)   | Applies to leaks from equipment such as pump<br>seals, compressor seals, seal oil degassing vents,<br>pipeline valves, flanges and other connections,<br>pressure relief devices, process drains and open<br>ended pipes. | None               | N/A              |
| Synthesized<br>Pharmaceutical<br>Products                                | Control of Volatile Organic<br>Emissions from Manufacture of<br>Synthesized Pharmaceutical<br>Products (EPA-450/2-78-029,<br>1978/12)                      | Applies to manufacturer of synthesized pharmaceutical products.   | None               | N/A              |
| Manufacture of<br>Pneumatic Rubber<br>Tire                               | Control of Volatile Organic<br>Emissions from Manufacture of<br>Pneumatic Rubber Tires (EPA-<br>450/2-78-030, 1978/12)                                     | Applies to manufacturing processes; under tread<br>cementing, tread-end cementing, bead dipping, and<br>green tire spraying.  | None               | N/A              |
| Graphic Arts   | Control of VOC Emissions from<br>Existing Stationary Sources –<br>Volume VIII: Graphic Arts-<br>Rotogravure and Flexography<br>(EPA-450/2-78-033, 1978/12) | Applies to graphic arts operations that use<br>flexographic and rotogravure printing processes as<br>applied to both publication and packaging printing.  | None               | N/A              |
| Storage of<br>Petroleum Liquids<br>in External<br>Floating Roof<br>Tanks | Control of VOC Emissions from<br>Petroleum Liquid Storage in<br>External Floating Roof Tanks<br>(EPA-450/2-78-047, 1978/12)                                | Applies to external floating roof tanks larger than<br>150,000 liters (39,600 gallons or 950 barrels)<br>capacity storing petroleum liquids.  | None               | N/A              |
| Large Petroleum<br>Dry Cleaners  | Control of VOC Emissions from<br>Large Petroleum Dry Cleaners<br>(EPA-450/3-82-009, 1982/09)   | Applies to petroleum solvent dry cleaning facilities<br>that consume 123,000 liters or more of petroleum<br>solvents, perchloroethylene (perc) and<br>trichlorotrifluoroethane per year.                                  | None               | N/A              |
| Polymers and<br>Resins<br>Manufacturing<br>Industry                      | Control of VOC Emissions from<br>Manufacture of High-Density<br>Polyethylene, Polypropylene,<br>and Polystyrene Resins (EPA-<br>450/3-83-008, 1983/11)     | Applies to manufacturing of high-density polyethylene, polypropylene, and polystyrene.  | None               | N/A              |

| CTG Source<br>Category   | <b>CTG Reference Document</b> <sup>17</sup>  | Applicability   | District<br>Source | RACT<br>Analysis |
|--|--|---|--------------------|------------------|
| Equipment Leaks<br>from Natural<br>Gas/Gasoline<br>Processing Plants                                     | Control of VOC Equipment<br>Leaks from Natural<br>Gas/Gasoline Processing Plants<br>(EPA-450/3-83-007, 1983/12)  | Applies to facilities engaged in the separation of<br>natural gas liquids from field gas and/or fraction of<br>the liquids into natural gas products such as<br>ethane, propane, butane and natural gasoline. Not<br>applicable to compressor stations, dehydration<br>units, sweetening units, field treatment,<br>underground storage facilities, liquefied natural<br>gas units and field gas gathering systems unless<br>they are located at a gas plant. | None               | N/A              |
| Equipment Leaks<br>from Synthetic<br>Organic Chemical<br>Polymer and Resin<br>Manufacturing<br>Equipment | Control of VOC Leaks from<br>Synthetic Organic Chemical<br>Polymer and Resin<br>Manufacturing Equipment (EPA-<br>450/3-83-006, 1984/03)                                      | Applies to leaks of process fluids (gaseous or<br>liquid) from plant equipment such as pumps,<br>compressors, in-line process valves, pressure relief<br>devices, open-ended valves, sampling connections,<br>flanges, agitators and cooling towers.  | None               | N/A              |
| Synthetic Organic<br>Chemical<br>Manufacturing<br>Industry   | Control of VOC Emissions from<br>Air Oxidation Processes in<br>Synthetic Organic Chemical<br>Manufacturing Industry (EPA-<br>450/3-84-015, 1984/12)                          | Applies to air oxidation processes used in the synthetic organic chemical manufacturing industry.   | None               | N/A              |
| Synthetic Organic<br>Chemical<br>Manufacturing<br>Industry   | Control of VOC Emissions from<br>Reactor Processes and<br>Distillation Operations in<br>Synthetic Organic Chemical<br>Manufacturing Industry (EPA-<br>450/4-91-031, 1993/08) | Applies to reactor processes that chemically<br>change feed stocks into products or intermediate<br>chemicals and distillation processes used to<br>separate chemicals in the synthetic organic<br>chemical manufacturing industry.   | None               | N/A              |
| Shipbuilding and<br>Ship Repair<br>Operations  | Control Techniques Guidelines<br>for Shipbuilding and Ship Repair<br>Operations (Surface Coating) (61<br>FR 44050 8/27/1996, 1996/08)  | Applies to coatings and solvents used for building<br>or repairing, repainting, converting, or alteration of<br>ships: any marine or fresh-water vessel, including<br>self-propelled by other craft (barges), and<br>navigational aids (buoys).   | None               | N/A              |

| CTG Source<br>Category                                | <b>CTG Reference Document</b> <sup>17</sup>   | Applicability   | District<br>Source | RACT<br>Analysis  |
|---|---|---|--------------------|---|
| Industrial Cleaning<br>Solvents                       | Control Techniques Guidelines<br>for Industrial Cleaning Solvents<br>(EPA-453/R-06-001, 2006/09)                              | Applies to industrial cleaning operations using organic solvents.   | Yes                | No sources<br>with emissions<br>greater than<br>CTG<br>applicability<br>threshold of 15<br>lb/day |
| Offset<br>Lithographic and<br>Letterpress<br>Printing | Control Techniques Guidelines<br>for Offset Lithographic Printing<br>and Letterpress Printing (EPA-<br>453/R-06-002, 2006/09) | Applies to offset lithographic printing industry and<br>the letterpress printing industry.  | Yes                | No sources<br>with emissions<br>greater than<br>CTG<br>applicability<br>threshold of 15<br>lb/day |
| Flexible Package<br>Printing                          | Control Techniques Guidelines<br>for Flexible Package Printing<br>(EPA-453/R-06-003, 2006/09)                                 | Applies to inks, coatings, adhesives and cleaning<br>materials used in flexible packaging printing<br>operations.   | None               | N/A   |
| Flat Wood<br>Paneling Coatings                        | Control Techniques Guidelines<br>for Flat Wood Paneling Coatings<br>(EPA-453/R-06-004, 2006/09)                               | Applies to wood paneling products that are any<br>interior, exterior or tileboard (class I hardboard)<br>panel.   | None               | N/A   |
| Paper, Film, and<br>Foil Coatings                     | Control Techniques Guidelines<br>for Paper, Film, and Foil<br>Coatings (EPA-453/R-07-003,<br>2007/09)                         | Applies to facilities where the total actual VOC<br>emissions from all paper, film and foil coating<br>operations, including cleaning activities, are at<br>least 6.8 kg/day (15 lb/day) of VOC before<br>consideration of controls | None               | N/A   |
| Large Appliance<br>Coatings                           | Control Techniques Guidelines<br>for Large Appliance Coatings<br>(EPA-453/R-07-005, 2007/09)                                  | Applies to the use of coatings in large appliance coating operations.   | None               | N/A   |
| Metal Furniture<br>Coatings                           | Control Techniques Guidelines<br>for Metal Furniture Coatings<br>(EPA-453/R-07-005, 2007/09)                                  | Applies to the use of coatings in metal furniture surface coating operations.   | None               | N/A   |

| CTG Source<br>Category                                  | <b>CTG Reference Document</b> <sup>17</sup>   | Applicability  | District<br>Source | RACT<br>Analysis |
|---|---|--|--------------------|------------------|
| Fiberglass Boat<br>Manufacturing                        | Control Techniques Guidelines<br>for Fiberglass Boat<br>Manufacturing Materials (EPA-<br>453/R-08-004, 2008/09)           | Applies to facilities that manufacture hulls or<br>decks of boats from fiberglass, or build molds to<br>make fiberglass boat hulls or decks, where total<br>actual VOC emissions from all fiberglass boat<br>manufacturing operations, including cleaning<br>activities, covered by the CTG are at least 6.8<br>kg/day (15 lb/day) of VOC before consideration of<br>controls. | None               | N/A              |
| Miscellaneous<br>Industrial<br>Adhesives                | Control Techniques Guidelines<br>for Miscellaneous Industrial<br>Adhesives (EPA-453/R-08-005,<br>2008/09)                 | Applies to each miscellaneous industrial adhesive<br>application process at facilities where total actual<br>VOC emissions from all industrial adhesive<br>operations, including cleaning activities, are at<br>least 6.8 kg/day (15 lb/day) of VOC before<br>consideration of controls.   | None               | N/A              |
| Automobile and<br>Light-Duty Truck<br>Assembly Coatings | Control Techniques Guidelines<br>for Automobile and Light-Duty<br>Truck Assembly Coatings (EPA-<br>453/R-08-006, 2008/09) | For automobile and light truck coating, applies to<br>all objects surface coated in automotive and light<br>duty truck assembly plants. Does not apply to<br>customizers, body shops or other repaints.  | None               | N/A              |
| Oil and Natural<br>Gas Industry                         | Control Techniques Guidelines<br>for the Oil and Natural Gas<br>Industry (EPA-453/B-16-001,<br>2016/10)                   | Applies to a tank or other vessel in the oil and<br>natural gas industry that contains an accumulation<br>of crude oil, condensate, intermediate hydrocarbon<br>liquids, or produced water, and that is constructed<br>primarily of non-earthen materials that provide<br>structural support.  | None               | N/A              |

Remainder of Page Intentionally Left Blank

### VI. RACT ANALYSIS

### A. Background

Emission sources covered by CTGs are known as CTG sources. The CAA requires  $O_3$  nonattainment areas to implement RACT for sources subject to CTGs issued for major sources of  $O_3$  precursor emissions. RACT requirements are included in the CAA to assure VOC and NOx emissions from major sources are controlled to a "reasonable" extent, but not necessarily to the more stringent BACT or "lowest achievable emission rate" (LAER) levels expected of new or modified major stationary sources.

CTG documents represent presumptive RACT levels of control for applicable sources of air pollution. The RACT SIP must contain adopted CTG-equivalent regulations for affected sources operating within the District's nonattainment area. Demonstration of existing regulations applicable to non-CTG major sources is appropriate for satisfying RACT when the cumulative PTE from a single source (facility) exceeds the nonattainment area's major source emission threshold. This RACT SIP is designed to demonstrate compliance with RACT requirements for major sources with a PTE 25-tpy or greater of VOCs or NOx.

Negative declaration of a CTG-equivalent rule is required when there is no applicable major source operating in the District's O<sub>3</sub> nonattainment area to which a CTG could apply, including sources located within the District's nonattainment area with emissions below the applicability threshold of the specified CTG source category. The District will provide notice and opportunity for public to comment on the draft RACT SIP, even where District certifies the existing regulation(s) satisfy RACT requirements, or where the District adopts a negative declaration. The District will also submit appropriate supporting information for their RACT demonstrations.

#### **B. RACT Evaluations for CTG Sources**

The summaries below compare elements and emission limits in CTG documents to the corresponding elements of the applicable District rule of the same source category. District rule elements are also compared to applicable corresponding provisions of South Coast Air Quality Management District (SCAQMD) and San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) rules that regulate emissions from non-CTG major sources.

#### RULE 410.3: ORGANIC SOLVENT DEGREASING OPERATIONS (Last Amended 5/7/1998)

Rule 410.3 reduces VOC emissions from solvent metal cleaning (degreasing) by specifying equipment/categories, their design requirements, and their operating practice requirements. Those three equipment/categories are cold cleaners, open top vapor degreasers, and conveyorized degreasers. It has been determined Rule 410.3 currently meets RACT requirements because it is equivalent to the CTG (Control of Volatile Organic Emissions from Solvent Metal Cleaning). The District did not compare Rule 410.3 to other air district rules since it meets RACT pursuant to the CTG, and therefore does not require an update at this time.

### RULE 410.4: METAL, PLASTIC, AND PLEASURE CRAFT PARTS AND PRODUCTS COATING OPERATIONS (Last Amended 3/13/2014)

Rule 410.4 reduces VOC emissions by specifying VOC content limits in coatings used to coat metal parts and products, large appliances parts and products, metal furniture, plastic parts and products, automotive/transportation and business machines parts and products, and pleasure crafts, and from cleaning, storage, and disposal of organic solvents and waste solvent materials associated with such coating operations. The VOC content limits of the rule are essentially equivalent to the CTG (Metal-Plastic Parts Coatings). The District does not have sources applicable to the category of Motor Vehicle Materials (Table 6 of the CTG) and has declared a negative declaration (see Table 5) for that category.

The District also evaluated SCAQMD Rule 1107 (Coating of Metal Parts and Products, amended 2/7/2020) and SJVAPCD Rule 4603 (Surface Coating of Metal Parts and Products, Plastic Parts and Products, and Pleasure Crafts, amended 9/17/2009). Both rules have similar requirements and VOC content limits to District Rule 410.4. Therefore, the District determines Rule 410.4 meets RACT and does not require an update at this time.

# RULE 410.8: AEROSPACE ASSEMBLY AND COATING OPERATIONS (Last Amended 9/1/2022)

Rule 410.8 reduces VOC emissions from manufacturing, assembling, coating, masking, bonding, paint stripping, surface cleaning, service, and maintenance of aerospace components, and the cleanup of equipment, storage, and disposal of solvents and waste solvent materials associated with these operations. The VOC content limits of the rule are equivalent to, or more stringent than the corresponding VOC content limits in the CTG (Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations).

The District also evaluated SCAQMD Rule 1124 (Aerospace Assembly and Component Manufacturing Operations, amended 9/21/2001) and SJVAPCD Rule 4605 (Aerospace Assembly and Coating Operations, amended 6/16/2011). District Rule 410.8 has more stringent controls than rule 1124 and 4605 and all three have similar VOC content limits. Therefore, the District determines Rule 410.8 meets RACT and does not require an update at this time.

#### RULE 410.9: WOOD PRODUCTS SURFACE COATING OPERATIONS (Adopted 3/13/2014)

Rule 410.9 reduces VOC emissions from wood products coatings and cleaning materials by limiting VOC content of the coats and by requiring certain application methods. The VOC content limits of the rule are essentially equivalent to the corresponding VOC content limits in the CTG (Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing and Rework Operations).

The District also evaluated SCAQMD Rule 1136 (Wood Products Coatings, amended 6/4/1996) and SJVAPCD Rule 4606 (Wood Products and Flat Wood Paneling Products Coating Operations, amended 10/16/2008). Both rules have similar requirements and VOC content limits

to District Rule 410.9. Therefore, the District determines Rule 410.9 meets RACT and does not require an update at this time.

### RULE 412: GASOLINE TRANSFER INTO STATIONARY STORAGE CONTAINERS, DELIVERY VESSELS, AND BULK PLANTS (Last Amended 1/13/2022)

Rule 412 reduces VOC emissions from stationary storage containers including storage containers located at bulk plants with capacities greater than 250 gallons and to gasoline delivery vessels. California Air Resources Board (CARB) sets vapor recovery system standards and is responsible for certifying systems to meet those standards. California local air districts have the primary authority for regulating gasoline-dispensing facilities under vapor recovery rules. Vapor recovery systems are capable of recovering displaced gasoline vapors to an efficiency of ninety-five (95) percent or greater.

The District did not compare Rule 412 to a CTG or other air district rules because CARB set the statewide standard. The California standard for gasoline vapor recovery is more stringent than the Federal requirement. Therefore, it is determined that by meeting CARB requirements, Rule 412 meets RACT. No changes are required at this time.

# RULE 412.1: TRANSFER OF GASOLINE TO VEHICLE FUEL TANKS (Last Amended 1/13/2022)

Rule 412.1 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants) reduces VOC emissions from transfer of gasoline into vehicle fuel tanks from stationary storage containers subject to the requirements of the Rule. A person shall not transfer or permit the transfer of gasoline from a stationary storage container into a motor vehicle fuel tank with a maximum capacity of more than five (5) gallons unless the gasoline-dispensing unit is equipped with and has in operation a CARB-Certified Phase II Vapor Recovery System. California local air districts have the primary authority for regulating gasoline-dispensing facilities under vapor recovery rules. CARB enhanced vapor recovery systems are capable of recovering displaced gasoline vapors to an efficiency of ninety-five (95) percent or greater.

The District did not compare Rule 412.1 to a CTG or other air district rules because CARB set the statewide standard. The California standard for gasoline vapor recovery is more stringent than the Federal requirement. Therefore, it is determined that by meeting CARB requirements, Rule 412.1 meets RACT. No changes are required at this time.

### C. RACT Evaluation for Non-CTG Major Sources

### RULE 425: STATIONARY GAS TURBINES (Last Amended 1/11/2018)

Rule 425 was amended to lower the current NOx limits for stationary gas turbines with rated heat input of 10.0 megawatts (MW) or more and fired with gaseous or liquid fuels. The amendment also included NOx limits for units rated from 0.88 MW to 10.0 MW.

The District evaluated MDAQMD Rule 1159 (Stationary Gas Turbines), last amended 9/28/09. Rule 1159 has similar limits and requirements to Rule 425 but is not as stringent. EPA approved Rule 1159 to meet RACT on 10/25/2012 (77 FR 65133). Additionally, EPA's last approval of Rule 425 was 3/1/96 (61 FR 7992). The SIP approved rule is less stringent than the most recently adopted revision.

#### EPA Technical Support Document for Rule 425 January 11, 2018, amendment

The following comments are from EPA's February 2023, *Technical Support Document (TSD) for Rule 425 January 11, 2018, Amendment.* Rule 425 strengthens the SIP by tightening NOx limits for most units regulated by the rule. The rule largely fulfills the relevant CAA §110 and part D requirements, but the deficiencies discussed within the TSD preclude full SIP approval. Therefore, EPA staff recommends a simultaneous limited approval and limited disapproval of Rule 425 pursuant to CAA §110(k)(3) and §301(a).

As stated in EPA's TSD, the revised NOx limits of amended Rule 425 are considered "tightened" and a strengthening of the rule. EPA will be providing partial approval of amended Rule 425, which includes the "tightened" NOx limits. The District believes that EPA's partial disapproval does not interfere with RACT requirements of this source category. Therefore, the District determines the NOx requirements of Rule 425 meet RACT and do not require an update at this time.

Additionally, the District will be addressing the deficiencies EPA has listed and amending the rule to satisfy requirements of the CAA. The revised rule will be adopted and submitted to CARB for review and forward to EPA for approval and inclusion in the SIP prior to the FIP clock deadline.

# RULE 425.2: BOILERS, STEAM GENERATORS, AND PROCESS HEATERS (Last Amended 3/8/2018)

Rule 425.2 was amended to lower the previous NOx limits for boilers, steam generators and process heaters with rated heat input of 5 million Btu per hour or more fired with gaseous or liquid fuels. NOx emission levels shall not exceed 30 parts per million by volume (ppmv) when operated on gaseous fuel and 40-ppmv when operated on liquid fuel, for units with annual heat input of 90,000-therms or more during one or more of the three preceding years of operation. For units with annual heat inputs of less than 90,000-therms, or for units with carbon monoxide (CO) emissions limits of 400-ppmv, the requirements were unchanged.

The District evaluated MDAQMD Rule 1157 (Boilers & Process Heaters), last amended 1/22/18. Rule 1157 has similar limits and requirements to Rule 425.2. EPA last approved Rule 1157 to meet RACT on 4/20/2003 (64 FR 19277). This was a previous version of the rule and less stringent. Additionally, EPA's last approval of Rule 425.2 was 9/24/99 (FR 51688). The SIP approved rule is less stringent than the most recently adopted revision. Therefore, the District determines Rule 425.2 meets RACT and does not require an update at this time.

#### RULE 425.3: PORTLAND CEMENT KILNS (Last Amended 3/8/2018)

Rule 425.3 was amended to lower NOx emission of Portland cement kilns from 6.4 lb/ton of clinker to 2.8 lb/ton of clinker produced when averaged over any 30 consecutive day period, or 3.4 lb/ton of clinker produced if low-NOx burner or low-NOx precalciner was installed and made operational by January 1, 2007. Additionally, all Portland cement manufacturing facilities are required to provide, properly install, maintain, calibrate, and operate a continuous emission monitoring system (CEMS) for each NOx emission point from the kiln.

The District evaluated MDAQMD Rule 1161 (Portland Cement Kilns), last amended 1/22/18. Rule 1161 has similar limits and requirements to Rule 425.3. EPA last approved Rule 1161 to meet RACT on 2/27/2003 (68 FR 9015). This was a previous version of the rule and less stringent. Additionally, EPA's last approval of Rule 425.3 was 7/20/99 (64 FR 38832). The SIP approved rule is less stringent than the most recently adopted revision. Therefore, the District determines Rule 425.3 meets RACT.

#### EPA Technical Support Document for Rule 425.3 March 8, 2018, amendment

The following comments are from EPA's February 2023, *Technical Support Document (TSD) for Rule 425.3 March 8, 2018, Amendment*. Based on our evaluation, the EPA recommends a limited approval and limited disapproval of Rule 425.3 – Portland Cement Kilns (Oxides of Nitrogen), adopted October 13, 1994, and amended March 8, 2018, pursuant to CAA §§ 110(k)(3) and 301(a). While our evaluation indicates that the revised NOx emission limit is more stringent and strengthens the SIP, Rule 425.3 contains multiple exemptions to this limit for periods of startup, shutdown, and breakdown (malfunction). The limited approval would add the revised version of Rule 425.3 to the SIP, replacing the current SIP-approved version. This is advisable because several of the revisions made by the EKAPCD, e.g., more stringent NOx emission limits and longer retention times of records, are SIP-strengthening.

We are proposing a limited disapproval due to the two emission limit exemptions for periods of startup, shutdown, and breakdown (malfunction). As a result, the revised emission limit established in Section (V) is not continuous, which is inconsistent with CAA requirements. If finalized as proposed, the limited disapproval would start sanctions and Federal Implementation Plan (FIP) clocks. These clocks could be stopped by the submission of rule revisions resolving the deficiencies.

As stated in EPA's TSD, the revised NOx limits of amended Rule 425.3 are considered more stringent and "SIP-strengthening". EPA will be providing limited approval of amended Rule 425.3, which includes the more stringent NOx limits. The District believes that EPA's partial disapproval does not interfere with RACT requirements of this source category. Therefore, the District determines the NOx requirements of Rule 425.3 meet RACT and do not require an update at this time.

Additionally, the District will be addressing the deficiencies EPA has listed and amending the rule to satisfy requirements of the CAA. The revised rule will be adopted and submitted to CARB for review and forward to EPA for approval and inclusion in the SIP prior to the FIP clock deadline.

### **D. RACT SIP Evaluation Findings**

As required by Sections 182(b)(2) and 182(f) of the FCAAA, the District has adopted VOC and NOx rules for the nonattainment area that are designed to implement RACT emission standards for major stationary sources of air pollution that are subject to CTGs issued by EPA. The District's VOC and NOx prohibitory rules were fully evaluated pursuant to requirements of the 2008 and 2015 8-hour O<sub>3</sub> NAAQS for "Severe" nonattainment (25-tpy). This RACT SIP compares the District's O<sub>3</sub> precursor control measures to applicable CTGs for completeness and stringency, in order to determine compliance with federal RACT requirements. All rules applicable to CTG source categories were determined to meet or exceed CTG requirements, and RACT was met for all non-CTG major sources with a PTE of 25-tpy or more.

Remainder of Page Intentionally Left Blank