



**South Coast
Air Quality Management District**

21865 Copley Drive, Diamond Bar, CA 91765

(909) 396-2000, www.aqmd.gov

STATIONARY SOURCE COMMITTEE MEETING

Committee Members

Mayor Ben Benoit, Chair
Dr. Joseph Lyou, Vice Chair
Mayor Pro Tem Judith Mitchell
Supervisor V. Manuel Perez
Supervisor Janice Rutherford
Supervisor Hilda L. Solis

**October 19, 2018 ♦ 10:30 a.m. ♦ CC8
21865 Copley Dr., Diamond Bar, CA 91765**

TELECONFERENCE LOCATIONS

Kenneth Hahn Hall of Administration
500 W. Temple Street
Room 493-A
Los Angeles, CA 90012

8575 Haven Ave., Suite 110
Rancho Cucamonga, CA 91730

73710 Fred Waring Drive
Suite 222
Palm Desert, CA 92260

(The public may attend at any location listed above.)

Call-in for listening purposes only is available by dialing:

Toll Free: 866-244-8528

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In addition, a webcast is available for viewing and listening at:

<http://www.aqmd.gov/home/library/webcasts>

AGENDA

Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54854.3(a)). Please provide a Request to Address the Committee card to the Committee Secretary if you wish to address the Committee on an agenda item. If no cards are available, please notify SCAQMD staff or a Board Member of your desire to speak. All agendas for regular meetings are posted at District Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of the regular meeting. Speakers may be limited to three (3) minutes each.

CALL TO ORDER

INFORMATIONAL ITEMS – Items 1-4

- 1. Update on Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations (No Motion Required) (20 mins.)** Susan Nakamura, Assistant Deputy Executive Officer

Staff will address stakeholder comments made at the September Public Hearing. If the Stationary Source Committee concurs, staff is recommending to proceed with a Public Hearing for PAR 1469 in November.
(Written Material Attached)
- 2. Proposed Amended Rules 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters; 1146.1 - Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters; 1146.2 - Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters; and Proposed Rule 1100 - Implementation Schedule for NO_x Facilities (No Motion Required) (15 mins.)** Tracy Goss, Manager

Staff will provide a briefing on Proposed Amended Rules 1146, 1146.1, 1146.2, and Proposed Rule 1100 and the key issues raised by stakeholders.
(Written Material Attached)
- 3. Proposed Rule 1118.1 – Control of Emissions from Non-Refinery Flares (No Motion Required) (15 mins.)** Michael Krause, Manager

Proposed Rule 1118.1 will reduce emissions and encourage alternatives to flaring for non-refinery flares located at landfills, wastewater treatment plants, oil and gas production facilities, organic liquid loading stations, and tank farms.
(Written Material Attached)

- 4. RECLAIM Quarterly Report – 3rd Update** (15 mins.) Susan Nakamura
(*No Motion Required*)
Staff will provide an update on the transition of NO_x RECLAIM facilities to a command-and-control regulatory structure.
(*Written Material Attached*)

WRITTEN REPORTS – Item 5-6

- 5. Notice of Violation Penalty Summary** (*No Motion Required*) Bayron Gilchrist,
General Counsel
This report provides the total penalties settled in September 2018 which includes Civil, Supplemental Environmental Projects, Mutual Settlement Assessment Penalty Program, Hearing Board and Miscellaneous.
(*Written Material Attached*)
- 6. Twelve-month and Three-month Rolling Price of 2017 and 2018 Compliance Years RTCs** (*No Motion Required*) Laki Tisopoulos,
Deputy Executive
Officer
The attached quarterly report summarizes the twelve-month and three-month rolling average prices of NO_x and SO_x RTCs.
(*Written Material Attached*)

OTHER MATTERS

- 7. Other Business**
Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may ask a question for clarification, may make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter, or may take action to direct staff to place a matter of business on a future agenda. (Gov't. Code Section 54954.2)
- 8. Public Comment Period**
At the end of the regular meeting agenda, an opportunity is provided for the public to speak on any subject within the Committee's authority that is not on the agenda. Speakers may be limited to three (3) minutes each.
- 9. Next Meeting Date: November 16, 2018**

ADJOURNMENT

Americans with Disabilities Act

The agenda and documents in the agenda packet will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't. Code Section 54954.2(a)). Disability-related accommodations will also be made available to allow participation in the Stationary Source Committee meeting. Any accommodations must be requested as soon as practicable. Requests will be accommodated to the extent feasible. Please contact Ryan Stromar at (909)396-2637 from 7:30 a.m. to 6:00 p.m., Tuesday through Friday, or send the request to rstromar@aqmd.gov.

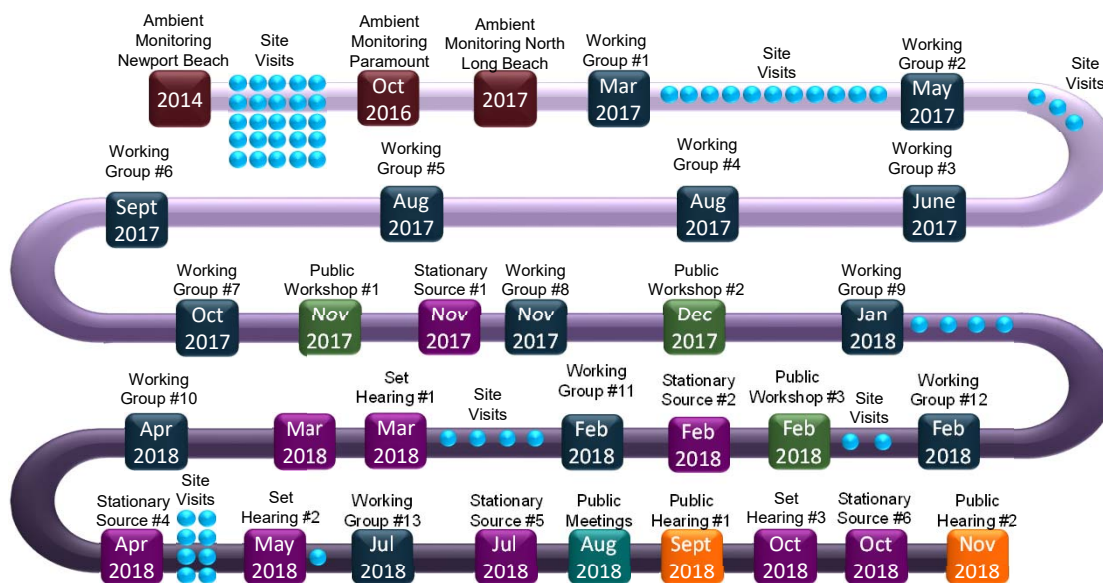
Document Availability

All documents (i) constituting non-exempt public records, (ii) relating to an item on an agenda for a regular meeting, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available prior to the meeting for public review at the South Coast Air Quality Management District, Public Information Center, 21865 Copley Drive, Diamond Bar, CA 91765.

Proposed Amended Rule 1469 Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing

Stationary Source Committee
October 19, 2018

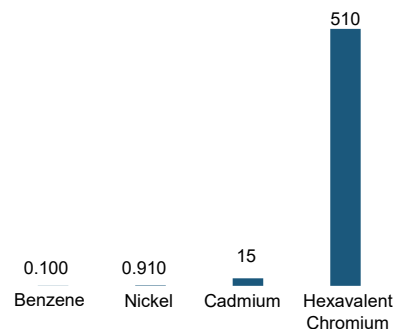
Extensive Rulemaking Process



Health Concerns of Hexavalent Chromium

- Hexavalent chromium is a known human carcinogen
- One of the most potent toxic air contaminants - orders of magnitude higher than other compounds
- Hexavalent chromium, even in very small quantities, can present high risks
- High emitting, unregulated tanks can significantly impact surrounding communities

Inhalation Cancer Potency (mg/kg-day)⁻¹



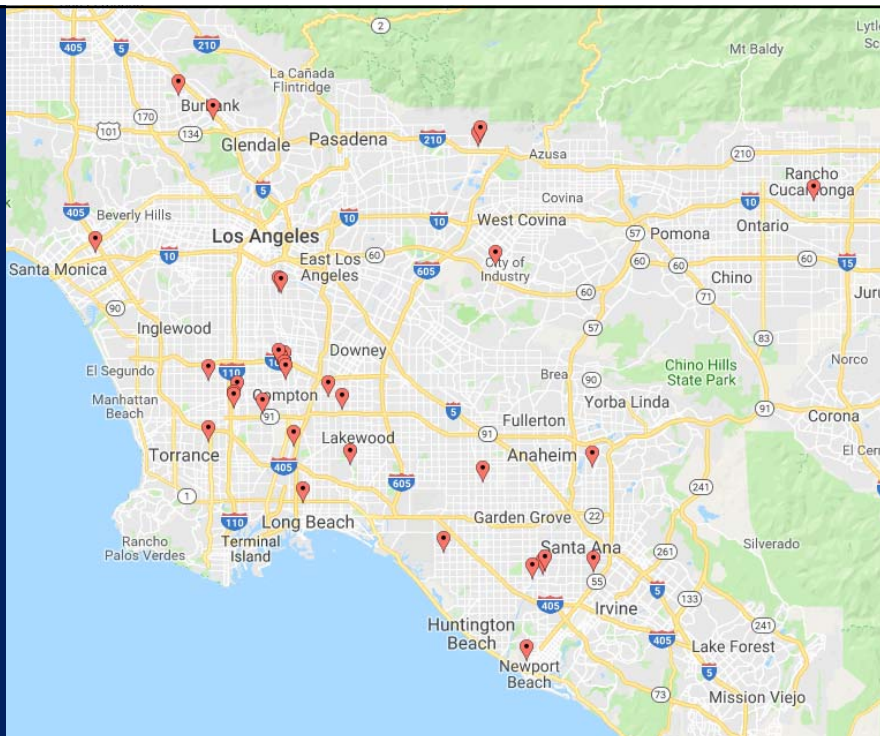
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Objective of PAR 1469 is to address issues found when monitoring near chromic acid anodizing facilities – Air pollution controls needed

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About 30 chromic acid anodizing facilities have unregulated Tier III Tanks that need air pollution controls



PAR 1469 is Designed to Address These Issues



High level of hexavalent chromium at ambient monitors near 3 chromic acid anodizing facilities



Identified **unregulated tanks** with hexavalent chromium emissions **300% above** proposed emission rate (0.2 mg/hour)



Building cross-drafts (openings on opposite sides of building) contributed to high ambient levels of hexavalent chromium

PAR 1469

Emission Control Requirements for Tier I, II, and III Tanks

Tier I
Low emission potential



No Controls

Tier II
Modest emission potential



Tank Covers and/or Mechanical Controls

Tier III
High emission potential



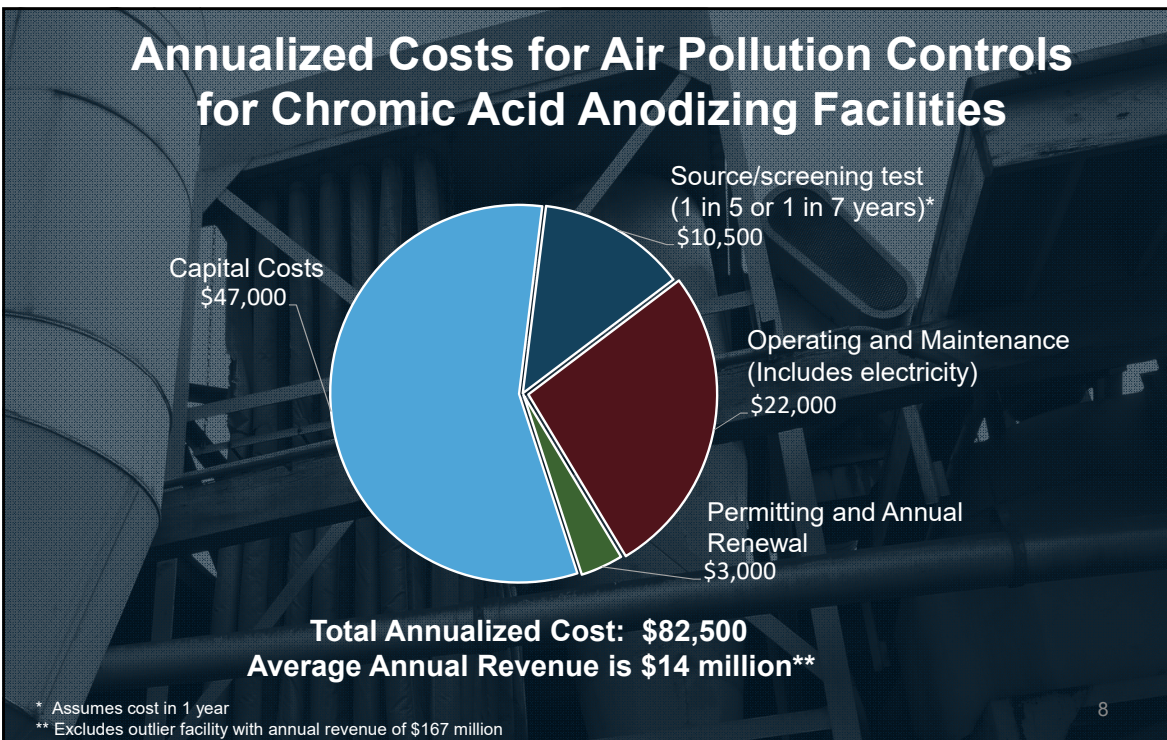
Add-on Air Pollution Control Devices

About half of the Tier III tanks* are expected to meet Tier II requirements by:

- Lowering tank temperature
- Reducing hexavalent chromium concentration in the bath
- Other stripping techniques such as chemical stripping
- Emissions testing demonstrating below Tier III threshold

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*Estimate 46 out of 103 tanks identified in the Socioeconomic Impact Assessment can meet Tier II tank provisions



Stationary Source Committee April 2018

- 13 facilities* provided testimony
 - Overall concern was compliance costs and job impacts
- Staff reached out to each facility to better understand specific issues
- Staff met or had a phone call with 11 of the 13 facilities to discuss their concerns
 - 2 facilities either declined or could not meet with staff



* 28 people, some facilities had multiple commenters

April 20th Stationary Source Committee Meeting

Facility	# People Testified	SCAQMD Staff Follow-up
AAA Plating	1	No Meeting*
Size Control Plating	2	Site Visit
EME	5	Site Visit
General/Brite Plating	5	Site Visit
Chromal Plating	2	Site Visit
Aircraft X-Ray	3	Site Visit
Pico Rivera Plating	1	Phone Call
Gardena Specialized Plating	2	Site Visit
Bowman Plating	2	Site Visit
California Electroplating	1	No Response
Metal Surfaces Inc	2	Met with Facility
Aviation and Repair Solutions	1	Met with Facility
Quaker City Plating	1	Site Visit

- Summary of Specific Issues**

 - Source testing frequency
 - Building enclosure provisions
 - Compressed air cleaning requirement
 - Clarifications

* Scheduling conflict

July 2018 PAR 1469 Revisions



Increased allowable openings for building enclosure from 3 to 3.5%



Reduced distance to a roof vent and removed powered roof vent provision



Reduced source testing frequency from 3 years to 5 or 7 years*



Modified definition of stack for building enclosures



Maintained weekly housekeeping provisions, instead of daily



Removed new provisions for tank freeboard ratio - will address in permitting



Allow outer tank wall to work as a barrier for compressed air drying



Allow use of large equipment or structure to eliminate cross-draft

* Based on annual amp-hours

Industry Comments at September 7th Public Hearing

- Representatives from 7 facilities commented
 - General comments about cost
- 3 of the facilities commented that
 - PAR 1469 would impact the future of their business and job impacts
- Rules staff visited all 3 facilities in April
 - July revision incorporated changes to address their issues

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September Public Hearing

Facility	Testified at April Stationary Source	Testified at Sept Public Hearing	Concerned About Future of Their Business
AAA Plating	Yes	Yes	
Size Control Plating	Yes		
EME	Yes	Yes	
General/Brite Plating	Yes	Yes	Yes
Chromal Plating	Yes		
Aircraft X-Ray	Yes	Yes	Yes
Pico Rivera Plating	Yes		
Gardena Specialized Plating	Yes		
Bowman Plating	Yes		
California Electroplating	Yes		
Metal Surfaces Inc	Yes	Yes	Yes
Aviation and Repair Solutions	Yes		
Quaker City Plating	Yes		
Anaplex Corporation		Yes	
Metal Finishing Marketers, Inc.		Yes	

Cost to Revenue for 3 Facilities

Facility	Annual Revenue ¹	SCAQMD Annual Cost ²	SCAQMD Cost to Revenue Ratio
1	\$24,000,000	\$3,200	0.01%
2	\$7,500,000	\$24,000	0.32%
3	\$11,500,000	\$97,000	0.83%

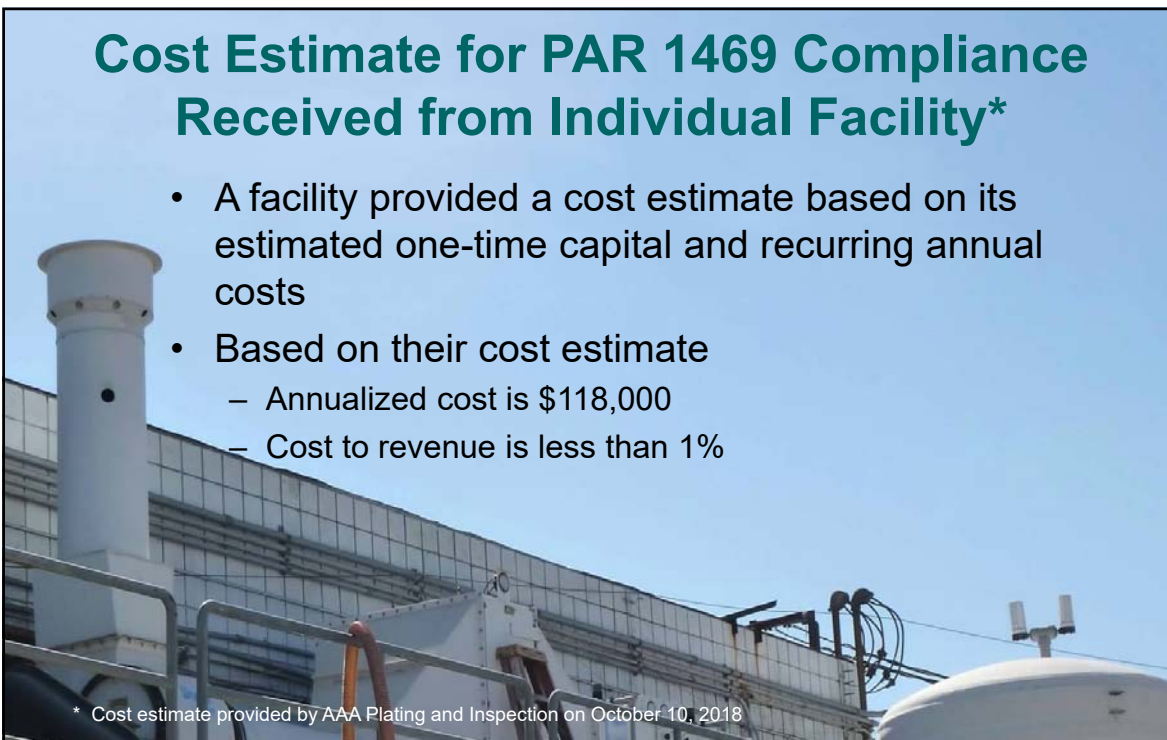
¹ Revenue data from Dun and Bradstreet

² High Cost Scenario in Socioeconomic Impact Assessment, based on available data from facility survey data

Cost Estimate for PAR 1469 Compliance Received from Individual Facility*

- A facility provided a cost estimate based on its estimated one-time capital and recurring annual costs
- Based on their cost estimate
 - Annualized cost is \$118,000
 - Cost to revenue is less than 1%

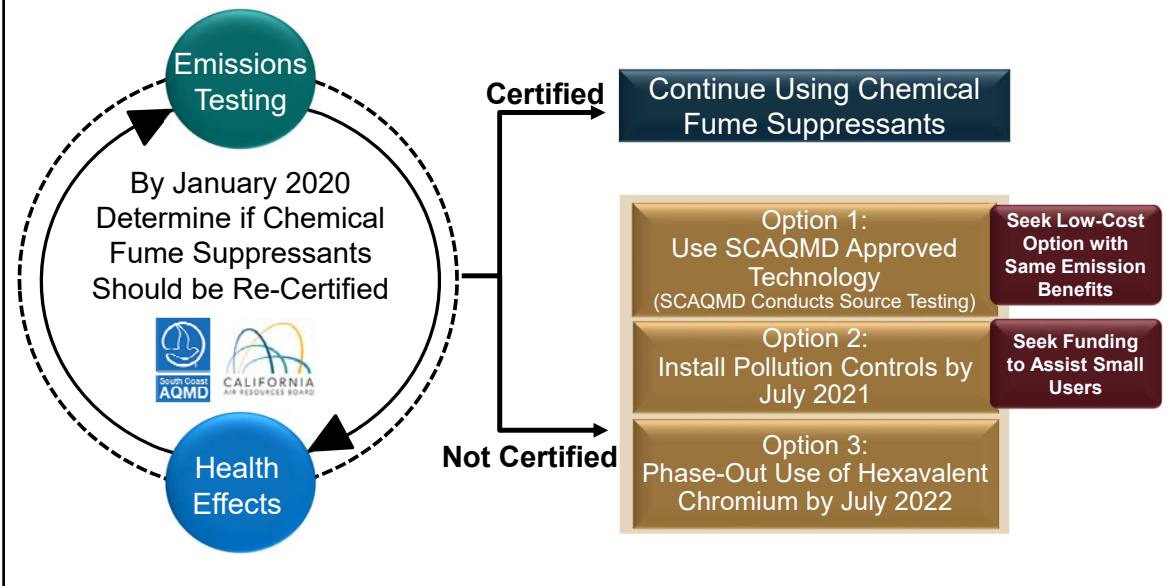
* Cost estimate provided by AAA Plating and Inspection on October 10, 2018



Community Concerns

	Rule 1469	PAR 1469
Use of PFAS CFS	Allowed	Schedule with Possible Ban
Building Enclosure Requirements	None	Enclosure Requirements
Phase Out of Hexavalent Chromium	None	Incentives
Source Test Frequency	Initial No Periodic	60 Months 84 Months
Ambient Monitoring Requirements	None	Address in PR 1480

Re-Evaluation of Fume Suppressants



Need for PAR 1469

Installation of air pollution controls on unregulated high emitting Tier III Tanks	Periodic source testing and parameter monitoring of air pollution controls	Building enclosure requirements to minimize release of fugitive emissions	Incentives for phase-out of hexavalent chromium use	Establish schedule to assess and possibly ban use of chemical fume suppressants

Next Steps

- Staff recommendation
 - Public Hearing in November 2018

PROPOSED AMENDED RULES 1146, 1146.1, 1146.2 & PROPOSED RULE 1100

STATIONARY SOURCE COMMITTEE
OCTOBER 19, 2018

Background

- ❑ Proposed Amended Rules 1146, 1146.1, and 1146.2 apply to boilers, process heaters, and steam generators
- ❑ Proposed amendments implement:
 - 2016 AQMP CMB-05 (Further NO_x Reductions from RECLAIM Assessment)
 - Best Available Retrofit Control Requirements (BARCT) for facilities in the state greenhouse gas cap and trade program by December 31, 2023, consistent with AB 617 requirements

Rule	Applicability	Size
Rule 1146	Boilers, steam generators, and process heaters	≥ 5 million Btu per hour
Rule 1146.1	Boilers, steam generators, and process heaters	>2 and <5 million Btu per hour
Rule 1146.2	Natural gas-fired water heaters, boilers, and process heaters	≤ 2 million Btu per hour

Proposed Amended Rules 1146 and 1146.1

- ❑ New NOx limits based on BARCT technology assessment which includes cost-effectiveness analysis
- ❑ Add ammonia slip emission limit of 5 ppm*
- ❑ Exclude units at refineries and electricity generating facilities – addressed in respective industry-specific rule
- ❑ RECLAIM implementation schedule specified in Proposed Rule 1100

* For pollution controls with ammonia emissions such as selective catalytic reduction

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Proposed NOx Emission Limits – PAR 1146

Category	Current Limit	Proposed Limit	Cost Effectiveness (\$/Ton)
≥5 to <20 MMBtu/hr	9 ppmv	7 ppmv (Fire-tube) 9 ppmv (Others)	<\$10,000* to \$27,000^
≥20 to <75 MMBtu/hr	9 ppmv	If >12 ppmv, then 5 ppmv If ≤12 ppmv, then 7 ppmv (Fire-tube) & 9 ppmv (Others)	\$36,000^ \$11,000*
≥75 MMBtu/hr	5 ppmv	Same	\$16,000^
Atmospheric (≥ 5 to ≤10 MMBtu/hr)	12 ppmv	Same	\$28,000+
Thermal Fluid Heater (≥ 5 MMBtu/hr)	30 ppmv	12 ppmv	\$36,000+
Landfill Gas Fired (≥ 5 MMBtu/hr)	25 ppmv	20 ppmv	\$35,000
Digester Gas Fired (≥ 5 MMBtu/hr)	15 ppmv	Same	N/A

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* Compliance until burner replacement or 15 yrs after amendment * Estimated assuming 20% operating capacity and a baseline of 30 ppm
^ Estimated using emissions from RECLAIM units

Proposed NOx Emission Limits - PAR 1146.1

Category	Current Limit	Proposed Limits	Cost Effectiveness (\$/Ton)
>2 to <5 MMBtu/hr	9 ppmv	7 ppmv (Fire-tube) 9 ppmv (Others)	<\$10,000* to \$36,000^
Atmospheric (>2 to <5 MMBtu/hr)	12 ppmv	Same	\$28,000*
Thermal Fluid Heater (>2 to <5 MMBtu/hr)	30 ppmv	12 ppmv	\$36,000*
Landfill Gas Fired (>2 to <5 MMBtu/hr)	25 ppmv	20 ppmv	N/A
Digester Gas Fired (>2 to <5 MMBtu/hr)	15 ppmv	Same	N/A

* Compliance until burner replacement or 15 yrs after amendment

^ Estimated using emissions from RECLAIM units

* Estimated assuming 20% operating capacity and a baseline of 30 ppm

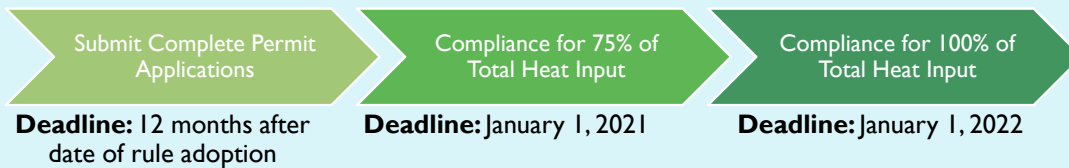
Proposed Amended Rule 1146.2

- ❑ No changes to NOx concentration limit of 30 ppm at this time
- ❑ Commitment to conduct a technology assessment by January 1, 2022
 - If BARCT is the same as existing rule requirements (30 ppm), compliance by December 31, 2023
 - If BARCT is less than 30 ppm, a new compliance schedule will be developed
- ❑ Any unit at a RECLAIM or former RECLAIM facility that is subject to a NOx emission limit in a different rule for an industry-specific category is exempt from Rule 1146.2

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Proposed Rule 1100 Compliance Schedule*

Compliance Schedule for Rule 1146 and 1146.1 Units

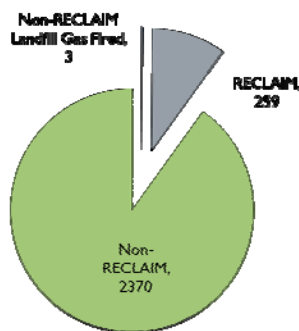


- Additional year to comply if facility elects to replace unit
- Units that are close to NOx emission limit can comply upon burner replacement or 15 years from date of rule amendment
- Requirements apply to facilities while in RECLAIM and through transition process
- Title V Facilities – follow Monitoring, Reporting and Recordkeeping (MRR) requirements specified in Rule 2012
- Non-Title V Facilities – follow MRR requirements specified in PAR 1146/1146.1

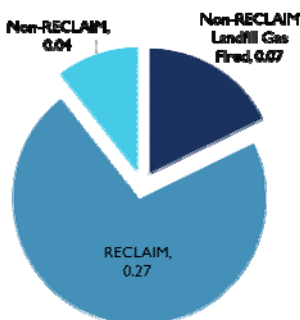
*Any unit at a RECLAIM or former RECLAIM facility that is subject to a NOx emission limit in a different rule for an industry-specific category is not subject to the schedule in PRI 1100

Emission Reductions

Rule 1146/1146.1 Equipment Distribution



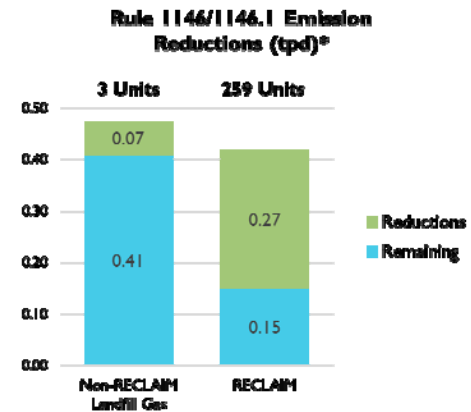
Rule 1146/1146.1 Reductions (tpd)



- RECLAIM emission reductions of 0.27 tpd by Jan. 1, 2023
- Emission reductions of 0.07 tpd from landfill gas fired units by Jan. 1, 2022
- Additional reductions of 0.04 tpd from non-RECLAIM natural gas fired units by 15 years after rule amendment

Key Remaining Issues – Landfill Gas Fired Units

- ❑ **Comment:** Landfill gas fired equipment will not be able to meet the proposed limit of 20 ppm and it will not be cost-effective to retrofit
- ❑ **Response:**
 - Landfill gas fired units located in other districts (< 40 MMbtu/hr) are permitted at 9-15 ppm
 - Source test results support lowering BARCT to 20 ppm is feasible
 - Baseline emissions from 3 landfill gas fired units are higher than baseline emissions from 259 RECLAIM units
 - Cost-effectiveness is approximately \$35,000/ton



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Key Remaining Issues – New Source Review

- ❑ **Comment:** Transition rules should not proceed without resolution of new source review (NSR) issues
- ❑ **Response:**
 - State law (AB 617) requires implementation of BARCT for facilities in the state greenhouse gas cap and trade program by December 31, 2023
 - RECLAIM facilities can begin implementing BARCT requirements while in RECLAIM
 - Rule 2002 provides an option for facilities to remain in RECLAIM for a limited time until future provisions in Regulation XIII pertaining to NSR are adopted

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Key Remaining Issues – Dual Fuel Units

- ❑ **Comment:** Dual fuel boilers using digester gas and natural gas will have difficulty meeting 7 ppm NOx limit when using natural gas only
- ❑ **Response:**
 - Dual fuel units located in SJVAPCD have been required to meet 7 ppm NOx when fired with only natural gas
 - Units located in SJVAPCD are permitted at 7 ppm or below when firing only on natural gas for both new and retrofits
 - Units in SJVAPCD are complying with rule limits through retrofits despite mitigation fee option

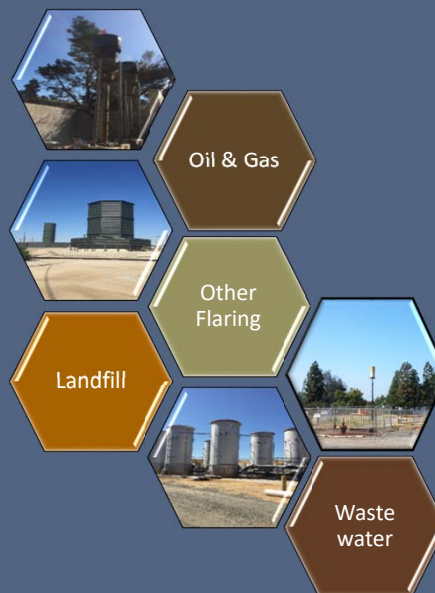
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Schedule

- | | |
|------------------|------------------|
| ▪ Set Hearing | November 2, 2018 |
| ▪ Public Hearing | December 7, 2018 |

PROPOSED RULE 1118.1 Control of Emissions From Non- Refinery Flares

Stationary Source Committee
October 19, 2018



Background

- Gas is produced from landfills, waste water treatment, oil extraction, and bulk liquid handling
 - ✓ Primarily composed of methane and other VOCs/air toxics
- Some gas is used for beneficial purposes:
 - ✓ Energy production
 - ✓ Pipeline injection
 - ✓ Transportation fuel
- Flares are used to combust methane and VOCs to reduce emissions but they result in NOx emissions

Wastewater Treatment



Oil Extraction



Other Flaring (tank farm)



Landfill

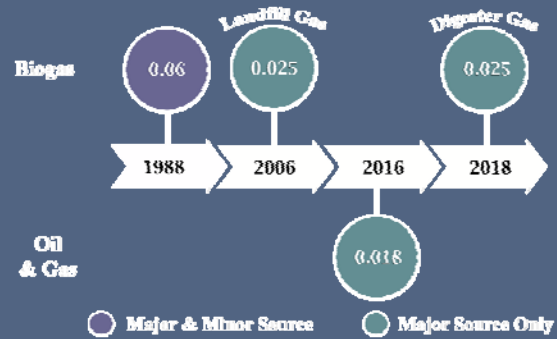


Regulatory Background

- Currently no source-specific rule for non-refinery flares

- ✓ New flares are subject to New Source Review Best Available Control Technology (BACT)
- ✓ U.S. EPA RACT/RACM requires rule for non-refinery flares
 - Two California air districts adopted flare rules

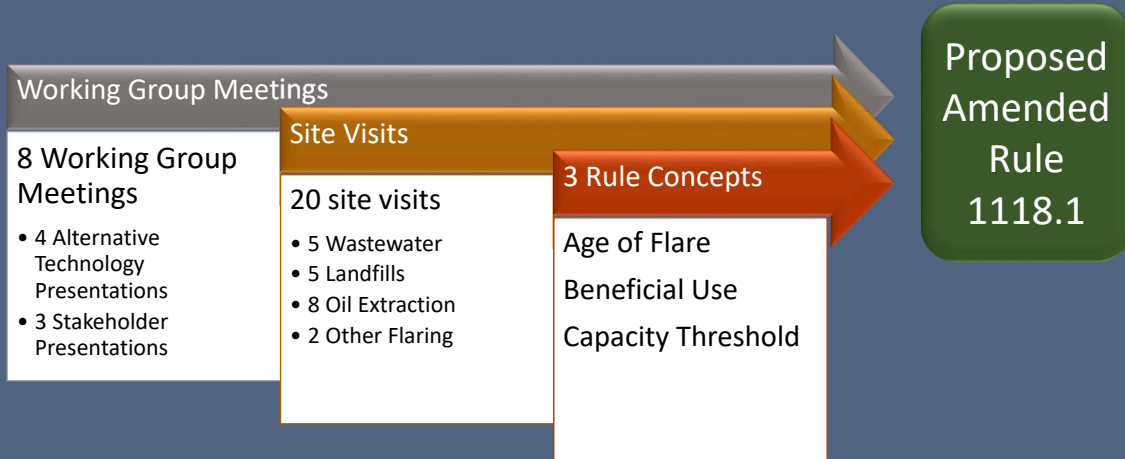
BACT Standards for Non-Refinery Flares (lbs./MMBtu)



- 2016 AQMP Control Measures

- ✓ CMB-03 – Emission Reductions from Non-Refinery Flares
- ✓ CMB-05 - Further NOx Reductions from RECLAIM Assessment

Rule Development – Initiated April 2017

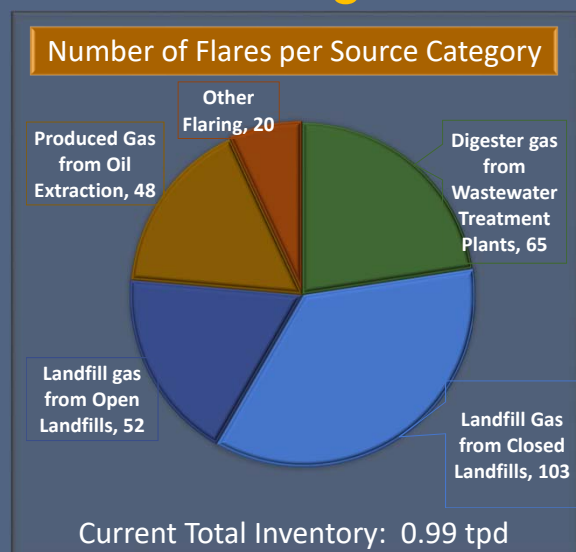


Goals of Proposed Rule 1118.1

Minimize routine flaring	Maximize Emission Reductions	Encourage beneficial use
Establish a capacity threshold for existing flares	Set threshold to achieve maximum emission reductions	Allow longer time frame for flare emission reduction vs flare replacement

Affected Facilities and Source Categories

- 146 facilities with total of 288 flares
- Landfills have the greatest number of flares, gas throughput, and NOx emissions
- “Other flaring” includes organic liquid handling:
 - ✓ Loading and unloading of marine vessels, trucks and railcars
 - ✓ Tank farms and tank degassing



Considerations By Source Category

 <p>Wastewater</p> <ul style="list-style-type: none"> • 29 facilities/65 flares • Constant gas production • Low gas quality/ high clean-up cost • Energy intensive operations – high interest in generating energy onsite 	 <p>Landfill</p> <ul style="list-style-type: none"> • 58 facilities/155 flares • Constant gas production • Low gas quality/ high clean-up cost • Capital investment at closed landfills is difficult 	 <p>Oil & Gas</p> <ul style="list-style-type: none"> • 37 facilities/48 flares • Gas production only when extracting oil – operation shut down possible • High gas quality • Typically install high capacity flares • Some operations energy intensive, some remote
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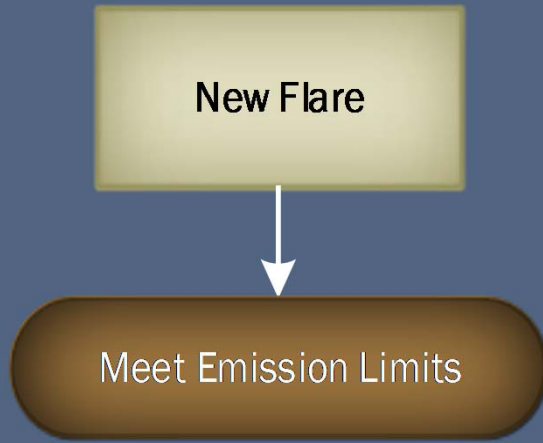
General Approach for PR 1118.1

- Different provisions for new and existing flares
- Designed to:
 - ✓ Provide compliance options that encourage beneficial use rather than flare replacement
 - Extended timeframe for flare reduction (e.g. increased beneficial use)
 - ✓ Accounts for different operational constraints for different source categories
 - ✓ Cost-effective by design



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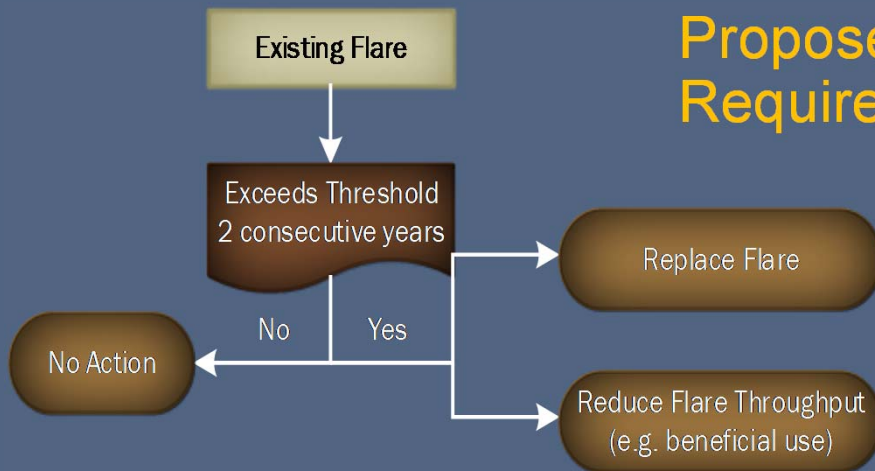
Proposed Requirements



Flare Gas	NOx	CO	VOC
	Pounds/MMBtu		
Digester gas	0.025	0.06	0.038
Landfill gas	0.025	0.06	0.038
Produced gas from Oil Extraction	0.018	0.06	0.038
Other flare gas	ppmv 3% O ₂		DE*
	30	10	99%

*DE = Destruction Efficiency
 0.018 pounds/MMBtu ~ 15 ppm

Proposed Requirements (cont'd)



Capacity Thresholds	
Flare Gas	Threshold
Any gas combusted in open flare	5%
Digester gas	70%
Landfill gas	20%
Produced gas from Oil Extraction	5%

- Capacity thresholds for each source category based on:
 - ✓ Source category emissions and flare replacement costs
 - ✓ Maximum emission reduction to be achieved
- No threshold for "other flaring" due to low volume, diverse gas stream and limited beneficial use opportunities

Other Rule Requirements

- Source Testing
 - ✓ Every 5 years to be consistent with current industry requirements
 - ✓ Required for flare subject to emission limit or low-emitting exemption
- Monitoring, Recordkeeping, and Reporting
 - ✓ Fuel meters required for flares with capacity threshold
 - ✓ Monitor throughput and percent capacity on monthly basis
- Exemptions
 - ✓ Low-use and low-emitting
 - ✓ Closed landfills generating less than 2,000 MMscf/year
 - ✓ Flares subject to other district rules

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Existing Flares

Gas Flared	Inventory		Potentially Impacted Flares	
	# of Flares	NOx (tpd)	# of Flares	Reductions (tpd)
Digester Gas	65	0.08	1	0.01
Landfill Gas	155	0.84	19	0.18
Produced Gas from Oil Extraction	48	0.05	5	0.01
Other Flare Gas	20	0.02	0	0
TOTAL	288	0.99	25	0.20

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Potentially Affected Flares

Greatest number at landfills

- Majority of gas flared occurs at landfills
- Cost effective due to potential emission reductions

Cost of flares

- Higher cost per flare at wastewater treatment plants and landfills
- Low emission reduction potential at wastewater treatment resulted in high capacity threshold

Beneficial Use

- All source categories utilizing beneficial use to some extent, especially for energy intensive operations (wastewater treatment and oil extraction)

0.2 tpd NOx reduction is substantial

- ~40 tpd NOx inventory in SCAQMD excluding mobile and residential (2023 inventory)
- Current inventory based on 2015 – 2017 usage
- Rule will have increased benefits in the future given potential growth in industry (e.g. increased price of oil)

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Key Concerns

Comment

- Allow higher emitting flares (0.06 lb/MMBtu) at *minor source* wastewater treatment plant
- Small facilities or facilities with small flares likely to exceed thresholds could be fiscally burdened
- Not enough incentive for oil and gas facilities to change to beneficial use

Response

- Rule seeks to achieve maximum emission reductions at all facilities; existing flares at some minor sources meet proposed limit
- Rule does not require flare replacement, other options may be more cost effective; rule provides opportunity for long term planning
- Low-NOx flares emit 50% less emissions; growing interest in replacing flare by utilizing gas beneficially

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Proposed Rule 1118.1 Schedule

Continue to work with stakeholders on key issues

Set Hearing: November 2, 2018

Public Hearing: December 7, 2018

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NOx RECLAIM Quarterly Update

STATIONARY SOURCE COMMITTEE
OCTOBER 19, 2018

4th Quarter Update “At a Glance”



**Monthly RECLAIM
Working Group
Meetings**

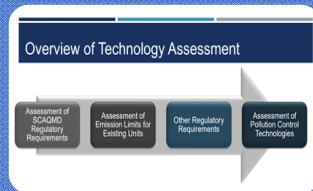


**Rule Development for
Command and Control Rules**
• 11 Working Group
Meetings



**Rules 2001/2002
Amended on
October 5, 2018**

RECLAIM Working Group Meetings



July 2018

- Details on BARCT analysis for landing rules
- Proposed Amendments to Rules 2001/2002
- Continued facility-level meetings



September 2018

- Details on BARCT cost-effectiveness methodology for landing rules
- Proposed Amended Rules 2001 and 2002
- New Source Review Update
- BARCT – Retrofit vs. Replacement

3

BARCT Requirements – Retrofit and Replacement

- ❑ **Comment:** SCAQMD does not have the authority to require replacement as BARCT
- ❑ **Response:**
 - The statutory definition of BARCT supports a broad interpretation including replacement
 - Applicable dictionary definitions do not preclude the view that BARCT can include equipment replacement
 - It may be more cost-effective for the oldest and dirtiest equipment to be replaced rather than installing additional add-on controls
 - BARCT is not a limitation on SCAQMD authority
 - The SCAQMD retains broad statutory authority to adopt emission-control requirements for stationary sources, and that authority may require equipment replacement, as long as the requirement is not arbitrary and capricious

4

Summary of Key New Source Review (NSR) Issues

- Options for offsets for NSR events post RECLAIM
 - Source of offsets – open market, internal bank, RECLAIM NSR
- Accounting of RTCs for NSR actions that occurred during RECLAIM
- Ensure mechanisms in place to establish a Potential to Emit to ensure future NSR events
- Other demonstrations
 - SB 288 – offset program is at least as stringent in aggregate
 - Clean Air Act §110(l) – Prohibition on Backsliding

5

NSR – Process Moving Forward

Continuing discussions with USEPA regarding RECLAIM NSR for transition

Ensure all NSR, AQMP, and CAA requirements will be met after sunset of RECLAIM program

Weekly calls with EPA

Periodic face-to-face meetings for more extensive discussions

Work with RECLAIM Working Group Meeting

Monthly RECLAIM Working Group Meetings will shift focus towards NSR

Continued discussions with stakeholders

Updates to Stationary Source Committee (SSC)

Quarterly presentation with quarterly RECLAIM update

Monthly written report to provide regular updates to the Committee

6

Command-and-Control BARCT Rulemaking Status

PAR 1146, 1146.1 and 1146.2



Boilers, steam generators, and heaters

- 7th Working Group Meeting: October 16, 2018
- Public Hearing: December 2018

PR 1118.1



Non-Refinery Flares

- Public Workshop: October 17, 2018
- Public Hearing: December 2018

PAR 1134



Gas Turbines

- Public Workshop: November 2018
- Public Hearing: 2019

PAR 1135



Electrical Generating Facilities

- Set Hearing: October 5, 2018
- Public Hearing: November 2, 2018

Command-and-Control BARCT Rulemaking Status

PR 1109.1



Refineries

- Draft Request for Proposal for third party verification of BARCT analysis:
 - Administrative Committee: November 9, 2018
 - Governing Board Approval Release December 7, 2018
- Continuing site visits
- Public Hearing: 2019

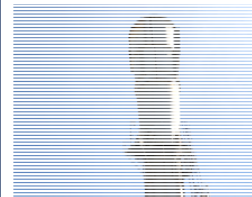
PAR 1110.2



Gaseous- and Liquid-Fueled Engines

- Initiated site visit, more to be scheduled
- Sent survey questionnaire
- Public Workshop: 4th Quarter 2018
- Public Hearing: 1st Quarter 2019

PR 113



Monitoring, Reporting, and Recordkeeping

- Integrated MRR requirements for:
 - Former RECLAIM
 - Possibly non-RECLAIM
- Initiated preliminary analysis
- Comparing District and Federal requirements
- Conducted three site visits

On-Going Efforts and Next Steps

- Monthly meetings of RECLAIM Working Group
- Continue rulemaking activities
- Individual facility meetings
- Continue work on working with USEPA, CARB and stakeholders on addressing NSR issues

9

**DISTRICT'S RULES AND REGULATIONS INDEX
FOR SEPTEMBER 2018 PENALTY REPORT**

Item #5

REGULATION II - PERMITS

- Rule 201 Permit to Construct
- Rule 203 Permit to Operate
- Rule 221 Plans

REGULATION IV - PROHIBITIONS

- Rule 401 Visible Emissions
- Rule 461 Gasoline Transfer and Dispensing
- Rule 462 Organic Liquid Loading

REGULATION XI - SOURCE SPECIFIC STANDARDS

- Rule 1148.1 Oil and Gas Production Wells
- Rule 1155 Particulate Matter Control Devices
- Rule 1173 Fugitive Emissions of Volatile Organic Compounds

REGULATION XX - REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

- Rule 2004 Requirements

REGULATION XXX - TITLE V PERMITS

- Rule 3002 Requirements
- Rule 3003 Applications

CALIFORNIA CODE OF REGULATIONS

- 13 CCR 2460 Portable Equipment Testing Requirements

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
General Counsel's Office**

September 2018 Settlement Penalty Report

<u>Total Penalties</u>	
Civil Settlements:	\$293,750.00
Settlements including SEP:	\$40,000.00
MSPAP Settlements:	\$6,475.00
Total Cash Settlements:	\$340,225.00
Total SEP Value:	\$10,000.00
Fiscal Year through 9 / 2018 Cash Total:	\$1,069,392.00
Fiscal Year through 9 / 2018 SEP Value Only Total:	\$10,000.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
Civil Settlements						
800030	CHEVRON PRODUCTS CO.	3002	9/14/2018	TRB	P58242	\$160,000.00
800032	CHEVRON USA INC	3002(c)(1) 462(d)(1)(F)	9/13/2018	TRB	P65314	\$10,000.00
19144	CORONET MFG CO INC	3002 3003	9/13/2018	VKT	P64013	\$1,250.00
181082	DAVITA DIALYSIS	203 (a)	9/7/2018	WBW	P56738	\$4,000.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
92901	DYNAMIC POWDER COATING	203 (a) 1155	9/11/2018	NSF	P58084 P58089 P60452	\$5,000.00
175388	GRAND GAS, INC.	461 203	9/21/2018	SMP	P63215 P64983	\$6,000.00
100145	HARBOR FUMIGATION INC	3002	9/27/2018	SH	P63555	\$15,000.00
131732	NEWPORT FAB, LLC	2004	9/6/2018	DH	P56342 P56343 P60573	\$40,000.00
131732	NEWPORT FAB, LLC	2004	9/6/2018	DH	P64145	\$2,500.00
97081	THE TERMO COMPANY	1148.1 1173 221 462 2004	9/11/2018	NAS	P37248 P37249 P56994 P56995 P59379 P59381 P59383 P60867 P61526 P62956	\$50,000.00

Total Civil Settlements: \$293,750.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
Settlements including SEP						
14364	CHEMICAL LIME CO	1155	9/19/2018	MJR	P61806	\$40,000.00
	<i>SEP \$10,000 - Facility to purchase equipment by November 1, 2018</i>	203				
		401				

Total Settlements including SEP: \$40,000

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
MSPAP Settlements						
167320	ANABI OIL CORP. DBA C-MINI MART, INC.	461(c)(3)(Q)	9/26/2018	GC	P70560	\$600.00
184713	EQUITY RESIDENTIAL (HESBY)	203	9/11/2018	GC	P65152	\$200.00
183372	H & M INC DBA ARCO OF FULLERTON	461	9/11/2018	GC	P64982	\$650.00
800428	LAMPS PLUS INC/ PACIFIC COAST LIGHTING	3002(c)(1)	9/27/2018	TF	P66764	\$500.00
179343	MOTORS PETROLEUM INC	461	9/27/2018	TF	P66351	\$850.00
121344	NO. ORANGE CTY COMMUNITY COLLEGE DIST.	461(c)(3)(Q)	9/27/2018	TF	P71028	\$200.00
34300	PIERCE BROTHERS INC. - SCI CALIF FUNERALS	201 203 (a)	9/27/2018	TF	P68201	\$1,600.00
186766	RANCHO CALIFORNIA LANDSCAPING, INC.	203	9/27/2018	TF	P67653	\$800.00
160732	THRIFTY TREE SERVICE INC	PERP 2460	9/27/2018	TF	P66754	\$275.00
123861	VERIZON WIRELESS, JOHNSTONE PEAK	203 (a)	9/27/2018	TF	P65381	\$800.00

Total MSPAP Settlements: \$6,475.00



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Twelve-Month and Three-Month Rolling Average Price of Compliance Years 2017 and 2018 NOx and SOx RTCs

October 2018 Quarterly Report to Stationary Source Committee

Table I

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTCs
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Jan-17	Jan-16 to Dec-16	69.7	\$460,621	9	\$6,606
Feb-17	Feb-16 to Jan-17	94.7	\$610,693	11	\$6,446
Mar-17	Mar-16 to Feb-17	82.2	\$573,193	10	\$6,970
Apr-17	Apr-16 to Mar-17	125.3	\$824,493	12	\$6,581
May-17	May-16 to Apr-17	113.8	\$741,828	15	\$6,519
Jun-17	Jun-16 to May-17	113.8	\$741,828	15	\$6,519
Jul-17	Jul-16 to Jun-17	134.4	\$867,079	22	\$6,450
Aug-17	Aug-16 to Jul-17	144.8	\$920,041	29	\$6,355
Sep-17	Sep-16 to Aug-17	150.4	\$955,120	35	\$6,351
Oct-17	Oct-16 to Sep-17	151.2	\$956,005	36	\$6,323
Nov-17	Nov-16 to Oct-17	252.8	\$1,345,772	55	\$5,324
Dec-17	Dec-16 to Nov-17	267.1	\$1,376,674	58	\$5,155
Jan-18	Jan-17 to Dec-17	305.1	\$1,276,006	57	\$4,182
Feb-18	Feb-17 to Jan-18	693.2	\$1,888,755	94	\$2,724
Mar-18	Mar-17 to Feb-18	743.6	\$1,991,269	111	\$2,678
Apr-18	Apr-17 to Mar-18	705.6	\$1,746,469	110	\$2,475
May-18	May-17 to Apr-18	766.5	\$1,993,214	127	\$2,600
Jun-18	Jun-17 to May-18	778.0	\$2,050,015	129	\$2,635
Jul-18	Jul-17 to Jun-18	826.8	\$2,091,914	128	\$2,530
Aug-18	Aug-17 to Jul 18	875.7	\$2,143,688	138	\$2,448

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Sep-18	Sep-17 to Aug-18	1,195.3	\$2,508,784	159	\$2,099
Oct-18	Oct-17 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table II

Twelve-Month Rolling Average Price Data for Compliance Year 2018 NOx RTCs
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2018 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Jan-18	Jan-17 to Dec-17	91.6	\$974,592	3	\$10,639
Feb-18	Feb-17 to Jan-18	91.6	\$974,592	3	\$10,639
Mar-18	Mar-17 to Feb-18	100.7	\$1,041,091	4	\$10,337
Apr-18	Apr-17 to Mar-18	51.6	\$497,246	5	\$9,643
May-18	May-17 to Apr-18	56.6	\$527,075	8	\$9,320
Jun-18	Jun-17 to May-18	53.1	\$502,575	7	\$9,473
Jul-18	Jul-17 to Jun-18	72.6	\$625,883	14	\$8,618
Aug-18	Aug-17 to Jul 18	80.0	\$660,279	19	\$8,251
Sep-18	Sep-17 to Aug-18	86.8	\$698,621	28	\$8,050
Oct-18	Oct-17 to Sep-18	104.3	\$759,871	29	\$7,287

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table III

Three-Month Rolling Average Price Data for Compliance Year 2017 NOx RTCs
 (Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	3-Month Period	Total Volume Traded with Price During Past 3-month (tons)	Total Price of Volume Traded During Past 3-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
Jan-17	Oct-16 to Dec-16	41.1	\$310,586	6	\$7,561
Feb-17	Nov-16 to Jan-17	66.1	\$460,658	8	\$6,971
Mar-17	Dec-16 to Feb-17	65.0	\$452,221	7	\$6,962
Apr-17	Jan-17 to Mar-17	68.1	\$401,372	4	\$5,897
May-17	Feb-17 to Apr-17	46.6	\$272,479	6	\$5,847
Jun-17	Mar-17 to May-17	46.6	\$272,479	6	\$5,847
Jul-17	Apr-17 to Jun-17	24.2	\$146,430	11	\$6,051
Aug-17	May-17 to Jul-17	31.0	\$178,213	14	\$5,753
Sep-17	Jun-17 to Aug-17	36.6	\$213,292	20	\$5,828
Oct-17	Jul-17 to Sep-17	17.9	\$97,616	15	\$5,468
Nov-17	Aug-17 to Oct-17	109.1	\$434,421	27	\$3,981
Dec-17	Sep-17 to Nov-17	118.9	\$438,682	25	\$3,689
Jan-18	Oct-17 to Dec-17	195.0	\$630,587	27	\$3,233
Feb-18	Nov-17 to Jan-18	506.5	\$1,003,641	47	\$1,981
Mar-18	Dec-17 to Feb-18	541.5	\$1,066,815	60	\$1,970
Apr-18	Jan-18 to Mar-18	468.5	\$871,835	57	\$1,861
May-18	Feb-18 to Apr-18	119.8	\$376,939	39	\$3,145
Jun-18	Mar-18 to May-18	81.0	\$331,226	24	\$4,092
Jul-18	Apr-18 to Jun-18	145.5	\$491,876	29	\$3,382
Aug-18	May-18 to Jul-18	140.1	\$328,687	25	\$2,345
Sep-18	Jun-18 to Aug-18	453.9	\$672,061	50	\$1,481
Oct-18	Jul-18 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

Table IV

Three-Month Rolling Average Price Data for Compliance Year 2018 NOx RTCs
(Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2018 NOx RTC					
Reporting Month	3-Month Period	Total Volume Traded with Price During Past 3-month (tons)	Total Price of Volume Traded During Past 3-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
Jan-18	Oct-17 to Dec-17	38.1	\$400,092	1	\$10,500
Feb-18	Nov-17 to Jan-18	38.1	\$400,092	1	\$10,500
Mar-18	Dec-17 to Feb-18	9.1	\$66,499	1	\$7,300
Apr-18	Jan-18 to Mar-18	10.0	\$72,654	3	\$7,295
May-18	Feb-18 to Apr-18	15.0	\$102,483	6	\$6,855
Jun-18	Mar-18 to May-18	5.8	\$35,984	5	\$6,160
Jul-18	Apr-18 to Jun-18	24.6	\$153,137	10	\$6,235
Aug-18	May-18 to Jul-18	27.0	\$157,704	12	\$5,848
Sep-18	Jun-18 to Aug-18	33.7	\$196,046	21	\$5,813
Oct-18	Jul-18 to Sep-18	31.7	\$133,988	15	\$4,233

Table V

Twelve-Month Rolling Average Price Data for Infinite-Year Block NOx RTCs
 (Report to Governing Board if rolling average price after 2018 is less than \$200,000/ton)

Twelve-Month Rolling Average Price Data for Infinite-Year Block NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
May-16	May-15 to Apr-16	805.1	\$215,694,953	44	\$267,913
Jun-16	Jun-15 to May-16	781.6	\$211,669,953	44	\$270,819
Jul-16	Jul-15 to Jun-16	351.5	\$128,539,029	31	\$365,654
Aug-16	Aug-15 to Jul-16	512.9	\$166,663,599	32	\$324,943
Sep-16	Sep-15 to Aug-16	517.7	\$167,951,099	32	\$324,449
Oct-16	Oct-15 to Sep-16	441.9	\$150,586,981	30	\$340,759
Nov-16	Nov-15 to Oct-16	321.9	\$121,239,854	25	\$376,628
Dec-16	Dec-15 to Nov-16	321.9	\$121,238,354	24	\$376,638
Jan-17	Jan-16 to Dec-16	301.9	\$114,731,605	20	\$380,057
Feb-17	Feb-16 to Jan-17	183.0	\$46,520,577	10	\$254,172
Mar-17	Mar-16 to Feb-17	174.3	\$41,738,077	7	\$239,491
Apr-17	Apr-16 to Mar-17	174.3	\$41,738,077	7	\$239,491
May-17	May-16 to Apr-17	176.8	\$42,113,977	8	\$238,223
Jun-17	Jun-16 to May-17	175.3	\$41,588,977	7	\$237,266
Jul-17	Jul-16 to Jun-17	172.2	\$40,437,201	6	\$234,802
Aug-17	Aug-16 to Jul-17	10.8	\$2,311,624	4	\$213,249
Sep-17	Sep-16 to Aug-17	4.1	\$624,124	3	\$152,598
Oct-17	Oct-16 to Sep-17	4.1	\$624,124	3	\$152,598
Nov-17	Nov-16 to Oct-17	4.1	\$624,124	3	\$152,598
Dec-17	Dec-16 to Nov-17	4.1	\$624,124	3	\$152,598
Jan-18	Jan-17 to Dec-17	31.8	\$1,262,801	6	\$39,673
Feb-18	Feb-17 to Jan-18	58.8	\$1,579,801	9	\$26,853
Mar-18	Mar-17 to Feb-18	58.8	\$1,579,801	9	\$26,853
Apr-18	Apr-17 to Mar-18	58.8	\$1,579,801	9	\$26,853
May-18	May-17 to Apr-18	56.3	\$1,203,901	8	\$21,374
Jun-18	Jun-17 to May-18	57.8	\$1,233,901	9	\$21,339
Jul-18	Jul-17 to Jun-18	56.7	\$1,140,677	8	\$20,103
Aug-18	Aug-17 to Jul 18	56.7	\$1,140,677	8	\$20,103
Sep-18	Sep-17 to Aug-18	56.7	\$1,140,677	8	\$20,103
Oct-18	Oct-17 to Sep-18	56.7	\$1,140,677	8	\$20,103

Table VI

Twelve-Month Rolling Average Price Data for Compliance Year 2017 SOx RTCs
(Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2017 SOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price¹ (\$/ton)
Jan-17	Jan-16 to Dec-16	0	0	0	-
Feb-17	Feb-16 to Jan-17	0	0	0	-
Mar-17	Mar-16 to Feb-17	0	0	0	-
Apr-17	Jan-17 to Mar-17	0	0	0	-
May-17	May-16 to Apr-17	0	0	0	-
Jun-17	Jun-16 to May-17	0	0	0	-
Jul-17	Jul-16 to Jun-17	0	0	0	-
Aug-17	Aug-16 to Jul-17	4.0	\$4,400	1	\$1,100
Sep-17	Sep-16 to Aug-17	14.0	\$19,400	2	\$1,386
Oct-17	Oct-16 to Sep-17	14.0	\$19,400	2	\$1,386
Nov-17	Nov-16 to Oct-17	14.0	\$19,400	2	\$1,386
Dec-17	Dec-16 to Nov-17	14.0	\$19,400	2	\$1,386
Jan-18	Jan-17 to Dec-17	14.0	\$19,400	2	\$1,386
Feb-18	Feb-17 to Jan-18	57.0	\$58,742	7	\$1,030
Mar-18	Mar-17 to Feb-18	57.0	\$58,742	7	\$1,030
Apr-18	Apr-17 to Mar-18	57.0	\$58,742	7	\$1,030
May-18	May-17 to Apr-18	57.0	\$58,742	7	\$1,030
Jun-18	Jun-17 to May-18	120.2	\$102,965	10	\$857
Jul-18	Jul-17 to Jun-18	120.2	\$102,965	10	\$857
Aug-18	Aug-17 to Jul 18	117.5	\$99,463	10	\$847
Sep-18	Sep-17 to Aug-18	107.8	\$84,686	10	\$786
Oct-18	Oct-17 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table VII

Twelve-Month Rolling Average Price Data for Compliance Year 2018 SOx RTCs
 (Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2018 SOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price¹ (\$/ton)
Jan-18	Jan-17 to Dec-17	None	-	-	-
Feb-18	Feb-17 to Jan-18	None	-	-	-
Mar-18	Mar-17 to Feb-18	None	-	-	-
Apr-18	Apr-17 to Mar-18	None	-	-	-
May-18	May-17 to Apr-18	None	-	-	-
Jun-18	Jun-17 to May-18	34.2	\$23,974	3	\$700
Jul-18	Jul-17 to Jun-18	34.2	\$23,974	3	\$700
Aug-18	Aug-17 to Jul 18	80.2	\$57,354	5	\$715
Sep-18	Sep-17 to Aug-18	95.2	\$67,854	6	\$713
Oct-18	Oct-17 to Sep-18	163.3	\$135,429	10	\$829

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.