

***8-Hour Reasonably Available Control  
Technology – State Implementation Plan Analysis  
(RACT SIP Analysis)***

February 2015

Mojave Desert Air Quality Management District  
14306 Park Avenue  
Victorville, CA 92392-2310

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## Abbreviations and Acronyms

ACT.....	Alternative Control Technology
AQMA .....	Air Quality Management Area
BACT.....	Best Available Control Technology
CARB.....	California Air Resources Board
CTG.....	Control Techniques Guideline
CFR.....	Code of Federal Regulations
FCAA.....	Federal Clean Air Act
FND.....	Federal Negative Declaration
FONA.....	Federal Ozone Non-attainment Area
MDAQMD .....	Mojave Desert Air Quality Management District
NAAQS.....	National Ambient Air Quality Standard
NO <sub>x</sub> .....	Oxides of Nitrogen
O <sub>3</sub> .....	Ozone
POTW .....	Publicly Owned Treatment Works
RACT .....	Reasonably Available Control Technology
SBCAPCD .....	San Bernardino County Air Pollution Control District
SCAQMD .....	South Coast Air Quality Management District
SIP.....	State Implementation Plan
USEPA.....	United States Environmental Protection Agency
VOC .....	Volatile Organic Compounds

## **Executive Summary**

The Federal Clean Air Act (FCAA) requires newly designated ozone non-attainment areas to implement Reasonably Available Control Technology (RACT) on certain sources, including all major sources of ozone precursors. For the purposes of the FCAA, portions of the District have been designated non-attainment for ozone and classified as Severe-15 for the 1997 and 2008 ozone standard (May 8, 2012, 77 FR 26950 and June 6, 2013 78 FR 34178). The Mojave Desert Air Quality Management District (MDAQMD) has evaluated its adopted rules and all of its major sources of ozone precursors to ensure that current rules satisfy RACT. The evaluation process produced several rules that must be updated to current RACT standards.

This document presents the evaluation method, the evaluation results, and the MDAQMD's commitment to adopt the required RACT rule updates.

The original *2006 RACT SIP Analysis* (for the 1997 8-hour ozone standard), together with the supplemental February 25, 2014 *RACT SIP Analysis* and this document, represent a current and complete RACT SIP Analysis document to satisfy the District's RACT obligation for the 1997 and 2008 8-hour ozone standards.

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## **CHAPTER 1 - Introduction and Background**

Purpose

Regulatory History

Federal Legal Requirements

Pollutant Descriptions

Setting

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## **INTRODUCTION**

### **Purpose**

The FCAA requires that ozone non-attainment areas implement RACT for sources that are subject to Control Techniques Guidelines (CTGs) and for major sources of ozone precursors. This document: (1) reviews all available instances of RACT for applicability to the MDAQMD; (2) reviews all MDAQMD major sources for RACT applicability; and (3) identifies any actions the MDAQMD must take to address applicable RACT requirements. This document satisfies 42 U.S.C. §§7511a (FCAA §182) regarding RACT requirements for the eight-hour ozone National Ambient Air Quality Standard NAAQS.

## **BACKGROUND**

### **Regulatory History**

The United States Environmental Protection Agency (USEPA) designated a portion of the southwestern desert part of San Bernardino County as non-attainment of the 8-hour ozone NAAQS as part of the Southeast Desert Modified AQMA on April 15, 2004 (40 CFR 81). This large “maintenance area” was classified moderate based on a 128 ppb ozone design value calculated from 2000 through 2002 eight-hour ozone values within the San Bernardino County portion of the area.

The MDAQMD was established on July 1, 1993, pursuant to H&SC §41200 et seq. (Statutes 1992 ch. 642). The MDAQMD was a successor agency to the San Bernardino County Air Pollution Control District (SBCAPCD), which had jurisdiction over the desert portions of San Bernardino County commencing in February 1977 through the formation of the MDAQMD. The Palo Verde Valley portion of eastern Riverside County was annexed by the MDAQMD from the South Coast Air Quality Management District (SCAQMD) effective July 1, 1994, pursuant to provisions of H&SC 41210(c) and MDAQMD Resolution 94-03.

Ozone plans have been adopted by the MDAQMD to address federal ozone planning requirements, including RACT applicability. This document updates the Federal RACT portion of all previously submitted plans.

### **Federal Legal Requirements**

Sections 182(b)(2) and 182(f) of the FCAA require that ozone non-attainment areas implement RACT for sources that are subject to CTGs and for major sources of ozone precursors (42 U.S.C. §7511a). Ozone non-attainment areas classified moderate and higher must submit a RACT SIP analysis by July 20, 2014 (40 CFR 51.912).

### **Pollutant Description and Health Effects**

Ozone (O<sub>3</sub>) - A colorless gas that is a highly reactive form of oxygen. It has a strong odor when highly concentrated. Ozone can occur naturally but can also be formed from other compounds through photochemistry, a complex system of reactions with hydrocarbons and oxides of nitrogen in the presence of sunlight (ultraviolet). The Mojave Desert Air Basin experiences ozone concentrations in excess of the State and Federal Ambient Air Quality Standards.

Ozone can cause respiratory irritation and discomfort, making breathing more difficult during exercise. Ozone can reduce the respiratory system's ability to remove inhaled particles, increase pulse rate, decrease blood pressure and reduce the body's ability to fight infection. After six hours of exposure a healthy person can have significant reduction of lung function. It is an irritant of the skin, eyes, upper respiratory system, and mucous membranes, although symptoms disappear after exposure. It may also be a carcinogen.

### **Setting**

The MDAQMD includes the desert portion of San Bernardino County and a portion of eastern Riverside County commonly known as the Palo Verde Valley. A portion of the MDAQMD has been designated non-attainment for the eight-hour ozone NAAQS by USEPA as a portion of the Southeast Desert Modified AQMA (herein referred to as the Federal Ozone Non-attainment Area (FONA)). The Southeast Desert Modified AQMA was defined using the Los Angeles-Anaheim-Riverside Consolidated Metropolitan Statistical Area, and includes a portion of the counties of Los Angeles, Riverside and San Bernardino (40 CFR 81.167). The FONA includes the communities of Phelan, Hesperia, Adelanto, Victorville, Apple Valley, Barstow, Joshua Tree, Yucca Valley and Twentynine Palms (the southwestern portion of the MDAQMD).

The MDAQMD covers more than 20,000 square miles and included 359,551 persons as of the 1990 census (approximately 445,000 in 2002). The region is characterized by hot, dry summers and cool winters, with little precipitation. The MDAQMD is a growing bedroom community, but does have significant mining and military activity. The National Training Center at Fort Irwin, the Marine Corps Air Ground Combat Center, and portions of Edwards Air Force Base and the China Lake Naval Air Weapons Station are in the MDAQMD. The MDAQMD also includes the Mojave National Preserve, portions of Death Valley National Park and Joshua Tree National Park

The primary roadways in the MDAQMD are Interstate 15, Interstate 40 and Interstate 395. All of these highways carry a significant amount of transiting heavy-duty truck traffic, and Interstate 15 carries a substantial amount of commuter traffic into the greater Los Angeles Basin.

# CHAPTER 2 – RACT SIP Evaluation

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Process  
CTG Sources  
Major Non-CTG Sources  
Future Years

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## **Process**

The MDAQMD reviewed a USEPA-provided list of source categories and applicable CTGs that collectively define RACT. The MDAQMD reviewed this list for local applicability, and the results are presented in Appendix "A."

## **CTG Sources**

Those categories of sources covered by a published CTG are referred to as CTG sources. For each CTG source category, the MDAQMD has identified whether or not a current source is sited within its jurisdiction, or whether it is likely a source may be sited within its jurisdiction. In most cases, where the MDAQMD has no source that meets the category, the MDAQMD will file a Federal Negative Declaration (FND) for that category. For some categories the MDAQMD has an adopted rule that applies to the category that has been deemed to meet the applicable RACT for that category. In a few cases, the MDAQMD has a rule which has been evaluated and needs to be updated for RACT, and the MDAQMD is accordingly committing to amending the rule to current RACT for those source categories. Chapter 3 details MDAQMD actions identified by this evaluation process.

## **Major Non-CTG Sources**

RACT is also required for all major sources of ozone precursors within the FONA. For severe non-attainment areas a major source is defined as any stationary source or group of sources that emits, or has the potential to emit, at least 25 tons per year of VOCs or NO<sub>x</sub> (FCAA 182(d) and (f)). Table 1 below presents a list of all facilities with Title V Federal Operating Permits within the MDAQMD (with the sources in the FONA identified), whether the facility is a major source of ozone precursors, and the current RACT applicable to those sources. In a few cases the MDAQMD has a rule which has been evaluated and needs to be updated for RACT, and the MDAQMD is accordingly committing to amend the rule to current RACT for those source categories. Chapter 3 details MDAQMD actions identified by this evaluation process.

**Table 1 - Major Source Table**

FONA	Source	Federal Operating Permit	Description	Applicable RACT
Y	AGC Flat Glass	27000935	Flat glass furnace, gas-fired	No applicable CTG. ACT Document-NO <sub>x</sub> Emissions from Glass Manufacturing (EPA-453/R-94-037, 6/94).
Y	CALNEV Pipe Line, Barstow Terminal	200353	Refined petroleum product storage and bulk dispensing	1. Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals (EPA-450/2-77-026, 12/77, NTIS PB-275-060), CTG. 2. Control of Volatile Organic Emissions from Bulk Gasoline Plants (EPA-450/2-77-035, 12/77, NTIS PB-276-722), CTG.
Y	CEMEX, River Plant & Black Mountain Quarry Plant	100005	Portland Cement Manufacturing	No applicable CTG. ACT Document-NO <sub>x</sub> Emissions from Cement Manufacturing (EPA-453/R-94-004, 3/94).
Y	Continental Fiberglass (formerly Hawaiian Fiberglass Pools, Inc.)	50901668	Composite fiberglass construction and coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Daniel Company	26671576	Composite fiberglass manufacturing of air pollution control systems.	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Ducommun Aerostructures	5400246	Aerospace manufacturing (chemical milling and related coating)	Control of VOC Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations CTG & MACT (See 59 FR 29216, 6/6/1994); CTG (Final), (EPA-453/R-97-004, 12/97).

Y	Duffy Electric Boat Company	121502114	Pleasure Craft Manufacturing	<p>1. Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials (EPA-453/R-08-004, September 2008).</p> <p>2. Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003, September 2008).</p> <p>Not a major source of ozone precursors, but still subject to Title V.</p>
Y	Fiber-Care Bath	88201634	Composite fiberglass manufacturing	<p>No applicable CTG.</p> <p>Not a major source of ozone precursors, but still subject to Title V.</p>
Y	High Desert Power Project	104701849	Two on one combined cycle gas turbine power trains	<p>No applicable CTG.</p> <p>1. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA-453/R-93-007, 1/93).</p> <p>2. ACT Document - Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).</p>
Y	LUZ Solar Partners III - VII	27700941	Solar thermal electricity generating facility with gas-fired boiler	<p>No applicable CTG.</p> <p>1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94).</p> <p>2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).</p>
Y	LUZ Solar Partners, Harper Lake facility - SEGS VIII/IX	60300975	Solar thermal electricity generating facility with gas-fired boiler	<p>No applicable CTG.</p> <p>1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94).</p> <p>2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).</p>
Y	Mitsubishi Cement Corporation	11800001	Portland Cement Manufacturing	<p>No applicable CTG.</p> <p>ACT Document-NOx Emissions from Cement Manufacturing (EPA-453/R-94-004, 3/94).</p>

Y	Mobile Pipe Wrappers and Coaters Inc.	3971067	Construction pipe coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Molded Fiber Glass West	132602297	Composite fiberglass construction and coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Molded Fiber Glass Companies West	42701095	Composite fiberglass construction and coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Molded Fiber Glass Companies West (formerly May Manufacturing/Artesian Spas)	86001617	Composite fiberglass construction and coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Northwest Pipe Company	44501112	Construction pipe coating	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Pacific Gas & Electric - Hinkley	1500535	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
Y	Reliant Energy - Coolwater Generating Station	6900004	Two two-on-one combined cycle turbine power trains and two boilers, all gaseous and liquid fired	No applicable CTG. 1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258). 3. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA-453/R-93-007, 1/93).

Y	Riverside Cement Co.	1200003	Portland Cement Manufacturing	No applicable CTG. ACT Document-NOx Emissions from Cement Manufacturing (EPA-453/R-94-004, 3/94).
Y	San Bernardino County Solid Waste Management - Barstow Landfill	102103122	Municipal landfill with landfill gas control system	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	San Bernardino County Solid Waste Management - Victorville Sanitary Landfill	102102443	Municipal landfill with landfill gas control system	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
Y	Southern California Gas Company - Adelanto	3100066	Gas turbine compressing natural gas transmission pipeline	No applicable CTG. 1. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA-453/R-93-007, 1/93). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).
Y	Southern California Gas Company - Newberry Springs	3100065	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
Y	Specialty Minerals, Inc.	62900261	Limestone quarrying, crushing and screening	No applicable CTG. Not a major source of ozone precursors, but still subject to Title V.
y	Sunray Energy Inc SEGS I	24800899	Solar thermal electricity generating facility	No applicable CTG. 1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).

	Sunray Energy Inc SEGS II	24802009	Solar thermal electricity generating facility	No applicable CTG.  1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94- 023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB- 93-150-258).
Y	Unlimited Performance Products	121902118	Composite fiberglass construction and coating	No applicable CTG.  Not a major source of ozone precursors, but still subject to Title V.
Y	USAF - Edwards AFB	8300565	Solid and liquid fueled rocket test stands	No applicable CTG.
Y	USMC - MCLB Barstow Yermo Annex	8700587	Military coating (all coating types)	Control of Volatile Organic Emissions From Existing Stationary Sources, Volume I: Control Methods For Surface Coating Operations (EPA- 450/2-76-028, 11/76, NTIS PB-260- 386).
N	ACE Cogeneration Company	50001051	Solid-fueled cogeneration boiler	No applicable CTG.  1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94- 023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB- 93-150-258).
N	Blythe Energy, LLC	130202262	Two on one combined cycle gas turbine power trains	No applicable CTG.  1. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA- 453/R-93-007, 1/93). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB- 93-150-258).

N	Blythe Energy II, LLC	Not Built	Two on one combined cycle gas turbine power trains	No applicable CTG. 1. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA-453/R-93-007, 1/93). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).
N	Ivanpah Solar Electric Generating System I	176903007	Solar thermal electrical generation	No applicable CTG. 1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).
N	Ivanpah Solar Electric Generating System II	177003008	Solar thermal electrical generation	No applicable CTG. 1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).
N	Ivanpah Solar Electric Generating System III	1771003009	Solar thermal electrical generation	No applicable CTG. 1. ACT Document-NOx Emissions from Utility Boilers (EPA-453/R-94-023, 3/94). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258).
N	NASA Goldstone DSCC	13300611	Liquid-fueled internal combustion engines conditioning power for radio communication	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).

N	Pacific Gas & Electric - Topock	1500039	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
N	Searles Valley Minerals Operations, Inc.	90002	Soluble mineral extraction and refining	No applicable CTG.
N	Southern California Gas Company - Blythe	3101437	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
N	Southern California Gas Company - Kelso	3100067	Gas turbine and gas-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. 1. ACT Document-NOx Emissions from Stationary Gas Turbines (EPA-453/R-93-007, 1/93). 2. Control Techniques for VOC Emissions from Stationary Sources (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258). 3. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).

N	Southern California Gas Company - North Needles	3100069	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
N	Southern California Gas Company - South Needles	3100068	Gaseous-fired internal combustion engines compressing natural gas transmission pipeline	No applicable CTG. ACT Document-NOx Emissions from Stationary IC Engines (EPA-453/R-93-032, 7/93, Updated 9/2000).
N	USN - Naval Air Weapons Station China Lake (North and South Range)	8800567	Aerospace research and development, aerospace test stands	Control of VOC Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations CTG & MACT (See 59 FR 29216, 6/6/1994); CTG (Final), (EPA-453/R-97-004, 12/97).

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## **CHAPTER 3 – MDAQMD RACT Actions**

Federal Negative Declarations  
Required RACT Rule Actions

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### Federal Negative Declarations

Current MDAQMD review has identified many source categories that do not have corresponding sources (major or minor) within the jurisdiction of the MDAQMD. The District reviewed its permit files and the emission inventory for its Federal Clean Air Plan, and conducted SIC Code searches, the internet, yellow pages, and District inspectors and engineers knowledge, and has determined that there are no stationary sources or emitting facilities for the following CTG categories. The District also does not anticipate these sources in the future. For these source categories the MDAQMD is filing FNDs. In some cases the FND is an update of an earlier FND. In every case the MDAQMD has reviewed source categories for applicability within Riverside County, and is extending the FND findings throughout the entire MDAQMD jurisdiction, including the Palo Verde Valley portion of Riverside County. FND actions are summarized in Table 2 below.

**Table 2 - Federal Negative Declarations**

Source Category	Action	CTG Document Covering Action
Large Petroleum Dry Cleaners	Update FND (Filed 01/22/07)	Control of VOC Emissions from Large Petroleum Dry Cleaners (EPA-450/3-82-009, 9/82, NTIS PB-83-124-875), CTG.
Manufacture of High Density Polyethylene, Polypropylene, and Polystyrene Resins	Update FND (Filed 01/22/07)	Control of VOC Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins (EPA-450/3-83-008, 11/83, NTIS PB-84-134-600), CTG.
Pneumatic Rubber Tire Manufacturing	Update FND (Filed 01/22/07)	Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires (EPA-450/2-78-030, 12/78, NTIS PB-290-557), CTG.
Surface Coating of Cans	Update FND (Filed 01/22/07)	Control of Volatile Organic Emissions from Existing Stationary Sources-Vol II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (EPA-450/2-77-008, 5/77, NTIS PB-272-445), CTG.
Surface Coating of Coils	Update FND (Filed 01/22/07)	

Surface Coating Operations at Automotive and Light Duty Truck Assembly Plants	Update FND (Filed 01/22/07)	<ol style="list-style-type: none"> <li>1. CTG for Automobile and Light-Duty Truck Assembly Coatings (EPA 453/R-08-006, 09/08)</li> <li>2. Protocol for Determining the Daily VOC Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations (EPA 453/R-08-002, 09/08)</li> <li>3. Control of Volatile Organic Emissions from Existing Stationary Sources - Vol II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (EPA-450/2-77-008, 5/77, NTIS PB-272-445)</li> </ol>
Surface Coating of Large Appliances	Update FND (Filed 01/22/07)	<ol style="list-style-type: none"> <li>1. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume V: Surface Coating of Large Appliances (EPA-450/2-77-034, 12/77, NTIS PB-278-259), CTG.</li> <li>2. Control Techniques Guidelines for Large Appliance Coatings (EPA 453/R-07-004, 9/07).</li> </ol>
Surface Coating of Magnet Wire	Update FND (Filed 01/22/07)	Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating of Insulation of Magnet Wire (EPA-450/2-77-033, 12/77, NTIS PB-278-258), CTG.
Vacuum Producing Devices or Systems	Update FND (Filed 01/22/07)	Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds (EPA-450/2-77-025, 10/77, NTIS PB-275-662), CTG.
Leaks From Petroleum Refinery Equipment	Update FND (Filed 01/22/07)	
Process Unit Turnarounds	Update FND (Filed 01/22/07)	
Equipment Leaks From Natural Gas/Gasoline Processing Plants	Update FND (Filed 01/22/07)	Control of VOC Equipment Leaks from Natural Gas/Gasoline Processing Plants (EPA-450/3-83-007, 12/83, NTIS PB-84-161-520), CTG.

Synthesized Pharmaceutical Products	Update FND (Filed 01/22/07)	1. Control Techniques for VOC Emissions from Stationary Sources: Industrial Manufacturing Processes (EPA-453/R-92-018, 12/92, NTIS PB-93-150-258). 2. Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products (EPA-450/2-78-029, 12/78, NTIS PB-290-580), CTG.
Air Oxidation Processes – Synthetic Organic Chemical Manufacturing Industry	Update FND (Filed 01/22/07)	Control of VOC Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry (EPA-450/3-84-015, 12/84, NTIS PB-85-164-275), CTG.
Reactor Processes and Distillation Operations in SOCFI	Update FND (Filed 01/22/07)	Control of VOC Emissions from Reactor Processes and Distillation Operations in SOCFI (EPA-450/4-91-031, 08/93, NTIS PB-92-180-009), CTG.
Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment	Update FND (Filed 01/22/07)	Control of VOC Fugitive Emissions from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment (EPA-450/3-83-006, 3/84, NTIS PB-84-189-372), CTG.
Petroleum Refinery Equipment	Update FND (Filed 08/23/2010)	Control of VOC Leaks from Petroleum Refinery Equipment (EPA-450/2-78-036, 6/78, NTIS PB-286-158).

Metal Furniture Coating	File FND	1. Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture (EPA -450/2-77-032, 12/77). 2. Control Techniques Guidelines for Metal Furniture Coatings (EPA 453/R-07-005, 09/07).
Flat Wood Paneling	File FND  District no longer has a source in the non-attainment area subject to the CTG. (See Rule 1114)	1. Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VII: Factory Surface Coating of Flat Wood Paneling (EPA-450/2-78-032, 06/78). 2. Control Techniques Guidelines for Flat Wood Paneling Coatings (EPA-453/R-06-004, 09/06).

Offset Lithographic Printing	Remove FND (Filed 01/22/07)	1. CTG for Offset Lithographic Printing and Letterpress Printing (EPA-453/R-06-002, 09/06), CTG.
and Surface Coating of Fabrics	<i>While the District has no offset lithography sources, or fabric coating sources, Rule 1117 has provisions for the categories and the rule has been approved as RACT.</i>	2. Control of Volatile Organic Emissions from Existing Stationary Sources-Vol II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks (EPA-450/2-77-008, 5/77, NTIS PB-272-445), CTG.

## **Required RACT Actions in the 2006 RACT SIP Analysis**

The MDAQMD identified six required RACT rule actions in the *2006 RACT SIP Analysis*. The completion of these commitments is detailed below.

### Ship Surface Coating

The MDAQMD has watercraft coating operations within its jurisdiction. The MDAQMD adopted Rule 1106 – *Marine Coating Operations* on 10/23/2006, and Rule 1106 was determined to fulfill RACT (07/16/2008, 73 FR 4075).

### Graphic Arts, including Paper Surface Coating and Offset Lithographic Printing

The MDAQMD has paper coating within its jurisdiction. The MDAQMD amended Rule 1117 – *Graphic Arts and Paper, Film, Foil and Fabric Coatings* on 09/28/2009, and Rule 1117 was determined to fulfill RACT (03/01/2012, 77 FR 12495).

### Commercial and Residential Space Heaters

The MDAQMD was advised by USEPA that this is not a CTG category, and a RACT rule would only be required if the MDAQMD had commercial or residential space heaters that exceed the major source threshold.<sup>3</sup> No rule was adopted because the MDAQMD does not have commercial or residential space heaters that exceed the major source threshold.

### Glass Manufacturing

The MDAQMD has an existing flat glass plant that is a major source of NO<sub>x</sub>. While this facility complies with BACT (circa 1987), a RACT backstop rule was adopted. Rule 1165 – *Glass Melting Furnaces* was adopted 08/12/2008, and determined to fulfill RACT (07/02/2012, 77 FR 39181).

### Publicly Owned Treatment Works

The MDAQMD was advised by USEPA that this is not a CTG category, and a RACT rule would only be required if MDAQMD has a POTW that exceeds the major threshold for VOCs or NO<sub>x</sub>. No rule was adopted because the MDAQMD does not have a POTW that exceeds the major source threshold.<sup>4</sup>

### Polyester Resin Operations

The MDAQMD has major sources of ozone precursors from polyester resin operations. The MDAQMD adopted Rule 1162 – *Polyester Resin Operations* on 08/27/2007, and determined to fulfill RACT (11/24/2008, 73 FR 70883).

## **Additional Required RACT Actions**

USEPA requested further clarification for several rules to determine if they still represent RACT, or should be submitted for SIP approval if needed for RACT.<sup>5</sup> The MDAQMD provided this analysis to USEPA on 02/25/2014 in the *2014 Supplement to the 2006 MDAQMD RACT SIP*

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<sup>3</sup> USEPA letter September 14, 2006, Re: 8-hour Ozone Reasonably Available Control Technology – State Implementation Plan (RACT SIP) Analysis, dated August 2006, pg. 1.

<sup>4</sup> Ibid, pg. 2

<sup>5</sup> Ibid, Table 1 and Table 2.

*Analysis.*<sup>6</sup> The original 2006 RACT SIP Analysis (for the 1997 8-hour ozone standard), together with the supplemental February 25, 2014 RACT SIP Analysis and this document, represents a current and complete RACT SIP Analysis document to satisfy the District's RACT obligation for the 1997 and 2008 8-hour ozone standards. Those items identified in the 2014 Supplement, and additional rule analysis which address newer CTGs, are as follows:

Rule 461 – Gasoline Transfer and Dispensing

Rule 461 – *Gasoline Transfer and Dispensing* will be updated to address current RACT for mobile fuelers, CARB Certified equipment/Executive Order requirements, self-compliance program provisions, and ORVR exemption.

Rule 462 – Organic Liquid Loading

Rule 462 – *Organic Liquid Loading* will be updated to meet RACT based on a future cost effectiveness analysis. The District currently does not have requirements for CMS, or vapor system reduction of emissions to 0.08 pounds or less per thousand gallons, or backpressure requirements.

Rule 463 – Storage of Organic Liquids

Rule 463 – *Storage of Organic Liquids* will be amended to meet federal RACT requirements based on updated RACT determinations of reviewed District rules. The SIP must also be updated for entire District upon amendment.

Rule 464 – Oil-Water Separators

The MDAQMD amended Rule 464 on 06/23/2014. This rule has been submitted to the California Air Resources Board with a request for inclusion in the SIP, and it is expected that the rule will be determined to fulfill RACT.

Rule 1104 – Organic Solvent Degreasing

Rule 1104 – *Organic Solvent Degreasing* does not meet all CTG recommended control options, work practices and alternative composite vapor pressure limit. Rule 1104 will be updated to meet current federal RACT requirements.

Rule 1106 – Marine Coating Operations

Rule 1106 – *Marine Coating Operations* does not meet CTG overall control efficiency for add on controls of 90%. Rule 1106 will be updated to meet current federal RACT requirements.

Rule 1114 – Wood Products Coating Operations

Rule 1114 does not have same applicability as Flat wood Paneling CTG. Rule 1114 must be amended to meet RACT when comparing to more recently amended District rules. Rule 1114 will not be amended to include flat wood paneling requirements (as SJVAPCD has done), but a Federal Negative Declaration (FND) will be filed for the flat wood paneling category.

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<sup>6</sup> 8-hour Ozone Reasonably Available Control Technology RACT State Implementation Plan (SIP) Analysis – Supplemental Analysis, February 25, 2014.

Rule 1115 – Metal Parts & Product Coating Operations

MDAQMD Rule 1115 does not meet several of the CTG VOC limits or control efficiency requirements. Rule 1115 will be amended to meet current federal RACT requirements.

Rule 1118 – Aerospace Vehicle Parts and Products Coating Operations

Rule 1118 is to be amended to include additional CTG categories and adjust VOC limits to conform to current federal RACT requirements.

Rule 1157 – Boilers and Process Heaters

Rule 1157 is to be amended to include the entire District, not excluding the Federal Ozone Nonattainment Area. NO<sub>x</sub> limits to be adjusted if necessary to conform to current federal RACT.

Rule 1158 – Electric Utility Operations

Rule 1158 is to be amended to include the entire District, not excluding the Federal Ozone Nonattainment Area. NO<sub>x</sub> limits to be adjusted if necessary to conform to current federal RACT.

Rule 1160 – Internal Combustion Engines

Rule 1160 – *Internal Combustion Engines* is in the process of amendment. The current amendment will address and fulfill RACT.

Rule 1161 – Portland Cement Kilns

Rule 1161 – *Portland Cement Kilns* does not meet current RACT as determined by a more recent RACT rule comparison with other states rules. Rule 1161 must be amended to meet Federal RACT requirements based on updated RACT determinations of reviewed state rules.

Rule 1162 – Polyester Resin Operations

Rule 1162 – *Polyester Resin Operations* does not match control efficiency requirements in SMAQMD Rule 465 or SJVUAPCD Rule 4684 which have been determined to fulfill federal RACT. Rule must be amended to meet Federal RACT requirements based on updated RACT determinations of reviewed state rules.

**Proposed Rule Adoption Schedule**

The MDAQMD will adopt all identified rules or updates by the end of calendar year 2015.

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## Appendices

### A - RACT Evaluations

1. Rule 442 – *Usage of Solvents*
2. Rule 461 – *Gasoline Transfer and Dispensing*
3. Rule 462 – *Organic Liquid Loading*
4. Rule 463 – *Storage of Organic Liquids*
5. Rule 464 – *Oil-Water Separators*
6. Rule 474 – *Fuel Burning Equipment*
7. Rule 476 – *Steam Generating Equipment*
8. Rule 1103 – *Cutback and Emulsified Asphalt*
9. Rule 1104 – *Organic Solvent Degreasing Operations*
10. Rule 1106 – *Marine Coating Operations*
11. Rule 1114 – *Wood Products Coating Operations*
12. Rule 1115 – *Metal Parts & Products Coating Operations*
13. Rule 1118 – *Aerospace Vehicle Parts and Products Coating Operations*
14. Rule 1126 – *Municipal Solid Waste Landfills*
15. Rule 1157 – *Boilers and Process Heaters*
16. Rule 1158 – *Electric Utility Operations*
17. Rule 1159 – *Stationary Gas Turbines*
18. Rule 1160 – *Internal Combustion Engines*
19. Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*
20. Rule 1161 – *Portland Cement Kilns*
21. Rule 1162 – *Polyester Resin Operations*

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1. Rule 442 – *Usage of Solvents*

The MDAQMD includes portions of San Bernardino County that were designated severe nonattainment under the 1-hour ozone standard and are currently designated moderate nonattainment under the 8-hour ozone standard. As such, the MDAQMD is required to impose RACT on all major VOC sources and all source categories subject to a CTG in these nonattainment areas. Major VOC sources and CTG source categories in the MDAQMD are, however, generally covered by other rules in Regulations IV and XI of the MDAQMD SIP. Rule 442 applies only to sources that are *not* subject to any of these source-specific VOC control requirements and is intended as a “backstop” provision for small, otherwise unregulated sources. As such, the rule is not necessary to implement RACT requirements (72 FR 52791, 9/17/07).

2. Rule 461 – Gasoline Transfer and Dispensing

MD Rule 461			
	MD Rule 461 - Gasoline Transfer and Dispensing	AVAQMD Rule 461 - Gasoline Transfer and Dispensing	MDAQMD Rule 461 RACT Comparison
RACT Version	05/25/1994 (60 FR 21702, 05/03/1995)	10/21/08 (76 FR 5277, 1/31/2011)	
Applicability	Gasoline storage and dispensing facility and any retail gasoline station operating equipment (G=retail, N=non-retail)	Transfer of gasoline from any tank truck, trailer or railroad car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor vehicle fuel tank.	Will evaluate Rule 461 to determine if mobile fueler requirements are a RACT provision.
Suggested Control Options		The difference in stringency of requirements between MD Rule 461 and AV 461 are noted in RACT comparison.	<ul style="list-style-type: none"> <li>*Any time an underground stationary tank is installed or replaced at any gasoline transfer and dispensing facility, a CARB Certified spill box shall be installed.</li> <li>*No installation of any Phase I VRS of coaxial design unless certified by CARB after 1/1/94.</li> <li>*No installation of any Phase I VRS of the dual point design unless system incorporates CARB Certified poppetted dry breaks of spring-loaded vapor check valves on the vapor return coupler.</li> <li>*Updated vapor recovery defects list to reference code sections rather than actual defects.</li> <li>*Bellows-equipped nozzles must have CARB certified insertion interlock mechanism.</li> <li>*Balance system nozzle must have vapor check valve</li> <li>*Nozzle must be equipped with coaxial hose after 1/1/98</li> <li>*Inside diameter between riser and dispenser cabinet not less than 0.75"</li> <li>*Dispenser rate &gt;5 gal/min must be CARB certified</li> <li>*CARB certified breakaway device, and drive-off documentation</li> <li>*Fuel tank not intended to be used for motor vehicle fueling shall be posted.</li> <li>*Tank vent pipe requirements</li> <li>*No storage that allows spills that permits vapors to contaminate air, ground, sewer.</li> <li>*New/alterd tanks shall have piping configuration inspected prior to backfill, Phase I and Phase II VRS inspected prior to operation.</li> </ul>
Additional Req		Self- Compliance Program	Self- Compliance Program
Testing		Performance testing as specified by applicable CARB ExOrders.	Performance testing as specified by applicable CARB ExOrders.
Recordkeeping	<ul style="list-style-type: none"> <li>Inspection log</li> <li>Monthly throughput, with yearly summary for exempted tanks</li> <li>Daily log of throughput</li> <li>Maintain 2 years</li> </ul>	<ul style="list-style-type: none"> <li>Inspection log</li> <li>Testing log</li> <li>Monthly throughput</li> <li>Certification for installer/contractor</li> <li>2 years (5 years Title V)</li> </ul>	
Exemptions	<ul style="list-style-type: none"> <li>*Containers less than 550 gals if used for implements of husbandry if has submerged fill tube</li> <li>*Hand pump for emergency services during loss of commercial power</li> <li>*Stationary storage containers installed prior to 1988 meeting certain conditions</li> </ul>	<ul style="list-style-type: none"> <li>*If 75% of monthly thruput if used for implements of husbandry if has submerged fill tube</li> <li>*Tanks for fueling ag wind machines</li> <li>*Mobile fuelers &gt;120 gals into tanks &gt;5 gals until 12 months following general commercial availability of VRS certified by CARB</li> <li>*ORVR</li> </ul>	ORVR
Rule 461 meets CTG recommended control options and was deemed RACT 60 FR 21702, 5/3/95.			
Rule 461 does not meet current RACT as determined by a more recent RACT rule comparison with AVAQMD Rule 461.			
Conclusion/Recommendation:			
Rule will be reviewed and amended to meet RACT.			

3. Rule 462 – Organic Liquid Loading

Rule 462 - Organic Liquid Loading			
	MD Rule 462 - Organic Liquid Loading	SCAQMD Rule 462 - Organic Liquid Loading	MDAQMD Rule 462 RACT Deficiencies
RACT Version	05/25/1994 (60 FR 21702, 05/03/1995)	05/14/1999 (64 FR 39037, 7/21/1999)	
Applicability	Transport of organic liquids, including fuels such as gasoline, between facilities and the transfer of such organic liquids into tanks, including motor vehicle fuel tanks, tank trucks, trailers or railroad tank cars. Facilities include, but are not limited to: bulk facilities, retail and non-retail service stations or any other facility where organic liquids are stored or transferred.	Facilities that load organic liquids with a vapor pressure of 1.5 psia or greater under actual loading conditions into any tank truck, trailer or railroad car as defined as Class A, B or C facilities.	
	Class A - Loading 5,000,000 gal/year and/or 20,000 gal/day of any liquid with TVP of 1.5 psia or more into any tank truck, trailer or railroad car. Class B - Loading less than 5,000,000 gal/year of any liquid with TVP of 1.5 psia or more into any tank truck, trailer or railroad car.	Class A - Any facility loading 20,000 gal/day or more of organic liquid into any tank truck, Trailer or railroad car. Class B - Before 1/9/76 loads between 4,000 and 20,000 gal/day - Before 1/9/76 loads not more than 4,000 gal/day but more than 500,000 gal/yr. - After 1/9/76 loads not more than 20,000 gal/day Class C - Before 1/9/76 loads not more than 20,000 gal/day	
Suggested Control Options	Class A - Must have a vapor recovery system. Displaced vapor and air vented to vapor recovery system. All connections and vapor lines are to be maintained in a Vapor Tight condition to prevent fugitive leaks. Prevent fugitive leaks from loading device when not in use or to accomplish complete drainage before the loading device is disconnected to prevent excess organic liquid drainage. Class B - As for Class A with a PV valve	Class A - CARB certified vapor recovery system and/or disposal system (or District approved when such system does not need to be CARB certified). Equipped with CMS. Displaced organic vapor and air vented to vapor recovery/disposal system. Vapor recovery system shall reduce emissions of VOCs to 0.08 lb or less per thousand gallons of organic liquid transferred. Bottom loading only operated and maintained so there are no overfills, vapor leaks, liquid leaks or liquid leaks from disconnect operations. Backpressure from vapor recovery or disposal system shall not exceed 18 inches of water column pressure. Class B - Same as above only vapor recovery designed to recover 90% of displaced vapors. Class C - Submerged fill loading or bottom fill loading. No overfills, liquid leaks or liquid leak from disconnect.	MD rule does not have requirement for CMS, or vapor system reduction of emissions to 0.08 lb or less per thousand gallons, or backpressure.  Bay Area has set a 0.04 lb per 1000 gallon limit effective 2011.
Additional Req	* Comply with safety, fire, weights and measures, etc as listed in H&S 41950-41974. *All facility components maintained and operated to prevent fugitive vapor leaks, fugitive liquid leaks, and excess drainage during transfer. *Loading or unloading vehicle shall have valid cert of vapor integrity by CARB. *Vapor leaks from dome covers determined in accordance with EPA Method 21. *Operate transport eqp with no fugitive liquid leaks. *No uncontrolled switch loading unless uncontrolled vapors do not exceed 10,000 ppmv and emissions are controlled by a vapor recovery system.	*No uncontrolled switch loading *Leak inspection requirements *Loading or unloading vehicle shall have valid cert of vapor integrity by CARB. *Vapor leaks from dome covers determined in accordance with CARB Vapor Recovery Test Procedure. *Transport vessel shall be operated so there are no vapor or liquid leaks.	
Responsibilities	Facility owner: shall be able to comply Transfer vehicle owner: Addl responsibilities pertaining to truck May be found jointly/separately in violation.	Facility owner: shall be able to comply Transfer vehicle owner: Addl responsibilities pertaining to truck	
Recordkeeping	2 years in daily log	2 years in daily log	
Exemptions		Violations of requirements detected or recorded by facility owner must be repaired/replaced within specified periods as specified in leak inspection requirements.  Certain provisions do not apply if displaced vapors sent to refinery flare or other combustion device that receives gaseous streams from other refinery sources.	
Rule 462 meets CTG recommended control options and was deemed RACT 60 FR 21702, 5/3/1995.			
Rule 462 does not meet current RACT as determined by a more recent RACT rule comparison with SCAQMD Rule 462.			
Conclusion/Recommendation			
Rule will be reviewed and amended to meet RACT.			

4. Rule 463 – Storage of Organic Liquids

MDAQMD Rule 463 - Storage of Organic Liquids			
MD Rule 463	SI Rule 4623	MDAQMD Rule 463 RACT Deficiencies	
<p>MD Rule 463</p> <p>11/02/1992 (60 FR 21702, 05/03/1995)</p>	<p>05/19/2005 (70 FR 59937, 09/13/2005)</p> <p>General:</p> <p>1,100-19,800 Gallons:</p> <p>0.5-&lt;1.5 psia (PV valve, internal/external floating roof, vapor recovery system)</p> <p>1.5-&lt;11 psia (PV valve, internal/external floating roof, vapor recovery system)</p> <p>≥11 psia (Pressure vessel or vapor recovery system)</p> <p>&gt;19,800-39,600 Gallons:</p> <p>0.5-&lt;1.5 psia (PV valve, internal/external floating roof, vapor recovery system)</p> <p>1.5-&lt;11 psia (Internal/external floating roof, vapor recovery system)</p> <p>≥11 psia (Pressure vessel or vapor recovery system)</p> <p>&gt;39,600 Gallons:</p> <p>0.5-&lt;1.5 psia (Internal/external floating roof, vapor recovery system)</p> <p>1.5-&lt;11 psia (Internal/external floating roof, vapor recovery system)</p> <p>≥11 psia (Pressure vessel or vapor recovery system)</p> <p>Small Producer:</p> <p>Welded Tank with Primary Metallic Shoe</p> <p>1. Gap between tank shell and primary seal &gt; 1 1/2" not to exceed cumulative length of 10%</p> <p>2. 30% cumulative length gap between tank shell and primary seal &gt; 1/2"</p> <p>3. 60% cumulative length gap between tank shell and primary seal &gt; 1/8", with no continuous gap &gt; 1/8" exceeding 10%.</p> <p>Riveted Tank with Primary Metallic Shoe type seal</p> <p>1. No gap between tank shell and primary seal &gt; 2 1/2"</p> <p>2. 10% cumulative length gap between tank shell and primary seal &gt; 1 1/2"</p> <p>3. 30% cumulative length gap between tank shell and primary seal &gt; 1/8", with no continuous gap &gt; 1/8" exceeding 10%</p> <p>Vapor loss with an effectiveness as (F)(1) (see above for welded tank req) as approved by APCCO.</p> <p>Primary Resilient Toroid Seal</p> <p>Prior to 2/20/80</p> <p>1. Gaps between shell and primary seal shall not exceed 1/8" for 95% circumference, 1/2" 5%. No gap over 1/2".</p> <p>2. Gaps between shell and secondary seal shall not exceed 1/8" for 95% circumference, 1/2" 5%. No gap over 1/2".</p> <p>After 2/20/80</p> <p>Equivalent as determined by APCCO to welded tank primary seal as above.</p> <p>Floating Roof Deck</p> <p>See (C)(1)(a)</p> <p>Vapor Recovery System</p> <p>Collect and process vapors at an efficiency of at least 95%</p>	<p>MDAQMD Rule 463 does not have same stringency for tanks ≤150,000 liters storing organic liquids ≥11 psia. MD requires PV or vapor loss control device. SI does not allow for PV valve.</p> <p>No Small Producer provisions in MDAQMD rule</p> <p>MDAQMD Rule 463 has lower stringency for galls for Welded Tanks with Primary Metallic Shoe type seal.</p> <p>MDAQMD Rule 463 has lower stringency for galls for Riveted Tanks with Primary Metallic Shoe type seal.</p> <p>MDAQMD Rule 463 has lower stringency for galls for Tanks with Resilient Toroid seals.</p> <p>MDAQMD Rule 463 has lower stringency for tanks with Floating Roof Decks.</p>	
<p>Applicability</p> <p>Tanks &gt;150,000 liters (External floating roof, fixed-roof)</p> <p>Tanks ≤150,000 liters with TVP ≥1.5 psia with PV valve or vapor loss control device</p>			
<p>Suggested Control</p> <p>Options</p>	<p>Voluntary tank preventative inspection and maintenance, and tank interior cleaning program</p>	<p>MDAQMD Rule 463 has no voluntary tank preventative inspection and maintenance, and tank interior cleaning program.</p> <p>MDAQMD Rule 463 has less stringent inspection and testing requirements.</p> <p>MDAQMD Rule 463 has less stringent record retention.</p>	
<p>Monitoring</p>	<p>Records - 2 years</p>		
<p>Recordkeeping</p>	<p>Evaluation for RACT</p>		
<p>Conclusion/Recommendation:</p>	<p>Rule 463 meets CTG recommended control options and was deemed RACT 60 FR 21702, 5/9/95.</p> <p>Rule 463 does not meet current RACT as determined by a more recent RACT rule comparison with SIVUAPCD Rule 4623.</p> <p>Rule must be amended to meet federal RACT requirements based on updated RACT determinations of reviewed District rules.</p>		

5. Rule 464 – *Oil-Water Separators*

The MDAQMD amended Rule 464 on 06/23/2014. Rule 464 was submitted to the California Air Resources Board on 08/26/2014 with a request for inclusion in the SIP. It is expected that the rule will be determined to fulfill RACT. The MDAQMD responded to and corrected all comments received on the preliminary draft, and was subsequently issued “No Comment” letters from both CARB and USEPA.

6. Rule 474 – *Fuel Burning Equipment*

MDAQMD Rule 474 generally applies outside the Federal Ozone Nonattainment Area (FONA). Rule 474 will effectively be displaced within the FONA when the applicable Regulation XI rules (1157, 1160 and 1161) are amended to cover the entire District, and not to exclude the FONA.

7. Rule 476 – *Steam Generating Equipment*

MDAQMD Rule 476 generally applies outside the Federal Ozone Nonattainment Area (FONA). Rule 474 will effectively be displaced within the FONA when the applicable Regulation XI rules (1157, 1160 and 1161) are amended to cover the entire District, and not to exclude the FONA.

8. Rule 1103 – *Cutback and Emulsified Asphalt*

MD Rule 1103 - <i>Cutback and Emulsified Asphalt</i>			
	MDAQMD Rule 1103	Northern Sierra AQMD Rule 227	Great Lakes States
RACT Version	12/24/94 (61 FR 4215, 2/5/96)	11/27/06 (74 FR 56120, 10/30/09)	
Applicability	Manufacturing, mixing, storage, use and application of cutback and emulsified asphalt.	May not discharge VOC caused by the use or manufacture of cutback and emulsified asphalts for paving, road construction or road maintenance.	Summertime restrictions on cutback asphalt.
Requirements	<p><i>No manufacture for sale nor use for paving, road construction or road maintenance any:</i></p> <ul style="list-style-type: none"> <li>-<b>Rapid cure</b> cutback asphalt</li> <li>-<b>Medium cure</b> cutback asphalt</li> <li>-<b>Slow cure</b> cutback asphalt containing more than 0.5% by volume of VOC which evaporate at 500F</li> <li>-<b>Emulsified</b> asphalt containing more than 3% by volume of VOC which evaporate at 500F</li> </ul>	<p><i>No manufacture for sale nor use for paving, road construction or road maintenance any:</i></p> <ul style="list-style-type: none"> <li>-<b>Rapid cure</b> cutback asphalt</li> <li>-<b>Medium cure</b> cutback asphalt</li> <li>-<b>Slow cure</b> cutback asphalt containing VOC which evaporate at 500F or lower</li> <li>-<b>Emulsified</b> asphalt containing more than 3% by volume of VOC which evaporate at 500F</li> </ul>	
Exemptions	<p>1. Requirements do not apply to cutback/emulsified asphalt in the manufacturing of paving materials where such materials shall be immediately shipped and used outside of the District.</p> <p>2. Medium and slow cure asphalt which contains more than 0.5% by volume VOC</p> <ul style="list-style-type: none"> <li>-as penetrating prime coat for aggregate bases prior to paving</li> <li>-manufacture of asphalt for long-period storage or stockpiling of patching mixes used in pavement maintenance but not for general paving</li> <li>-when National Weather Service official forecast of the high 24 hour temp following application is below 50F</li> </ul>	<p>1. The use of medium cure cutback asphalt when National Weather Service official forecast of the high 24 hour temp following application is below 50F</p> <p>2. Requirements do not apply to cutback/emulsified asphalt in the manufacturing of paving materials where such materials shall be immediately shipped and used outside of the Western Nevada County FONA and where such area is designated attainment for state/federal ozone std.</p>	Seasonal restrictions on use of cutback asphalt (April-October)
Records	2 years	2 years	
Evaluation for RACT:			
<p>Rule 1103 meets current RACT as determined by a more recent RACT rule comparison with Northern Sierra AQMD. Also, the SCAQMD Technology Assessment for Rule 1108 - Cutback Asphalt (June 2008) evaluated the feasibility of further limiting the use of cutback asphalt to the fall and winter months where ozone formation is at its least, or replacing it with surrogate water-based emulsion technology. Based on this assessment, SCAQMD determined that no changes were necessary. The MDAQMD accepts this determination as having a similar reasonable applicability in the MDAQMD.</p>			
Conclusion/Recommendation:			
No action necessary.			

9. Rule 1104 – Organic Solvent Degreasing Operations

Rule 1104 - Organic Solvent Degreasing Operations (Adopted 9/28/1994)				
Applicability	VOC Content Limit	Work Practices	Alternative Composite Vapor Pressure Limit	Suggested Exclusions
<p><b>Rule 1104</b></p> <p>Wipe cleaning, cold solvent cleaning and/or vapor cleaning (degreasing) operations for metal/non-metal parts/products or electric circuit boards, which utilize organic solvents.</p>	<p><b>No VOC content requirement.</b> Exemption for solvents containing less than 2% VOC (E)(1).</p>	<p>1. Covered - (C)(2)(a)(v) - degreasers shall be covered to prevent fugitive leaks of vapors, except when processing work or to perform maintenance.  <b>2. No requirement in rule.</b>                      3. Disposal of used solvent and towels - (C)(2)(a)(iv) - Waste solvent disposal req, no specific req for used shop towels.                      4. Minimize emissions from equipment practices - (C)(1) requirements specify covers, freeboard, markings, limit carryout, entrance/exit openings, hood, temperature, drying tunnels, condenser, etc.</p>	<p><b>No requirement.</b></p>	<p><b>Rule 442 excludes VOC emissions from VOC containing materials or equipment not subject to VOC limits of any rule found in Reg XI, and section (F) has Rule 442 Applicability.</b></p>
<p><b>EPA CTG: Industrial Cleaning Solvents (EPA 453/R-06-001, September 2006)</b></p> <p>Industries that have to use organic solvent for cleaning unit operations such as mixing vessels (tanks), spray booths, and parts cleaners, where a facility emits at least 6.8 kg/day (15 lb/day) before consideration of controls in an ozone nonattainment area. Recommend specific category exclusion similar to BAAQMD and SCAQMD.</p>	<p>50 grams VOC per liter (0.42 lb/gal) unless controlled by emission control system with OCE of at least 85%</p>	<p>1. Covering Open Containers                      2. Minimizing air circulation around cleaning operations                      3. Properly disposing of used solvent and shop towels                      4. Implementing equipment practices that minimize emissions</p>	<p>8 mmHg at 20 degrees Celsius as 1) a replacement for 50 g/l VOC content entirely; or 2) an alternative limit that may be used in lieu of the 50 g/l VOC content limit for specific operations.</p>	<p>1. Categories listed for regulation under CAA Section 183(e)                      2. Categories with specific exemptions under Bay Area 8-4-116                      3. Categories with specific exemptions under Bay Area 8-4-117                      4. Categories with special limits in SCAQMD 1171 (c) and exemptions in 1171 (h)</p>
<p>Evaluation for RACT:                      Rule 1104 does not meet all CTG recommended control options, including work practices and alternative composite vapor pressure limit.                      Conclusion/Recommendation:                      Rule must be amended to meet Federal RACT requirements</p>				

10. Rule 1106 – Marine Coating Operations

Marine Coating Materials Categories	VOC Limit (g/liter)		CTG/Notes
	Air-Dried	Baked	
Air Flask	340		2006 Shipbuilding
Antenna	530		2006 Shipbuilding
Antifoulant Coating – Non Pleasure Craft	400		2006 Shipbuilding
Antifoulant Coating – Aluminum Substrate Pleasure Craft	560		2008 Misc Metal/Plastic Parts
Antifoulant Coating – Other Substrates Pleasure Craft	330		2008 Misc Metal/Plastic Parts
Clear Wood Finishes – Sealers	550		<i>(Wood coating, not metal or plastic, not covered by “other category in 2008 Misc Metal/Plastic Parts CTG)</i>
Clear Wood Finishes – Topcoats	490		<i>(Wood coating, not metal or plastic, not covered by “other” category in 2008 Misc Metal/Plastic Parts CTG)</i>
Elastomeric Adhesives with 15%, by weight, Natural or Synthetic Rubber	730		<i>(Adhesive, not metal or plastic, not covered by “other category in 2008 Misc Metal/Plastic Parts CTG)</i>
Extreme Performance	420	360	<i>(Meets “other” category limit in 2008 Misc Metal/Plastic Parts CTG)</i>
Extreme High-Gloss	490	420	2008 Misc Metal/Plastic Parts (This category is the same as Topcoat – Extreme High gloss, but broken down as in the SCAQMD rule in to Baked and Air-dried)
Finish Primer/Surfacer	420		2008 Misc Metal/Plastic Parts
General Use	340	275	2006 Shipbuilding
Heat Resistant	420	360	2006 Shipbuilding
High Build Primer/Surfacer	340		2008 Misc Metal/Plastic Parts
High-Gloss	340	275	2006 Shipbuilding <i>(Not specified as a topcoat. Lower SC limit adopted.)</i>
High-Temperature	500		2006 Shipbuilding
Inorganic Zinc (high-build)	340		2006 Shipbuilding
Metallic Heat Resistant	530		<i>SC Category and limit adopted. Substrate not defined. Higher than “other” category from 2008 2008 Misc Metal/Plastic Parts CTG)</i>
Military Exterior Specialty	340		2006 Shipbuilding
Mist	610		2006 Shipbuilding
Navigational Aids	340		2006 Shipbuilding <i>(Lower)</i>
Nonskid	340		2006 Shipbuilding
Nuclear Specialty	420		2006 Shipbuilding
Organic Zinc	360		2006 Shipbuilding

Pretreatment Wash Primer	780	780	2006 Shipbuilding and 2008 Misc Metal/Plastic Parts
Repair and Maintenance of Thermoplastics	550	550	2006 Shipbuilding
Rubber Camouflage	340		2006 Shipbuilding
Sealant for Wire-Sprayed Aluminum	610		2006 Shipbuilding
Special Marking	490	490	2006 Shipbuilding
Specialty Interior	340		2006 Shipbuilding
Tack Coat	610		2006 Shipbuilding
Teak Primer	775		<i>(Wood coating, not metal or plastic, not covered by "other" category in 2008 CTG)</i>
Topcoats – Extreme High Gloss	490		2008 Misc Metal/Plastic Parts
Topcoats – High Gloss	420		2008 Misc Metal/Plastic Parts
Underwater Weapons Systems	340	275	2006 Shipbuilding
Weld-through Preconstruction Primer	340		2006 Shipbuilding ( <i>Lower</i> )

Rule 1106 is controlling more emissions than *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings* (EPA 453/R-08-003, September 2008) and *Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating)* (61 FR 44050, 08/27/96). Rule 1106 was adopted in 08/28/06 and derived from South Coast Air Quality Management District Rule 1106 – *Marine Coating Operations* as amended January 13, 1995. Rule 1106 was subsequently amended on 10/23/06. The 10/23/06 amendment updated definitions, cross references and compliance procedures. VOC limits were not adjusted.

There is one limit in Rule 1106 with a VOC limit higher than the “all other pleasure craft surface coatings for metal or plastic” limit of 0.42 kg VOC/liter coating contained in the Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings. This category is Metallic Heat Resistant (530 g/liter). The substrate application material is not identified in the category definitions or table, so this coating may conceivably be used on metal or plastic parts for pleasure craft surface coating. This category is based on similar category in SCAQMD Rule 1106.

There are also three category limits in Rule 1106 that are substantially lower than the CTG limits. These categories are “High Gloss” (CTG limit 420 g/liter, rule limit 340 g/liter), “Navigation Aids” (CTG limit 550 g/liter, rule limit 340 g/liter), and “Weld-through Preconstruction Primer” (CTG limit 650 g/liter, rule limit 340 g/liter). Once again the substrate is not identified, and therefore, these coatings could also be used on metal and plastic parts on pleasure craft.

It should be noted that “Metallic Heat Resistant” coating is not currently used in the pleasure craft facility located in the MDAQMD. This coating, if used, would most likely be used by the military and these uses would be more consistent with those categories found in the shipbuilding and ship repair operations CTG, not the “other” category in the miscellaneous metal and plastic parts coatings CTG.

Air pollution control equipment with overall control efficiency of 90% is required in *Control Techniques Guidelines for Miscellaneous Metal or Plastic Parts Coatings* (EPA-453/R-08-003 September 2008). MDAQMD Rule 1106 has an overall control efficiency requirement of 85%.

Therefore, MDAQMD Rule 1106 – *Marine Coating Operations* has RACT coating categories which contribute lower limits which offset the single higher limit. The higher limit category most likely would be used by the military rather than in pleasure craft applications, and this higher limit category is more consistent with the shipbuilding CTG. However, Rule 1106 is not RACT for control device efficiency. Therefore, Rule 1106 must be amended to meet current RACT.

# 11. Rule 1114 – Wood Products Coating Operations

Rule 1114 - Wood Products Coating Operations (Amended 11/25/96, approved 08/18/98 63 FR 44132)				
Applicability	VOC Content Limit and Controls	Work Practices	Exemptions	Monitoring and Records
<p><b>Rule 1114</b></p> <p>VOC emissions from wood products coating application operations.</p>	<p><b>VOC content requirement.</b></p> <p>Clear Sealers - 275 g/L            Clear Topcoat - 275 g/L            Pigmented Primers, Sealers, Undercoats - 275 g/L            Fillers - 275 g/L            High-Solid Stains - 350 g/L            Inks - 500 g/L            Mold-Seal Coatings - 750 g/L            Multi-Colored Coatings - 275 g/L            Low-Solids Stains, Toners, Washcoats - 120 g/L            Adhesives - 250 g/L            Surface Prep (except strippers) - 200 g/L            Stripper - 350 g/L</p> <p>Overall control efficiency - 85%</p>	<p>1. Closed, nonabsorbant containers for storage of used cloth or paper with solvent used for surface prep and cleanup.</p> <p>2. Store solvent in closed containers.</p> <p>3. Organic compounds used for spray eqp cleanup and paint lines shall utilize eqp for collection of cleaning compounds and minimization of evaporation.</p> <p>4. Transfer efficiency</p> <p>Flow coat, dip coat, HVLP, paint brush, hand roller, roll coater, coating application method able to demonstrate 65% transfer efficiency.</p>	<p>1. Aerosol products.</p> <p>2. Rate per day coating use less than 1 gallon (only including coatings subject to this rule) or coating application operations that emit not more than 3 pounds of VOC/day and not more than 200 pounds of VOC/calendar year.</p> <p>3. Laminating of fiberglass, metal, or plastic sheets to wood panels.</p> <p>4. Application of coatings to musical instruments.</p> <p>Application of coatings to billiard tables.</p> <p>5. VOC limits shall not apply to refinishing operations necessary for preservation, to replace missing furniture to produce a matching set, or to produce replica furniture.</p> <p>6. VOC limits shall not apply to touch-up and repair coatings or stencil coatings.</p>	<p><b>RECORDS</b></p> <p>1. List of coatings</p> <p>2. Daily records of coating and mix ratios, quantities applied</p> <p>3. Daily record of type/amount solvent used for cleanup</p> <p><b>CAM</b></p> <p>1. CAM as approved by APCO for equipment using air pollution abatement eqp.</p> <p>2. Daily records of key system operating parameters and maintenance procedures.</p> <p><b>RETENTION</b></p> <p>1. 5 years</p>
<p><b>SCAQMD and AVAQMD Rule 1136 (June 14, 1996)</b></p> <p>Reduce VOC emissions from the application of coatings or strippers to, and surface preparation of, any wood products, including furniture, cabinets, shutters, frames and toys.</p>	<p>Barrier Coat (plastic components) - 275 g/L            Composite wood edge filler - 275 g/L            Extreme performance - 275 g/L</p> <p>Low-Solids Barrier Coat - Plastic comp - 120 g/L</p> <p>Stripper - 350 g/L or composite vapor pressure is 2 mm Hg or less at 68 F</p> <p>Continuous monitor required for any add on control device.</p>	<p>1. Solvent Cleaning Operations subject to provisions of Rule 1171</p> <p>2. Transfer efficiency</p> <p>Flow coat, dip coat, HVLP, paint brush, hand roller, roll coater, coating application method able to demonstrate 65% transfer efficiency.</p>	<p>1. Less than 1 gallon/day as applied subject to rule.</p> <p>2. Does not apply to operations subject to 1104.</p> <p>3. Aerosol</p> <p>4. Air brushes with capacity less than 4 fluid ounces</p> <p>5. Add up to 10% VOC to avoid blushing during high humidity.</p>	<p>Recordkeeping pursuant to Rule 109</p> <p>Record of monitoring device to be maintained for 2 years</p>
<p><b>Sacramento Metropolitan AQMD Rule 463 - Wood Products Coatings (9-25-08)</b></p> <p>Applies to any person who uses, manufactures, blends, sells, repackages, distributes or specifies the use of wood products coatings and/or strippers.</p>	<p>Conversion varnish - 550 g/L</p> <p>Refinishing, Repairing, Preserving, Restoring</p> <p>Clear topcoat - 680 g/L            Conversion varnish - 550 g/L            Filler - 500 g/L            High-solid stain - 700 g/L            Inks - 500 g/L            Mold-seal coating - 750 g/L            Multi-colored coating - 680 g/L            Pigmented Coating - 600 g/L            Sealer - 680 g/L            Low solids stains, toners, washcoats - 480 g/L</p> <p>Stripper - 350 g/L or VOC composite partial vapor pressure is 2 mm Hg or less at 68 F.</p> <p>No surface prep or cleanup with VOC in excess of 25 g/L</p>	<p>1. Transfer Efficiency</p> <p>Electrostatic, HVLP, flowcoat, dip coat, hand application, roll coater, LVLP, air assisted airless, equivalent method approved by APCO and USEPA.</p> <p>2. Closed containers for disposal of cloth or paper used for surface prep, cleanup and coating removal.</p> <p>3. Store VOC containing materials in closed containers unless in use, and dispose of properly.</p>	<p>1. Sources using less than 55 gallons per year of coatings and/or strippers.</p> <p>2. Aerosol</p> <p>3. Flat wood paneling operations</p> <p>4. Rule 442 - Architectural Coatings applicability.</p>	<p>5 years.</p>
<p><b>SJVAPCD Rule 4606</b></p> <p>Applies to coatings applied to wood products including furniture, cabinets, flat wood paneling, and custom replica furniture.</p>	<p>High-Solid Stains - 240 g/L            Sanding Sealer - 275 g/L</p> <p>Flat panel limits</p> <p>APCO-approved VOC emission control system that controls emissions from the source that meet VOC limits.</p> <p>Overall Control Efficiency - 85% (wood coating)            90% (flat panel)</p> <p>Clean up operations - 25 g/L, using wipe cleaning, spray bottles, non-atomized solvent flow in container or collection system, solvent flushing.</p>	<p>1. Transfer efficiency: Electrostatic, HVLP, hand roller, flow coat, roll coater, dip coat, paint brush, detailing or touch-up guns, other methods with 65% transfer efficiency.</p> <p>2. Store coatings, inks, adhesives, thinners, cleaning materials, waste materials in closed containers.</p> <p>3. Mixing vessels closed except when in use.</p> <p>4. Minimize spills and clean up immediately.</p> <p>5. Convey VOC containing materials in closed containers or pipes.</p>	<p>1. Aerosol products.</p> <p>2. 20 gallons/year</p> <p>3. Application of coatings by templates to add letters/numbers.</p> <p>4. Wooden musical instruments.</p> <p>5. Residential noncommercial operations.</p> <p>6. Architectural coatings subject to Rule 4601.</p> <p>7. Refinishing, replacement and custom furniture operations.</p> <p>8. Specific finishes except to flat wood paneling: Crackle lacquers, faux finishes, imitation wood grain, leaf finishes.</p>	<p>5 years.</p>
<p><b>EPA CTG: Control of Volatile Organic Emissions from Existing Stationary Sources Volume VII: Factory Surface Coating of Flat Wood Paneling (EPA 450/2-78-032, June, 1978)</b></p> <p><b>EPA CTG: Control Techniques Guidelines for Flat Wood Paneling Coatings (EPA 453/R-06-004, September 2006)</b></p> <p>Applies to facilities that apply flat wood paneling coatings that emit at least 15 lb/day of VOC before considering controls. Wood paneling coatings mean wood paneling products that are any interior, exterior, or tileboard panel to which a protective, decorative, or functional material or layer has been applied.</p>	<p>Inks, coatings and adhesives - 250 g VOC/L (minus water and minus exempt compounds), or 350 g VOC/L solids.</p> <p>Higher VOC coating limits to be controlled by add on control eqp with an overall control efficiency of 90%.</p>			
<p>Evaluation for RACT:</p> <p>Rule 1114 must be amended to meet RACT when comparing to more recently amended District rules.</p> <p>Conclusion/Recommendation:</p> <p>Rule must be amended to meet Federal RACT requirements.</p>				

12. Rule 1115 – Metal Parts & Products Coating Operations

Applicability	VOC Content Limit and Controls	Work Practices	Exemptions	Records
<p>Rule 1115</p> <p>Metal Coating Operations, except those on aircraft and aerospace; magnet wire; metal containers; closures and coils; marine vessel exteriors; motor vehicles; motor vehicle assembly lines; mobile equipment; or any other source specific rule</p>	<p>VOC content requirement (Air dried/Baked)</p> <p>General - 4.20/360</p> <p>Military Spec - 4.20/360</p> <p>Etching Filler - 4.20/420</p> <p>Solar Absorbant - 4.20/360</p> <p>Heat Resistant - 4.20/360</p> <p>High Gloss - 4.20/360</p> <p>Extreme High Gloss - 4.20/360</p> <p>Metallic - 4.20/420</p> <p>Extreme Performance - 4.20/360</p> <p>Prefabricated Architectural Component - 4.20/275</p> <p>Touch up - 4.20/360</p> <p>Repair - 4.20/360</p> <p>Silicone Release - 4.20/420</p> <p>High Performance Architectural - 4.20/420</p> <p>Camouflage - 4.20/420</p> <p>Vacuum-Metalizing - 4.20/420</p> <p>Mold-Seal - 4.20/420</p> <p>High Temperature - 4.20/420</p> <p>Electric Insulating Varnish - 4.20/420</p> <p>Pan-Backing - 4.20/420</p> <p>Pretreatment Wash Primer - 4.20/420</p> <p>Clear Coating - 5.20/520</p> <p>Add-On Control Alternative - 85% Surface Preparation - &lt;200 g/L, initial bp of 190C, total VOC vapor pressure of 20 mm-Hg or less</p>	<p>1. Transfer efficiency</p> <p>Electrostatic attraction, dip coat, HVLP, hand application methods; transfer efficiency equal to one of the above methods.</p> <p>2. Surface Prep and Cleanup</p> <p>Application eqp cleaned/disassembled in closed system during washing/rinsing/drainng.</p> <p>Cleaned in a container which is open only when adding/cleaning/removing eqp or cleaning material.</p> <p>3. Closed, non-absorbant containers for storage or disposal of cloth, paper, or any other absorbant material for solvent surface preparation and cleanup.</p>	<p>1. Aerosol products.</p> <p>2. Daily usage less than 1 gallon.</p> <p>3. Total noncompliant coating less than 55 gal year.</p> <p>4. Stencil coatings.</p> <p>5. Safety-indicating Coatings.</p> <p>6. Magnetic Data Storage Disk Coatings.</p> <p>7. Solid-film Lubricants.</p> <p>8. Adhesives.</p> <p>9. Motor vehicle bodies at motor vehicle rework facilities.</p> <p>10. Transfer eff shall not apply to contractors applying coatings to objects on trays, provided no object has any dimension &gt; 12".</p> <p>11. Transfer eff shall not apply to touch-up coatings, repair coatings, textured coatings, metallic coatings which have a metallic content of &gt;30 g/L, mold-seal coatings, facilities using less than 3 gallons per day.</p> <p>12. Application of coatings and use of solvents while applying coatings and use of cleaning solvents while conducting performance tests on the coatings at paint manufacturing facilities.</p>	<p>2 years</p>
<p>Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003, September 2008)</p> <p>Reduce VOC emissions from the use of coatings in miscellaneous metal products and miscellaneous plastic parts surface coating operations.</p>	<p>Several coating limits lower than existing Rule 1115 limits. Control efficiency also 90%.</p> <p>Pleasure Craft Coating limits to be addressed in Rule 1106 amendment.</p>	<p>1. Solvent Cleaning Operations subject to provisions of Rule 1171</p> <p>2. Transfer efficiency</p> <p>Flow coat, dip coat, HVLP, paint brush, hand roller, roll coater; coating application method able to demonstrate 65% transfer efficiency.</p>		
<p>Evaluation for RACT:</p> <p>MDAQMD does not meet several of the CTG VOC limits or Control Efficiency requirements.</p> <p>Conclusion/Recommendation:</p> <p>Amend rule to meet federal RACT requirements.</p>				

13. Rule 1118 – *Aerospace Vehicle Parts and Products Coating Operations*

Rule 1118, as adopted on 10/29/1996, does not include all the coating categories and limits contained in *Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations* ((EPA-453/R-97-004, December 1997). Although approved in the SIP (63 FR 43884, 8/17/98), the Federal Register notice identified that the rule was inconsistent with the recently issued CTG, and that the District was to resubmit the rule to meet the CTG in order to require sources to comply with limitations and work practices. Rule 1118 – *Aerospace Vehicle Parts and Products Coating Operations* will be amended to meet current RACT.

14. Rule 1126 – *Municipal Solid Waste Landfills*

The District has two landfills which are not major sources but are Title V sources. Rule 1126 does not require amendment to meet RACT.

15. Rule 1157 – *Boilers and Process Heaters*

Rule 1157 is to be amended to include the entire District. Current version of the rule excludes the FONA. NO<sub>x</sub> limits will be adjusted to meet current RACT.

16. Rule 1158 – *Electric Utility Operations*

Rule 1158 is to be amended to include the entire District. Current version of the rule excludes the FONA. NO<sub>x</sub> limits will be adjusted to meet current RACT.

17. Rule 1159 – *Stationary Gas Turbines*

Rule 1159 was amended 09/28/2009. USEPA determined that Rule 1159 implements RACT for units in the current federal ozone nonattainment area (FONA) (10/25/2012, 77 FR 65133). Therefore, Rule 1159 does not need to be amended for RACT at this time.

18. Rule 1160 – *Internal Combustion Engines*

Rule 1160 – *Internal Combustion Engines* is in the process of amendment. The pending amendment will address and fulfill current RACT.

19. Rule 1160.1 – *Internal Combustion Engines in Agricultural Operations*

The District does not have agricultural engine major sources. This rule was adopted in response to SB700 and the agricultural exemption removal. Therefore, Rule 1160.1 is not required to meet RACT.

20. Rule 1161 – Portland Cement Kilns

MD Rule 1161 - Portland Cement Kilns			
	Assessment of Nox Emissions Reduction Strategies for Cement Kilns - Ellis County	Texas Comission on Environmental Quality Section 117.260	MD Rule 1161
Date	7/14/2006	11/8/2002	03/25/2002 (68 FR 9015, 02/27/2003)
Applicability	Cement Kilns	Portland Cement Kilns	All existing Portland Cement Kilns operated within the FONA.
Requirements	Table D-1 (Summary of US NOx Control Regulations for Cement Kilns - EPA 2004): Emissions limits for several states are presented at 2.8 or higher lb/ton clinker.	(30 day average) 1. Long wet kiln Bexar, Comal, Hays, McLennan Counties: 6 lbs/ton clinker Ellis County: 4.0 lbs/ton 2. Long dry kiln: 5.1 lbs/ton 3. Preheater Kiln: 3.8 lbs/ton 4. Preheater/precalciner kiln: 2.8 lbs/ton	1. NOx reduction technology: Combustion controls Low NOx burners Staged combustion NOx reducing fuels or substances (includes tire-derived fuels) 2. NOx RACT limits (excluding start-up/shut-down) Preheater-Precalciner: 6.4 lb/ton clinker avg over 30 days Long Dry Kilns: 6.4 lb/ton clinker avg over 30 days Short Dry Kilns: 7.2 lb/ton clinker avg over 30 days 3. NOx RACT limits (start-up/shut-down) Preheater-precalciner kilns man. by Allis Chalmers before 1982: 17,616 lbs NOx/day Preheater-precalciner kilns man. by Humboldt-Wedag completed in 1984: 28,160 lb NOx/day For Long Dry kilns man. by F.L. Smidth completed in 1965: 30,664 lb NOx/day All other: Max heat input of 4,500 MMBtu/day/kiln 4. Additional Requirements: Start-up/shut-down not longer than 36 hours. Minimize impacts of emissions during start-up/shut-down. Best efforts Document start-up/shut-down actions in operating logs.
Evaluation for RACT			
Rule 1161 does not meet current RACT as determined by a more recent RACT rule comparison with other states.			
Conclusion/Recommendation			
Rule must be amended to meet Federal RACT requirements based on updated RACT determinations of reviewed state rules.			

21. Rule 1162 – Polyester Resin Operations

Rule 1162 - Polyester Resin Operations			
	Applicability	Application Technique	Control Efficiency
MDAQMD Rule 1162 - Polyester Resin Operations, 8/27/2007 (73 FR 70883, 11/24/2008)	New and existing manufacture of products from, or the use of, PRO, including repair, rework, and touch-up activities for commercial, military or industrial use.	Non-atomizing spray application Flowcoaters Pressure-fed rollers Resin impregnators Hand lay-up Other non-atomizing tech. with	85%
SMAQMD Rule 465 - Polyester Resin Operations, 9/25/2008 (76 FR 44493, 9/29/2011)	Polyester resin operations.	Airless Air-assisted airless HVLP LVLP Electrostatic Other	90%
SJUAPCD Rule 4684 - Polyester Resin Operations, 8/18/2011 (77 FR 5709, 2/6/2012)	Applicable to all commercial and industrial PRO, fiberglass boat manufacturing operations, and to the organic solvent cleaning, and the storage and disposal of all solvents and waste solvent materials associated with such operations.	Airless Air-assisted airless HVLP Electrostatic Other	90%
CTG - None			
Evaluation for RACT:			
MDAQMD Rule 1162 does not match control efficiency requirements in SMAQMD Rule 465 or SJVUAPCD Rule 4684 which have been determined to fulfill federal RACT.			

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