

**SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT**

**DEMONSTRATION OF REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR THE
2015 OZONE NAAQS (RACT SIP)**

June 22, 2020

Prepared by: Marc Cooley
Associate Air Quality Engineer

Reviewed by: Kevin J. Williams, Ph.D.
Program Supervisor

Approved by: Mark Loutzenhiser
Division Manager

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BACKGROUND

In 2015, the U.S. Environmental Protection Agency (EPA) revised the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone to 0.070 parts per million¹. EPA subsequently designated the Sacramento Metropolitan Area as a moderate nonattainment area² for the new standard, with an attainment date of August 4, 2024³. The Sacramento Metropolitan Area includes all of Sacramento and Yolo counties, and parts of El Dorado, Placer, Solano, and Sutter counties. These areas are under the jurisdictions of the Sacramento Metropolitan Air Quality Management District (SMAQMD or District), Yolo-Solano Air Quality Management District (YSAQMD), El Dorado County Air Quality Management District (EDCAQMD), Placer County Air Pollution Control District (PCAPCD), and Feather River Air Quality Management District (FRAQMD). In May of 2020, the districts of the Sacramento Metropolitan Area requested a voluntary reclassification from moderate to serious in accordance with Section 181(b)(3) of the federal Clean Air Act (CAA). The reclassification to serious will extend the attainment deadline to August 3, 2027. Either classification requires the districts in the nonattainment area to submit several plan elements to EPA, including revisions to the State Implementation Plan (SIP) that meet the Reasonably Available Control Technology (RACT) requirements for VOC and NOx in accordance with Sections 182(b)(2) and 182(f) of the CAA. This requirement is known as the RACT SIP.

In 2017, the District adopted and submitted for EPA approval the RACT SIP for the 2008 ozone NAAQS⁴. The document identified two RACT deficiencies, which SMAQMD committed to remedy. The first was a CTG VOC RACT deficiency for coatings applied to plastic parts, which the District corrected by adopting and submitting to EPA Rule 468 – Surface Coating of Plastic Parts and Products. The second was a NOx RACT deficiency for natural gas-fired ovens at a major source, which the District corrected by adopting and submitting to EPA Rule 419 – NOx from Miscellaneous Combustion Units. In August 2018, EPA found the submittals of Rules 468 and 419 complete⁵.

This new document, a RACT SIP for the 2015 ozone NAAQS, will re-examine the RACT determinations made in the RACT SIP for the 2008 ozone standard in light of any new information. Staff has conducted a thorough review to identify and evaluate new information that might change the previous RACT conclusions. Such information includes equipment changes at major stationary sources, amendments to referenced rules, and RACT requirements for a new Control Techniques Guidelines (CTG) published by EPA for the oil and natural gas production industry⁶.

EPA defines RACT as “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and

¹ 80 FR 65292, October 26, 2015.

² 83 FR 25776, June 4, 2018.

³ 83 FR 62998, December 6, 2018.

⁴ SMAQMD. Demonstration of Reasonably Available Control Technology for the 2008 Ozone NAAQS (RACT SIP). January 23, 2017.

⁵ Letter dated August 23, 2018, from Elizabeth Adams, U.S. EPA Region IX, to Richard Corey, CARB.

⁶ U.S. EPA. Control Techniques Guidelines for the Oil and Natural Gas Industry. EPA-453/B-16-001. October 2016.

economic feasibility⁷.” Sections 182(b)(2) and 182(f) of the Clean Air Act require the District to implement RACT for:

- Each category of VOC sources that is covered by a Control Techniques Guideline (CTG) document issued by EPA; and
- All major stationary sources of VOC and/or NO_x (a potential to emit at least 50 tons per year of VOC and/or NO_x for serious nonattainment areas⁸).

EPA’s Implementation Rule for the 2015 Ozone Standard

In 2018, EPA published the final implementation rule for the 2015 8-hour ozone standard⁹. The final implementation rule retains existing RACT requirements from the 2008 8-hour ozone standard. The final rule provides guidance to states and districts for preparing their required SIP submittals, including RACT SIPs. The deadline for submittal of the RACT SIP is August 3, 2020 and implementation of any identified measures by January 1, 2023.

The final implementation rule for the 2015 ozone standard notes EPA guidance from the 2008 ozone implementation rule¹⁰ and any other available information should be used in making RACT determinations, such as:

- CTGs and Alternative Control Techniques (ACTs);
- BACT/LAER Clearinghouse;
- SIPs for other nonattainment areas, in particular those areas with higher classifications;
- The “Menu of Control Measures” for NO_x and VOC¹¹;
- Standards of performance for existing stationary sources developed under CAA section 111(d);
- New Source Review (NSR) and Prevention of Significant Deterioration (PSD) settlement agreements;
- In some cases, Maximum Achievable Control Technology (MACT) standards and National Emission Standards for Hazardous Air Pollutants (NESHAP)¹² may be used to demonstrate RACT; and
- Previous RACT determinations, if the incremental emission reductions that would result from additional controls would be small^{13,14}.

To demonstrate RACT for CTG source categories and all major stationary sources of VOC and/or NO_x, the 2008 implementation rule specifies that RACT SIPs must include:

⁷ 44 FR 53762, September 17, 1979.

⁸ Clean Air Act Section 182(d).

⁹ “Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements,” Final Rule, 83 FR 62998, December 6, 2018.

¹⁰ “Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements,” Final Rule, 80 FR 12264, March 6, 2015.

¹¹ “Menu of Control Measures,” EPA, updated April 12, 2012.

¹² National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63.

¹³ 80 FR 12279, March 6, 2015, states in part “In cases where controls were applied due to the 1-hour or 1997 NAAQS ozone RACT requirement, we expect that any incremental emissions reductions from application of a second round of RACT controls may be small and, therefore, the cost for advancing that small additional increment of reduction may not be reasonable.”

¹⁴ 80 FR 12280, March 6, 2015.

- Adopted RACT regulations;
- Certifications, where appropriate, that existing provisions are RACT;
- Negative declarations where there are no sources in the nonattainment area covered by a specific CTG source category;
- Notice and opportunity for public comment, even when certifying that the existing provisions remain RACT or when a negative declaration is being submitted; and
- Appropriate supporting information.

2006 EPA Region IX Guidance

To help states and districts prepare their 2006 RACT SIPs, EPA Region IX provided guidance in a letter from Andrew Steckel, dated March 9, 2006. The following elements are included in the recommended strategy:

- 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.
- Describe the basis for concluding that the regulations fulfill RACT. Documents useful in establishing RACT include CTGs, ACTs, Maximum Achievable Control Technology (MACT) standards, New Source Performance Standards (NSPSs), California Suggested Control Measures (SCMs) and RACT/Best Available Retrofit Control Technology (BARCT) determinations, regulations adopted in other Districts, and guidance and rules developed by other state and local agencies.

This RACT demonstration document has been prepared in accordance with the guidance discussed above. It will be submitted to EPA as a SIP revision to meet the requirements of Sections 182(b)(2) and 182(f) of the federal Clean Air Act.

RACT ANALYSIS

The specific information sources Staff used for RACT determinations included:

- CTGs and ACTs¹⁵;
- New Source Performance Standards (NSPSs);
- National Emission Standards for Hazardous Air Pollutants (NESHAPs);
- The Menu of Control Measures;
- NSR and PSD settlement agreements from EPA's database of Civil Cases and Settlements¹⁶;

¹⁵ <https://www.epa.gov/ground-level-ozone-pollution/control-techniques-guidelines-and-alternative-control-techniques>

¹⁶ <http://cfpub.epa.gov/enforcement/cases/>

- CARB’s Determinations of Reasonably Available Control Technology and Best Available Retrofit Control Technology;
- EPA’s RACT/BACT/LAER Clearinghouse¹⁷;
- CARB’s BACT Clearinghouse¹⁸;
- The District’s BACT Clearinghouse; and
- Rules from other nonattainment areas that were classified as serious nonattainment or higher for the 2008 and/or 2015 8-hour ozone standard, including:
 - Placer County Air Pollution Control District (Severe-15 for 2008 and expected reclassification to serious for 2015);
 - Yolo-Solano Air Quality Management District (Severe-15 for 2008 and expected reclassification to serious for 2015);
 - Ventura County Air Pollution Control District (Serious for 2008 and 2015);
 - San Joaquin Valley Air Pollution Control District (Extreme for 2008 and 2015);
 - South Coast Air Quality Management District (Extreme for 2008 and 2015);
 - Dallas-Fort Worth, Texas¹⁹ (Serious for 1997 and 2008); and
 - Houston-Galveston-Brazoria, Texas (Severe-15 for 1997); and
 - Baltimore, Maryland²⁰ (Serious for 1997).

The District submitted the RACT SIP for the 2008 ozone standard in 2017. Because those RACT determinations were made so recently, it is expected that many of the RACT conclusions made at that time will still be applicable to the 2015 ozone standard. Nevertheless, Staff reviewed the information sources shown in Table 1 to identify and evaluate any new emissions standards that have been adopted since the beginning of preparation of the previous RACT SIP (approximately March 2016) through May 2020.

Table 1 – New or Revised Information Sources Since Previous RACT SIP Submittal

Information Source	Agency	Title	Effective/ Adopted Date
Control Techniques Guidelines	EPA	CTG for Oil and Natural Gas Industry	10/2016 ²¹
Greenhouse Gas Emission Standards	CARB	Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities	10/2017 ²²
NESHAP	EPA	Subpart MMMM: Surface Coating of Miscellaneous Metal Parts and Products	Signed 3/11/2020
NESHAP	EPA	Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.	Signed 5/29/2020
NESHAP	EPA	Subpart RRRR: National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture	Signed 3/11/2020

¹⁷ <http://cfpub.epa.gov/RBLC/index.cfm?action=Home.Home>

¹⁸ <http://www.arb.ca.gov/bact/bactnew/rptpara.htm>

¹⁹ The Texas air quality regulations are contained in Title 30, Part 1 of the Texas Administrative Code. [http://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac_view=3&ti=30&pt=1](http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=30&pt=1)

²⁰ The Maryland air quality regulations are contained in Title 26, Subtitle 11 of the Code of Maryland Regulations. http://www.dsd.state.md.us/comar/subtitle_chapters/26_Chapters.aspx

²¹ 81 FR 74798, October 27, 2016.

²² <https://ww3.arb.ca.gov/regact/2016/oilandgas2016/oilandgas2016.htm>

Information Source	Agency	Title	Effective/ Adopted Date
NESHAP	EPA	Subpart PPPP: National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products	Signed 3/11/2020
NESHAP	EPA	Subpart WWWW: Reinforced Plastic Composites Production	2/25/2020
Adopted or Amended Air District Rules	SCAQMD	1106 – Marine Coating Operations	5/3/2019
		1110.2 – Emissions from Gaseous and Liquid-Fueled Engines	11/1/2019
		1118 – Control of Emissions from Refinery Flares	7/7/2017
		1118.1 – Control of Emissions from Non-Refinery flares	1/4/2019
		1134 – Emissions of Oxides of Nitrogen from Stationary Gas Turbines	4/5/2019
		1135 - Emissions of Oxides of Nitrogen from Electric Power Generating Systems	11/2/2018
		1146, 1146.1, & 1146.2 - Emissions of Oxides of Nitrogen from Industrial and Commercial Boilers, Small Industrial, and Large Water Heaters and Small boilers	12/7/2018
		1147 – NOx Reductions from Miscellaneous Sources	7/7/2017
		1168 – Adhesive and Sealant Applications	10/6/2017
		1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities	4/6/2018
	SJVUAPCD	4703 – Stationary Gas Turbines	9/20/2017
	VCAPCD	66.1 – Misc. Surface Coating Operations and Other Processes Emitting VOCs	5/11/2016
		67.12.1 – Polyester Resin Operations	5/11/2016
		74.20 – Adhesives and Sealants	10/9/2018
		74.23 – Stationary Gas Turbines	11/12/2019
		74.34 – NOx Reductions from Miscellaneous Sources	12/13/2016
	YSAQMD	2.21 – Organic Liquid Storage and Transfer	9/14/2016
		2.27 – Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters	5/15/2019
		2.29 – Graphic Arts Printing Operations	7/11/2018
		2.31 – Solvent Cleaning and Degreasing	4/12/2017
2.45 - Boilers		5/15/2019	
PCAPCD	206 – Incinerator Burning	10/13/2016	
BACT Determinations	EPA CARB Local Districts	Various	From 2016 to Present

The process Staff used to demonstrate compliance with federal RACT requirements consisted of the following steps:

- For each CTG, identify whether the District has sources to which the CTG applies.
- If the District has no sources to which a CTG applies, submit a negative declaration, including CTGs where the District has previously submitted negative declarations.
- If the District has a source(s) to which a CTG applies, identify the applicable District rule and perform a detailed comparison of the rule requirements with the CTG and other available RACT guidance. The comparison has been updated to include new standards or rule requirements that are applicable to these source categories. Appendix C contains the analyses for CTG source categories.
- For non-CTG categories that are applicable to one or more major sources within the District, perform a detailed comparison of the rule requirements applicable to those source categories with relevant RACT guidance. The comparison has been updated to include

new standards or rule requirements that are applicable to these source categories. Appendix D contains the analyses for non-CTG categories where the District has applicable rules.

- For major sources, determine the types of emission units at the facility and determine which District rules apply to these sources. The list of major sources has been updated to identify new equipment and new rule requirements (identified above) that are applicable to major sources at serious nonattainment thresholds. The RACT requirement is satisfied for a major source when all units that emit VOC or NOx are subject to rules that have been determined to satisfy RACT (as demonstrated in Appendices C and D). Appendix E contains the analyses for major sources.

Table 1 contains the list of all CTG categories, together with the applicable District rule (unless there are no sources), the most recent amendment date, and the status of the rule in the SIP. For CTGs where the District has applicable sources, District rules were analyzed to determine if the District's requirements meet RACT. These analyses are included in Appendix C.

Updates from the previous RACT SIP for the CTG source categories are as follows: 1) EPA approval of District Rule 464, 2) Submittal of District Rule 468, and 3) CARB submittal of the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities into the California State Implementation Plan.

Table 1 – CTG Source Categories

CTG Doc. No./ Date	CTG Category	SMAQMD Rule No. (Most Recent Amendment)	SIP Status
EPA-450/R-75-102 Nov. 1975	Gasoline Service Stations – Phase I Vapor Recovery	448 (2/26/09)	Adopted 2/26/09; Approved 1/7/13.
EPA-450/2-77-008 May 1977	Surface Coating Operations		
	– Coils, Paper, Fabrics, Automobiles, and Light- Duty Truck Coating Operations	No Sources	
	– Metal Can Coating	452 (9/25/08)	Adopted 9/25/08; Approved 4/9/10.
EPA-450/2-77-022 Nov. 1977	Solvent Metal Cleaning	454 (9/25/08)	Adopted 9/25/08; Approved 4/9/10.
EPA-450/2-77-025 Oct. 1977	Refineries –Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	No Sources	
EPA-450/2-77-026 Oct. 1977	Gasoline Loading Terminals	447 (4/2/98)	Adopted 4/2/98; Approved 11/26/99.
EPA-450/2-77-032 Dec. 1977	Metal Furniture Coating	451 (10/28/10)	Adopted 10/28/10; Approved 11/21/11.
EPA-450/2-77-033 Dec. 1977	Magnet Wire Coating	No Sources	
EPA-450/2-77-034 Dec. 1977	Large Appliance Coating	No Sources	

CTG Doc. No./ Date	CTG Category	SMAQMD Rule No. (Most Recent Amendment)	SIP Status
EPA-450/2-77-035 Dec. 1977	Gasoline Bulk Plants	447 (4/2/98)	Adopted 4/2/98; Approved 11/26/99.
EPA-450/2-77-036 Dec. 1977	Petroleum Liquid Storage – Fixed-Roof Tanks	446 (11/16/93)	Adopted 11/16/93; Approved 9/16/94.
EPA-450/2-77-037 Dec. 1977	Cutback Asphalt	453 (8/31/82)	Adopted 8/31/82; Approved 1/24/85.
EPA-450/2-78-015 June 1978	Miscellaneous Metal Parts and Products Coating	451 (10/28/10)	Adopted 10/28/10; Approved 11/21/11.
EPA-450/2-78-029 Dec. 1978	Pharmaceutical Products Manufacturing	464 (4/28/16)	Adopted 4/28/16; Approved 12/04/17.
EPA-450/2-78-030 Dec. 1978	Pneumatic Tire Manufacturing	No Sources	
EPA-450/2-78-032 June 1978	Flat Wood Panel Coating	No Sources	
EPA-450/2-78-033 Dec. 1978	Graphic Arts		
	– Flexographic Printing	450 (10/23/08)	Adopted 10/23/08; Approved 4/9/10.
	– Rotogravure Printing	No Sources	
EPA-450/2-78-036 June 1978	Refineries – VOC Leaks	No Sources	
EPA-450/2-78-047 Dec. 1978	Petroleum Liquid Storage – External Floating Roof Tanks	446 (11/16/93)	Adopted 11/16/93; Approved 9/16/94.
EPA-450/2-78-051 Dec. 1978	Gasoline Tank Trucks and Vapor Collection Systems – VOC Leaks	447 (4/2/98) 448 (2/26/09)	Rule 447: Adopted 4/2/98; Approved 11/26/99. Rule 448: Adopted 2/26/09; Approved 1/7/13.
EPA-450/3-82-009 Sep. 1982	Large Petroleum Dry Cleaners	No Sources ²³	
EPA-450/3-83-006 Mar. 1984	Synthetic Organic Chemical Manufacturing – VOC Leaks	443 (9/5/96)	Adopted 9/5/96; Approved 11/9/98.
EPA-450/3-83-007 Dec. 1983	Natural Gas/Gasoline Processing – VOC Leaks	No Sources	
EPA-450/3-83-008 Nov. 1983	High Density Polyethylene, Polypropylene, and Polystyrene Resin Manufacturing	No Sources	
EPA-450/3-84-015 Dec. 1984	Synthetic Organic Chemical Manufacturing – Air Oxidation Processes	No Sources	

²³ This CTG applies to dry cleaning facilities that use 123,000 liters or more of petroleum solvent per year. Although there are petroleum solvent dry cleaners operating in Sacramento County, the largest facility is limited by permit to use no more than 4,164 liters per year of petroleum solvent.

CTG Doc. No./ Date	CTG Category	SMAQMD Rule No. (Most Recent Amendment)	SIP Status
EPA-450/4-91-031 Aug. 1993	Synthetic Organic Chemical Manufacturing – Reactor and Distillation Operations	464 (4/28/16)	Adopted 4/28/16; Approved 12/4/17.
EPA-453/R-96-007 Apr. 1996	Wood Furniture Coating	No Sources ²⁴	
EPA-453/R-97-004 Dec. 1997	Aerospace Manufacturing	No Sources ²⁵	
EPA-453/R-06-001 Sep. 2006	Industrial Cleaning Solvents	466 (10/28/10)	Adopted 10/28/10; Approved 9/29/11.
EPA-453/R-06-002 Sep. 2006	Graphic Arts – Offset Lithographic and Letterpress Printing	450 (10/23/08)	Adopted 10/23/08; Approved 4/9/10.
EPA-453/R-06-003 Sep. 2006	Graphic Arts – Flexible Package Printing	450 (10/23/08)	Adopted 10/23/08; Approved 4/9/10.
EPA-453/R-06-004 Sep. 2006	Flat Wood Panel Coating	No Sources	
EPA-453/R-07-003 Sep. 2007	Paper, Film, and Foil Coatings	No Sources	
EPA-453/R-07-004 Sep. 2007	Large Appliance Coating	No Sources	
EPA-453/R-07-005 Sep. 2007	Metal Furniture Coating	451 (10/28/10)	Adopted 10/28/10; Approved 11/21/11.
EPA-453/R-08-003 Sep. 2008	Miscellaneous Metal and Plastic Parts Coating		
	– Metal Parts	451 (10/28/10)	Adopted 10/28/10; Approved 11/21/11.
	– Plastic Parts – Business Machine & Transportation	Rule 468 (3/22/2018)	Submitted to EPA 5/18/18.
	– Pleasure Craft	No Sources	
	– Motor Vehicle Materials	459 (8/25/11)	Adopted 8/25/11; Approved 8/9/12.
EPA-453/R-08-004 Sep. 2008	Fiberglass Boat Manufacturing	No Sources ²⁶	

²⁴ This CTG applies to source with the potential to emit 25 or more tons per year of VOC. There used to be an applicable source operating in the District; however, it closed and cancelled its permits in 2007.

²⁵ This CTG applies to facilities that perform manufacture or rework of commercial, civil, or military aerospace vehicles or components. In severe ozone nonattainment areas, the CTG applies to sources with a potential to emit of 25 tons per year or more of VOC from such operations. Although there are sources in the District that perform these operations, all have potentials to emit of less than 25 tons per year of VOC from aerospace manufacture and rework operations.

²⁶ This CTG applies to facilities that manufacture fiberglass boat decks or hulls where the total actual VOC emissions from all such processes at the facility, including related cleaning activities, are equal to or exceed 15 pounds per day or an equivalent level such as 2.7 tons per 12-month rolling period, before consideration of controls. The District adopted a negative declaration for this category in 2012 after Staff determined that the only two potential sources identified had emissions much less than the threshold of 2.7 tons per 12-month rolling period. Both facilities have since gone out of business, and

CTG Doc. No./ Date	CTG Category	SMAQMD Rule No. (Most Recent Amendment)	SIP Status
EPA-453/R-08-005 Sep. 2008	Miscellaneous Industrial Adhesives	No Sources ²⁷	
EPA-453/R-08-006 Sep. 2008	Automobile and Light-Duty Truck Assembly Coating	No Sources	
61 FR 44050 Aug. 1996; EPA-453/R-94-032 Apr. 1994	Shipbuilding and Ship Repair Operations	No Sources	
EPA-453/B16-001	Oil and Natural Gas Industry	446 (11/16/93)	<u>Rule 446</u> Adopted 11/16/93; Approved 9/16/94. <u>Other</u> <u>Requirements</u> CARB submitted State GHG Rule into California SIP ²⁸ 12/4/2018.

For CTGs in Table 1 where “No Sources” is shown in lieu of a rule number, Staff reviewed the District’s permit files, the emission inventory for the federal Clean Air Plan, business listings, and telephone yellow pages to verify that there are no existing stationary sources or emitting facilities for these CTG categories and Staff is not aware of any that are being proposed. If any sources in these CTG categories are constructed in the future, they will be subject to more stringent New Source Review Requirements, including Best Available Control Technology. Negative declarations for these CTG categories are included in Appendix A.

The District is designated a moderate nonattainment area for the 2015 8-hour ozone standard. However, it is anticipated that the Sacramento Federal Nonattainment Area will request a voluntary reclassification to serious. In serious nonattainment areas, major sources of VOC and/or NOx are defined as those with the potential to emit at least 50 tons per year of the individual pollutants. Table 2 lists the 5 major stationary sources in the District that are subject to RACT

Staff’s recent information search confirms that there are no new facilities.

²⁷ This CTG applies to miscellaneous industrial adhesives and adhesive primer application processes where the total actual VOC emissions from all such processes at the facility, including related cleaning activities, are equal to or exceed 15 pounds per day or an equivalent level such as 3 tons per 12-month rolling period, before consideration of controls. Although there are sources in the District that perform these operations, all have actual VOC emissions, before consideration of controls, less than 3 tons per 12-month rolling period from such operations.

²⁸ On December 4, 2018, CARB submitted the Greenhouse Gas Emission Standards for Oil and Natural Gas Facilities to U.S. EPA as a revision to the California SIP. This SIP revision, in combination with SMAQMD Rule 446, and a Memorandum of Agreement between CARB and the Sac Metro Air District (<https://ww2.arb.ca.gov/sites/default/files/2020-03/Sacramento%20Revised%20MOA.pdf>) to implement the greenhouse gas emission standards, satisfies the RACT requirement for this source category.

requirements for VOC and/or NOx at the 50 tons per year thresholds. The table shows the pollutant(s) for which the sources are major sources. Each major source was analyzed to determine if it meets RACT requirements. These analyses, with updates for any new requirements, are included in Appendix E.

Table 2 – Major Sources of VOC and NOx in SMAQMD

Major Source	Major Pollutant(s)
Kiefer Landfill, Department of Waste Management and Recycling, County of Sacramento	VOC, NOx
Sacramento Cogeneration Authority	NOx
Sacramento Municipal Utility District (SMUD) Financing Authority – Cosumnes Power Plant	NOx
Santa Fe Pacific Pipeline, L.P. Bradshaw Terminal	VOC
University of California, Davis Medical Center	NOx

Staff reviewed the permitting records of the major sources shown in Table 2 to determine the types of emission units present at each source. Each of the major sources contain emission units that do not fall into one of the CTG categories; therefore, it was necessary to perform RACT determinations for additional source categories. Table 3 lists the “non-CTG” categories that apply to major sources. In the 4 categories for which the District has applicable rules, the requirements were analyzed to determine if they meet RACT. These analyses are included in Appendix D.

Table 3 – Additional (Non-CTG) Source Categories Applicable to Major Sources

Non-CTG Source Category	SMAQMD Rule No. (Most Recent Amendment)	SIP Status
Boilers, Process Heaters, and Steam Generators	411 (8/23/07)	Adopted 8/23/07; Approved 5/6/09 (74 FR 20880).
Gas Turbines	413 (3/24/05)	Adopted 3/24/05; Approved 1/10/08 (73 FR 1819).
Internal Combustion Engines	412 (6/1/95)	Adopted 6/1/95; Approved 4/30/96 (61 FR 18959).
Gasoline Service Stations – Phase II Vapor Recovery	449 (2/26/09)	Adopted 2/26/09; Approved 1/7/2013 (78 FR 897).

CONCLUSIONS

CTG Categories

For 22 CTG categories (or in some cases, specific subcategories of the CTGs), the District has no sources to which the CTGs apply, either because there are no sources of that type or there are no sources with emissions exceeding the CTG applicability thresholds. Negative declarations for these CTGs or subsets of these CTGs, as appropriate, are included in Appendix A. For the remaining CTGs, the District has SIP-approved rules that meet RACT requirements. Certifications for CTG categories in which RACT is met are included in Appendix B.

Non-CTG Categories

The District meets RACT requirements for all 4 non-CTG source categories shown in Table 3.

Major Stationary Sources

Of the 5 major sources with the potential to emit 50 tons or more per year of VOC and/or NO_x, RACT requirements have been met for all emission units at all 5 of these sources, which are listed below:

- Kiefer Landfill
- Sacramento Cogeneration Authority
- Santa Fe Pacific Pipeline
- SMUD Cosumnes Power Plant
- UC Davis Medical Center

APPENDICES

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Appendix A

Negative Declarations

The District has reviewed its permit files, the emission inventory for its federal Clean Air Plan, business listings, and telephone yellow pages and has determined that there are no stationary sources or emitting facilities for the following CTG categories. The District also does not anticipate that any known businesses will propose constructing these sources in the future.

GUIDANCE DOCUMENT TITLE	DOCUMENT TYPE	DOCUMENT NUMBER
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (Negative declaration includes only coils, paper, fabrics, automobiles, and light-duty truck coating operations)	CTG	EPA-450/2-77-008
Control of Refinery Vacuum Producing Systems, Wastewater Separators and Process Unit Turnarounds	CTG	EPA-450/2-77-025
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating for Insulation of Magnet Wire	CTG	EPA-450/2-77-033
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume V: Surface Coating of Large Appliances	CTG	EPA-450/2-77-034
Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires	CTG	EPA-450/2-78-030
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VII: Factory Surface Coating of Flat Wood Paneling	CTG	EPA-450/2-78-032
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VIII: Graphic Arts – Rotogravure and Flexography (Negative declaration includes only rotogravure)	CTG	EPA-450/2-78-033
Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment	CTG	EPA-450/2-78-036
Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners	CTG	EPA-450/3-82-009
Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants	CTG	EPA-450/2-83-007
Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins	CTG	EPA-450/3-83-008
Control of Volatile Organic Compound Emissions from Air Oxidation Processes in the Synthetic Organic Chemical Manufacturing Industry	CTG	EPA-450/3-84-015
Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations	CTG	EPA-453/R-96-007

GUIDANCE DOCUMENT TITLE	DOCUMENT TYPE	DOCUMENT NUMBER
Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations	CTG	EPA-453/R-97-004
Control Techniques Guidelines for Flat Wood Paneling Coatings	CTG	EPA-453/R-06-004
Control Techniques Guidelines for Paper, Film, and Foil Coatings	CTG	EPA-453/R-07-003
Control Techniques Guidelines for Large Appliance Coatings	CTG	EPA-453/R-07-004
Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials	CTG	EPA-453/R-08-004
Control Techniques Guidelines for Miscellaneous Industrial Adhesives	CTG	EPA-453/R-08-005
Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings	CTG	EPA-453/R-08-006
Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating)	CTG	61 FR 44050 and EPA-453/R-94-032
Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (Pleasure Craft Coatings Portion Only)	CTG	EPA-453/R-08-003

Appendix B

RACT Certifications for CTGs

The District has determined that the following CTGs apply to stationary sources in Sacramento County. The District has further determined that the RACT requirements for these CTG sources have been met by rules which are incorporated into the SIP.

GUIDANCE DOCUMENT TITLE	DOCUMENT TYPE	DOCUMENT NUMBER	RACT RULE (ADOPTION OR AMENDMENT DATE)	SIP APPROVAL REFERENCE
Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations	CTG	EPA-450/R-75-102	448 (2/26/09)	78 FR 898
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (RACT required only for surface coating of cans)	CTG	EPA-450/2-77-008	452 (9/25/08)	75 FR 18068
Control of Volatile Organic Emissions from Solvent Metal Cleaning	CTG	EPA-450/2-77-022	454 (9/25/08)	75 FR 18068
Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals	CTG	EPA-450/2-77-026	447 (4/2/98)	64 FR 66393
Control of Volatile Organic Compound Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture	CTG	EPA-450/2-77-032	451 (10/28/10)	76 FR 71886
Control of Volatile Organic Emissions from Bulk Gasoline Plants	CTG	EPA-450/2-77-035	447 (4/2/98)	64 FR 66393
Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks	CTG	EPA-450/2-77-036	446 (11/16/93)	59 FR 47544
Control of Volatile Organic Compounds from Use of Cutback Asphalt	CTG	EPA-450/2-77-037	453 (8/31/82)	50 FR 3338

GUIDANCE DOCUMENT TITLE	DOCUMENT TYPE	DOCUMENT NUMBER	RACT RULE (ADOPTION OR AMENDMENT DATE)	SIP APPROVAL REFERENCE
Control of Volatile Organic Compound Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products	CTG	EPA-450/2-78-015	451 (10/28/10)	76 FR 71886
Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products	CTG	EPA-450/2-78-029	464 (4/28/16)	82 FR 57123
Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VIII: Graphic Arts – Rotogravure and Flexography (RACT required only for flexography)	CTG	EPA-450/2-78-033	450 (10/23/08)	75 FR 18068
Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks	CTG	EPA-450/2-78-047	446 (11/16/93)	59 FR 47544
Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems	CTG	EPA-450/2-78-051	447 (4/2/98) 448 (2/26/09)	64 FR 66393 78 FR 898
Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment	CTG	EPA-450/3-83-006	443 (9/5/96)	63 FR 60214
Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in the Synthetic Organic Chemical Manufacturing Industry	CTG	EPA-450/4-91-031	464 (4/28/16)	82 FR 57123
Control Techniques Guidelines: Industrial Cleaning Solvents	CTG	EPA-453/R-06-001	466 (10/28/10)	76 FR 60376
Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	CTG	EPA-453/R-06-002	450 (10/23/08)	75 FR 18068
Control Techniques Guidelines for Flexible Package Printing	CTG	EPA-453/R-06-003	450 (10/23/08)	75 FR 18068
Control Techniques Guidelines for Metal Furniture Coatings	CTG	EPA-453/R-07-005	451 (10/28/10)	76 FR 71886

GUIDANCE DOCUMENT TITLE	DOCUMENT TYPE	DOCUMENT NUMBER	RACT RULE (ADOPTION OR AMENDMENT DATE)	SIP APPROVAL REFERENCE
Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (except for pleasure craft coatings)	CTG	EPA-453/R-08-003	451 (10/28/10) 459 (8/25/11) 468 (3/22/18)	76 FR 71886 77 FR 47536 Submitted to EPA 5/18/18
Control Techniques Guidelines for the Oil and Natural Gas Industry	CTG	EPA-453/B-16-001	446 (11/16/93)	59 FR 47544
			CARB GHG Emission Standards for Crude Oil and Natural Gas Facilities (10/1/2017)	CARB Submitted GHG Regulation to EPA (12/4/18)

Appendix C

RACT Analysis of CTG Source Categories

For the 2015 Ozone Standard, Staff conducted a thorough review to identify and evaluate new information that might change the RACT SIP conclusions, including:

- CTGs and ACTs;
- NSPSs;
- NESHAPs;
- The Menu of Control Measures;
- NSR and PSD settlement agreements;
- CARB's RACT/BARCT Determinations;
- EPA's RACT/BACT/LAER Clearinghouse;
- CARB's BACT Clearinghouse;
- The District's BACT Clearinghouse; and
- Rules from other nonattainment areas, including:
 - Placer County Air Pollution Control District;
 - Yolo-Solano Air Quality Management District;
 - Ventura County Air Pollution Control District;
 - San Joaquin Valley Air Pollution Control District;
 - South Coast Air Quality Management District;
 - Dallas-Fort Worth, Texas and Houston-Galveston-Brazoria, Texas; and
 - Baltimore, Maryland.

CTG Category	Updated Guidance and/or Referenced Material from Previous RACT SIP	Category Meets RACT for 2015 Ozone Standard?	Page Number
Cutback Asphalt	No changes to analysis – No updated rules or guidance	Yes	C-4
Gasoline Service Stations – Phase I Vapor Recovery	No changes to analysis – Updated BACT determination that does not change the conclusion	Yes	C-5
Gasoline Tank Trucks, Bulk Plants, and Bulk Terminals (Liquid Loading)	No changes to analysis – No updated rules or guidance	Yes	C-6
Graphic Arts: Flexographic, Lithographic, Letterpress, and Flexible Package Printing	No changes to conclusion – Updated BACT determination and YSAQMD rule updated to lower limits to meet SCAQMD Rule 1171 do not change the conclusion	Yes	C-8
Industrial Cleaning Solvents	No changes to conclusion – YSAQMD rule updated to lower one limit to SCAQMD limits does not change conclusion	Yes	C-10
Metal Can Coating	No changes to analysis – No updated rules or guidance	Yes	C-12
Metal Furniture Coating	No changes to analysis – No updated rules or guidance	Yes	C-14
Miscellaneous Metal and Plastic Parts and Products Coating and Motor Vehicle Materials	No changes to conclusion – Updates to NESHAP and BACT determinations do not change conclusion	Yes	C-16
Oil and Natural Gas Industry	N/A - New category	Yes	C-19
Organic Chemical Manufacturing: Process Vents from Reactor Processes, Distillation Operations, and Other Separation and Production Equipment	No changes to analysis – No updated rules or guidance	Yes	C-23
Pharmaceuticals Manufacturing	No changes to conclusion – BACT updated to allow alternative to demonstrate 90% control does not change conclusion	Yes	C-25

CTG Category	Updated Guidance and/or Referenced Material from Previous RACT SIP	Category Meets RACT for 2015 Ozone Standard?	Page Number
Solvent Metal Cleaning (Degreasers)	No changes to conclusion –YSAQMD rule amended to match SCAQMD rule limits	Yes	C-27
Storage of Petroleum Products (> 40,000 gallons)	No changes to conclusion - One referenced rule revised to implement RACT to another county. Two new BACT determinations do not change conclusion.	Yes	C-29
VOC Leaks from Synthetic Organic Chemical and Polymer Manufacturing	No changes to analysis – Update to NESHAP does not change conclusion	Yes	C-31

Category: Cutback Asphalt

CTG DOCUMENT

Control of Volatile Organic Compounds from Use of Cutback Asphalt, EPA-450/2-77-037, December 1977.

The CTG applies to the application of cutback asphalt. Cutback asphalt is a blend of asphalt cement and solvent. The solvent ranges in volatility depending upon the need for rapid cure (uses highly volatile gasoline or naphtha), medium cure (uses less volatile kerosene), or slow cure (uses low volatility oils). The VOCs evaporate when the cutback asphalt cures, and can range from 20% to 50% by volume, averaging 35%.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 453, Cutback and Emulsified Asphalt Paving Materials, prohibits the manufacture and use of rapid and medium cure cutback asphalt, as well as slow cure cutback asphalt containing organic compounds that evaporate at 500°F or lower (as determined by ASTM Method D-402).

Rule 453 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 453 satisfies the RACT requirement for this category. No referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same. Rule 453 continues to satisfy the RACT requirement for this source category.

Category: Gasoline Service Stations – Phase I Vapor Recovery

CTG DOCUMENT

Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations, EPA-450/R-75-102, November 1975.

The CTG applies to the control of gasoline vapors during storage tank filling at gasoline service stations (Stage I sources). The CTG does not apply to vehicle fueling at gasoline service stations (Stage II sources). Emissions are the result of displaced organic vapor-laden air being forced out of the storage tank by liquid gasoline.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 448, Gasoline Transfer into Stationary Storage Containers, applies to this CTG category. It prohibits the transfer of gasoline from a tank truck or trailer unless the container has a permanent submerged fill pipe and the displaced vapors are processed by a CARB-certified vapor recovery system with a control efficiency of at least a 98% by volume for underground tanks and 95% by volume for aboveground tanks and mobile fuelers.

Rule 448 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: In 2020, the District updated the BACT determination for all retail gasoline dispensing stations. The BACT determination maintained the requirement for a CARB-certified vapor recovery equipment for Phase I and Phase II. This update does not change the emission standards and does not change the conclusion that Rule 448 meets RACT.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 448 satisfies the RACT requirement for this category. Other than the BACT determination, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 448 continues to satisfy the RACT requirement for this source category.

Category: Gasoline Tank Trucks, Bulk Plants, and Bulk Terminals (Liquid Loading)

CTG DOCUMENTS

CTG #1 – Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals, EPA-450/2-77-026, October 1977.

This CTG applies to the loading of gasoline tank trucks at tank truck terminals with daily gasoline throughputs of greater than 76,000 liters.

CTG #2 – Control of Volatile Organic Emissions from Bulk Gasoline Plants, EPA-450/2-77-035, December 1977.

This CTG applies to loading of gasoline tank trucks at bulk gasoline plants with daily throughputs of 76,000 liters of gasoline or less.

CTG #3 – Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems, EPA-450/2-78-051, December 1978.

This CTG applies to gasoline tank trucks that are equipped for vapor collection, and to vapor collection systems at bulk terminals, bulk plants, and service stations.

There have been no updates to any of these CTGs since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 447, Organic Liquid Loading, prohibits the transfer of organic liquids into any tank truck, trailer, or railroad tank car unless the emissions do not exceed certain limits. Rule 447 requires that all equipment associated with the loading facility be maintained to be leak-free and vapor-tight, determined using visual and instrument monitoring methods as defined in the rule.

District Rule 448, Gasoline Transfer into Stationary Storage Containers, applies to the transfer of gasoline from delivery vessels (i.e., tank truck/rail car) into stationary storage containers (250-gallon capacity or more). Rule 448 requires all covered stationary storage containers to be equipped with a CARB-certified vapor recovery system with 98% efficiency for underground storage tanks (USTs) and 95% efficiency for above-ground storage tanks (ASTs).

Neither Rule 447 nor 448 has been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rules 447 and 448 satisfy the RACT requirement for this category. No referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rules 447 and 448 continue to satisfy the RACT requirements for gasoline tank trucks and for loading at bulk plants and bulk terminals.

Category: Graphic Arts: Flexographic, Lithographic, Letterpress, and Flexible Package Printing

CTG DOCUMENTS

CTG #1 – Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VIII: Graphic Arts – Rotogravure and Flexography, EPA-450/2-78-033, December 1978.

CTG #1 applies to both flexographic and rotogravure processes used in publication and packaging printing. The guideline document does not apply to offset lithography or letterpress printing. There are no sources in the District using gravure printing, and a negative declaration will be submitted for that subcategory. The CTG requirements for gravure printing will not be discussed in this analysis.

CTG #2 – Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing, EPA-453/R-06-002, September 2006.

CTG #2 applies to offset lithographic printing and letterpress printing. The CTG provides control recommendations for reducing VOC emissions stemming from the use of fountain solutions, cleaning materials, and inks in offset lithographic printing and cleaning materials and inks in letterpress printing.

CTG #3 – Control Techniques Guidelines for Flexible Package Printing, EPA-453/R-06-003, September 2006.

CTG #3 applies to flexible package printing operations, which includes printing on items such as bags, pouches, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials. The CTG provides control recommendations for reducing VOC emissions from inks, coatings, adhesives and cleaning materials.

There have been no updates to CTGs since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 450, Graphics Arts Operations, applies to screen printing, flexographic printing, lithographic printing and letterpress printing, and any coating or laminating operation associated with flexible packaging material. The rule was amended in 2008 to incorporate the requirements specified in CTG #2 and CTG #3.

Rule 450 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated EPA or ARB BACT/LEAR determinations. A 2020 update to the SMAQMD BACT determination for a non-heatset lithographic printing press continues to require the use of low VOC inks, coatings, and fountain solutions that comply with Rule 450.

The update to the SMAQMD BACT determination does not change the conclusion for this category.

OTHER NONATTAINMENT AREA RULES

The following rule was identified in the previous RACT and has been amended:

- YSAQMD Rule 2.29 (7/11/2018)

The amendments to YSAQMD Rule 2.29 lowered the VOC limit for fountain solutions to levels recommended by the EPA Control Technology Guidelines (CTGs) and do not change the conclusion that Rule 448 meets RACT. SMAQMD Rule 450 also has these limits.

There have been no other new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 450 satisfies the RACT requirement for this category. Although a BACT determination has been updated and YSAQMD Rule 2.29 has been amended since that time, neither the BACT determination nor Rule 2.29 requirements were made more stringent than SMAQMD Rule 450. No other referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same. Rule 450 continues to satisfy the RACT requirement for this category.

Category: Industrial Cleaning Solvents

CTG DOCUMENT

Control Techniques Guidelines: Industrial Cleaning Solvents. EPA-453/R-06-001, September 2006.

This CTG applies to solvent cleaning unit operations in industries that are not covered by other CTGs or are typically subject to other state or district rules. The cleaning activities for removal of foreign material from substrates being cleaned use methods such as wiping, flushing, or spraying.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 466, Solvent Cleaning, limits VOC emissions from solvents used in cleaning operations during the production, repair, maintenance or servicing of parts, products, tools, machinery, or equipment, or in general work areas. Rule 466 limits general solvent cleaning operations to 25 g/L.

Rule 466 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT RULES

The following rule was identified in the previous RACT SIP and has been updated:

- YSAQMD Rule 2.31 (4/12/17)

The amendments to YSAQMD Rule 2.31 lowered the VOC limit for cleaning of application equipment for ultraviolet printing operations, consistent with SCAQMD Rule 1171, and added a de minimis level exemption for non-compliant solvents. The amendments to YSAQMD Rule 2.31 do not change the conclusion that Rule 466 meets RACT.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 466 satisfies the RACT requirement for this category. Although YSAQMD Rule 2.31 has been amended since that time, the requirements were not made more stringent than SMAQMD Rule 466. No other

referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 466 continues to satisfy the RACT requirement for this source category.

Category: Metal Can Coating

CTG DOCUMENT

Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobile, and Light-Duty Trucks, EPA-450/2-77-008, May 1977.

The CTG applies to two- and three-piece can manufacturing processes, can fabrication processes, and end coating operations. The CTG identifies five control alternatives: catalytic and non-catalytic incineration, carbon adsorption, water-borne and high-solids coatings, ultraviolet curing, and powder coating.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 452, Can Coating, sets VOC content limits for 11 categories of can coating materials. Emissions control equipment may be used instead of VOC content limits, provided that the overall collection and control efficiency is at least 90% on a mass basis. Rule 452 also specifies a 25 g/l VOC limit for materials used for to clean container assembling equipment.

Rule 452 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP, except for the NESHAP for Surface Coating of Metal Cans²⁹. However, when EPA finalized these amendments, they stated “We are making no revisions to the numerical emission limits for the two source categories based on the residual risk and technology reviews³⁰.”

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

²⁹ 40 CFR Part 63, Subpart KKKK.

³⁰ 85 FR 10828, February 25, 2020.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 452 meets the RACT requirement for this category. No referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 452 continues to satisfy the RACT requirement for this category.

Category: Metal Furniture Coating

CTG DOCUMENTS

Control of Volatile Organic Emissions from Existing Stationary Sources Volume III: Surface Coating of Metal Furniture, EPA-450/2-77-032, December 1977.

The 1977 CTG applies to any facility that performs surface coating (finishing) of metal furniture, including any furniture made of metal or any metal parts that will be assembled with other non-metal parts to form a furniture piece.

Control Techniques Guidelines for Metal Furniture Coatings, EPA-453/R-07-005, September 2007.

The 2007 CTG applies to each metal furniture surface coating unit at a facility where the total actual VOC emissions from all such operations, including related cleaning activities, are at least 15 lb/day (or an equivalent level such as 3 tons per 12-month rolling period) before consideration of controls. The 2007 CTG specifies three alternative methods to reduce VOC emissions from metal furniture coatings: lower VOC limits, add-on controls, or a combination of lower VOC limits and add-on controls. The CTG recommends more stringent VOC content limits for general use coatings than the 1977 CTG, but also includes new recommendations for several "specialty use" categories that are less stringent than the general use VOC content limits established in the 1977 CTG. Taken as a whole, though, the 2007 CTG limits result in greater emission reductions and are therefore more stringent³¹.

There have been no updates to either of these CTGs since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 451, Surface Coating of Miscellaneous Metal Parts and Products, applies to the coating of metal parts and products, including metal furniture. Rule 451 sets the VOC content limits and work practices for miscellaneous metal parts coatings. Rule 451 provides an option to use add-on control equipment with an overall control efficiency of at least 90% in lieu of using coatings and other materials that meet the VOC content limits.

Rule 451 has not been amended since the previous RACT SIP.

³¹ For further discussion, see memo from Scott Matthias, U.S. EPA, to Regional Air Division Directors. "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories." March 17, 2011.
https://www3.epa.gov/ttn/naaqs/aqmguidance/collection/cp2/20110317_mathias_approve_sip_revisions_voc_ract.pdf

OTHER FEDERAL GUIDANCE

NESHAP:

40 CFR Part 63, Subpart RRRR—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Metal Furniture

The NESHAP applies to metal furniture surface coating operations at major sources of HAP. Existing major sources must emit no more than 0.10 kg organic HAP/liter coatings solids used (0.83 lb/gal).

On March 11, 2020, EPA amended Subpart RRRR and made minor modifications that clarify that the standards apply during periods of startup, shutdown and malfunction, and to require 5-year performance testing for facilities with add-on controls and require electronic reporting of performance test results. In the proposed rule for this action, EPA stated “We are making no revisions to the numerical emission limits for the two source categories based on the residual risk and technology reviews³².” Therefore, these amendments do not change the RACT conclusion.

There have been no other new or updated ACT, NSPS, EPA menu of control measures, settlement agreements, or other federal guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 451 satisfies the RACT requirement for this category. Aside from the NESHAP amendment discussed above (which changed no numerical limits), no other referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 451 continues to satisfy the RACT requirement for this category.

³² 84 FR 58936, November 1, 2019.

Category: Miscellaneous Metal and Plastic Parts and Products Coating and Motor Vehicle Materials

CTG DOCUMENTS

Control of Volatile Organic Compound Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products, EPA-450/2-78-015, June 1978.

The 1978 CTG applies to the coating of miscellaneous metal parts and products. This CTG is less stringent than the 2008 CTG, which is discussed below.

Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008.

The CTG recommends more stringent VOC content limits for general use coatings than the 1978 CTG, but also includes new recommendations for several "specialty use" categories that are less stringent than the general use VOC content limits established in the 1978 CTG. Taken as a whole, though, the 2008 CTG limits result in greater emission reductions and are therefore more stringent³³

The 2008 CTG applies not just to the coating of miscellaneous metal parts and products but also several other operations, including:

- Miscellaneous plastic parts and products coatings
- Automotive/transportation plastic parts coatings
- Business machine plastic parts coatings
- Pleasure craft coatings
- Motor vehicle materials

There have been no updates to these CTGs since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 451, Surface Coating of Miscellaneous Metal Parts and Products, sets VOC content limits and work practices for 13 miscellaneous metal parts coatings. Rule 451 provides an option to use add-on control equipment with an overall control efficiency of at least 90% in lieu of using coatings and other materials that meet the VOC content limits.

Rule 451 has not been amended since the previous RACT SIP.

³³ For further discussion, see memo from Scott Matthias, U.S. EPA, to Regional Air Division Directors. "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories." March 17, 2011.
https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20110317_mathias_approve_sip_revisions_voc_ract.pdf

District Rule 468, Surface Coating of Plastic Parts and Products, sets VOC content limits and work practices for the coating of miscellaneous plastic parts and products, automotive/transportation plastic parts coatings, and business machine plastic parts coatings. It was adopted in 2018 and submitted to EPA to correct a RACT deficiency identified in our previous RACT SIP. The requirements of the rule follow the RACT recommendations of the 2008 CTG.

District Rule 459, Automotive, Mobile Equipment, and Associated Parts and Components Coating Operations, contains the requirements for motor vehicle materials. The requirements of the rule follow the RACT recommendations of the 2008 CTG.

There are no pleasure craft coating operations in the District and negative declaration is being submitted for this subcategory.

OTHER FEDERAL GUIDANCE

NESHAP:

40 CFR Part 63, Subpart MMMM—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

This NESHAP applies to miscellaneous metal parts and products manufacturing surface coating operations at major HAP sources. These standards are in terms of pounds of organic HAP per gallon solids used. Since many VOC are not HAP, these limits for HAP establish no practical limits on VOC content or VOC emissions from these operations.

40 CFR Part 63, Subpart PPPP—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products

This NESHAP applies to miscellaneous plastic parts and products manufacturing surface coating operations at major HAP sources. These standards are in terms of pounds of organic HAP per gallon solids used. Since many VOC are not HAP, these limits for HAP establish no practical limits on VOC content or VOC emissions from these operations.

On March 11, 2020, EPA finalized minor amendments to both NESHAPs. The final amendments clarify that the standards are applicable during periods of startup, shutdown and malfunction, require 5-year performance testing for facilities with add-on controls and require electronic reporting of performance test results. The amendments do not establish VOC content or VOC emissions from these operations. In the proposed rule for this action, EPA stated “We are proposing no revisions to the numerical emission limits based on these analyses.”³⁴

There have been no other new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

³⁴ 84 FR 58936, November 1, 2019.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse:

Between 2016 and 2020, there has been one BACT determination for miscellaneous metal parts and products surface coating operations. The BACT required low-VOC coatings, HVLP or equivalent transfer efficiency, operator training, closed container requirements, and a regenerative thermal oxidizer add-on control device with a minimum control efficiency of 98%.

ARB BACT Clearinghouse: There have been no new or updated ARB BACT determinations since the previous RACT SIP.

SMAQMD BACT Determination: In April 2020, an update was made to the previous BACT determination for OEM rail car coating operations emitting < 20 tons per year of VOC. The determination establishes VOC requirements for three scenarios of miscellaneous metal parts coating operations: 1) OEM booths without add-on controls, 2) OEM booths with add-on controls, 3) and OEM refinishing booths. All scenarios require HVLP spray equipment or equivalent and enclosed gun cleaning systems. The BACT established requires compliance with District Rule 451 for OEM booths and compliance with District Rule 459 for refinishing booths.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rules 451 and 459 satisfy the RACT requirement for this category. Although there have been updates to the NESHAP and a new BACT determinations, there are no more stringent requirements for this category since the previous RACT SIP. A RACT deficiency was identified in the previous RACT SIP because there was no District rule that applied to the coating of miscellaneous plastic parts and products. This deficiency was corrected when the District adopted Rule 468.

Rules 451 and 459 continue to satisfy RACT for this source category. New Rule 468 has also been determined to satisfy RACT for the plastic parts and products subcategory.

Category: Oil and Natural Gas Industry

CTG DOCUMENT

Control Techniques Guidelines for the Oil and Natural Gas Industry, EPA-453/B-16-001, October 2016.

The CTG applies to well sites, gathering and boosting stations, fugitive components, compressors, pneumatic controllers, and condensate storage vessels in the crude oil and natural gas production industry. The collection and transmission of produced crude oil and natural gas emits fugitive VOC from leaks and storage losses.

The CTG identifies presumptive RACT for controlling VOC emissions from the production, collection, and gathering of crude oil and natural gas industry. VOC sources subject to the CTG include storage vessels, pneumatic controllers and pumps, compressors, and fugitive leaks at well sites and gathering and boosting stations. RACT recommendations include VOC control devices, no- or low-bleed pneumatic controllers, compressor seal replacements, and leak detection and repair.

SMAQMD REQUIREMENTS

For fugitive emissions from natural gas production: SMAQMD enforces the California Greenhouse Gas Emissions Standards for Crude Oil and Natural Gas Facilities through a memorandum of agreement with CARB³⁵. CARB's regulation applies to all natural gas production sources in Sacramento County.

For storage of organic liquids, such as condensate from natural gas production, SMAQMD Rule 446 meets RACT. Rule 446 is also included as part of the CARB's submittal of the GHG regulation into the SIP. See the CTG category section: Storage of Petroleum Products (> 40,000 gallons) for more details on Rule 446.

OTHER FEDERAL GUIDANCE

ACT: None

NSPS:

1) 40 CFR Part 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015.

2) 40 CFR Part 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015.

³⁵ <https://ww2.arb.ca.gov/sites/default/files/2020-03/Sacramento%20Revised%20MOA.pdf>

Subpart OOOO applies to VOC emissions from pneumatic controllers, centrifugal and reciprocating compressors. Subpart OOOO exempts storage vessels with VOC emissions less than 6 tons per year.

Subpart OOOOa established GHG standards for the same equipment as Subpart OOOO and also includes additional equipment (gas wells, associated components, and organic storage vessels).

NESHAP:

40 CFR Part 63, Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.

The NESHAP applies to major sources of HAPs, and area sources operating triethylene glycol dehydration units. There are no major sources of HAPs in this industry operating in Sacramento County.

EPA Menu of Control Measures: Two control measures for natural gas production were identified in the menu of control measures:

Equipment	Technology	Control Efficiency
Natural Gas Production - Compressors	Selective Catalytic Reduction	80%
Oil and Natural Gas Production - Fugitive Emissions	SCAQMD Rule 1148.1	14%

- For natural gas compressors, the NOx control measure is not relevant to this CTG category for control of VOC emissions.
- The oil and natural gas production fugitive emissions control measure, SCAQMD Rule 1148.1, applies to wellheads, well cellars and the handling of produced gas at oil and gas production facilities.

NSR/PSD Settlement Agreements:

A 2020 agreement with K.P. Kauffman Company required an enhanced leak detection and repair program at its condensate tank systems and associated vapor control systems at its oil and natural gas production operations in the Denver-Julesburg basin, including the following elements:

- Ensure vapor control systems capture and route emissions to a control device
- Evaluate and maintain condition of pressure relief valves, hatches, and mountings and gaskets on each condensate storage tank
- Implement a leak detection and repair program including monthly or quarterly inspections using infrared camera
- Install pressure monitors with continuous data reporting at tank systems to detect increased pressuring readings to identify possible excess VOC emissions

A 2016 agreement with Slawson Exploration Company, Inc. required controls similar to the 2020 agreement.

STATE GUIDANCE:

California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 10
Climate Change, Article 4, Subarticle 13: Greenhouse Gas Standards for Crude
Oil and Natural Gas Facilities.

The regulation requires crude oil and natural gas facilities control fugitive emissions of greenhouse gases and, as a co-benefit, VOC emissions. The regulation applies to all emission sources subject to the CTG, and in combination with SMAQMD Rule 446, achieves emission reductions equivalent to RACT level controls³⁶. CARB identified each CTG emission source and determined the GHG Regulation meets RACT³⁷.

SMAQMD is enforcing the regulation through a memorandum of agreement with the ARB. On December 4, 2018, CARB submitted the Greenhouse Gas Emission Standards for Oil and Natural Gas Facilities to U.S. EPA as a revision to the California SIP. This SIP revision, in combination with SMAQMD Rule 446, and a Memorandum of Agreement between CARB and the Sac Metro Air District meets RACT for this category.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse: In 2018, a BACT determinations as made for methane emissions from natural gas piping and components. BACT required a leak detection and repair program using 40 CFR 60 Subpart VVa methods.

ARB BACT Clearinghouse: None

SMAQMD BACT Determination: None

OTHER NONATTAINMENT AREA RULES

The requirements for fugitive emissions from well sites in the rules listed below were evaluated and compared with CARB's Greenhouse Gas Standards for Crude Oil and Natural Gas Facilities:

- SCAQMD Rules 1148.1 (9/4/15), 1173 (2/6/09), and 1176 (9/13/96)
- SJVUAPCD Rules 4401 (6/16/11) and 4409 (4/20/05)
- VCAPCD Rule 74.10 (3/10/98)
- YSAQMD Rule 2.23 (8/13/97)

The Oil and Natural Gas regulation requires quarterly inspections of all components at natural gas processing plants. CARB estimated an 80% reduction of emissions overall, which is more stringent than the 73% reductions from the CTG. CARB estimated the emission reductions of the district rules listed above range from 77 to 83%³⁸.

³⁶ CARB. Staff Report: Proposed Submission of California's Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities into the California State Implementation Plan. September 21, 2018. p. 2.

³⁷ Ibid. pp. 2-3.

³⁸ Ibid. pp. 8-9.

The requirements for storage vessels that contain condensate or produced water in the rules listed below were evaluated and compared with CARB's Greenhouse Gas Standards for Crude Oil and Natural Gas Facilities:

- SCAQMD Rules 463 (11/4/11) and 1178 (4/6/18)
- SMAQMD Rule 446 (11/16/93)
- SJVUAPCD Rule 4623 (5/19/05)
- VCAPCD Rules 71.1 (6/16/92) and 71.2 (9/26/89)
- YSAQMD Rule 2.21 (9/14/16)

The VOC standards in Rule 446 are at least as stringent as those in the other nonattainment area rules. See the CTG category section: Storage of Petroleum Products (> 40,000 gallons) for more details of the Rule 446 RACT Analysis.

CONCLUSION

The VOC control requirements in the California Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities are more stringent than those in the 2016 CTG, which is the presumptive RACT for this category. CARB has submitted this regulation for inclusion in the SIP, and the District enforces the regulation through a memorandum of agreement with CARB. Rule 446 meets the RACT requirements for storage of organic liquids.

Rule 446 and California's Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities satisfy RACT for this source category.

Category: Organic Chemical Manufacturing: Process Vents from Reactor Processes and Distillation Operations

CTG DOCUMENT

Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in the Synthetic Organic Chemical Manufacturing Industry.
EPA-450/4-91-031, August 1993.

The CTG applies to continuous process vent streams from reactors, associated product recovery systems, and distillation operations in synthetic organic chemical manufacturing industry (SOCMI) process units. The presumptive RACT VOC limit for process vent streams is 98% VOC reduction or 20 ppmv at the outlet of the combustion control device, corrected to 3% oxygen.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

Rule 464, Organic Chemical Manufacturing Operations, applies to the manufacturing of organic chemicals in general, which also includes pharmaceuticals and cosmetics. The requirements of Rule 464 include control of VOC emissions using capture and control devices depending on the type of equipment. Controls are also required for storage tanks, wastewater systems, and equipment leaks.

OTHER FEDERAL GUIDANCE

NESHAP:

40 CFR Part 63, Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

The Miscellaneous Organic NESHAP (the “MON”) applies to HAP emissions from a specific list of organic chemical processes at major sources of HAP. EPA recently amended the MON³⁹. Changes were made to reduce emissions from ethylene oxide production (not applicable to any District source). No other changes were made to the standards applicable to emission points covered by the CTG.

Other than the changes to the MON discussed above, there have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

³⁹ The amendments were signed by the administrator on May 29, 2020 but have not yet been published in the Federal Register. https://www.epa.gov/sites/production/files/2020-06/documents/frn_mon_rtr_final_rule.pdf

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 464 satisfies the RACT requirement for this category. Other than the MON as discussed above, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 464 continues to satisfy the RACT requirement for this source category.

Category: Pharmaceuticals Manufacturing

CTG DOCUMENT

Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products, EPA-450/2-78-029, December 1978.

The CTG applies to unit operations at facilities manufacturing synthesized pharmaceuticals. These unit operations include reactors, distillation operations, crystallizers, centrifuges, vacuum dryers, and associated storage tanks and transfer operations.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

Prior to April 28, 2016, there were two District rules that applied to pharmaceuticals manufacturing: Rule 464, Organic Chemical Manufacturing Operations, which applied to the broader category of organic chemicals (including pharmaceuticals), and Rule 455, Pharmaceuticals Manufacturing, which applied only to pharmaceuticals and cosmetics. On April 28, 2016, the District amended Rule 464 to consolidate all requirements for pharmaceuticals manufacturing and, at the same time, repealed Rule 455. In addition, the requirements for pharmaceuticals manufacturing were strengthened. EPA approved Rule 464 on December 4, 2017.

There have been no updates to Rule 464 since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

SMAQMD BACT Determinations

In 2018, BACT for the control of VOC emissions from a pharmaceutical process was determined to be the use of afterburners, refrigerated condensers, carbon adsorbers, or scrubbers on the process vents with a combined capture and control of at least 90%. For chemical streams that preclude a control of 90% because of their chemical and physical characteristics, a ≥ 0.3 second retention time at ≥ 1400 °F for afterburners and an exit gas temperature of -25 °C for condensers will also satisfy BACT if emissions from reactors, distillation columns, crystallizer, evaporators, and centrifuges are < 15 pounds per day and emissions from dryers are less than 10 pounds per day.

OTHER NONATTAINMENT AREA RULES

There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 464 satisfies the RACT requirement for this category. Although the SMAQMD BACT determination was revised, the requirements were not made more stringent than the 2014 determination used in the previous RACT SIP. No other referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 464 continues to satisfy the RACT requirement for this source category.

Category: Solvent Metal Cleaning (Degreasers)

CTG DOCUMENT

Control of Volatile Organic Emissions from Solvent Metal Cleaning, EPA-450/2-77-022, November 1977.

The CTG applies to cold cleaners, open top vapor degreasers, and conveyORIZED degreasers. It identifies machine design specifications, control devices, and work practices to reduce solvent losses from diffusion and convection, carryout, leaks, downtime, solvent transfer, water contamination, and waste disposal for each type of degreaser.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS: District Rule 454, Degreasing Operations, specifies design and work practice standards for non-vapor degreasers, vapor degreasers, remote reservoir degreasers, and conveyORIZED degreasers. In 2008, the District amended Rule 454 to require that solvents used in any vapor or non-vapor degreaser contain no more than 25 g/l of VOC. As an alternative to complying with the VOC limit, an airtight/airless cleaning system may be used.

There have been no updates to Rule 454 since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES

The following rule was identified in the previous RACT SIP and has been updated:

- YSAQMD Rule 2.31 (4/12/17)

The amendments to YSAQMD Rule 2.31 lowered the VOC limit for cleaning of application equipment for ultraviolet printing operations, consistent with SCAQMD Rule 1171, and adding de minimis level exemption limitations for non-compliant solvents. The amendments to YSAQMD Rule 2.31 do not change the conclusion that Rule 454 meets RACT.

None of the other nonattainment area rules was more stringent than Rule 454.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 454 satisfies the RACT requirement for this category. Although YSAQMD Rule 2.31 has been amended, the requirements were not made more stringent than Rule 454. No other referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 454 still meets the RACT requirement for this source category.

Category: Storage of Petroleum Products (> 40,000 gallons)

CTG DOCUMENTS

CTG#1 – Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks. EPA-450/2-77-036, December 1977.

This CTG applies to fixed-roof storage tanks with capacities greater than 150,000 liters (40,000 gallons) containing petroleum liquids with a true vapor pressure greater than 10.5 kPa (1.5 psia). Presumptive RACT is to retrofit fixed-roof tanks with internal floating roofs that are equipped with closure seals.

CTG#2 – Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks. EPA-450/2-78-047, December 1978.

This CTG applies to external floating-roof storage tanks with capacities greater than 40,000 gallons containing petroleum liquids with a true vapor pressure greater than 1.5 psia.

There have been no updates to either of these CTGs since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 446, Storage of Petroleum Products, applies to storage tanks with capacity greater than 40,000 gallons storing liquids with vapor pressures greater than 1.5 psia. The rule requires vapor recovery systems that achieve at least 95% reduction in emissions for fixed roof tanks. Alternatively, tanks may be equipped with internal or external floating roofs with seals and other components meeting the rule's specifications.

Rule 446 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse:

Since the previous RACT SIP, in 2016, there have been two new BACT determinations for petroleum liquid storage tanks for which the capacity and liquid vapor pressure fall within the applicability of the CTGs. BACT was determined to be compliance with NSPS subpart Kb using floating roof tanks and periodic visual inspections and seal gap measurements.

There have been no new or updated ARB or SMAQMD BACT determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES

The following rules were identified in the previous RACT and have been updated:

- SCAQMD Rule 1178 (4/6/2018)
- Dallas-Fort Worth and Houston-Galveston-Brazoria Rule 115.112 (1/5/17)

The amendments to SCAQMD Rule 1178 allow for additional compliance options to meet the VOC limits. An optional compliance method was adopted for both internal/domed floating roof tanks and external floating roof tanks. SCAQMD states that the objective of Rule 1178 amendments is to provide storage tank operators with the option of using a flexible enclosure system for controlling VOC emissions from a slotted guidepole⁴⁰. The amendments to Rule 1178 do not lower any VOC emission limits and do not change the conclusion that Rule 446 meets RACT.

The amendments to Dallas-Fort Worth and Houston-Galveston-Brazoria Rule 115.112 revised the applicability to implement RACT in Wise county. The amendments establish new lower major source threshold for fixed-roof oil and condensate VOC storage tanks in Wise County. The amendments do not change the conclusion that Rule 446 meets RACT.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 446 satisfies the RACT requirement for this category. Although there were new BACT determinations and amendments to other nonattainment area rules, the requirements were not made more stringent than Rule 446. No other referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 446 continues to satisfy the RACT requirement for this source category.

⁴⁰ <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-apr6-024.pdf?sfvrsn=6>

Category: VOC Leaks from Synthetic Organic Chemical and Polymer Manufacturing

CTG DOCUMENT

Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment. EPA-450/3-83-006, March 1984.

The CTG applies to equipment in VOC service in process units operated to produce synthetic organic chemicals or polymers. The CTG establishes presumptive RACT for various equipment leaks and repair times for valves, compressors, pumps, open-ended lines, pressure relief valves, and flanges.

There have been no updates to the CTG since the previous RACT SIP.

SMAQMD REQUIREMENTS

District Rule 443, Leaks from Synthetic Organic Chemical and Polymer Manufacturing, limits fugitive emissions from process equipment in this CTG category. The components covered by Rule 443 include leak thresholds and repair times for valves, pumps, compressors, open-ended lines, sampling connections, agitators, pressure relief devices, and flanges.

Rule 443 has not been amended since the previous RACT SIP.

OTHER FEDERAL GUIDANCE

NSPS: There are two applicable NSPS: 40 CFR 60 subparts VV and VVa. Neither has been amended since the previous RACT SIP.

NESHAP:

40 CFR Part 63, Subpart FFFF - National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

The Miscellaneous Organic NESHAP (the "MON") applies to HAP emissions from a specific list of organic chemical processes at major sources of HAP. In addition to requirements for other emission units at these sources, the MON contains requirements for equipment leaks. EPA recently amended the MON⁴¹. Leak thresholds were lowered to reduce residual risks from HAPs. The amendments do not change the conclusion that Rule 443 still meets RACT for VOC.

⁴¹ The amendments were signed by the administrator on May 29, 2020 but have not yet been published in the Federal Register. https://www.epa.gov/sites/production/files/2020-06/documents/frn_mon_rtr_final_rule.pdf

Other than the changes to the MON discussed above, there have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated BACT/LAER determinations since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 443 satisfies the RACT requirement for this category. No referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 443 continues to satisfy the RACT requirement for this source category.

Appendix D

RACT Analysis of Rules for Non-CTG Source Categories Applicable to Major Sources

Non-CTG Category	Updated Referenced Material Since Previous RACT SIP	Category Meets RACT?	Page Number
Boilers, Process Heaters, and Steam Generators	<ul style="list-style-type: none"> • New BACT determinations • Amendments to SCAQMD Rules 1146 and 1146.1 • Amendments to YSAQMD Rule 2.27 	Yes	D-2
Gas Turbines	<ul style="list-style-type: none"> • Minor amendments to NESHAP Subpart YYYY • New BACT determinations • Amendments to SCAQMD Rule 1134 • Amendments to VCAPCD Rule 74.23 	Yes	D-4
Internal Combustion Engines	<ul style="list-style-type: none"> • New BACT determinations • Administrative amendment to SCAQMD Rule 1110.2 	Yes	D-7
Gasoline Service Stations – Phase II Vapor Recovery	<ul style="list-style-type: none"> • New BACT determination 	Yes	D-9

Category: Boilers, Process Heaters, and Steam Generators

At major sources in the District, units in this category are fired with gaseous fuel as the primary fuel. Therefore, the analysis will focus on gas-fired units.

SMAQMD REQUIREMENTS

District Rule 411, NOx from Boilers, Process Heaters, and Steam Generators, establishes NOx limits for units rated 1 mmBtu/hr or greater that are fired on gaseous or nongaseous fuel.

Units using gaseous fuel must meet the following NOx limits:

- For units ≥ 1 mmBtu/hr and < 5 mmBtu/hr, 30 ppmv NOx at 3% O₂
- For units ≥ 5 mmBtu/hr and ≤ 20 mmBtu/hr, 15 ppmv NOx at 3% O₂
- For units > 20 mmBtu/hr, 9 ppmv NOx at 3% O₂
- For gas-fired reformer furnaces, 30 ppmv NOx at 3% O₂
- For landfill gas-fired units ≥ 5 mmBtu/hr, 15 ppmv NOx at 3% O₂
- For load following units ≥ 5 mmBtu/hr, 15 ppmv NOx at 3% O₂

Rule 411 has not been amended since the previous RACT SIP.

FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse

The ten most recent BACT determinations were made since 2018. Boiler ratings ranged from 28 to 99.9 mmBtu/hr. NOx limits ranged from 0.01 to 0.05 lb/mmBtu (approximately 8 to 42 ppmv @ 3% O₂), with an average of 0.025 lb/mmBtu (approximately 21 ppmv @ 3% O₂). The BACT NOx emission limits are nearly identical to the previous RACT SIP.

There have been no new or updated ARB or SMAQMD BACT determinations for boilers ≥ 25 mmBtu/hr since the previous RACT SIP.

OTHER NONATTAINMENT AREA RULES

The following rules were identified in the previous RACT and have been updated:

- SCAQMD Rules 1146 (12/7/2018), 1146.1 (12/7/2018)

- YSAQMD Rule 2.27 (5/15/2019) and 2.45 (5/15/2019)

The amendments to SCAQMD Rules 1146 and 1146.1 reduced the NO_x emission limits for units ≥ 2 mm Btu/hr to < 75 mmBtu/hr to 7 ppm @3% O₂ for fire-tube boilers and 9 ppm @ 3% O₂ for other units. For some boilers ≥ 20 mm Btu/hr to < 75 mmBtu/hr the limit is 5 ppm @ 3% O₂.

The amendments to YSAQMD Rule 2.27 lowered NO_x emission limits for boilers > 20 mmBtu/hr to 9 ppmv @ 3% O₂, consistent with SMAQMD Rule 411. The newly adopted YSAQMD Rule 2.45 established a NO_x limit of 30 ppmv @ 3% O₂ for boilers rated from ≥ 1 mmBtu/hr to < 5 mmBtu/hr, also consistent with Rule 411. The YSAQMD rulemaking actions do not change the conclusion that Rule 411 meets RACT.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 411 satisfies the RACT requirement for this category. Rule 411 is at least as stringent as the PCAPCD, YSAQMD, SJVUAPCD, VCAPCD, Texas, and Baltimore rules. The amendments to the SCAQMD rules lowered some NO_x limits for boilers in specific capacity ranges to levels that are lower than the corresponding limits in Rule 411; however, SCAQMD is classified as an extreme nonattainment area. The SCAQMD limits are more stringent than other nonattainment area rules and the federal and state guidance (and are equivalent to the District's current BACT standards). Staff considers the more stringent SCAQMD standards to be beyond RACT.

Other than the amended SCAQMD and YSAQMD rules and updated BACT determinations, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP.

Rule 411 continues to satisfy the RACT requirement for this source category.

Category: Gas Turbines

At major sources in the District, units in this category are gas-fired simple cycle or combined cycle turbines rated between 25 MW and 198 MW. Therefore, the analysis will focus on units of these types.

SMAQMD REQUIREMENTS

District Rule 413, Stationary Gas Turbines, applies to stationary gas turbines rated ≥ 0.3 MW. The emission limits for units > 25 MW are 9 ppmv @ 15% O₂ for gaseous fueled and 9 ppmv @ 15% O₂ for liquid fueled units.

Rule 413 has not been amended since the previous RACT SIP.

FEDERAL GUIDANCE

NESHAP:

40 CFR Part 63, Subpart YYYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

The NESHAP applies to stationary combustion turbines located at major sources of HAPs. There are emission standards for formaldehyde, a HAP. There are no NO_x limits or co-benefits. On March 9, 2020, EPA finalized minor amendments to this NESHAP⁴². The final amendments clarify that the standards are applicable during periods of startup, shutdown and malfunction, and to add electronic reporting requirements. The amendments do not establish VOC content or VOC emissions from these operations.

There have been no other new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse

For natural gas-fueled simple cycle turbines >25 MW, the ten most recent BACT determinations were made from 2017 to 2019. Turbine ratings ranged from 80 to 645 MW. NO_x limits ranged from 9 to 25 ppmv @ 15% O₂. For natural gas-fueled combined cycle turbines > 25 MW, the ten

⁴² 85 FR 13524, March 9, 2020.

most recent BACT determinations were made in 2019 and 2020. Turbine ratings ranged from 270 to 1230 MW. NOx limits ranged from 2 to 25 ppmv @ 15% O₂.

ARB BACT Clearinghouse: There have been no new or updated ARB BACT/LAER determinations since the previous RACT SIP.

SMAQMD BACT Determinations

In 2018, a BACT determination was made for a combined cycle, natural gas-fueled turbine rated at 198 MW. The NOx limit was 2 ppmv @ 15% O₂.

OTHER NONATTAINMENT AREA RULES

The following rules were identified in the previous RACT and have been updated:

- SCAQMD Rule 1134 (4/5/19)
- VCAPCD Rule 74.23 (11/12/19)

The amendments to SCAQMD Rule 1134 significantly reduced the NOx limits for all types of natural gas turbines, however these requirements are not in effect until at least January 1, 2024 unless the equipment is modified. The NOx limits for combined cycle natural gas turbines is 2.0 NOx at 15% O₂.

The amendments to VCAPCD Rule 74.23 significantly reduce the NOx limits for all types of stationary gas turbines, however these requirements are not in effect until January 1, 2024. The NOx limit for any natural gas turbine is 2.5 NOX at 15% O₂. These limits are less stringent than limits in SCAQMD Rule 1134.

The amendments to SCAMQD Rule 1134 and VCAPCD Rule 74.23 are considered beyond RACT and do not change the conclusion that Rule 413 meets RACT.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 413 satisfies the RACT requirement for this category. Rule 413 is at least as stringent as the Baltimore, YSAQMD, PCAPCD, and Texas rules. Although both SCAQMD and VCAPCD amended their rules recently, these limits are lower than all of the other nonattainment rules and the federal and state guidance (and are equivalent to the District's current BACT standards). Staff considers these more stringent SCAQMD and VCAPCD standards to be beyond RACT.

The NOx emission limits in Rule 413 are comparable to the most stringent of EPA's menu of control measures (applicable to units with NOx emissions greater than or equal to 10 tons per year, uncontrolled, approximately equivalent to a 3 MW gas-fired turbine operated 8,760 hours per year). Other than the amended rules and updated BACT determinations, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP.

Rule 413 continues to satisfy the RACT requirement for this source category.

Category: Internal Combustion Engines

The only engines for which RACT must be demonstrated are located at Kiefer Landfill, where five 4,230-bhp lean-burn, spark-ignited engines are fueled by landfill gas. All of the other engines located at major sources are either emergency standby engines or nonroad engines. The District is pre-empted from setting standards for nonroad engines by federal regulations. Therefore, this analysis will focus on NO_x emission requirements for landfill gas-fueled, spark-ignited engines.

There have been no equipment changes to the engines located at Kiefer Landfill.

SMAQMD REQUIREMENTS

District Rule 412, Stationary Internal Combustion Engines Located at Major Stationary Sources of NO_x, sets RACT and BARCT emission standards for engines greater than 50 horsepower located at major sources of NO_x. The rule establishes a RACT NO_x emission limit of 125 ppmv @15% O₂ for lean-burn, spark-ignited engines.

In addition, engines are required to meet more stringent BARCT emission limits of 65 ppmv @15% O₂ for lean-burn, spark-ignited engines, such as the engines at Kiefer Landfill.

As an alternative to meeting the NO_x concentration limits, the engine may be equipped with emission controls that reduce NO_x emissions by 90%.

Rule 412 has not been amended since the previous RACT SIP.

FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER

EPA RACT/BACT/LAER Clearinghouse

In 2016, there was a BACT determination for a landfill gas-fueled engine rated at 1,573 bhp that required a NO_x limit of 9 ppmv @ 15% O₂.

ARB BACT Clearinghouse: There have been no new or updated ARB BACT/LAER determinations since the previous RACT SIP.

SMAQMD BACT Determinations

In 2019, a BACT determination for a 778-bhp biogas-fueled engines set the NO_x emission limit at 11 ppmv @ 15% O₂.

OTHER NONATTAINMENT AREA RULES

The following rule was identified in the previous RACT and has been updated:

- SCAQMD Rule 1110.2 (11/1/2019)

The amendments to SCAQMD Rule 1110.2 were administrative and no emissions standards were affected. The amendments expanded applicability of the rule to large facilities previously subject to a cap-and-trade program.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 412 satisfies the RACT requirement for this category. Other than the BACT determination and administrative amendment to SCAQMD Rule 1110.2, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP. The new BACT determination is more stringent than Rule 412, but the BACT standards reflect the emission levels achievable by new engines, and Staff considers these standards to be beyond RACT; therefore, the previous RACT SIP conclusion remains the same.

Rule 412 continues to satisfy the RACT requirement for this source category.

Category: Gasoline Service Stations – Phase II Vapor Recovery

One major source of VOC, Kiefer Landfill, has a non-retail gas station that transfers gasoline into the facility's own vehicles. This analysis will focus on the Phase II vapor requirements for gasoline transfer.

SMAQMD REQUIREMENTS

District Rule 449, Transfer of Gasoline into Vehicle Fuel Tanks, requires that gasoline transfer from a stationary storage container with a capacity of 250 gallons or more, or mobile fueler with a capacity of 120 gallons or more, into any motor vehicle fuel tank with a capacity of at least 5 gallons be performed only when equipped with a Phase II vapor recovery system. The vapor recovery system must be CARB-certified and have a control efficiency of at least 95% by weight.

Rule 449 has not been amended since the previous RACT SIP.

FEDERAL GUIDANCE: There have been no new or updated ACT, NSPS, NESHAP, EPA menu of control measures, settlement agreements, or other federal requirements or guidance since the previous RACT SIP.

STATE GUIDANCE: No state regulations have been adopted or amended and no guidance documents have been published since the previous RACT SIP.

BACT/LAER: There have been no new or updated EPA or ARB BACT/LAER determinations for Phase II gasoline dispensing since the previous RACT SIP.

SMAQMD BACT Determinations

In 2020, an update to the BACT determination was made for all retail gasoline dispensing stations. No changes were identified and the BACT determination requires CARB-certified equipment for Phase I and II control.

OTHER NONATTAINMENT AREA RULES: There have been no new or amended rules for other nonattainment areas since the previous RACT SIP.

CONCLUSION

In the previous RACT SIP, it was determined that Rule 449 satisfies the RACT requirement for this category. Other than the updated BACT determinations, no referenced rules, regulations, or guidance have been changed since the previous RACT SIP; therefore, the conclusion remains the same.

Rule 449 continues to satisfy the RACT requirement for this source category.

Appendix E

RACT Analysis of Major Sources for a Serious Nonattainment Area

For a serious nonattainment area, RACT is required for a stationary source that emits or has the potential to emit at least 50 tons per year of NOx or VOC. There are five major stationary sources operating in Sacramento county which are subject to RACT for the 2015 ozone NAAQS. These sources were analyzed in the previous RACT SIP, which was submitted to EPA in 2017. The table below identifies any equipment changes to these sources since the previous RACT SIP.

One previously major source (Aerojet Rocketdyne) operating in Sacramento County has been partially shut down and has reduced emissions to below major source thresholds. In early 2020, the source submitted a request to cancel their Title V permit⁴³.

Major Source	Major Pollutants	2017 RACT SIP Equipment	Equipment Changes from 2017 RACT SIP	Applicable Rules	Source Meets RACT?
Kiefer Landfill	VOC, NOx	<ul style="list-style-type: none"> • Landfill gas collection system • Landfill gas flares • IC engines, landfill gas-fired • Gasoline dispensing facility • Nonroad portable IC engines, diesel • Emergency standby diesel engine 	No new or modified equipment since 2013.	412 448 449	Yes, previous RACT deficiency corrected through inclusion of landfill flare permits into SIP ^{44,45} . Otherwise, same conclusion as previous RACT SIP.

⁴³ Letter from Scott Goulart, Aerojet, to Steve Mosunic, SMAQMD. "Certification that Applicability Requirements No Longer Apply/ Emissions for Remaining Operations." February 6, 2020.

⁴⁴ 82 FR 33032, July 19, 2017.

⁴⁵ 82 FR 57130, December 4, 2017.

Major Source	Major Pollutants	2017 RACT SIP Equipment	Equipment Changes from 2017 RACT SIP	Applicable Rules	Source Meets RACT?
Sacramento Cogeneration Authority	NOx	<ul style="list-style-type: none"> • Combined cycle gas turbines • Heat recovery steam generator • Simple cycle gas turbine • Boilers 	No new or modified equipment since 2015.	411 413	Yes, same conclusion as previous RACT SIP.
Sacramento Municipal Utility District Financing Authority - Cosumnes Power Plant	NOx	<ul style="list-style-type: none"> • Combined cycle gas turbines 	<p>No new equipment but modification made to upgrade existing turbines to increase MW output and improve efficiency due to higher temperatures.</p> <p>Turbines maintain existing emission limits of NOx 2.0 ppmvd @ 15 %O₂ 1-hour average.</p>	413	Yes, same conclusion as previous RACT SIP.
SFPP, L.P. Bradshaw Terminal	VOC	<ul style="list-style-type: none"> • Storage tanks, internal floating roof • Storage tanks, external floating roof • Organic liquid loading racks • Tank truck unloading system 	No new or modified equipment since 2012.	446 447 448	Yes, same conclusion as previous RACT SIP.

Major Source	Major Pollutants	2017 RACT SIP Equipment	Equipment Changes from 2017 RACT SIP	Applicable Rules	Source Meets RACT?
UCD Medical Center	NOx	<ul style="list-style-type: none"> • Simple cycle gas turbine • Large boilers • Small boilers • Emergency standby diesel engines • Gasoline dispensing⁴⁶ 	<p>No equipment changes since 2014.</p> <p>Pending installation for emergency standby engine that would be subject to Rule 412.</p>	<p>411 412 413 448 449</p>	<p>Yes, same conclusion as previous RACT SIP.</p>

⁴⁶ UCD Medical Center is not a major source of VOC at the emission threshold for serious nonattainment areas (50 tpy). Therefore, VOC RACT need not be demonstrated for this facility. Nevertheless, gasoline dispensing is subject Rules 448 and 449, which have been determined to meet RACT.