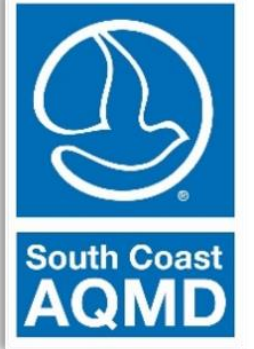


Working Group Meeting #2

May 27, 2026, 2:00 PM



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

Join Zoom Meeting

<https://aqmd.zoomgov.com/j/1615498699>

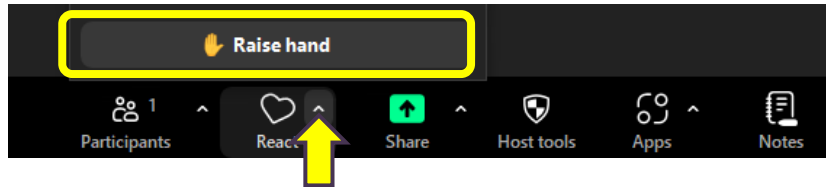
Zoom Webinar ID: 161 549 8699

Teleconference Dial-In: +1 669 254 5252

If the Zoom link does not work, please cut and paste it into your browser

Meeting Information

- To speak in today's meeting:

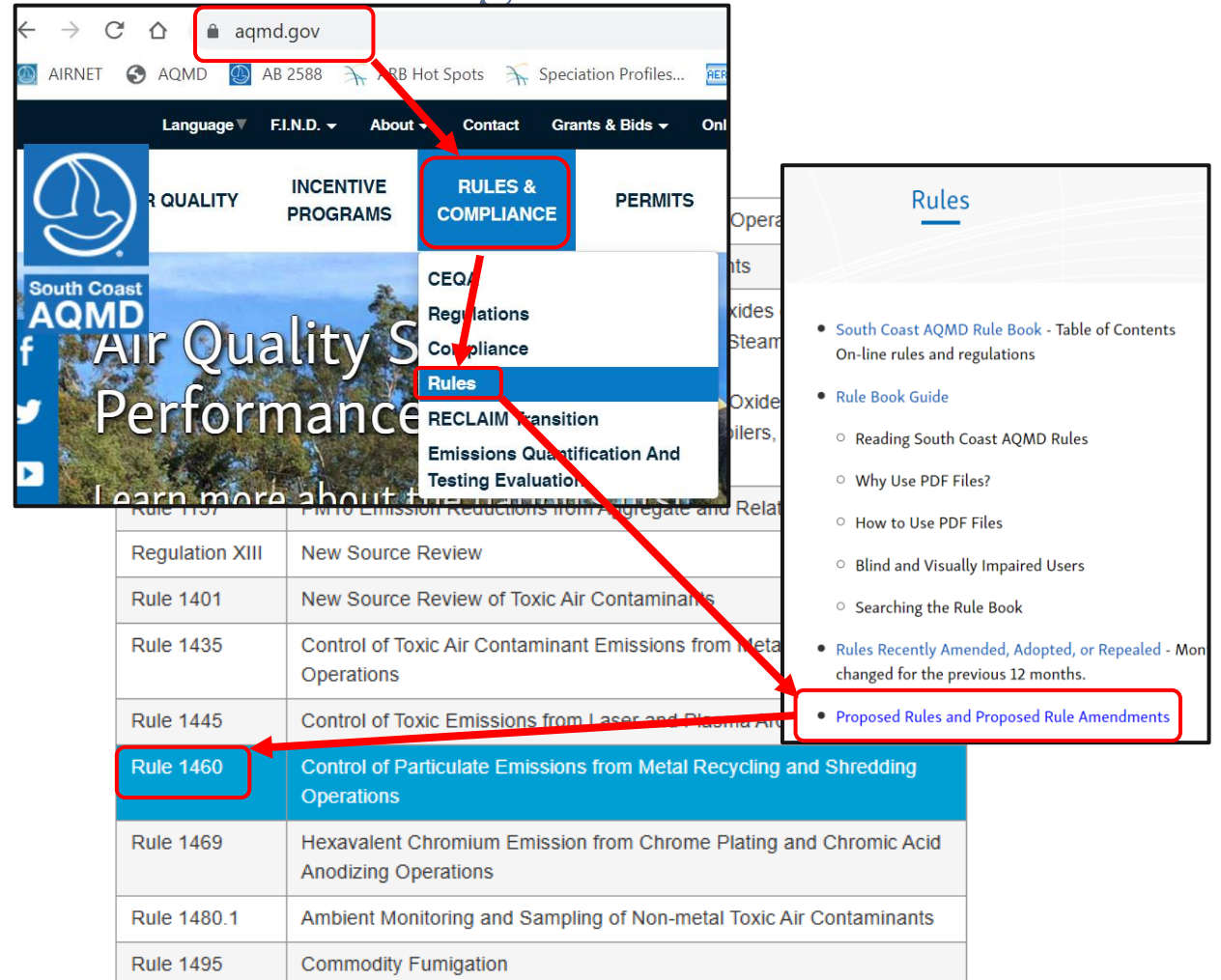


OR



Dial *9 to raise hand
Then dial *6 to unmute

- For meeting materials:



aqmd.gov

Language F.I.N.D. About Contact Grants & Bids Onl

AIR QUALITY INCENTIVE PROGRAMS RULES & COMPLIANCE PERMITS

South Coast AQMD

Air Quality Standards Performance

Learn more about the...

Rule 1137	PM10 Emission Reductions from Aggregate and Related Operations
Regulation XIII	New Source Review
Rule 1401	New Source Review of Toxic Air Contaminants
Rule 1435	Control of Toxic Air Contaminant Emissions from Metal Recycling and Shredding Operations
Rule 1445	Control of Toxic Emissions from Laser and Plasma Arc Operations
Rule 1460	Control of Particulate Emissions from Metal Recycling and Shredding Operations
Rule 1469	Hexavalent Chromium Emission from Chrome Plating and Chromic Acid Anodizing Operations
Rule 1480.1	Ambient Monitoring and Sampling of Non-metal Toxic Air Contaminants
Rule 1495	Commodity Fumigation

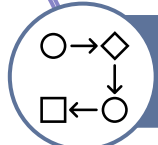
Rules

- South Coast AQMD Rule Book - Table of Contents
On-line rules and regulations
- Rule Book Guide
 - Reading South Coast AQMD Rules
 - Why Use PDF Files?
 - How to Use PDF Files
 - Blind and Visually Impaired Users
 - Searching the Rule Book
- Rules Recently Amended, Adopted, or Repealed - Monitored and changed for the previous 12 months.
- Proposed Rules and Proposed Rule Amendments

Agenda



Summary of First Working Group Meeting



Updates



Automotive Metal Shredding Facilities in South Coast



Overview and Examples of Airborne Particulate Metal Measurement Methods and Notification Systems



Approach to Fence-line Air Monitoring



Next Steps

SUMMARY OF FIRST WORKING GROUP

Previous Working Group Meeting



- Overview of the rule development process
- Background on Metal Recycling Operations and Rule 1460
- Background on 2024 Assembly Bill 2851 (AB 2851)
 - Mandates air districts to implement fence-line metal monitoring requirements
 - Air districts to collaborate with Office of Environmental Health Hazard Assessment (OEHHA) and Department of Toxic Substances Control (DTSC)
 - Only applies to automotive and appliance metal shredding facilities
 - Three facilities identified in South Coast based on AB 2851 definition
- Stakeholder comments and questions
 - Questions on OEHHA development and timeline of threshold values for air districts
 - Potential metal monitoring technologies used
 - South Coast AQMD collaborations with other regulatory agencies

UPDATES

Meetings with Other Agencies



Ongoing interagency meetings to discuss AB 2851 to clarify mandates for agencies

- Which facilities would be subject to fence-line monitoring?
- What are the deadlines?
- Key requirements
 - Metals to monitor
 - Notification
 - Enforceable actions
- OEHHA will develop threshold values that would be basis for
 - Notification to public
 - Trigger for enforceable actions



South Coast Air Quality Management District



Bay Area Air Quality Management District



San Joaquin Valley Air Pollution Control District

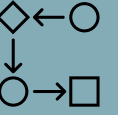


Department of Toxic Substances Control

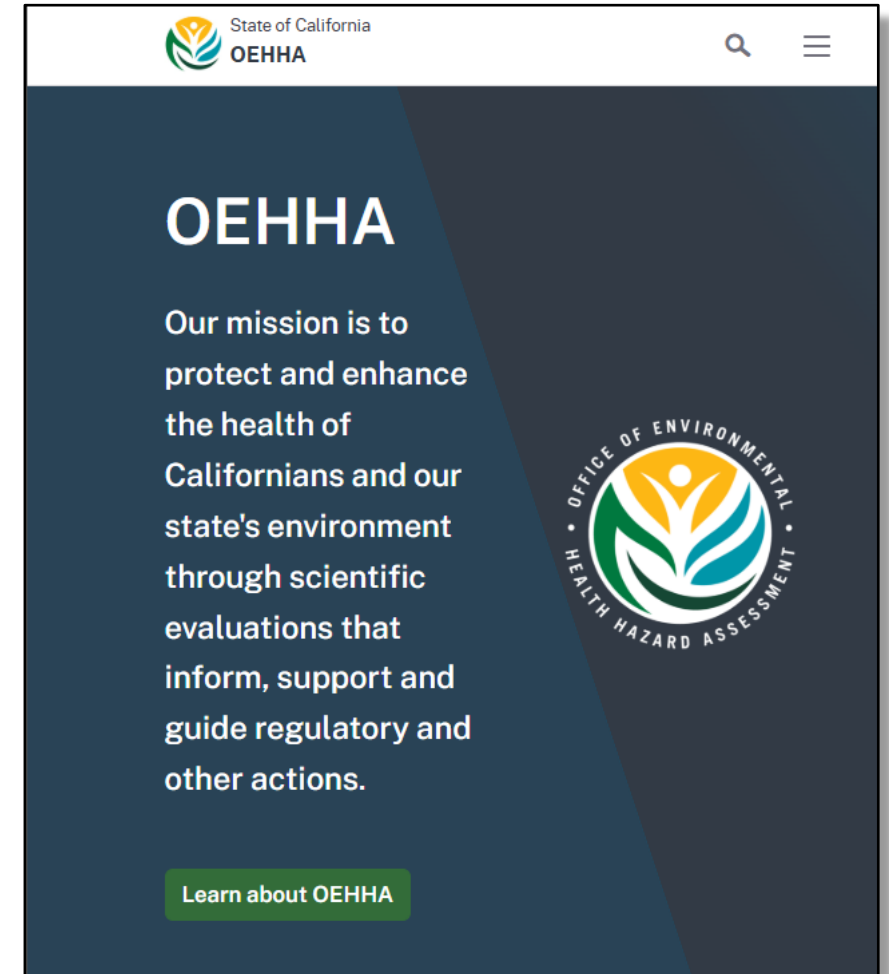


Office of Environmental Health Hazard Assessment

Threshold – Development by OEHHA

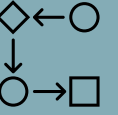


- South Coast AQMD provided list of four metals (lead, zinc, cadmium, and nickel) specified in AB 2851 for OEHHA to develop threshold values
- OEHHA will develop provisional health guidance values for air districts specifically for use as thresholds for AB 2851
 - Expedited process largely based on Study of Neighborhood Air near Petroleum Sources (SNAPS)*
 - Thresholds expected before end of year

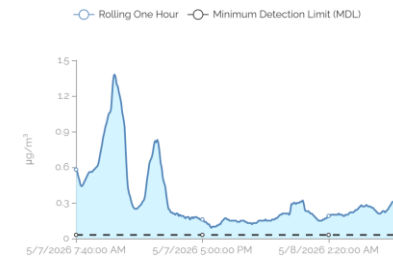


* <https://ww2.arb.ca.gov/resources/documents/snaps-overview-videos>

Thresholds and Monitoring Requirements



- PAR 1460 would require use of monitoring technology capable of quantifying concentrations below thresholds provided by OEHHA
- Evaluation of appropriate monitoring technologies ongoing
 - Capabilities (e.g., pollutants, time resolution, etc.)
 - Limitations (e.g., siting, operation, detection limit, etc.)
 - Costs (initial capital and recurring)



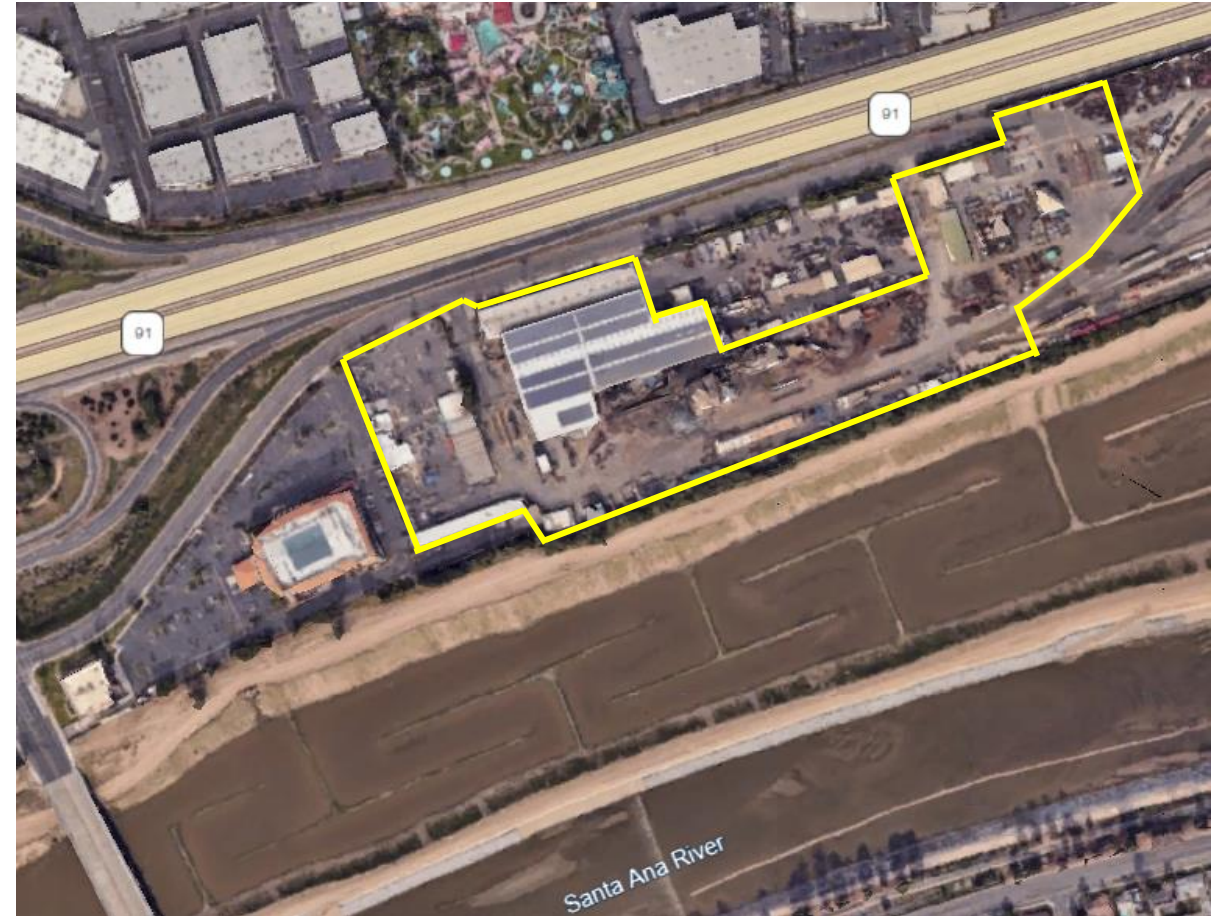
**AUTOMOTIVE METAL
SHREDDING FACILITIES**

IN SOUTH COAST

SA RECYCLING - ANAHEIM



- **Location:** 3200 E Frontera St, Anaheim
- **Shreds:** Automobiles and appliances
 - Permitted up to 56,160 tons per month
 - 7,000 hp metal shredder
- **Size:** ~20 acres
- **Nearest sensitive receptor:** Hospital
~200ft northeast of the facility property line



SA RECYCLING – TERMINAL ISLAND



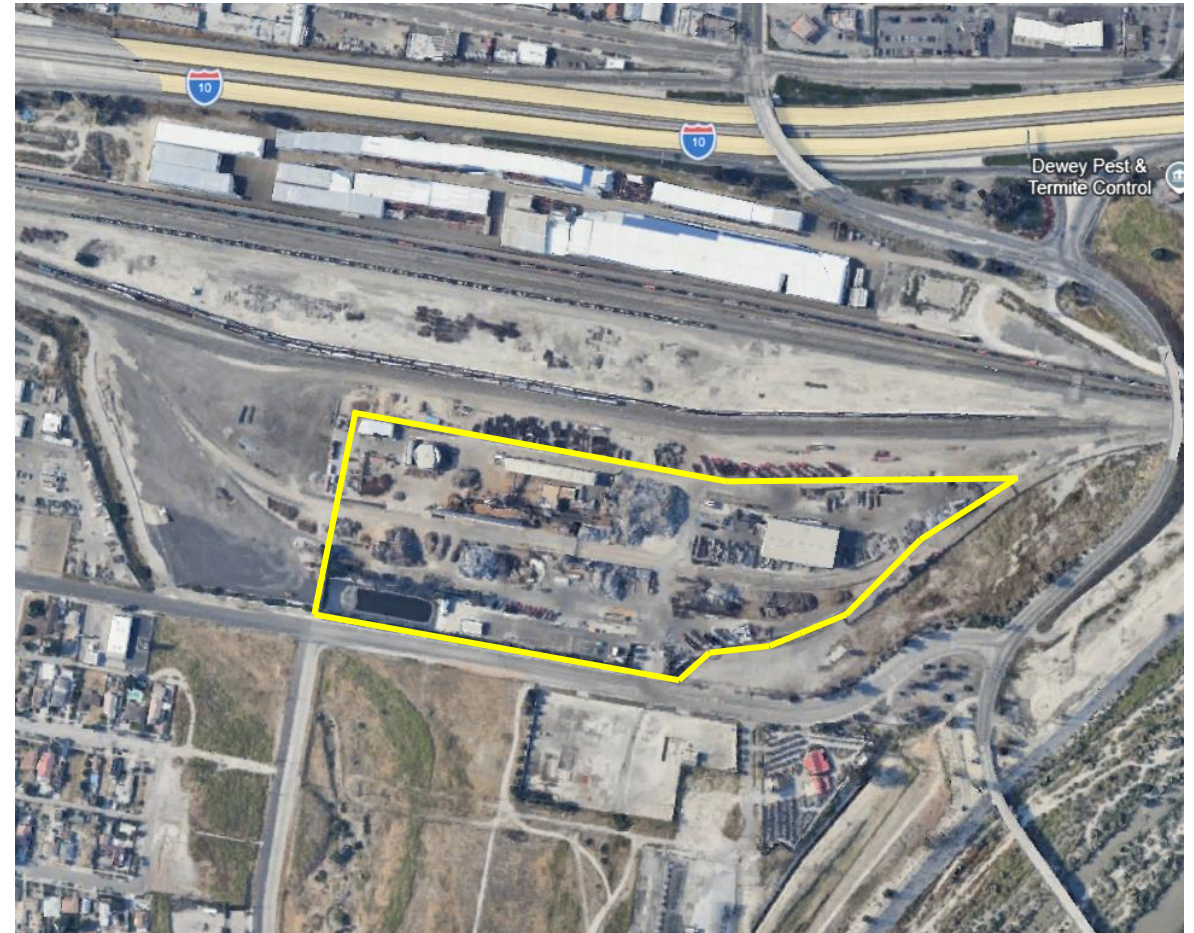
- **Location:** 901 New Dock St, San Pedro
- **Shreds:** Automobiles and appliances
 - Permitted up to 108,333 tons per month
 - 9,000 hp metal shredder
- **Size:** ~27 acres
- **Nearest sensitive receptor:** Residential ~1 mile northwest of the facility property line



ECOLOGY / AMERICAN IRON & METAL



- **Location:** 785 E M St, Colton
- **Shreds:** Automobiles and appliances
 - Permitted up to 40,000 tons per month
 - 6,000 hp metal shredder
- **Size:** ~22 acres
- **Nearest sensitive receptor:**
Residential ~210ft southwest of the facility property line



OVERVIEW AND EXAMPLES OF AIRBORNE PARTICULATE METAL MEASUREMENT METHODS AND NOTIFICATION SYSTEMS



Time-Integrated Sampling

Pros

- Relatively lower capital cost
- Lower detection limits compared to continuous methods
- Highly defensible data for potential compliance purposes or health impact assessments

Cons

- Typically collected over 24-hr period
- Labor intensive
- Significantly higher operation costs
- Turnaround time from days to weeks

Continuous Measurements

Pros

- High time-resolution measurements (for example can provide hourly data)
- Ability to detect short-term spikes
- Data can be used for near-real time notification
- Preliminary data can stream in real-time on dashboards

Cons

- Higher detection limits compared to time-integrated sampling method
- Higher capital cost
- Typically, not as accurate as time-integrated measurements
- Data gaps due to instrument down time

Time-Integrated Sampling

- **Method:** Sample collection → Sample pretreatment → Metal detection by chemical analysis in the laboratory
- **Sampling and analysis:** Samples are usually collected for 24 hours followed by lab analysis
- **Sampling frequency:** Typically, 1-in-3 or 1-in-6 days
- **Possible sample size:** PM_{2.5}, PM₁₀, TSP
- **Detection limits:** Can detect metals at lower concentrations
- **Siting:** More flexible siting requirements



Example of Time-Integrated Metals Monitoring Network

Paramount Cr VI Monitoring Network



<https://paramountenvironment.org/air/>

- Facility and community air monitoring
- Time-integrated sample collection and chemical analysis used to detect hexavalent chromium
- Data access and visualizations
- Subscription based notification system

Most Recent Sampling Data (ng/m³)

24-hour Hexavalent Chrome Samples

Cr(VI) - ng/m³

22. Dec 5. Jan 19. Jan 2. Feb 16. Feb 2. Mar

City Hall - Cr(VI) Wesley Gains Elem Cr (VI) Vermont Ave Cr (VI) SE Garfield and Jackson CR(VI) Lincoln Cr(VI) 15701 Minnesota Cr(VI) Waterwell Cr (VI)

24-hour Hexavalent Chrome Cr(VI) Samples

Time	15701 Minnesota (ng/m ³)	City Hall (ng/m ³)	Lincoln Elementary (ng/m ³)	Vermont Ave (ng/m ³)	Wesley Gains Elementary (ng/m ³)	SE Garfield and Jackson (ng/m ³)
2026-02-25 00:00:00	0.936	0.189	0.133	0.332	0.087	0.189
2026-02-19 00:00:00	0.447	0.517	0.298	0.564	0.135	0.462
2026-02-13 00:00:00	0.381	0.035	0.026	0.11	0.293	0.588
2026-02-07 00:00:00	0.218	0.256	0.058	0.5	0.249	
2026-02-01 00:00:00	0.649	0.56	0.016	0.1	0.141	0.342
2026-01-26 00:00:00	10.52	0.24	0.145	0.625	0.395	0.661
2026-01-20 00:00:00	0.972	0.136	0.112	0.407	0.152	0.344
2026-01-14 00:00:00	1.302	0.311	0.157	0.464	0.253	0.39
2026-01-08 00:00:00	0.336	0.353	0.154	0.993	0.088	0.193
2026-01-02 00:00:00	0.383	0.049	0.058	0.125	0.083	0.139
2025-12-27 00:00:00	0.135	0.159	0.088	0.231	0.06	0.118

Current Wind Direction
137°
2026-03-10 09:30:00

Wind Rose Chart
[2025-12-10 09:32:00 - 2026-03-10 09:32:00]
Wind Speed (mph)
Legend: > 24 (Red), 18 - 24 (Yellow), 12 - 18 (Green), 6 - 12 (Cyan), 3 - 6 (Blue), 1 - 3 (Dark Blue), < 1 (Black)

Current Wind Speed
0.5 mph
NORMAL
2026-03-10 09:30:00

Current Temperature
60.1 °F
NORMAL
↑ 1%
2026-03-10 09:30:00

Current Relative Humidity
68.5 %
NORMAL
↓ 1%
2026-03-10 09:30:00

Historic Meteorological Data

Time	WS (mph)	WD (°)	Temp (°F)	RH (%)
2026-03-10 09:00:00	0.1	102.3	59.3	73.8
2026-03-10 08:00:00	0.0	20.3	58.6	77.3
2026-03-10 07:00:00	0.1	244.8	58.3	78.8
2026-03-10 06:00:00	0.1	282.4	57.9	81.0
2026-03-10 05:00:00	0.6	243.3	57.5	83.8
2026-03-10 04:00:00	0.3	236.9	57.6	85.4
2026-03-10 03:00:00	0.6	218.1	58.2	85.3
2026-03-10 02:00:00	0.3	252.5	58.2	87.1
2026-03-10 01:00:00	0.3	258.0	58.8	87.8
2026-03-10 00:00:00	0.5	237.3	59.6	84.9
2026-03-09 23:00:00	0.5	248.9	60.1	81.9
2026-03-09 22:00:00	0.2	249.5	60.8	80.3

Data Disclaimer

City of Paramount Air Quality Monitoring
This map was made with Google My Maps. Create your own.

Continuous Metal Monitors

- **Method:** Sample collection → Metal detection in real-time with the instrument
- **Sampling and analysis:** Sample is typically collected for 1 hour continuously followed by chemical analysis by the instrument in near real time
- **Possible sample size:** PM2.5, PM10, TSP
- **Detection limits:** Detection limits are typically higher than laboratory-based methods
- **Siting:** Requires air-conditioned monitoring sheds/housing



Example of Continuous Metals Monitoring Network

AB 617 Community Air Monitoring



<https://xappprod.aqmd.gov/AB617CommunityAirMonitoring/Home/Index>

- Continuous monitoring
 - PM, metals, black carbon, particle number, NOx
- Real-time data access and visualizations
- Continuous metals measurements at:
 - Saul Martinez (Coachella Valley)
 - Huntington Park
 - Compton
 - Wilmington
 - Resurrection Church (Los Angeles) - *concluded in December 2023*

South Coast AQMD - AB 617 Community Air Monitoring

AB 617 COMMUNITY AIR MONITORING

Community Air Monitoring is being conducted in selected communities as part of the AB 617 program. The locations and types of pollutants being monitored is unique to each community and was determined through close collaboration with stakeholders. Data collected from air monitoring can provide valuable information about sources of air pollution, types of pollutants, and air quality impacts in AB 617 communities. Monitoring data resulting from the implementation of the Community Air Monitoring Plans (or CAMPs) can be used to support and track air quality actions prioritized by the community to reduce local exposure to harmful air pollutants.

Main Goals & Objectives

- To help provide critical information used to guide investigations or provide public information
- To expand South Coast AQMD's understanding of air quality priorities in AB 617 communities
- To support the development and implementation of emission reduction strategies and enforcement actions designed to improve local air quality and reduce exposure
- To complement and enhance existing South Coast AQMD and community-led programs

Types of Monitoring and Data Reporting

- Continuous monitors - near real-time (within an hour)
- Time-integrated samples - summary reports (several days to weeks)
- Mobile surveys - summary reports (several days to weeks)

CAMP Highlights

- Will provide new information about air pollution at the community level
- Monitoring will be done in areas of concern identified by the selected communities
- Areas selected for monitoring reflect the air quality priorities in AB 617 communities
- Many types of monitoring equipment will be used, from advanced techniques to low-cost sensors

DISCLAIMER

South Coast Air Quality Management District
21865 Copley Dr, Diamond Bar, CA 91765

Disclaimer
FAQs

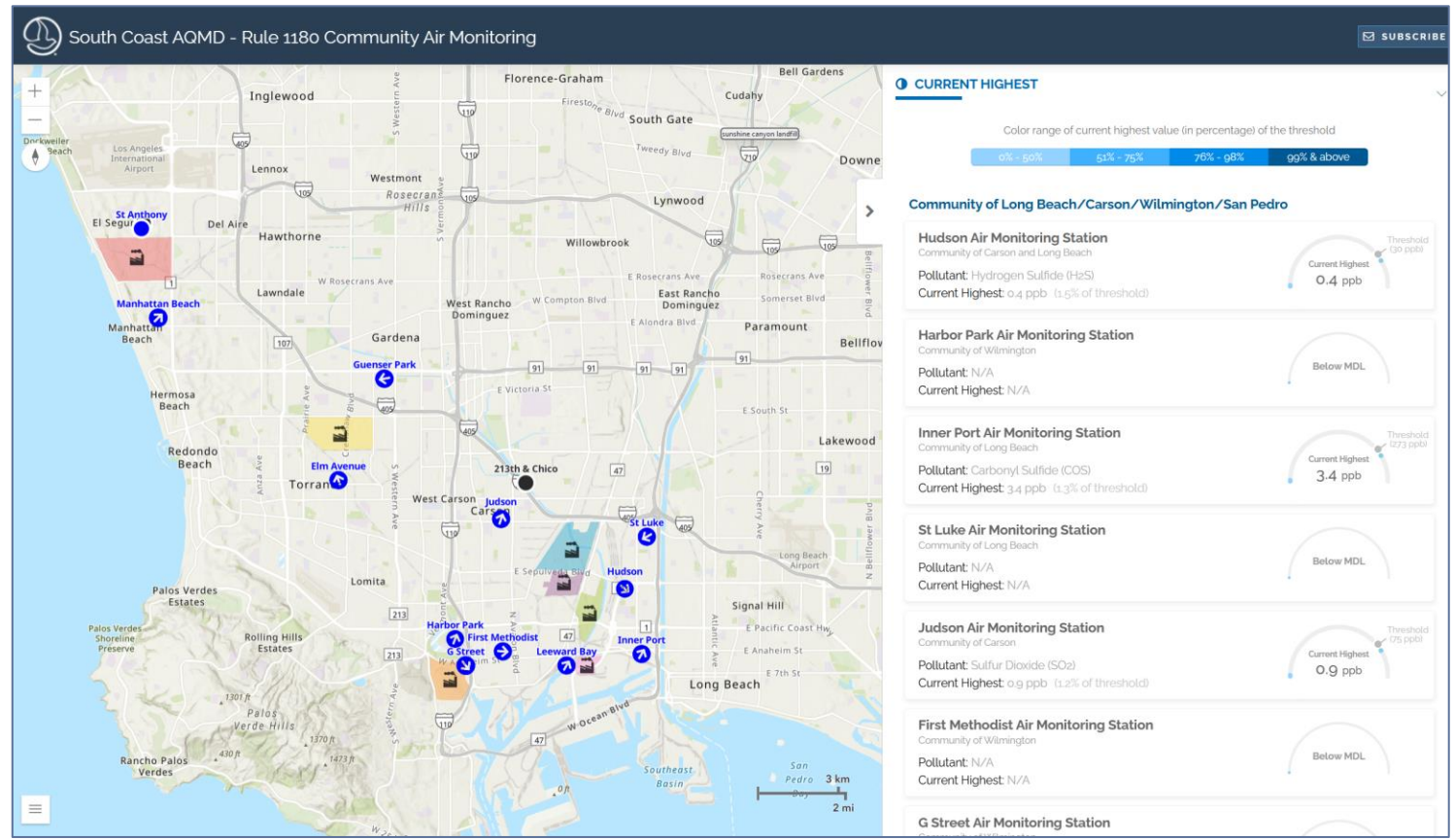
Example of Continuous Metals Monitoring Network

Rule 1180 – refinery fenceline and community air monitoring



<https://xapprod.aqmd.gov/Rule1180CommunityAirMonitoring/>

- Fenceline monitoring (by the refineries) and community air monitoring (by the South Coast AQMD)
- Continuous monitoring
 - VOCs, PM, metals, black carbon, H₂S, HF (at select stations)
- Real-time data access and visualizations
- Automated and subscription based alert systems
- Root cause assessment when thresholds exceeded



Cost Comparison

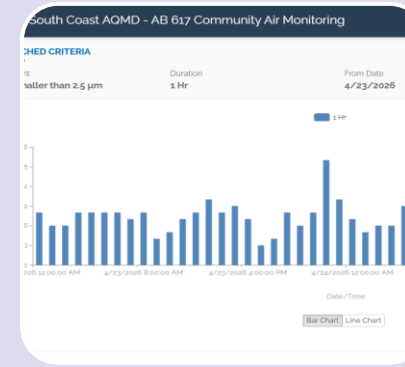
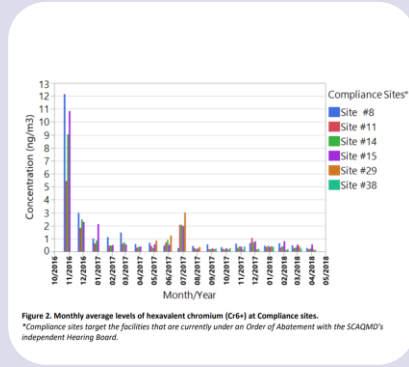


	Capital Outlay	Siting Needs	Labor (Sample Retrieval and Lab Analysis)	Consumables and Services	Data QA/QC and Analysis	Development and Maintenance of Data Dashboard and Notification System
Time-integrated	High	Low	Very high	Moderate	Moderate	High
Continuous	Very high	High	Moderate	Moderate	High	High

Summary & Concluding Remarks



South Coast
AQMD



Time-integrated sampling approach has higher data quality, but significantly more costly over longer time periods

Time-integrated approach is EPA approved method and better suited for health impact assessments

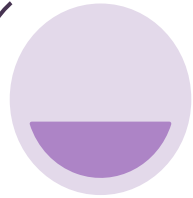
Continuous methods have higher capital costs, but significantly lower operation costs for long term measurements

Although both technologies could be used for notification, continuous methods provide more timely notifications

The thresholds set by OEHHA for the target metals might impact the selected technology

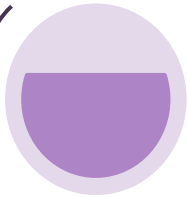
APPROACH TO FENCE- LINE AIR MONITORING

Identifying Various Elements Needed for Fence-line Monitoring Implementation



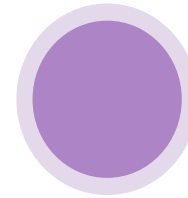
Identify specified elements in AB 2581 required for fence-line monitoring

- AB 2851 only specified certain elements needed to implement fence-line air monitoring
 - Applicability (i.e., facilities)
 - Metals to be monitored
 - Thresholds to be developed (underway by OEHHA)
 - Public notification, *but not how to implement it*
 - Enforceable actions, *but no specific actions*



Non-specified elements will be determined by South Coast AQMD

- Identify and assess: Regulations with fence-line monitoring
- Review requirements for potential use in PAR 1460
 - ❖ South Coast has rules with fence-line monitoring
 - ❖ Non-specified elements for PAR 1460 will be developed after evaluation of South Coast rules



Collect data from South Coast rules for use in PAR 1460, that include:

- Monitoring technologies to conduct fence-line monitoring
- Process required of facilities to implement fence-line monitoring
- Public notification
- Enforceable actions tied to monitoring results
- Duration of fence-line monitoring for intended purpose

Key South Coast AQMD Monitoring Rules Currently Being Evaluated



Staff evaluating rules with monitoring requirements for potential use in PAR 1460

- **Rule 1180** – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities
- **Rule 1180.1** – Fenceline and Community Air Monitoring for Other Refineries
- **Rule 1405** – Control of Ethylene Oxide Emissions from Sterilization and Related Operations
- **Rule 1420.1** – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities
- **Rule 1420.2** – Emission Standards for Lead from Metal Melting Facilities
- **Rule 1480** – Ambient Monitoring and Sampling of Metal Toxic Air Contaminants

Results to be presented at future working group meeting

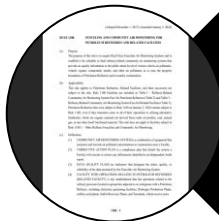
- Overview of regulatory framework for fence-line monitoring requirements
- Initial rule concepts for fence-line monitoring in PAR 1460

NEXT STEPS

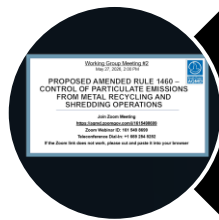
Next Steps



Continue collaboration with Air Districts, DTSC, and OEHHA



Finalize assessment of South Coast monitoring rules



Present updates during Working Group #3



Estimated Public Hearing –
First Quarter of 2027

Staying Updated



- Sign up to receive e-mail updates via <http://www.aqmd.gov/sign-up>

[Sign Up](#)

The South Coast AQMD offers periodic newsletter updates via Email on a variety of topics . Click on the Manage Subscriptions link at the bottom of the form to update your subscriptions (unsubscribe from lists, subscribe to additional lists, or change your Email address).

If you wish to receive daily pollution forecasts or alerts for specific pollution levels in your area, sign up for [Air Alerts](#).

For printed copies of South Coast AQMD publications that mailed to you, please visit [Subscription Services](#) (charges may apply).

Enter the following information:

Email Address:	Re-Enter Email Address:
<input type="text"/>	<input type="text"/>
First Name (optional):	Last Name (optional):
<input type="text"/>	<input type="text"/>

Subscribe by checking the box adjacent to the E-Mail List(s) you are interested in and then CLICK on the Subscribe button below:

General Notifications:

<input type="checkbox"/> Events & Conferences	List of stakeholders interested in events and conferences.
<input type="checkbox"/> South Coast AQMD News	Brief updates highlighting what is current at South Coast AQMD, such as conferences, equipment exchanges, advisories, etc.
<input type="checkbox"/> South Coast AQMD Advisor	South Coast AQMD's comprehensive bi-monthly newsletter containing the latest news, including rule updates, the latest on programs for businesses

Subscribe by scrolling down the page and checking off the box for **Rule 1460** to receive future meeting notices and links to documents



<input type="checkbox"/> Rule 1426	Emissions from Metal Finishing Operations
<input type="checkbox"/> Rule 1435	Control of Emissions from Metal Heat Treating Processes
<input checked="" type="checkbox"/> Rule 1460	Control of Particulate Emissions from Metal Recycling and Shredding Operations
<input type="checkbox"/> Rule 1466	Toxic Air Contaminant Emissions from Decontamination of Soil
<input type="checkbox"/> Rule 1469	Hexavalent Chromium Emission from Chrome Plating and Chromic Acid Anodizing Operations

Staff Contacts

Min Sue

Air Quality Specialist

 (909) 396-3241

 msue@aqmd.gov

Tiffani To

Air Quality Specialist

 (909) 396-2738

 tto@aqmd.gov

Shawn Wang

Program Supervisor

 (909) 396-3319

 swang@aqmd.gov

Neil Fujiwara

Program Supervisor

 (909) 396-3512

 nfujiwara@aqmd.gov

Michael Krause

Assistant Deputy Executive Director

 (909) 396-2706

 mkrause@aqmd.gov