



**South Coast  
Air Quality Management District**  
21865 Copley Drive, Diamond Bar, CA 91765  
(909) 396-2000, [www.aqmd.gov](http://www.aqmd.gov)

## **HYBRID STATIONARY SOURCE COMMITTEE MEETING**

### **Committee Members**

Mayor Ben J. Benoit, Chair  
Supervisor Sheila Kuehl, Vice Chair  
Senator Vanessa Delgado (Ret.)  
Board Member Veronica Padilla-Campos  
Vice Mayor Rex Richardson  
Supervisor Janice Rutherford

**October 21, 2022 ♦ 10:30 a.m.**

**Pursuant to Assembly Bill 361, a meeting of the South Coast Air Quality Management District Stationary Source Committee will be held at 10:30 a.m. on Friday, October 21, 2022 through a hybrid format of in-person attendance in the Dr. William Burke Auditorium at the South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, and/or virtual attendance via videoconferencing and by telephone.**

**Please follow the instructions below to join the meeting remotely.**

**Given health and safety concerns, the meeting format may be changed to full remote via webcast. Please refer to South Coast AQMD's website for information regarding the format of the meeting, updates if the meeting is changed to a full remote via webcast format, and details on how to participate:**

<http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>

Face coverings: In accordance with state and local public health department guidelines, people may choose to wear a mask based on personal preference while in South Coast AQMD facilities.

## **ELECTRONIC PARTICIPATION INFORMATION** (Instructions provided at bottom of the agenda)

**Join Zoom Webinar Meeting - from PC or Laptop**

<https://scaqmd.zoom.us/j/94141492308>

**Zoom Webinar ID: 941 4149 2308 (applies to all)**

**Teleconference Dial In**

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**One tap mobile**

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**Audience will be allowed to provide public comment in person or through Zoom connection or telephone.**

**PUBLIC COMMENT WILL STILL BE TAKEN**

*Cleaning the air that we breathe...*

### **AGENDA**

*Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54954.3(a)). If you wish to speak, raise your hand on Zoom or press Star 9 if participating by telephone. All agendas for regular meetings are posted at South Coast AQMD 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 total for all items on the agenda.*

### **CALL TO ORDER**

### **ROLL CALL**

### **INFORMATIONAL ITEMS (Items 1 through 4)**

- 1. Update on Proposed Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations** (10 mins) Michael Krause  
(No Motion Required) Assistant Deputy  
Executive Officer

At the September Stationary Source Committee meeting, staff was directed to provide a summary of the status PR 1460 and any key remaining issues prior to the November Public Hearing.  
(Written Material Attached)
- 2. Summary of Ethylene Oxide Health Effects** (10 mins) Vince Cogliano  
(No Motion Required) Deputy Director  
Scientific Programs  
OEHHA

This presentation will include a summary of the potential health effects of Ethylene Oxide, as well as recent work carried out by the California Office of Environmental Health Hazard Assessment on the toxicity of this pollutant.  
(Written Material Attached)
- 3. Quarterly Permitting Update for Rule 1109.1 - Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations** (10 mins) Bhaskar Chandan  
(No Motion Required) Sr. AQ Engineering  
Manager

Staff will provide the first quarterly update of permitting activities associated with implementation of Rule 1109.1 and describe efforts to streamline permitting activities with estimated timelines for permit issuance.  
(Written Material Attached)
- 4. Update on Rule 1111 – Reduction of NO<sub>x</sub> Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces Availability for High Altitudes** (10 mins) Michael Krause  
(No Motion Required)

Staff will present an update on the availability of 14 ng/J and provide the status of all-electric heat pump technology for high altitude areas.  
(Written Material Attached)

**WRITTEN REPORTS (Items 5 through 7)**

5. **Monthly Update of Staff's Work with U.S. EPA and CARB on New Source Review Issues for the Transition of RECLAIM Facilities to a Command-and-Control Regulatory Program** Michael Krause  
*(No Motion Required)*  
This is a monthly update on staff's work with U.S. EPA and CARB regarding New Source Review issues related to the RECLAIM transition.  
*(Written Material Attached)*
6. **Twelve-month and Three-month Rolling Average Price of Compliance Years 2021 and 2022 NOx and SOx RTCs (June – September 2022)** Jason Aspell  
*(No Motion Required)* Deputy Executive Officer  
The attached report summarizes the twelve-month and three-month rolling average prices of NOx and SOx RTCs.  
*(Written Material Attached)*
7. **Notice of Violation Penalty Summary** Bayron Gilchrist  
*(No Motion Required)* General Counsel  
This report provides the total penalties settled in September 2022 which includes Civil, Supplemental Environmental Projects, Mutual Settlement Assessment Penalty Program, Hearing Board and Miscellaneous.  
*(Written Material Attached)*

**OTHER MATTERS**

8. **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)
9. **Public Comment Period**  
At the end of the regular meeting agenda, an opportunity is also 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.
10. **Next Meeting Date:** Friday, November 18, 2022 at 10:30 a.m.

**ADJOURNMENT**

### **Americans with Disabilities Act and Language Accessibility**

*Disability and language-related accommodations can be requested to allow participation in the Stationary Source Committee meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to the South Coast AQMD. Please contact Catherine Rodriguez at (909) 396-2735 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to [crodriguez@aqmd.gov](mailto:crodriguez@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 by contacting Catherine Rodriguez at (909) 396-2735, or send the request to [crodriguez@aqmd.gov](mailto:crodriguez@aqmd.gov).*

## **INSTRUCTIONS FOR ELECTRONIC PARTICIPATION**

### **Instructions for Participating in a Virtual Meeting as an Attendee**

As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.

Before joining the call, please silence your other communication devices such as your cell or desk phone. This will prevent any feedback or interruptions during the meeting.

**Please note:** During the meeting, all participants will be placed on Mute by the host. You will not be able to mute or unmute your lines manually.

After each agenda item, the Chairman will announce public comment.

A countdown timer will be displayed on the screen for each public comment.

If interpretation is needed, more time will be allotted.

**Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.**

### **Directions for Video ZOOM on a DESKTOP/LAPTOP:**

- If you would like to make a public comment, please click on the **“Raise Hand”** button on the bottom of the screen.  
This will signal to the host that you would like to provide a public comment and you will be added to the list.

### **Directions for Video Zoom on a SMARTPHONE:**

- If you would like to make a public comment, please click on the **“Raise Hand”** button on the bottom of your screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

**Directions for TELEPHONE line only:**

- If you would like to make public comment, please **dial \*9** on your keypad to signal that you would like to comment.

# PROPOSED RULE 1460 – CONTROL OF PARTICULATE EMISSIONS FROM METAL RECYCLING AND SHREDDING OPERATIONS

Stationary Source Committee

October 21, 2022



## Background

- Objective of Proposed Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations (PR 1460) is to reduce fugitive particulate emissions at metal recycling facilities
- PR 1460 implements a community air quality priority identified through the AB 617 program
- Provided a summary of PR 1460 at the September Stationary Source Committee
  - Committee members requested a second update today, before the November Public Hearing



## Update on Key Remaining Issues

- Staff has continued working with stakeholders to address remaining issues
- A Public Consultation Meeting was held September 21, 2022, to discuss:

### Separate controls for High Value Grade Metals

- Staff proposed additional control options which resolved this issue

### Requirements for facilities near Sensitive Receptors during high wind events

- Preliminary draft rule required work cessation for metal recycling and metal shredding facilities located near sensitive receptors during high wind events
- Concerns were raised that requirement could result in excess truck idling emissions near sensitive receptors

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## Staff Proposal

### Requirements for facilities near Sensitive Receptors during high wind events

- To address potential unintended consequence of excess idling emissions near sensitive receptors, proposing the following rule changes:
  - Reduce time to cease activities from 30 to 15 minutes
  - Wind gust to be averaged over one minute interval
  - Allow activities that are not sources of fugitive emissions to continue
    - Operations conducted in an enclosure
    - Scrap metal unloading where water is applied to minimize fugitive emissions
    - Hand unloading of scrap metal
    - Processes related to the clean High Value Grade Metals

Staff is not aware of any remaining key issues

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## Next Steps



Release Final Proposed Rule Language and Staff Report



November 4, 2022 – Public Hearing



## Summary of Ethylene Oxide Health Effects



Vincent Cogliano, PhD

Deputy Director for Scientific Programs

CalEPA Office of Environmental Health  
Hazard Assessment

## About OEHHA

**OEHHA is the lead state agency for the assessment of health risks posed by environmental contaminants**

- Air Toxics Hot Spots assessments
- Public Health Goals for drinking-water
- Proposition 65
- Fish advisories
- Special assessments, such as food dyes in children
- CalEnviroScreen
- Human Right to Water
- Indicators of Climate Change in California
- Peer review pesticide evaluations, protection from pesticide illness
- Biomonitoring California



**OEHHA**

CalEPA Office of Environmental  
Health Hazard Assessment

## Ethylene Oxide Health Effects

### Cancer — highest evidence category

- International Agency for Research on Cancer (2012)
- National Toxicology Program (2016)
- U.S. Environmental Protection Agency (2016)

### Noncancer effects

- Respiratory toxicity, neurotoxicity, reproductive toxicity, developmental toxicity
- Suspected: hematological effects, endocrine system effects

<https://www.atsdr.cdc.gov/toxprofiles/tp137.pdf>



**OEHHA**

CalEPA Office of Environmental  
Health Hazard Assessment

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## OEHHA's Assessments of Ethylene Oxide

### Cancer (Air Toxics Hot Spots, 1987)

- Substantial, but not conclusive, evidence of leukemia in humans
- Evidence of cancer at multiple sites in rats and mice
- Risk estimate:  $8.8 \times 10^{-5}$  per  $\mu\text{g}/\text{m}^3$

### Noncancer effects (Air Toxics Hot Spots, 2000)

- Evidence of neurotoxicity, reference dose:  $30 \mu\text{g}/\text{m}^3$

### Proposition 65

- Cancer, female reproductive toxicity (listed in 1987)
- Developmental toxicity, male reproductive toxicity (added in 2009)



**OEHHA**

CalEPA Office of Environmental  
Health Hazard Assessment

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## U.S. EPA's "IRIS" Assessment of Ethylene Oxide (2016)

### Carcinogenic to humans by inhalation

- Strong but less-than-conclusive evidence of lymphoid cancer and breast cancer in exposed workers
- Extensive evidence in laboratory animals (male/female rats/mice)
- Clear evidence of genotoxicity, chromosome damage in humans

**Risk estimate:  $3 \times 10^{-3}$  per  $\mu\text{g}/\text{m}^3$  (34× OEHHA's 1987 estimate)**

[https://iris.epa.gov/ChemicalLanding/&substance\\_nmbr=1025](https://iris.epa.gov/ChemicalLanding/&substance_nmbr=1025)



**OEHHA**

CalEPA Office of Environmental  
Health Hazard Assessment

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## OEHHA's Activities and Next Steps

Comprehensive literature search for recent studies

Derive cancer risk estimates from animal studies

Consider deriving cancer risk estimates from human studies

Anticipate review by the Scientific Review Panel in early 2023



**OEHHA**

CalEPA Office of Environmental  
Health Hazard Assessment

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## Rule 1109.1: NO<sub>x</sub> Emissions from Petroleum Refineries and Related Operations

- ▶ Adopted on November 5, 2021
- ▶ Established NO<sub>x</sub> emission limits (BARCT) for nearly 300 pieces of combustion equipment
- ▶ Alternative compliance pathways for facilities with six or more pieces of equipment



## Rule 1109.1 Applicability

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### 9 Petroleum Refineries

- Chevron (El Segundo)
- Marathon (Carson)
- Marathon (Wilmington)
- Marathon – Calciner
- Marathon – Sulfur Recovery Plant
- Phillips 66 (Carson)
- Phillips 66 (Wilmington)
- Torrance Refining Company
- Ultramar (Valero)



### 3 Small Refineries

#### Asphalt Plants

- Lunday-Thagard DBA World Oil Refining
- Valero Wilmington Asphalt Plant

#### Biodiesel Refinery

- AltAir Paramount



### 4 Related Operations

#### Hydrogen Plants

- Air Liquide Large Industries
- Air Products and Chemicals (Carson & Wilmington)

#### Sulfuric Acid Plant

- Eco Services Operations

## Key Permitting Activities for Implementation of Rule 1109.1

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### Permit Modifications for Conditional Limits

- Conditional limits are alternative BARCT NOx limits for units operating near BARCT limits
- Rule requires specific conditions to qualify for conditional limits
- Applications due June 1, 2022

### I-Plans, B-Plans, and B-Caps

- Implementation and alternative compliance plan options for facilities with six or more units
- Provides flexibility for NOx reduction projects
- Applications due September 1, 2022

### Permits to Meet Requirements of Approved B-Plans or B-Caps and I-Plans

- Implementation and alternative compliance plans establish:
  - Percent reduction targets
  - Compliance schedule to meet NOx limits
- Application due dates specified in approved plans

## About Conditional Limits

- ▶ To qualify for a conditional limit:
  - ▶ Unit has not received a Permit to Operate after December 4, 2015 for post-combustion control equipment
  - ▶ Potential emission reduction to achieve Table 1 limits cannot be greater than:
    - ▶ 10 tons per year for process heaters between 40 – 110 MMBtu/hour
    - ▶ 20 tons per year for boilers or process heaters greater than 110 MMBtu/hour
  - ▶ Unit does not have a permit limit at the applicable Table 1 NOx emission limit
  - ▶ Unit is not currently achieving the applicable Table 1 NOx emission limit
  - ▶ Unit is not identified as being decommissioned in a B-Cap
- ▶ Submit permit applications by June 1, 2022

Unit	NOx (ppmv)	CO (ppmv)	O <sub>2</sub> Correction (%)	Rolling Averaging Time <sup>1</sup>
Boilers <40 MMBtu/hour	Pursuant to subparagraphs (d)(2)(A) and (d)(2)(B)	400	3	24-hour
Boilers ≥40 MMBtu/hour	5	400	3	24-hour
FCCU	2 5	500	3	365-day 7-day
Flares	20	400	3	24-hour
Gas Turbines fueled with Natural Gas	2	130	15	24-hour
Gas Turbines fueled with				

Unit	NOx (ppmv)	CO (ppmv)	O <sub>2</sub> Correction (%)	Rolling Averaging Time <sup>1</sup>
Boilers >110 MMBtu/hour	7.5	400	3	24-hour
FCCUs	8 16	500	3	365-day 7-day
Gas Turbines fueled with Natural Gas	2.5	130	15	24-hour
Process Heaters ≥40 – ≤110 MMBtu/hour	18	400	3	24-hour
Process Heaters >110 MMBtu/hour	22	400	3	24-hour
SMR Heaters	7.5	400	3	24-hour
Vapor Incinerators	40	400	3	24-hour

## Status of Permit Modifications for Conditional Limits

Conditional Limit Permit Modifications	Number
Permit Applications Anticipated	30
Permit Applications Received	37
Complete Permit Applications Received	19
Permit to Construct Issued	0

- ▶ Several incomplete applications submitted
- ▶ Staff working closely with facilities to obtain the necessary information to assure compliance with Table 2 Conditional limits
- ▶ Complete applications submitted are currently under supervisory review



## About I-Plans, B-Plans, and B-Caps

- ▶ I-Plan provides a phased implementation schedule and establishes Phase targets
- ▶ Five I-Plan Options
- ▶ B-Plan and B-Cap provides options to achieve BARCT in aggregate
  - ▶ B-Plan is BARCT equivalent concentration plan and allows NOx concentration limits equivalent to BARCT in aggregate
  - ▶ B-Cap is BARCT equivalent Mass Cap and requires a NOx emission limit for each unit
    - ▶ B-Cap requires an additional 10% NOx emission reduction
- ▶ Allows refineries to implement projects within turnaround schedules

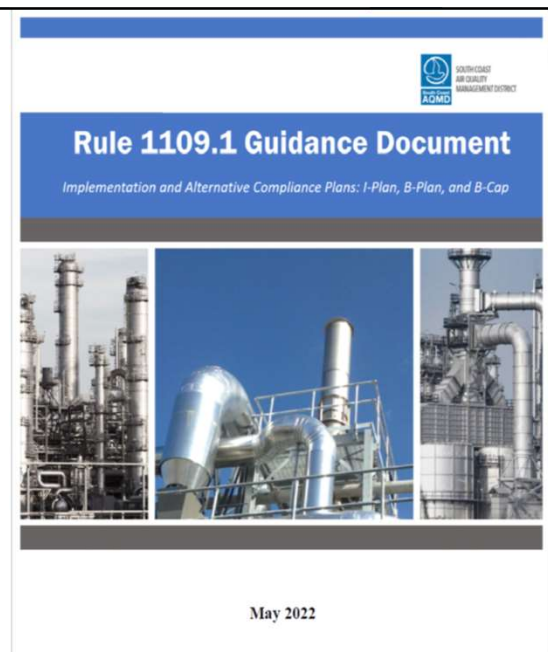
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I-Plan Options	Provision	Phase I	Phase II	Phase III
<b>Option 1</b> for B-Plan or Table 1 or 2	<b>Targets</b>	<b>80%</b>	<b>100%</b>	
	Submit Permit Application	Jan 1, 2023	Jan 1, 2031	
<b>Option 2</b> B-Plan	<b>Targets</b>	<b>65%</b>	<b>100%</b>	
	Submit Permit Application	July 1, 2024	Jan 1, 2030	
<b>Option 3</b> B-Plan or B-Cap	<b>Targets</b>	<b>40%</b>	<b>100%</b>	
	Submit Permit Application	July 1, 2025	July 1, 2029	
<b>Option 4</b> B-Cap Only	<b>Targets</b>	<b>50%</b>	<b>80%</b>	<b>100%</b>
	Submit Permit Application	N/A	Jan 1, 2025	Jan 1, 2028
<b>Option 5</b> for B-Plan or Table 1 or 2	<b>Targets</b>	<b>50%</b>	<b>70%</b>	<b>100%</b>
	Submit Permit Application	Jan 1, 2023	Jan 1, 2025	July 1, 2028

## Guidance Document for B-Plans, B-Caps, and I-Plans

- ▶ Rule 1109.1 guidance document released May 2022\*
- ▶ Provides guidance on development and preparation of Rule 1109.1 compliance plans
- ▶ Addresses questions raised by stakeholders regarding target and reduction calculations
- ▶ Spreadsheet also provided to aid facilities in calculation of plan requirements
- ▶ Streamlines plan submittals and reduces staff review time

\* <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1109-1-guidance-document-final-rev.pdf?sfvrsn=8>



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# Status of I-Plans, B-Plans, and B-Caps

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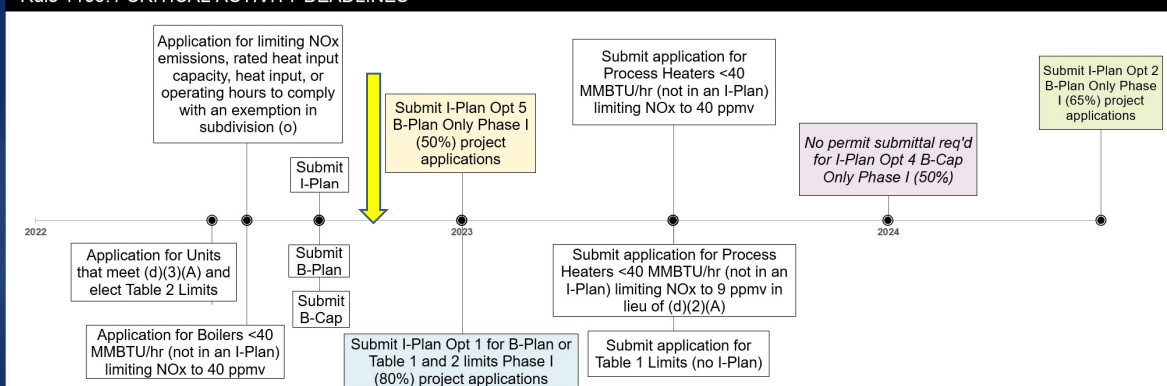
Plan Options	Number Received	Facilities	Status
I-Plan with Table 1 or Table 2 NOx limits	2	Phillips 66 and World Oil	Under Review
I-Plan with B-Plan	3	Torrance Refining Company, Chevron, Valero	Under Review
I-Plan with B-Cap	1	Marathon Petroleum Corp.	Under Review

- ▶ All applications received on time
- ▶ Staff currently working closely with facilities to:
  - ▶ Correct deficiencies with plan submittals
  - ▶ Address minor changes requested by facilities
- ▶ Staff preparing plan documents for submittal to U.S. EPA
- ▶ Confidentiality review by facilities prior to submittal to U.S. EPA
  - ▶ Documents will be made available on South Coast AQMD's website

# Rule 1109.1 Applications Timeline – First 3-Years (2022-24)

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## Rule 1109.1 CRITICAL ACTIVITY DEADLINES

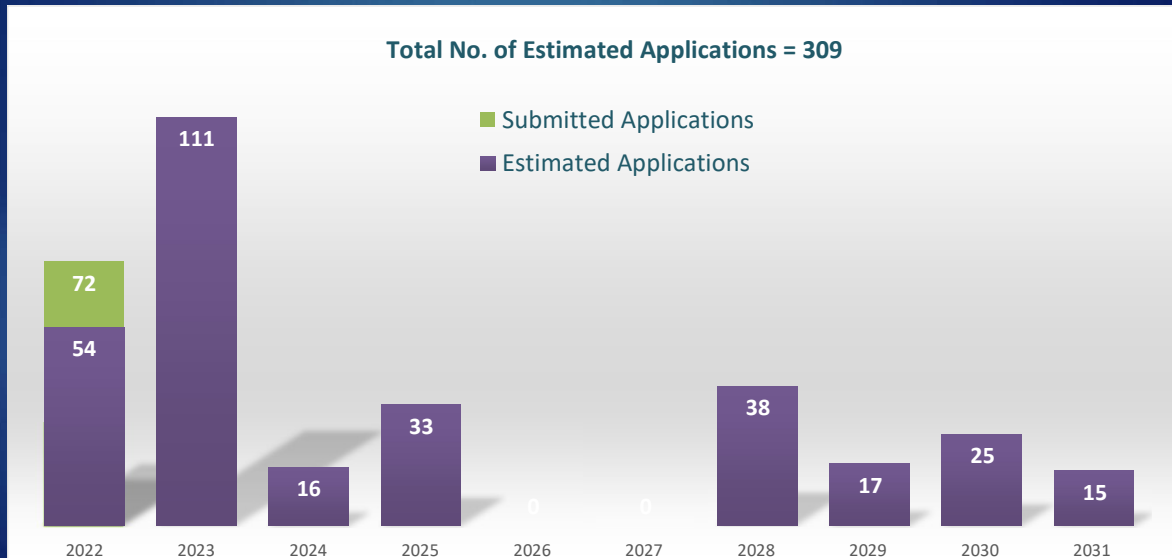


Future applications will implement Plan and Table 1 requirements



## Rule 1109.1 Application Count by Year

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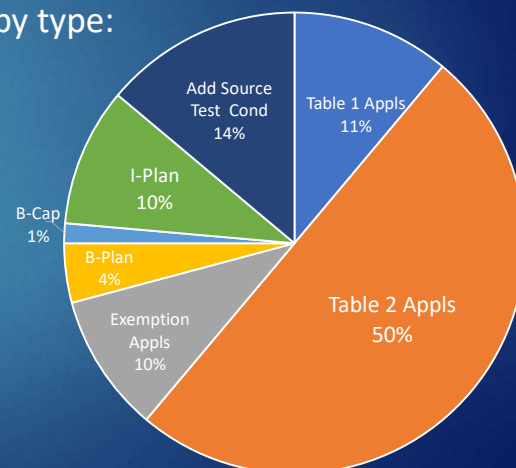


## Permit Application Submittal Summary

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- ▶ Number of Rule 1109.1 applications received: 72
- ▶ Breakdown of submitted applications by type:

Table 1 Applications	7
Table 2 Applications	37
Exemption Applications	7
Plan Applications	11
<i>B-Plan</i>	3
<i>B-Cap</i>	1
<i>I-Plan</i>	7
Add Source Test Condition	10
<b>Total</b>	<b>72</b>



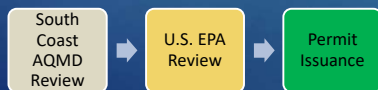
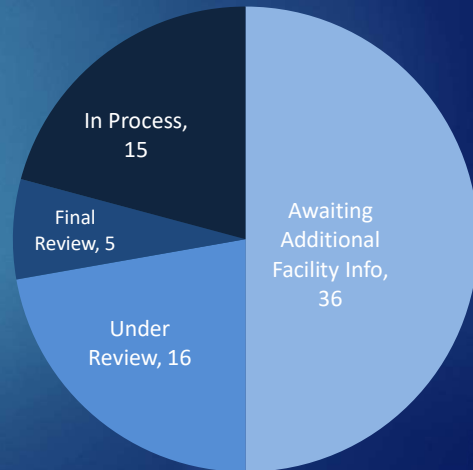
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## Permit Application Processing Summary

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- ▶ Number of Rule 1109.1 permit applications received: **72**
- ▶ Permit application processing status:

Awaiting Additional Facility Info	36
In Process	15
Under Review	16
Final Review	5
Under U.S. EPA Review	0
Issued	0
<b>Total</b>	<b>72</b>



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## Streamlining Implementation

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- ▶ Outreached to all refineries through WSPA
- ▶ Developed Rule 1109.1 guidance document
- ▶ Timely processing of Rule 1109.1 applications requires:
  - ▶ Complete permit application packages
  - ▶ Operator's responding quickly to South Coast AQMD requests for additional information
  - ▶ Minimizing or eliminating additional modifications to permit applications that could delay permit issuance (e.g. increase in throughput or firing rate)
  - ▶ No modifications that may trigger additional regulatory requirements
- ▶ Streamlined permit evaluation and development of templates for applications

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## Next Steps

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- ▶ Continue processing Rule 1109.1 applications expeditiously
- ▶ Continue outreach to the refineries to:
  - ▶ Minimize need for additional information requests
  - ▶ Focus processing on Rule 1109.1 projects
- ▶ Continue to strategically process other projects
- ▶ Next SSC update: February 2023

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## Rule 1111– Reduction of NO<sub>x</sub> Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces



### Update on Product Availability for High Altitudes

Stationary Source Committee

October 21, 2022

## Background

### Rule 1111

- ❑ Applies to manufacturers, distributors, sellers, and installers of residential and small commercial natural gas furnaces
- ❑ NO<sub>x</sub> limit lowered from 40 to 14 ng/J in November 2009 rule amendment
  - ❑ 14 ng/J limit has been implemented for most types of furnaces
- ❑ For high-altitude\* areas, final compliance date for condensing/non-condensing units is April 1, 2022
  - ❑ High-altitude downflow and large units ( $\geq 100$  kbtu/hr) are exempt from 14 ng/J limit, must comply with 40 ng/J NO<sub>x</sub> limit

### At the October 2021 Board Meeting, Board directed staff to:

- Report back to the Stationary Source Committee October 2022 regarding the availability of 14 ng/J NO<sub>x</sub> furnaces for sale and installation in high-altitude areas

\* Installation at areas  $\geq 4,200$  feet above sea level

## Survey for High Altitude Rule 1111 Compliance Product Availability

Staff conducted a Rule 1111 survey of Original Equipment Manufacturers (OEMs) regarding product availability in high-altitude areas

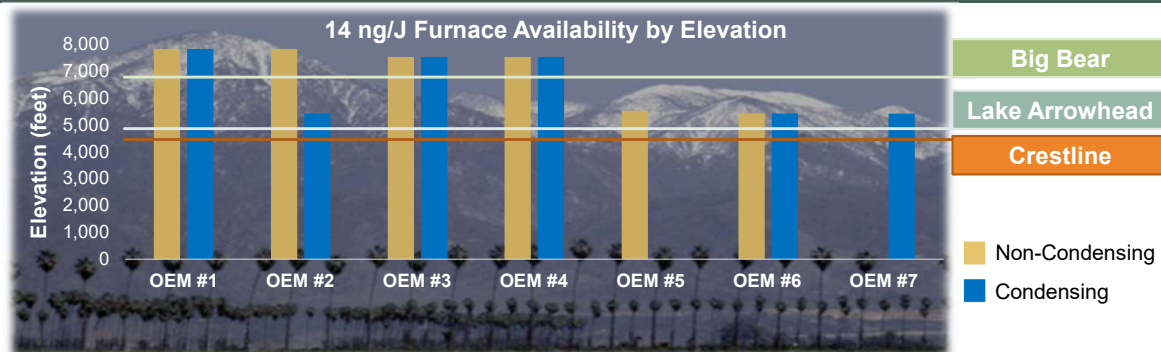
- Focused on high-altitude condensing and non-condensing furnaces

Inquired about alternative emerging technologies such as all-electric heat pumps

- 2022 AQMP Control Measures are proposing zero emission technologies for residential and commercial space heating

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## High Altitude 14 ng/J Furnaces Availability



# of Base Models (14 ng/J NOx)	Total Base Models	OEM #1	OEM #2	OEM #3	OEM #4	OEM #5	OEM #6	OEM #7
Non-Condensing	52	3	3	7	22	9	8	0
Condensing	41	3	3	5	16	3 (2023)	8	3

Most OEMs provide base models with heat input capacity covering the range of 40-100 kbtu/hr

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## Progress on High Altitude Product Availability

### 2021 Availability

- 29-70 high altitude models available
- 2 out of 7 OEMs have products available up to 7,500 ft or higher
- 2 out of 7 OEMs stated they may develop more higher altitude models in the future

### Current Availability

- 90 high altitude models available
- 4 out of 7 OEMs have products available up to 7,500 ft or higher
- 3 out of 7 OEMs stated they may develop more higher altitude models in the future

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## OEM Input on All-Electric Heat Pumps at High Altitudes – Alternative of 14 ng/J Furnace

### Technological Feasibility

- Most OEMs stated heat pumps work at all altitudes
- Heat pumps include split and packaged systems
  - One OEM stated that split system heat pumps\*, commonly for residential use, are essentially not affected by altitude

### Challenges

- Some OEMs noted the compromised efficiency for *traditional* heat pumps versus newer models in cold weather below 40°F
- One mentioned that proper installation is critical at high altitudes and adjustments may be needed

\* Split system heat pump has an indoor air handler for air distribution and outdoor compressor/condenser for heat exchange

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## Survey Summary

Four OEMs have 14 ng/J furnaces available for elevations  $\geq 7,500$  ft

- Future development plans by some OEMs include:
  - Updating current models
  - Developing condensing & non-condensing downflow models

All-electric heat pumps are an emerging alternative technology for high altitude

- Manufacturers are developing more heat pump products for cold climate ([Cold Climate HP Product List \(neep.org\)](#))
- Energy Star standard for air-source heat pumps, launching in January 2023, will include a certification mark for cold climate heat pumps ([Best Heat Pump Buying Guide - Consumer Reports](#))

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## Conclusion

Sufficient condensing and non-condensing units are available for high altitude areas

More focused incentives for cold climate all-electric heat pump installations

- Consistent with 2022 AQMP control measure proposals

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### **October 2022 Update on Work with U.S. EPA and CARB on New Source Review Issues for the RECLAIM Transition**

At the October 5, 2018 Board meeting, the Board directed staff to provide the Stationary Source Committee with a monthly update of staff's work with U.S. EPA regarding resolving NSR issues for the transition of facilities from RECLAIM to a command-and-control regulatory structure. The table below summarizes key activities with U.S. EPA and CARB since the last report.

<b>Item</b>	<b>Discussion</b>
Video Conference with U.S. EPA and CARB – September 2, 2022	<ul style="list-style-type: none"><li>• Reviewed presentations for the September RECLAIM and Regulation XIII working group meetings</li></ul>
RECLAIM and Regulation XIII Working Group Meetings – September 8, 2022	<ul style="list-style-type: none"><li>• Provided updates on rulemakings for the RECLAIM transition</li><li>• Presented proposed amendments to Regulation XIII</li></ul>





# South Coast Air Quality Management District

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

## Twelve-Month and Three-Month Rolling Average Price of Compliance Years 2021 and 2022 NOx and SOx RTCs (June – September 2022)

October 2022 Report to Stationary Source Committee

**Table I**

Twelve-Month Rolling Average Price Data for Compliance Year 2021 NOx RTCs  
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2021 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 <sup>1</sup> (\$/ton)
Jan-21	Jan-20 to Dec-20	76.2	\$717,162	15	\$9,418
Feb-21	Feb-20 to Jan-21	77.6	\$736,204	16	\$9,488
Mar-21	Mar-20 to Feb-21	71.7	\$667,889	15	\$9,321
Apr-21	Apr-20 to Mar-21	69.6	\$656,731	13	\$9,439
May-21	May-20 to Apr-21	73.6	\$917,864	12	\$12,470
Jun-21	Jun-20 to May-21	43.3	\$630,190	10	\$14,545
Jul-21	Jul-20 to Jun-21	134.1	\$2,265,703	20	\$16,898
Aug-21	Aug-20 to Jul-21	131.1	\$2,238,560	23	\$17,072
Sep-21	Sep-20 to Aug-21	204.7	\$3,499,147	31	\$17,091
Oct-21	Oct-20 to Sep-21	210.0	\$3,664,844	33	\$17,455
Nov-21	Nov-20 to Oct-21	309.8	\$5,429,848	55	\$17,529
Dec-21	Dec-20 to Nov-21	310.0	\$5,432,348	54	\$17,523
Jan-22	Jan-21 to Dec-21	368.1	\$6,937,025	64	\$18,846
Feb-22	Feb-21 to Jan-22	548.8	\$8,783,951	91	\$16,007
Mar-22	Mar-21 to Feb-22	601.1	\$9,116,953	103	\$15,166
Apr-22	Apr-21 to Mar-22	680.8	\$12,274,023	107	\$18,028
May-22	May-21 to Apr-22	704.4	\$13,127,083	123	\$18,635
Jun-22	Jun-21 to May-22	705.6	\$13,157,558	124	\$18,647
Jul-22	Jul-21 to Jun-22	643.4	\$12,121,674	119	\$18,839
Aug-22	Aug-21 to Jul-22	738.9	\$13,694,488	141	\$18,534

Twelve-Month Rolling Average Price Data for Compliance Year 2021 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 <sup>1</sup> (\$/ton)
Sep-22	Sep-21 to Aug-22	719.3	\$12,926,573	152	\$17,970
Oct-22	Oct-21 to Sep-22	714.1	\$12,760,876	150	\$17,869

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 annual RTC price exceeds \$15,000 per ton. The average annual RTC price is reported to the Board in the Annual RECLAIM Audit Report in March of each year.

**Table II**

Twelve-Month Rolling Average Price Data for Compliance Year 2022 NOx RTCs  
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2022 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 <sup>1</sup> (\$/ton)
Jan-22	Jan-21 to Dec-21	165.4	\$5,473,709	18	\$33,085
Feb-22	Feb-21 to Jan-22	165.4	\$5,473,709	18	\$33,085
Mar-22	Mar-21 to Feb-22	165.4	\$5,473,709	18	\$33,085
Apr-22	Apr-21 to Mar-22	193.6	\$6,611,522	22	\$34,146
May-22	May-21 to Apr-22	194.6	\$6,656,124	24	\$34,198
Jun-22	Jun-21 to May-22	176.4	\$6,227,716	22	\$35,311
Jul-22	Jul-21 to Jun-22	174.8	\$6,373,786	24	\$36,457
Aug-22	Aug-21 to Jul-22	176.3	\$6,434,733	32	\$36,489
Sep-22	Sep-21 to Aug-22	174.6	\$6,443,413	33	\$36,894
Oct-22	Oct-21 to Sep-22	151.8	\$5,960,928	31	\$39,280

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 annual RTC price exceeds \$15,000 per ton. The average annual RTC price is reported to the Board in the Annual RECLAIM Audit Report in March of each year.

**Table III**

Three-Month Rolling Average Price Data for Compliance Year 2021 NOx RTCs  
(Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2021 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-21	Oct-20 to Dec-20	1.3	\$16,750	3	\$13,400
Feb-21	Nov-20 to Jan-21	2.9	\$38,049	5	\$13,218
Mar-21	Dec-20 to Feb-21	2.1	\$26,049	3	\$12,238
Apr-21	Jan-21 to Mar-21	1.6	\$21,299	2	\$13,079
May-21	Feb-21 to Apr-21	32.4	\$482,253	3	\$14,900
Jun-21	Mar-21 to May-21	32.4	\$482,253	3	\$14,900
Jul-21	Apr-21 to Jun-21	123.1	\$2,117,767	13	\$17,201
Aug-21	May-21 to Jul-21	95.9	\$1,718,259	15	\$17,921
Sep-21	Jun-21 to Aug-21	169.5	\$2,978,846	23	\$17,575
Oct-21	Jul-21 to Sep-21	84.0	\$1,509,029	15	\$17,974
Nov-21	Aug-21 to Oct-21	178.6	\$3,191,288	32	\$17,865
Dec-21	Sep-21 to Nov-21	106.0	\$1,945,201	25	\$18,346
Jan-22	Oct-21 to Dec-21	159.4	\$3,288,931	34	\$20,636
Feb-22	Nov-21 to Jan-22	241.9	\$3,392,151	41	\$14,024
Mar-22	Dec-21 to Feb-22	293.3	\$3,710,654	52	\$12,653
Apr-22	Jan-22 to Mar-22	314.4	\$5,358,297	45	\$17,045
May-22	Feb-22 to Apr-22	188.1	\$4,825,385	35	\$25,659
Jun-22	Mar-22 to May-22	136.8	\$4,522,857	24	\$33,056
Jul-22	Apr-22 to Jun-22	85.7	\$1,965,417	25	\$22,927
Aug-22	May-22 to Jul-22	130.3	\$2,285,664	33	\$17,542
Sep-22	Jun-22 to Aug-22	183.2	\$2,747,861	51	\$14,997
Oct-22	Jul-22 to Sep-22	154.6	\$2,148,231	46	\$13,891

**Table IV**

Three-Month Rolling Average Price Data for Compliance Year 2022 NOx RTCs  
(Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2022 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-22	Oct-21 to Dec-21	97.4	\$3,780,324	10	\$38,803

Three-Month Rolling Average Price Data for Compliance Year 2022 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)
Feb-22	Nov-21 to Jan-22	79.5	\$3,110,524	7	\$39,114
Mar-22	Dec-21 to Feb-22	29.5	\$1,110,524	5	\$37,614
Apr-22	Jan-22 to Mar-22	28.2	\$1,137,813	4	\$40,372
May-22	Feb-22 to Apr-22	29.2	\$1,182,415	6	\$40,506
Jun-22	Mar-22 to May-22	29.2	\$1,182,415	6	\$40,506
Jul-22	Apr-22 to Jun-22	21.3	\$852,942	6	\$40,000
Aug-22	May-22 to Jul-22	24.3	\$962,009	13	\$39,531
Sep-22	Jun-22 to Aug-22	25.1	\$998,189	15	\$39,706
Oct-22	Jul-22 to Sep-22	4.8	\$189,849	11	\$39,359

**Table V**

Twelve-Month Rolling Average Price Data for Compliance Year 2021 SOx RTCs  
(Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2021 SOx RTC <sup>1</sup>					
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 <sup>2</sup> (\$/ton)
Jan-21	Jan-20 to Dec-20	None	-	-	-
Feb-21	Feb-20 to Jan-21	None	-	-	-
Mar-21	Mar-20 to Feb-21	None	-	-	-
Apr-21	Apr-20 to Mar-21	None	-	-	-
May-21	May-20 to Apr-21	None	-	-	-
Jun-21	Jun-20 to May-21	None	-	-	-
Jul-21	Jul-20 to Jun-21	None	-	-	-
Aug-21	Aug-20 to Jul-21	None	-	-	-
Sep-21	Sep-20 to Aug-21	None	-	-	-
Oct-21	Oct-20 to Sep-21	None	-	-	-
Nov-21	Nov-20 to Oct-21	None	-	-	-
Dec-21	Dec-20 to Nov-21	None	-	-	-
Jan-22	Jan-21 to Dec-21	37.5	\$112,500	1	\$3,000
Feb-22	Feb-21 to Jan-22	37.5	\$112,500	1	\$3,000
Mar-22	Mar-21 to Feb-22	53.9	\$209,201	2	\$3,882
Apr-22	Apr-21 to Mar-22	53.9	\$209,201	2	\$3,882
May-22	May-21 to Apr-22	53.9	\$209,201	2	\$3,882
Jun-22	Jun-21 to May-22	53.9	\$209,201	2	\$3,882

Twelve-Month Rolling Average Price Data for Compliance Year 2021 SOx RTC <sup>1</sup>					
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 <sup>2</sup> (\$/ton)
Jul-22	Jul-21 to Jun-22	53.9	\$209,201	2	\$3,882
Aug-22	Aug-21 to Jul-22	53.9	\$209,201	2	\$3,882
Sep-22	Sep-21 to Aug-22	53.9	\$209,201	2	\$3,882
Oct-22	Oct-21 to Sep-22	53.9	\$209,201	2	\$3,882

1. Pursuant to District Rule 2002(f)(1)(Q), the requirement to report 12-month rolling average SOx RTC price ended February 1, 2020. This table is provided as a courtesy.
2. 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 annual RTC price exceeds \$15,000 per ton. The average annual RTC price is reported to the Board in the Annual RECLAIM Audit Report in March of each year.

**Table VI**

Twelve-Month Rolling Average Price Data for Compliance Year 2022 SOx RTCs  
(Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2022 SOx RTC <sup>1</sup>					
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 <sup>2</sup> (\$/ton)
Jan-22	Jan-21 to Dec-21	None	-	-	-
Feb-22	Feb-21 to Jan-22	None	-	-	-
Mar-22	Mar-21 to Feb-22	None	-	-	-
Apr-22	Apr-21 to Mar-22	None	-	-	-
May-22	May-21 to Apr-22	None	-	-	-
Jun-22	Jun-21 to May-22	None	-	-	-
Jul-22	Jul-21 to Jun-22	None	-	-	-
Aug-22	Aug-21 to Jul-22	None	-	-	-
Sep-22	Sep-21 to Aug-22	None	-	-	-
Oct-22	Oct-21 to Sep-22	None	-	-	-

1. Pursuant to District Rule 2002(f)(1)(Q), the requirement to report 12-month rolling average SOx RTC price ended February 1, 2020. This table is provided as a courtesy.
2. 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 annual RTC price exceeds \$15,000 per ton. The average annual RTC price is reported to the Board in the Annual RECLAIM Audit Report in March of each year.

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

**Settlement Penalty Report (09/01/2022 - 09/30/2022)**

Total Penalties

Civil Settlement: \$164,250.00  
Criminal Referral Settlement: \$13,290.72  
MSPAP Settlement: \$6,133.30

**Total Cash Settlements:** \$183,674.02

**Fiscal Year through 09/30/2022 Cash Total:** \$1,867,256.71

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
<b>Civil</b>						
190125	ABACUS BUSINESS CAPITAL/ISLAND PACIFIC	1415.1	09/07/2022	JL	P64775	\$2,000.00
186947	BOOSTER FUELS, INC.	203, 461, H&S 42401	09/20/2022	BT	P68163, P69851, P69855, P69856, P69862, P69868, P69872	\$87,500.00
190097	COMPLETE FUELING SOLUTIONS	1166	09/01/2022	SH	P67434, P67435	\$3,000.00
189971	EXEL/DHL SUPPLY CHAIN	1415.1	09/20/2022	SH	P64776	\$2,000.00
117744	GOLD COAST BAKING CO.	H&S 42401	09/14/2022	NS	P68571	\$40,000.00
20197	LAC/USC MEDICAL CENTER	461(C)(3)(Q), 1146, 1415, 3002	09/16/2022	DH	P63934, P63943	\$20,500.00
800168	PASADENA CITY, DWP	2004	09/01/2022	SH	P66131, P66177	\$2,500.00
189913	UNILEVER	1415.1	9/30/2022	SH	P64772	\$3,500.00
800393	VALERO WILMINGTON ASPHALT PLANT	1176	09/16/2022	SH	P63384, P63393	\$3,250.00
<b>Total Civil Settlements: \$164,250.00</b>						
<b>Criminal Referral</b>						
188287	NEILSON HAMMER YOSEMITE, LLC.	40 CFR 61.145, 1403	09/23/2022	TCF	P65413	\$13,290.72
<b>Total Criminal Referral: \$13,290.72</b>						

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
<b>MSPAP</b>						
144558	CLS LANDSCAPE MGMT INC.	203(a)	09/15/2022	GC	P69710	\$800.00
121822	CORONA CITY, DEPT OF WATER & POWER	203(b), 1470	09/15/2022	GC	P69388	\$1,600.00
165923	D & I STATION, INC.	461	09/15/2022	GC	P67249	\$327.30
183218	FIRE STATION #143, CASTAIC, LA COUNTY	461	09/15/2022	GC	P68637	\$800.00
34058	G & M OIL CO #3	461, H&S 41960	09/15/2022	GC	P69626	\$818.00
157896	G & M OIL CO, #186	461, H&S 41960	09/15/2022	GV	P70203	\$1,363.00
148840	GALAXY OIL COMPANY	461(E)(2)(A)	09/15/2022	GC	P69020	\$425.00
<b>Total MSPAP Settlements: \$6,133.30</b>						

**SOUTH COAST AQMD'S RULES AND REGULATIONS INDEX  
FOR SEPTEMBER 2022 PENALTY REPORT**

**REGULATION II - PERMITS**

Rule 203            Permit to Operate

**REGULATION IV - PROHIBITIONS**

Rule 461            Gasoline Transfer and Dispensing

**REGULATION XI - SOURCE SPECIFIC STANDARDS**

Rule 1146           Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters

Rule 1166           Volatile Organic Compound Emissions from Decontamination of Soil

Rule 1176           Sumps and Wastewater Separators

**REGULATION XIV - TOXICS**

Rule 1403           Asbestos Emissions from Demolition/Renovation Activities

Rule 1415           Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems

Rule 1415.1        Reduction of Refrigerant Emissions from Stationary Refrigeration Systems

Rule 1470           Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

**REGULATION XX - REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)**

Rule 2004           Requirements

**REGULATION XXX - TITLE V PERMITS**

Rule 3002           Requirements

**CODE OF FEDERAL REGULATIONS**

40 CFR 61.145    Standard for Demolition and Renovation

**CALIFORNIA HEALTH AND SAFETY CODE**

41960              Certification of Gasoline Vapor Recovery System

42401              Violation of Order for Abatement

**CALIFORNIA CODE OF REGULATIONS**

13 CCR 2485      Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling