

Reasonably Available Control Technology Demonstration for the 2015 8-hour Ozone Standard

Public Consultation Meeting

April 8, 2020

Cleaning The Air That We Breathe...



Background – 2015 Ozone Standard

- In 2015, the U.S. EPA strengthened the National Ambient Air Quality Standards (NAAQS) for ozone to 70 parts per billion (ppb)
- Five Nonattainment Classifications:
 - Marginal; Moderate; Serious; Severe; Extreme

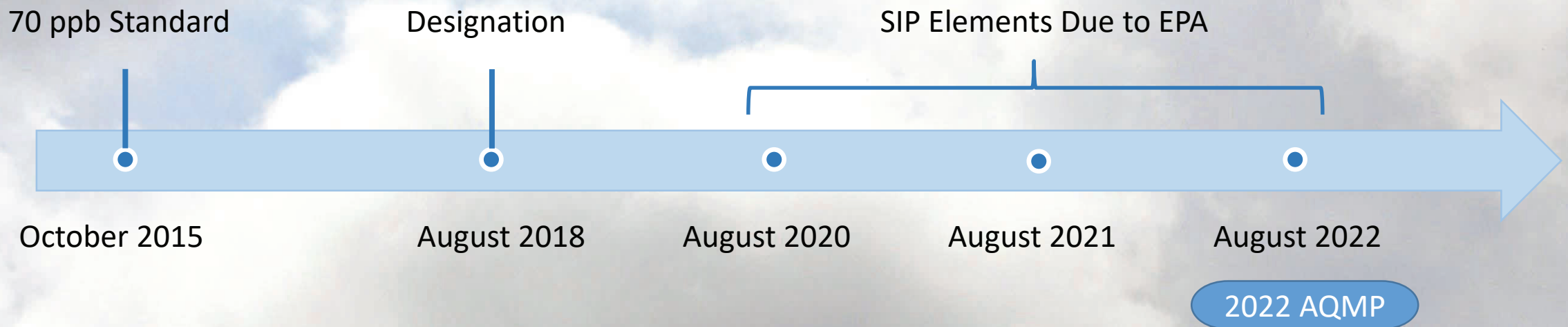
Standard	Level	South Coast Classification	Coachella Valley Classification	Attainment Date
2015 8-hour Ozone	70 ppb	Extreme	Severe	August 3, 2038 (South Coast) August 3, 2033 (Coachella Valley)
2008 8-hour Ozone	75 ppb	Extreme	Severe	July 20, 2032 (South Coast) July 20, 2027 (Coachella Valley)
1997 8-hour Ozone	80 ppb	Extreme	Extreme*	June 15, 2024 (both South Coast and Coachella Valley)
1979 1-hour Ozone	120 ppb	Extreme	Attainment	February 6, 2023 (South Coast)

*Voluntary reclassification from severe to extreme in September 2019



Implementation of the 2015 Ozone Standard

- Air agencies must develop State Implementation Plans (SIPs) to address Clean Air Act Requirements
- Majority of requirements carried forward from the implementation rule for the 75 ppb standard





Key SIP Elements and Due Dates for Severe and Extreme Nonattainment Areas

	8/3/2020	8/3/2021	8/3/2022	8/3/2028
Severe and Extreme Areas	Base Year Emissions Inventory	Nonattainment New Source Review	Attainment Demonstration	Section 185 Fee Program (Failure to attain)
	Emission Statement		Reasonable Further Progress	
	Reasonably Available Control Technology Demonstration		Contingency Measures	
	Vehicles Miles Traveled Offset		Enhanced Inspection and Maintenance Program	
Extreme Area Only		Clean Fuels for Boilers		

What is RACT?

- Reasonably Available Control Technology (RACT)
 - ❑ “Lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economical feasibility” (*44 Federal Register 53762, September 17, 1979*)
- Guidance
 - ❑ Based on current information at time of development
 - ❑ Considers controls achieved in practice to be feasible (economically and technologically)
 - ❑ Includes EPA’s Control Techniques Guidelines at minimum (*CAA §182(b)(2)*)





What Emission Sources are Subject to RACT?

EPA Control Technique Guidelines Sources

40+ Control Technique Guidelines (CTG) sources such as:

- Bulk Gasoline Plants
- Leaks from Petroleum Refinery Equipment
- Petroleum Liquid Storage in External Floating Roof Tanks
- Leaks from Natural Gas/Gasoline Processing Plants
- Shipbuilding and Ship Repair Operations (Surface Coating)
- Paper, Film, and Foil Coatings
- Large Appliance Coatings
- Metal Furniture Coatings
- Miscellaneous Metal and Plastic Parts Coatings
- Miscellaneous Industrial Adhesives
- Automobile and Light-Duty Truck Assembly Coatings
- Oil and Natural Gas Industry

Non-CTG Major Stationary Sources

South Coast Air Basin:

- Facilities exceeding 10 tons per year of VOC or NOx emissions

Coachella Valley:

- Facilities exceeding 25 tons per year of VOC or NOx emissions



Regulatory History for RACT SIP Submittal

2006 RACT
Demonstration for
1997 Ozone
Standard

2014 RACT
Demonstration for
2008 Ozone
Standard

2016 AQMP
RACT/BACT*
Demonstration for
PM2.5 Standards

**BACT is defined as Best Available Control Technology, and is part of Best Available Control Measure (BACM) demonstration for PM2.5 serious nonattainment areas*

RACT Demonstration – Approach



EPA Control Technique
Guidelines



California Air Districts

- Antelope Valley AQMD
- Bay Area AQMD
- Mojave Desert AQMD
- Sacramento Metropolitan AQMD
- San Joaquin Valley APCD
- Ventura County APCD



Maryland
Department of
the Environment



TEXAS COMMISSION
ON ENVIRONMENTAL QUALITY

Other States

- Delaware Department of Natural Resources and Environment Control
- Maryland Department of the Environment
- Texas Commission on Environmental Quality



Rules and Regulations Recently Adopted by Other Agencies

RACT is a moving target that changes over time as new technologies and products become feasible and cost effective

- Evaluated 60+ rules and regulations recently adopted (March 2014 to February 2020) by other ozone impacted agencies
- Reflecting the most up-to-date information from current control technologies





An Example of RACT Evaluation

Rule Number and Title	Current Rule Requirements	Requirements in Other Agencies, States and Federal Guidance that Are More Stringent	RACT Evaluation
South Coast AQMD Rule 1146 Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (Amended 12/7/18)	<ul style="list-style-type: none"> • 75+ MMBtu/hr: 5 ppm • 20-75 MMBtu/hr: 5 to 9 ppm • 5-20 MMBtu/hr: 7 to 9 ppm 	San Joaquin Valley APCD Rule 4320 <ul style="list-style-type: none"> • 20+ MMBtu/hr: 7 ppm • 5-20 MMBtu/hr: 9 ppm 	<p>For units between 20 to 75 MMBtu/hr, South Coast AQMD emission limits vary from 5-9 ppm</p> <ul style="list-style-type: none"> • Lowering emission limits to 7 ppm not technically feasible for non fire-tube boilers • SJV's rule provides an option to comply with mitigation fee, while Rule 1146 does not <p>Based on the above information, it is concluded that South Coast AQMD Rule 1146 meets RACT.</p>



Summary of Findings - CTG Sources

Oil and Gas CTG (2016)

- The only new CTG since last ozone RACT submittal
- RACT determination through California's Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

Automobile and Light-Duty Truck Assembly Coatings CTG

- South Coast AQMD Rule 1115 (Motor Vehicle Assembly Line Coating Operations) regulates VOC emissions from this source category, and is not as stringent as the 2008 EPA's CTG for several coatings and products
- New light-duty motor vehicle manufacturing facilities are operating in the Basin that are subject to this CTG
- South Coast AQMD commits to amend Rule 1115 to meet the CTG requirements

Paper, Foil and Film Coating CTG

- South Coast AQMD Rule 1128 (Paper, Fabric and Film Coating Operations) regulates VOC emissions from this source category, and is not as stringent as the 2007 EPA's CTGs (85.5% control efficiency in Rule 1128 vs. 90% in CTG; limit of 265 g/L in Rule 1128 vs. 80 g/L in CTG)
- Facilities with add-on controls for coating operations meet RACT requirements; add-on controls are listed on federally enforceable Title V permits
- Facilities without add-on controls do not exceed the CTG's applicable threshold (25 tons per year per coating line).
 - A negative declaration is included in this submittal

Conclusions: With the exception of Rule 1115, all applicable CTG sources are subject to RACT level of control



Summary of Findings – Non-CTG Major Stationary Sources

- Evaluated applicable NO_x and VOC rules
- South Coast AQMD rules and regulations closely matched those of other agencies, and meet or exceed RACT level of control for all applicable source categories



Conclusions

- With the exception of Rule 1115, South Coast AQMD's current rules meet or exceed federal RACT requirements
- South Coast AQMD commits to amend Rule 1115 to meet U.S. EPA's CTG requirements for Automobile and Light-Duty Truck Assembly Coatings

Public Process





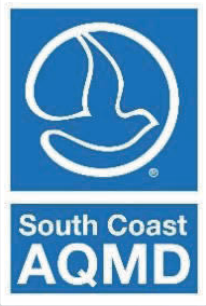
For More Information

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT



Comments / Questions