



South Coast Air Quality Management District

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

A G E N D A

HYBRID GOVERNING BOARD MEETING DECEMBER 1, 2023

A meeting of the South Coast Air Quality Management District Board will be held at 9:00 a.m. on Friday, December 1, 2023 through a hybrid format of in-person attendance in the Dr. William A. 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.

Please refer to South Coast AQMD's website for information regarding the format of the meeting, updates, and details on how to participate at: <http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>.

<p>Electronic Participation Information (Instructions provided at the bottom of the agenda)</p>	<p>Join Zoom Meeting - from PC, Laptop or Phone https://scaqmd.zoom.us/j/97766653662 Meeting ID: 977 6665 3662 Teleconference Dial In +1 669 900 6833 or +1 253 215 8782 One tap mobile +16699006833,,97766653662# or +12532158782,,97766653662#</p> <p>Spanish Language Audience/Para la Audiencia que Habla Español Unirte a la Reunión en Zoom: https://scaqmd.zoom.us/j/92830003925 Meeting ID/Identificación de la Reunión: 928 3000 3925 Teleconference Dial In/Numero para llamar: +1 669 900 6833 One tap mobile: +16699006833,,92830003925# o +12532158782,,92830003925#</p>
<p>Public Comment Will Still Be Taken</p>	<p>Audience will be allowed to provide public comment in person and through Zoom connection or telephone. Phone controls for participants: The following commands can be used on your phone's dial pad while in meeting: *6 (Toggle mute/unmute); *9 - Raise hand</p>
<p>Questions About an Agenda Item</p>	<ul style="list-style-type: none">▪ The name and telephone number of the appropriate staff person to call for additional information or to resolve concerns is listed for each agenda item.▪ In preparation for the meeting, you are encouraged to obtain whatever clarifying information may be needed to allow the Board to move expeditiously in its deliberations.
<p>Meeting Procedures</p>	<ul style="list-style-type: none">▪ The public meeting of the South Coast AQMD Governing Board begins at 9:00 a.m. The Governing Board generally will consider items in the order listed on the agenda. However, <u>any item</u> may be considered in <u>any order</u>.▪ After taking action on any agenda item not requiring a public hearing, the Board may reconsider or amend the item at any time during the meeting.

All documents (i) constituting non-exempt public records, (ii) relating to an item on the agenda, and (iii) having been distributed to at least a majority of the Governing Board after the agenda is posted, are available prior to the meeting for public review at South Coast AQMD's Clerk of the Boards Office, 21865 Copley Drive, Diamond Bar, CA 91765 or web page at www.aqmd.gov

Americans with Disabilities Act and Language Accessibility

Disability and language-related accommodations can be requested to allow participation in the Governing Board meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov. 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 the Clerk of the Boards Office at (909) 396-2500 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to cob@aqmd.gov.

A webcast of the meeting is available for viewing at:

<http://www.aqmd.gov/home/news-events/webcast>

CALL TO ORDER

- Pledge of Allegiance
- Roll Call
- Opening Comments: Vanessa Delgado, Chair
Other Board Members
Wayne Nastri, Executive Officer
- Election of Chair for Term January 2024 – January 2026
- Election of Vice Chair for Term January 2024 – January 2026

Staff/Phone (909) 396-

PUBLIC COMMENT PERIOD – (Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3) The public may comment on any subject within the South Coast AQMD’s authority that does not appear on the agenda, during the Public Comment Period. Each speaker addressing non-agenda items may be limited to a total of (3) minutes.

CONSENT AND BOARD CALENDAR (Items 1 through 23)

Note: Consent and Board Calendar items held for discussion will be moved to Item No. 24

Items 1 and 2 – Action Items/No Fiscal Impact

1. Approve Minutes of November 3, 2023 **Thomas/3268**
2. Set Public Hearing January 5, 2024 to Consider Adoption of and/or Amendments to South Coast AQMD Rules and Regulations: **Nastri/3131**

Determine That Proposed Amended Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities and Proposed Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries Are Exempt from CEQA; Amend Rule 1180, Adopt Rule 1180.1, and Amend the Rule 1180 and Rule 1180.1 Fenceline Air Monitoring Plan Guidelines **Krause/2706**

Proposed Amended Rule 1180 (PAR 1180) and Proposed Rule 1180.1 (PR 1180.1) will require refineries and facilities with operations related to refineries to monitor for air contaminants at or near their fenceline and to fund the installation and operation of monitoring stations within the community near their facilities. PAR 1180 will remove an exemption, include facilities with operations related to petroleum refineries, and include monitoring requirements for additional air pollutants. PR 1180.1 will establish similar fenceline and community monitoring requirements for smaller refineries that are not currently subject to Rule 1180. PAR 1180 and PR 1180.1 will establish notification thresholds; require root cause analysis; independent audits and corrective actions; and

improve data accessibility. In addition, Fenceline Air Monitoring Plan Guidelines has proposed amendments to reflect the proposed rule changes. This action is to adopt the Resolution: 1) Determining that Proposed Amended Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities; and Proposed Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries are exempt from the requirements of the California Environmental Quality Act; and 2) Amending Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities; adopting Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries; and amending the Rule 1180 and Rule 1180.1 Fenceline Air Monitoring Plan Guidelines. (Reviewed: Stationary Source Committee, September 15 and November 17, 2023)

Items 3 through 8 – Budget/Fiscal Impact

3. Appropriate Funds, Issue Solicitation and Purchase Orders to Meet Operational Needs for Rule 1180 Community Air Monitoring Program

Low/2269

In June 2018, the Board created the Rule 1180 Special Revenue Fund to establish and maintain a community air monitoring network near refineries. The FY 2023-24 budget for this program includes approximately \$4.6 million in annual fees from refineries for community air monitoring. These actions are to appropriate funds to Monitoring and Analysis' FY 2023-24 and/or FY 2024-25 Budget, and issue a solicitation and purchase orders to meet operational needs of the Rule 1180 Community Air Monitoring Program. (Reviewed: Administrative Committee, November 9, 2023; Recommended for Approval)

4. Transfer and Appropriate Funds, Issue Solicitations and Purchase Orders for MATES VI

Low/2269

Since 1987, South Coast AQMD has conducted five MATES to evaluate air toxics health risks in South Coast AQMD's jurisdiction. MATES VI measurements for a wide range of air toxics are anticipated to begin the first half of 2025. The collected data will be used to conduct air toxics modeling and quantify health impacts. These actions are to transfer up to \$5,024,725 from the Clean Fuels Program Fund to the General Fund for the MATES VI program, and appropriate funding to the Monitoring & Analysis and Planning, Rule Development, and Implementation divisions' budgets over FY 2023-24 through FY 2027-28 as needed. These actions are also to issue solicitations and purchase orders to support the goals and objectives of MATES VI. (Reviewed: Administrative Committee, November 9, 2023; Recommended for Approval)

5. Issue Program Announcement and Execute Agreements for Zero-Emission Infrastructure Projects

Katzenstein/2219

Zero-emission infrastructure for medium and heavy-duty trucks is critical to support the transition to zero-emission technologies. These actions are to: 1) Issue a Program Announcement to solicit applications for eligible infrastructure projects to support zero-emission medium and heavy-duty vehicles and equipment in the South Coast Air Basin, and 2) execute agreements for eligible projects based on the results of the Program Announcement. Funding will be provided by the Carl Moyer Program Fund (32), AB 617 Community Air Protection Program Fund (77) and other funding sources as they become available. (Reviewed; Technology Committee, November 17, 2023; Recommended for Approval)

6. Establish Special Revenue Fund, Recognize Revenue, Execute Contracts, and Reimburse General Fund to Demonstrate Fuel Cell Locomotive and Deploy Heavy-Duty Truck Charging and Fueling Infrastructure

Katzenstein/2219

South Coast AQMD has been awarded up to \$76,250,003 from California State Transportation Agency's (CalSTA) Port and Freight Infrastructure Program to demonstrate a short line hydrogen fuel cell locomotive and deploy direct current fast chargers and hydrogen refueling dispensers. South Coast AQMD has also been allocated \$500,000 through the DOE through a FY 23 Congressional Direct Spending Request for the project. These actions are to: 1) establish the CalSTA Special Revenue Fund (89) and recognize, upon receipt, revenue up to \$76,250,003 from CalSTA and up to \$500,000 from DOE into Fund (89); 2) execute contracts with Wabtec Corporation for up to \$34,188,480 from CalSTA Special Revenue Fund (89) and Prologis Mobility LLC for up to \$38,930,570 from CalSTA Special Revenue Fund (89) and up to \$11,679,171 from MSRC Fund (23); and 3) reimburse the General Fund up to \$3,630,953 from CalSTA Special Revenue Fund (89) to administer these project. (Reviewed: Technology Committee; November 17, 2023; Recommended for Approval)

7. Transfer and Appropriate Funds and Execute Sole Source Contract to Upgrade Fire Life Safety System at Headquarters Building

Olvera/2309

South Coast AQMD's headquarters building periodically requires upgrades to its building infrastructure systems and equipment. This action is to transfer and appropriate \$720,000 from the Infrastructure Improvement Fund (Fund 02) to Administrative and Human Resources' FY 2023-24 Budget, Capital Outlays Major Object, and to approve a sole source contract with National Fire Safe to upgrade the building's fire life safety system. The current system was installed in 1991 with the construction of the building. (Reviewed: Administrative Committee, November 9, 2023; Recommended for Approval)

8. Appoint Medical Member to Hearing Board and Appoint Alternate Medical Member to Hearing Board

Thomas/3268

This action is to fill the Regular Medical Member vacancy on the South Coast AQMD Hearing Board for an unexpired term ending June 30, 2025. Based on the recommendation of the Hearing Board Advisory Committee, the Administrative Committee interviewed Dr. Jerry P. Abraham and Dr. Sharon Williams at its meeting on November 9, 2023 and made a final recommendation. (Reviewed: Administrative Committee, November 9, 2023; Recommended for Approval)

Items 9 through 16 – Information Only/Receive and File

9. Legislative, Public Affairs and Media Report

Alatorre/3122

This report highlights the October 2023 outreach activities of the Legislative, Public Affairs and Media Office, which includes: Major Events, Community Events/Public Meetings, Environmental Justice Update, Speakers Bureau/Visitor Services, Communications Center, Public Information Center, Business Assistance, Media Relations and Outreach to Business and Federal, State and Local Government. (No Committee Review)

10. Report to Legislature and CARB on South Coast AQMD's Regulatory Activities for Calendar Year 2022

Alatorre/3122

South Coast AQMD is required by law to submit a report to the Legislature and CARB on its regulatory activities for the preceding calendar year. The report is to include a summary of each rule and rule amendment adopted by South Coast AQMD, number of permits issued, denied or cancelled, emission offset transactions, budget and forecast, and an update on the Clean Fuels program. Also included is the Annual RECLAIM Audit Report, as required by RECLAIM Rule 2015 - Backstop Provisions. (No Committee Review)

11. Hearing Board Report

Verdugo-Peralta

This reports the actions taken by the Hearing Board during the period of October 1 through October 31, 2023. (No Committee Review)

12. Civil Filings and Civil Penalties Report

Gilchrist/3459

This report summarizes monthly penalties and legal actions filed by the General Counsel's Office from October 1, 2023 through October 31, 2023. An Index of South Coast AQMD Rules is attached with the penalty report. (Reviewed: Stationary Source Committee, November 17, 2023)

13. Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects **Krause /2706**

This report provides a listing of CEQA documents received by South Coast AQMD between October 1, 2023 and October 31, 2023, and those projects for which South Coast AQMD is acting as lead agency pursuant to CEQA. (Reviewed: Mobile Source Committee, November 17, 2023)

14. Rule and Control Measure Forecast **Rees/2856**

This report highlights South Coast AQMD rulemaking activities and public hearings scheduled for 2024. (No Committee Review)

15. 2023 Annual Progress Report for AB 617 Community Emission Reductions Plans **Higgins/3309**

This report summarizes the progress of Community Emission Reduction Plan objectives implemented from September 2019 to June 2023 in the six South Coast AQMD AB 617 designated communities. (Reviewed: Stationary Source Committee, November 17, 2023)

16. Status Report on Major Ongoing and Upcoming Projects for Information Management **Moskowitz/3329**

Information Management is responsible for data systems management services in support of all South Coast AQMD operations. This action is to provide the monthly status report on major automation contracts and planned projects. (Reviewed: Administrative Committee, November 9, 2023)

Items 17 through 23 -- Reports for Committees and CARB

- | | | |
|---|-------------------|-------------------------|
| 17. Administrative Committee (Receive & File) | Chair: Delgado | Nastri/3131 |
| 18. Legislative Committee (Receive & File) | Chair: Cacciotti | Alatorre/3122 |
| 19. Mobile Source Committee (Receive & File) | Chair: Kracov | Rees/2856 |
| 20. Stationary Source Committee (Receive & File) | Chair: McCallon | Aspell/2491 |
| 21. Technology Committee (Receive & File) | Chair: Rodriguez | Katzenstein/2219 |
| 22. Mobile Source Air Pollution Reduction Review Committee (Receive & File) | Board Rep: Hagman | Katzenstein/2219 |
| 23. California Air Resources Board Monthly Report (Receive & File) | Board Rep: Kracov | Thomas/3268 |

24. Items Deferred from Consent and Board Calendar

PUBLIC HEARING

25. Determine That Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations, Is Exempt from CEQA; and Amend Rule 1405

Krause/2706

Proposed Amended Rule 1405 establishes new and enhanced control and monitoring requirements to further reduce stack and fugitive ethylene oxide emissions from sterilization operations. Proposed Amended Rule 1405 includes reporting, recordkeeping, and curtailment provisions. Proposed Amended Rule 1405 also includes inventory tracking, monitoring, and reporting provisions for certain large warehouses receiving materials sterilized by ethylene oxide. This action is to adopt the Resolution: 1) Determining that Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations is exempt from the requirements of the California Environmental Quality Act; and 2) Amending Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations. (Reviewed: Stationary Source Committee, April 21, June 16, August 18, September 15, and October 20, 2023)

BOARD MEMBER TRAVEL – (No Written Material)

Board member travel reports have been filed with the Clerk of the Boards, and copies are available upon request.

CLOSED SESSION -- (No Written Material)

Gilchrist/3459

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION

It is necessary for the Board to recess to closed session pursuant to Government Code sections 54956.9(a) and 54956.9(d)(1) to confer with its counsel regarding pending litigation which has been initiated formally and to which the South Coast AQMD is a party. The actions are:

- In the Matter of South Coast Air Quality Management District v. Southern California Gas Company, Aliso Canyon Storage Facility, South Coast AQMD Hearing Board Case No. 137-76 (Order for Abatement); People of the State of California, ex rel South Coast Air Quality Management District v. Southern California Gas Company, Los Angeles Superior Court Case No. BC608322; Judicial Council Coordinated Proceeding No.4861;
- South Coast Air Quality Management District, et al. v. EPA, United States Court of Appeals, D.C. Circuit, Case No. 19-1241 (consolidated with Union of Concerned Scientists v. NHTSA, No. 19-1230);
- South Coast Air Quality Management District, et al. v. NHTSA, EPA, et al., United States Court of Appeals, D.C. Circuit, Filed May 28, 2020;
- Natural Resources Defense Council, et al. v. City of Los Angeles, et al., San Diego Superior Court, Case No. 37-2021-00023385-CU-TT-CTL (China Shipping Case) (transferred from Los Angeles Superior Court, Case No. 20STCP02985); Fourth District Court of Appeal, Division One, No. D080902;

- California Trucking Association v. South Coast Air Quality Management District; the Governing Board of the South Coast Air Quality Management District; and Does 1 through 25, inclusive, U.S. District Court for the Central District of California, Case No. 2:21-cv-06341;
- In the Matter of South Coast Air Quality Management District v. Baker Commodities, South Coast AQMD Hearing Board Case No. 6223-1 (Order for Abatement); Baker Commodities, Inc. v. South Coast Air Quality Management District Hearing Board; South Coast Air Quality Management District; South Coast Air Quality Management District Hearing Board Members: Cynthia Verdugo-Peralta, Robert Pearman, Micah Ali, and Allan Bernstein, DPM MBA, in their official capacities only; and 100 Does and Roes, Los Angeles County Superior Court, Case No. 22STCP03597;
- South Coast Air Quality Management District v. EPA, U.S. District Court for the Central District of California, Case No. 2:23-cv-02646; and
- East Yard Communities for Environmental Justice, et al. v. South Coast Air Quality Management District, the Governing Board of the South Coast Air Quality Management District, the California Air Resources Board, and Does 1 through 25, Inclusive, U.S. District Court for the Central District of California, Case No. 2:23-cv-06682.

CONFERENCE WITH LEGAL COUNSEL – INITIATING LITIGATION

It is also necessary for the Board to recess to closed session pursuant to Government Code section 54956.9(a) and 54956.9(d)(4) to consider initiation of litigation (three cases).

- Center for Biological Diversity and Center for Environmental Health v. Michael S. Regan, in his official capacity as Administrator, United States Environmental Protection Agency, U.S. District Court for the Northern District of California, Case No. 4:23-cv-00148 (PM 2.5); and
- Western States Trucking Association, Inc. v. EPA, et al., Unites States Court of Appeals, D.C. Circuit, Case No. 23-1143.

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

Also, it is necessary for the Board to recess to closed session pursuant to Government Code section 54956.9(d)(2) to confer with its counsel because there is a significant exposure to litigation against the South Coast AQMD (two cases).

CONFERENCE WITH LABOR NEGOTIATORS

It is also necessary to recess to closed session pursuant to Government Code section 54957.6 to confer with labor negotiators: Agency Designated Representative: A. John Olvera, Deputy Executive Officer – Administrative & Human Resources;

- Employee Organization(s): Teamsters Local 911, and South Coast AQMD Professional Employees Association; and
- Unrepresented Employees: Designated Deputies and Management and Confidential employees.

ADJOURNMENT

*****PUBLIC COMMENTS*****

Members of the public are afforded an opportunity to speak on any agenda item before consideration of that item. Persons wishing to speak may do so in person or remotely via Zoom or telephone. To provide public comments via a Desktop/Laptop or Smartphone, click on the "Raise Hand" at the bottom of the screen, or if participating via Dial-in/Telephone Press *9. This will signal to the host that you would like to provide a public comment and you will be added to the list.

All agendas are posted at South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, and website, <http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>, at least 72 hours in advance of the meeting. At the beginning of the agenda, an opportunity is also provided for the public to speak on any subject within the South Coast AQMD's authority. Speakers may be limited to a total of three (3) minutes for the entirety of the Consent Calendar plus Board Calendar, and three (3) minutes or less for each of the other agenda items.

Note that on items listed on the Consent Calendar and the balance of the agenda any motion, including action, can be taken (consideration is not limited to listed recommended actions). Additional matters can be added and action taken by two-thirds vote, or in the case of an emergency, by a majority vote. Matters raised under the Public Comment Period may not be acted upon at that meeting other than as provided above.

Written comments will be accepted by the Board and made part of the record. Individuals who wish to submit written or electronic comments must submit such comments to the Clerk of the Board, South Coast AQMD, 21865 Copley Drive, Diamond Bar, CA 91765-4178, (909) 396-2500, or to cob@aqmd.gov, on or before 5:00 p.m. on the Tuesday prior to the Board meeting.

ACRONYMS

AQ-SPEC = Air Quality Sensor Performance Evaluation Center	NATTS =National Air Toxics Trends Station
AQIP = Air Quality Investment Program	NESHAPS = National Emission Standards for Hazardous Air Pollutants
AQMP = Air Quality Management Plan	NGV = Natural Gas Vehicle
AVR = Average Vehicle Ridership	NOx = Oxides of Nitrogen
BACT = Best Available Control Technology	NSPS = New Source Performance Standards
BARCT = Best Available Retrofit Control Technology	NSR = New Source Review
Cal/EPA = California Environmental Protection Agency	OEHA = Office of Environmental Health Hazard Assessment
CARB = California Air Resources Board	PAMS = Photochemical Assessment Monitoring Stations
CEMS = Continuous Emissions Monitoring Systems	PEV = Plug-In Electric Vehicle
CEC = California Energy Commission	PHEV = Plug-In Hybrid Electric Vehicle
CEQA = California Environmental Quality Act	PM10 = Particulate Matter ≤ 10 microns
CE-CERT =College of Engineering-Center for Environmental Research and Technology	PM2.5 = Particulate Matter ≤ 2.5 microns
CNG = Compressed Natural Gas	RECLAIM=Regional Clean Air Incentives Market
CO = Carbon Monoxide	RFP = Request for Proposals
DOE = Department of Energy	RFQ = Request for Quotations
EV = Electric Vehicle	RFQQ=Request for Qualifications and Quotations
EV/BEV = Electric Vehicle/Battery Electric Vehicle	SCAG = Southern California Association of Governments
FY = Fiscal Year	SIP = State Implementation Plan
GHG = Greenhouse Gas	SOx = Oxides of Sulfur
HRA = Health Risk Assessment	SOON = Surplus Off-Road Opt-In for NOx
LEV = Low Emission Vehicle	SULEV = Super Ultra Low Emission Vehicle
LNG = Liquefied Natural Gas	TCM = Transportation Control Measure
MATES = Multiple Air Toxics Exposure Study	ULEV = Ultra Low Emission Vehicle
MOU = Memorandum of Understanding	U.S. EPA = United States Environmental Protection Agency
MSERCs = Mobile Source Emission Reduction Credits	VOC = Volatile Organic Compound
MSRC = Mobile Source (Air Pollution Reduction) Review Committee	ZEV = Zero Emission Vehicle

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.

For language interpretation:

Click the interpretation Globe icon at the bottom of the screen

Select the language you want to hear (either English or Spanish)

Click "Mute Original Audio" if you hear both languages at the same time.

Para interpretación de idiomas:

Haga clic en el icono de interpretación el globo terráqueo en la parte inferior de la pantalla

Seleccione el idioma que desea escuchar (inglés o español)

Haga clic en "Silenciar audio original" si escucha ambos idiomas al mismo tiempo.

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 Chair will announce public comment.

Speakers may be limited to a total of 3 minutes for the entirety of the consent calendar plus board calendar, and three minutes or less for each of the other agenda items.

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

If interpretation is needed, more time will be allotted.

Directions to provide public comment on ZOOM from a DESKTOP/LAPTOP or SMARTPHONE:

Click on the "Raise Hand" feature at 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 to provide public comment via TELEPHONE:

Dial *9 on your keypad to signal that you would like to comment.

Directions for Spanish Language TELEPHONE line only:

- The call in number is the same (+1 669 900 6833)
- The meeting ID number is 928-3000-3925
- If you would like to make public comment, please dial *9 on your keypad to signal that you would like to comment.

Instrucciones para la línea de TELÉFONO en español únicamente:

- El número de llamada es el mismo (+1 669 900 6833)
- El número de identificación de la reunión es 928-3000-3925
- Si desea hacer un comentario público, marque *9 en su teclado para indicar que desea comentar.

[↑ Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 1

MINUTES: Governing Board Monthly Meeting

SYNOPSIS: Attached are the Minutes of the November 3, 2023
Board Meeting.

RECOMMENDED ACTION:

Approve the November 3, 2023 Board Meeting Minutes.

Faye Thomas
Clerk of the Boards

FT

FRIDAY, NOVEMBER 3, 2023

Notice having been duly given, the regular meeting of the South Coast Air Quality Management District Board was conducted in a hybrid format (in person and remotely via videoconferencing and telephone). Members present:

Councilmember Michael A. Cacciotti, Vice Chair
Cities of Los Angeles County – Eastern Region

Mayor Lock Dawson
Cities of Riverside County

Supervisor Andrew Do
County of Orange

Supervisor Curt Hagman
County of San Bernardino

Gideon Kracov
Governor's Appointee

Mayor Larry McCallon
Cities of San Bernardino County

Supervisor Holly J. Mitchell
County of Los Angeles

Veronica Padilla-Campos
Speaker of the Assembly Appointee

Supervisor V. Manuel Perez
County of Riverside

Councilmember Nithya Raman
City of Los Angeles

Councilmember Carlos Rodriguez
Cities of Orange County

Councilmember José Luis Solache
Cities of Los Angeles County – Western Region

Absent: Senator Vanessa Delgado (Ret.), Chair
Senate Rules Committee Appointee

For additional details of the Governing Board Meeting, please refer to the recording of the [Webcast](#) at: [Live Webcast \(aqmd.gov\)](#)

CALL TO ORDER: Vice Chair Cacciotti called the meeting to order at 9:09 a.m.

- Pledge of Allegiance: Led by Supervisor Do
- Roll Call
Councilmember Rodriguez arrived at 9:11 a.m. and Board Member Padilla-Campos arrived at 9:19 a.m.
- Opening Comments

Councilmember Solache shared photos of a commercial electric lawn and garden equipment demonstration event that the South Coast AQMD hosted in the City of Lynwood. He expressed appreciation to the community members and landscapers that attended to learn about the rebate program.

Mayor McCallon acknowledged and congratulated Councilmember Rodriguez for being reappointed to the South Coast AQMD Board by the Orange County City Selection Committee on November 2, 2023.

Vice Chair Cacciotti announced that he attended the Mount San Antonio (Mt. SAC) college Green Zone Certification ceremony on November 2, 2023 to celebrate Mt. SAC's achievement as the first AGZA Green Zone certified community college in the country.

Executive Officer Wayne Nastri provided an update on recent activities that took place at the Diamond Bar headquarters, including the onsite childcare center's Halloween parade and the Playhouse Build event, which was an event done in partnership with Habitat for Humanity of Greater Los Angeles as part of the Working with Communities employee volunteer service program. Mr. Nastri provided a brief update on ongoing work related to the railyard MOU, including past and upcoming community meetings and comments/feedback received during those meetings. For additional details, please refer to the [Webcast](#) at 15:24.

Supervisor Perez announced that a meeting will be scheduled in the near future for the Board's Climate Change Committee. He looks forward to working with his fellow Board members and the community on this important committee.

Councilmember Rodriguez expressed gratitude to his colleagues on the Orange County City Selection Committee for reappointing him to serve as their South Coast AQMD representative. He recognized the responsibility to balance economic vitality and success of the region with protecting public health and looks forward to working with his fellow Board members.

PUBLIC COMMENT PERIOD – (Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3)

The Public Comment Period on Non-Agenda Items was opened. The following individuals addressed the Board.

For additional details, please refer to the [Webcast](#) at 21:05.

Eric Fefferman, Granada Hills resident
Frank Nolan, Granada Hills resident
*Elizabeth Mitev, Granada Hills resident

Commented on the following issues regarding the Sunshine Canyon Landfill:

- Expressed concerns with the continued public nuisance violations
- Expressed frustration with South Coast AQMD's complaint process
- Questioned enforcement and penalty actions.

** The Public Comment Period on Non-Agenda items was temporarily suspended. Therefore, this speaker was delayed and provided comments later in the meeting. Please refer to the [Webcast](#) at 45:47 for the full details of this speaker's comments.*

Mr. Nastri noted that staff is aware of the complaints regarding Sunshine Canyon and Chiquita Canyon Landfills. He also noted staff's coordination with other agencies, consideration of an abatement order for Sunshine Canyon, and work to address the increased number of complaints. Terrence Mann, Deputy Executive Officer, Compliance and Enforcement, discussed compliance and enforcement actions. For additional details, please refer to the [Webcast](#) at 43:26.

Yasmin Angelides, Earthjustice, expressed concern with the railyard MOU proposal and emphasized the need for public review time of the proposed MOU before any committee or board discussion. For additional details, please refer to the [Webcast](#) at 30:15.

Monty Rowan, Marina Del Rey resident, questioned the asbestos remediation process and safety measures for potential asbestos exposure at the Dolphin Marina Apartments construction project. For additional details, please refer to the [Webcast](#) at 33:34.

Harvey Eder, Public Solar Power Coalition, expressed concern that South Coast AQMD, CARB, and U.S. EPA have not evaluated the Department of Energy's Sunshot Initiative. For additional details, please refer to the [Webcast](#) at 36:51.

There being no further requests to speak, the Public Comment Period on non-agenda items was closed.

Written Comments Submitted Regarding Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Healthy Industry Distributors Association
Hospital Association of Southern California

Written Comments Submitted Regarding Adoption of Mandatory ISR

West Long Beach Association

CONSENT AND BOARD CALENDAR

Items 1 and 2 – Action Items/No Fiscal Impact

1. Approve Minutes of October 6, 2023 Board Meeting
2. Establish Board Meeting Schedule for Calendar Year 2024

Items 3 through 6 – Budget/Fiscal Impact

3. Amend Agreement with Phillips 66 Company for Continued Fenceline Air Measurements at Phillips 66 Wilmington Refinery Using Optical Tent, Recognize Revenue, Appropriate Funds and Amend Contract
4. Execute Contract for Regional Medium and Heavy-Duty Zero Emission Vehicle Infrastructure Analysis
5. Amend Contracts for Legislative Representation in Washington, D.C.
6. Approve Contract Modification and Allocation of Funds as Approved by MSRC

Items 7 through 13 – Information Only/Receive and File

7. Legislative, Public Affairs and Media Report
8. Hearing Board Report
9. Civil Filings and Civil Penalties Report
10. Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects
11. Rule and Control Measure Forecast
12. Report of RFQs/RFPs Scheduled for Release in October
13. Status Report on Major Ongoing and Upcoming Projects for Information Management

Items 14 through 20 – Reports for Committees and CARB

14. Administrative Committee
15. Legislative Committee
16. Mobile Source Committee
17. Stationary Source Committee
18. Technology Committee

19. Mobile Source Air Pollution Reduction Review Committee
20. California Air Resources Board Monthly Report
21. Items Deferred from Consent and Board Calendar
There were no items pulled.

Disclosures

Mayor Lock Dawson reported that she had no financial interest in Agenda Item No. 6 but is required to identify for the record that she is the Mayor of the City of Riverside, which is involved in this item. The Mayor noted for the record that she would abstain from Agenda Item No. 1 as she was absent from the October 6, 2023 meeting.

Board Member Kracov reported that he had no financial interest in Agenda Item No. 6 but is required to identify for the record that he is a board member for CARB, which is involved in this item.

Councilmember Raman reported that she had no financial interest in Agenda Item No. 6 but is required to identify for the record that she is a Councilmember for the City of Los Angeles, which is involved in this item.

Supervisor Perez reported that he had no financial interest in Agenda Item No. 6 but is required to identify for the record that he is a Board Member for CARB, which is involved in this item.

The public comment period was opened for Agenda Item Nos. 1 through 20 and the following individuals addressed the Board.

Thomas Jelenic, Pacific Merchant Shipping Association, requested that South Coast AQMD 1) set aside development of the proposed ISR and re-engage with the Ports of Los Angeles and Long Beach, maritime industry stakeholders and labor representatives on a collaborative approach to reducing emissions; and 2) through a collaborative approach, take the lead on a coalition to seek a comprehensive national approach to address federal sources. A federal solution would create significant emission reductions and be saved from legal challenges while creating a level regulatory field across the nation. Uniform national rules are critical to preserving California Ports' competitiveness and assisting South Coast AQMD in achieving air quality standards. For additional details, please refer to the [Webcast](#) at 42:48. (Written Comments Submitted)

Elizabeth Mitev comments moved under Public Comment Period for Non-Agenda Items. For additional details, please refer to the [Webcast](#) at 45:47.

There being no further requests to speak, the public comment period was closed for Agenda Item Nos. 1 through 20.

Board Action (Items 1-20)

MOVED BY MCCALLON, SECONDED BY DO TO APPROVE AGENDA ITEMS 1 THROUGH 20 AS RECOMMENDED, RECEIVE AND FILE THE COMMITTEE, MSRC, AND CARB REPORTS, APPROVE THE RECOMMENDATIONS ON LEGISLATION AS SET FORTH BELOW, AND ADOPT RESOLUTION 23-21 SETTING THE TIME AND PLACE OF REGULARLY SCHEDULED MEETINGS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT GOVERNING BOARD FOR CALENDAR YEAR 2024.

THE MOTION PASSED BY THE FOLLOWING VOTE:

AYES: Cacciotti, Lock Dawson (except on Item No. 1), Do, Hagman, Kracov, McCallon, Mitchell, Padilla-Campos, Perez, Raman, Rodriguez, and Solache

NOES: None

ABSTAIN: Lock Dawson (only on Item No. 1)

ABSENT: Delgado

Legislation/Agenda Item	Recommendation
S. 1920 (Whitehouse, Padilla, Welch) - International Maritime Pollution Accountability Act of 2023	Support
S. 1917 / H.R 4024 (Padilla, Welch, Whitehouse, Booker, Feinstein / Garcia, Barragán, Huffman, Bonamici, Cleaver, Tlaib, Norton, Lee, Schiff, Sherrill, Lieu, Grijalva, Espailat) - Clean Shipping Act of 2023	Support

PUBLIC HEARINGS

22. Determine That Proposed Rule 1110.3 – Emissions from Linear Generators and Proposed Amended Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines, Are Exempt from CEQA; and Adopt Rule 1110.3 and Amend Rule 1110.2

Michael Morris, Planning and Rules Manager, gave the staff presentation.

Mayor McCallon and Councilmember Rodriguez commended staff for working on this new technology, resolving key issues during the rulemaking, and initiating the

development of the certification program. For additional details, please refer to the [Webcast](#) at 55:09.

Vice Chair Cacciotti asked if other than grocery stores and logistic centers whether linear generators could be utilized for other applications. Mr. Morris responded that staff looks at all possible applications not only for this technology but all technologies. For additional details, please refer to the [Webcast](#) at 56:41.

The public comment period was opened for Agenda Item No. 22 and the following individuals addressed the Board.

Chris Chavez, Coalition for Clean Air, expressed support for Proposed Rule 1110.3. For additional details, please refer to the [Webcast](#) at 57:57. (Written Comments Submitted)

Harvey Eder asked if the generators will run on alcohol. Mr. Morris responded that the generators do not run on liquid fuels. For additional details, please refer to the [Webcast](#) at 58:13.

There being no further requests to speak, the public comment period was closed for Agenda Item No. 22.

Written Comments Submitted

Bioenergy Association of California
Breathe Southern California
California Hydrogen Business Council

MOVED BY SOLACHE, SECONDED BY MCCALLON TO APPROVE AGENDA ITEM NO. 22 AS RECOMMENDED TO ADOPT RESOLUTION NO. 23-22:

1. DETERMINING THAT PROPOSED RULE 1110.3 – EMISSIONS FROM LINEAR GENERATORS AND PROPOSED AMENDED RULE 1110.2 – EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES, ARE EXEMPT FROM THE REQUIREMENTS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; AND
2. ADOPTING RULE 1110.3 – EMISSIONS FROM LINEAR GENERATORS AND AMENDING RULE 1110.2 – EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

THE MOTION PASSED BY THE FOLLOWING VOTE:

AYES: Cacciotti, Lock Dawson, Do, Hagman, Kracov,
McCallon, Mitchell, Padilla-Campos, Perez,
Raman, Rodriguez, and Solache

NOES: None

ABSTAIN: None

ABSENT: Delgado



23. Determine That Proposed Amended Rule 2011 - Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SOx) Emissions and Proposed Amended Rule 2012 - Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions, Are Exempt from CEQA; and Amend Rules 2011 and 2012

Michael Krause, Assistant Deputy Executive Officer/Planning, Rule Development and Implementation, gave the staff presentation.

Board Member Padilla-Campos inquired about the length of time it takes to restart the CEMS unit after a shutdown, and the process that facilities use to notify South Coast AQMD of a scheduled CEMS shutdown. Mr. Krause responded that it does not take much time for the CEMS to startup. For additional details, please refer to the [Webcast](#) at 1:03:23.

Board Member Kracov commented on the consensus in this rulemaking to highlight South Coast AQMD's track record of working constructively with industry while being realistic, reasonable, and fair. He sees no reason why the Ports would be any different. For additional details, please refer to the [Webcast](#) at 1:04:18.

The public comment period was opened for Agenda Item No. 23 and the following individuals addressed the Board.

For additional details regarding the following comments, please refer to the [Webcast](#) beginning at 1:05:49.

Bill Quinn, California Council for Environmental and Economic Balance
Curtis Coleman, Southern California Air Quality Alliance

These commenters thanked staff and expressed support for the adoption of the proposal for PARs 2011 and 2012. They emphasized the importance of the changes to address a potential conflict that could occur as facilities implement landing rules under the RECLAIM program.

There being no further requests to speak, the public comment period was closed for Agenda Item No. 23.

MOVED BY SOLACHE, SECONDED BY DO TO APPROVE AGENDA ITEM NO. 23 AS RECOMMENDED TO ADOPT RESOLUTION NO. 23-23:

1. DETERMINING THAT PROPOSED AMENDED RULE 2011 - REQUIREMENTS FOR MONITORING, REPORTING, AND RECORDKEEPING FOR OXIDES OF SULFUR (SOX) EMISSIONS AND PROPOSED AMENDED RULE 2012 - REQUIREMENTS FOR MONITORING, REPORTING, AND RECORDKEEPING FOR OXIDES OF NITROGEN (NOX) EMISSIONS, ARE EXEMPT FROM THE REQUIREMENTS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; AND

2. AMENDING RULES 2011 AND 2012.

THE MOTION PASSED BY THE FOLLOWING VOTE:

AYES: Cacciotti, Lock Dawson, Do, Hagman, Kracov, McCallon, Mitchell, Padilla-Campos, Perez, Raman, Rodriguez, and Solache

NOES: None

ABSTAIN: None

ABSENT: Delgado

CLOSED SESSION

The Board recessed to closed session at 10:09 a.m., pursuant to Government Code sections:

- 54956.9(a) and 54956.9(d)(1) to confer regarding pending litigation South Coast Air Quality Management District v. EPA, U.S. District Court for the Central District of California, Case No. 2:23-cv-02646; and East Yard Communities for Environmental Justice, et al. v. South Coast Air Quality Management District, the Governing Board of the South Coast Air Quality Management District, the California Air Resources Board, and Does 1 through 25, Inclusive, U.S. District Court for the Central District of California, Case No. 2:23-cv-06682.

- 54957.6 to confer with labor negotiators

Agency Designated Representative: A. John Olvera, Deputy Executive Officer – Administrative & Human Resources;

- Employee Organization(s): Teamsters Local 911, and South Coast AQMD Professional Employees Association; and
- Unrepresented Employees: Designated Deputies and Management and Confidential employees.

Following closed session, Bayron Gilchrist, General Counsel, announced that a report of any reportable actions taken in closed session will be filed with the Clerk of the Boards.

ADJOURNMENT

There being no further business, the meeting was adjourned by General Counsel Bayron Gilchrist at 11:50 a.m.

The foregoing is a true statement of the proceedings held by the South Coast Air Quality Management District Board on November 3, 2023.

Respectfully Submitted,

Faye Thomas
Clerk of the Boards

Date Minutes Approved: _____

Vanessa Delgado, Chair

ACRONYMS

AQMP = Air Quality Management Plan
CARB = California Air Resources Board
CEQA = California Environmental Quality Act
FY = Fiscal Year
ISR = Indirect Source Rule
MOU = Memorandum of Understanding
PAR = Proposed Amended Rule
RECLAIM = Regional Clean Air Incentives Market

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 2

PROPOSAL: Set Public Hearing January 5, 2024 to Consider Adoption of and/or Amendments to South Coast AQMD Rules and Regulations:

Determine that Proposed Amended Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities and Proposed Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries are Exempt from CEQA; Amend Rule 1180, Adopt Rule 1180.1, and Amend the Rule 1180 and Rule 1180.1 Fenceline Air Monitoring Plan Guidelines

Proposed Amended Rule 1180 (PAR 1180) and Proposed Rule 1180.1 (PR 1180.1) will require refineries and facilities with operations related to refineries to monitor for air contaminants at or near their fenceline and to fund the installation and operation of monitoring stations within the community near their facilities. PAR 1180 will remove an exemption, include facilities with operations related to petroleum refineries, and include monitoring requirements for additional air pollutants. PR 1180.1 will establish similar fenceline and community monitoring requirements for smaller refineries that are not currently subject to Rule 1180. PAR 1180 and PR 1180.1 will establish notification thresholds, require root cause analysis, independent audits and corrective actions, and improve data accessibility. In addition, Fenceline Air Monitoring Plan Guidelines has proposed amendments to reflect the proposed rule changes. This action is to adopt the Resolution: 1) Determining that Proposed Amended Rule 1180 - Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities; and Proposed Rule 1180.1 - Fenceline and Community Air Monitoring for Other Refineries are exempt from the requirements of the California Environmental Quality Act; and 2) Amending Rule 1180 - Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities; adopting Rule 1180.1 - Fenceline and Community Air Monitoring for Other Refineries; and amending the Rule 1180 and Rule 1180.1 Fenceline Air Monitoring Plan Guidelines. (Reviewed: Stationary Source Committee, September 15 and November 17, 2023)

The complete text of the proposed rule, proposed amended rule, staff report, and other supporting documents will be available from the South Coast AQMD's Public Information Center at (909) 396-2001, or Mr. Derrick Alatorre – Deputy Executive Officer/Public Advisor, South Coast AQMD, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2432, dalatorre@aqmd.gov and on the Internet (www.aqmd.gov) as of December 6, 2023.

RECOMMENDED ACTION:

Set public hearing January 5, 2024 to determine that Proposed Amended Rule 1180 and Proposed Rule 1180.1 are exempt from CEQA; amend Rule 1180, adopt Rule 1180.1, and amend the Rule 1180 and Rule 1180.1 Fenceline Air Monitoring Plan Guidelines

Wayne Nastri
Executive Officer

FT

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 3

PROPOSAL: Appropriate Funds, Issue Solicitation and Purchase Orders to Meet Operational Needs for Rule 1180 Community Air Monitoring Program

SYNOPSIS: In June 2018, the Board created the Rule 1180 Special Revenue Fund to establish and maintain a community air monitoring network near refineries. The FY 2023-24 budget for this program includes approximately \$4.6 million in annual fees from refineries for community air monitoring. These actions are to appropriate funds to Monitoring and Analysis' FY 2023-24 and/or FY 2024-25 Budget, and issue a solicitation and purchase orders to meet operational needs of the Rule 1180 Community Air Monitoring Program.

COMMITTEE: Administrative, November 9, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Appropriate up to \$610,000 from the General Fund Undesignated (Unassigned) Fund Balance for Rule 1180 activities to Monitoring and Analysis' FY 2023-24 and/or 2024-25 Budget (Org 42) Capital Outlays (up to \$330,000) and Services and Supplies (up to \$280,000) Major Objects, as indicated in Tables 1 and 2;
2. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue sole source purchase orders for the following items as listed in Tables 1 and 2, and described in this letter:
 - a. Up to three gas dilution systems from Teledyne Advanced Pollution Instrumentation (Teledyne) in an amount not to exceed \$45,000;
 - b. One Aethalometer from Sonoma Technologies, Inc. (STI) in an amount not to exceed \$35,000;
 - c. Installation of an optical table from Thorlabs, Inc. (Thorlabs) in an amount not to exceed \$5,000;
 - d. Up to 11 mirror replacements and spectrometers upgrades for optical multi-pollutant analyzers from FluxSense, Inc. (FluxSense) in an amount not to exceed \$220,000;
 - e. Annual consumables supply from Tricorntech Corporation (Tricorntech) for the operation of automated gas chromatography (auto-GC) systems at Rule 1180 community air monitoring stations in an amount not to exceed \$200,000; and

- f. Annual data quality assurance services from Tricorntech for validating data from auto-GC systems in an amount not to exceed \$ 80,000.
3. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue a contract or purchase order, as deemed appropriate, with vendor(s) selected from South Coast AQMD's List of Prequalified Vendors in an amount up to \$25,000 for one Linux server and support hardware as shown in Table 1.

Wayne Natri
Executive Officer

JCL:AP:OP:ld:ir:kdl

Background

Rule 1180 - Refinery Fenceline and Community Air Monitoring was adopted by the Board in December 2017 and requires the seven major refineries in the Basin to measure levels of various air pollutants at their fenceline. Rule 1180 also established a fee schedule to fund community air monitoring stations developed and operated by South Coast AQMD to provide air quality information to the public about the potential impact of refinery emissions in their communities. In FYs 2017-18 and 2018-19, the Board recognized revenue in two installments of \$2,145,390 and \$5,005,907, respectively, into the Rule 1180 Special Revenue Fund (78) for the installation of community air monitoring stations near refineries. Beginning January 2020, pursuant to Rule 301 - Permitting and Associated Fees, the refineries also started funding annual operating and maintenance costs totaling \$4,682,087 in FY 2023-24 for refinery-related community air monitoring programs near the following refineries:

- Tesoro Refining & Marketing Company, LLC, Carson;
- Tesoro Refining & Marketing Company, LLC, Wilmington;
- PBF Energy, Torrance Refining Company, Torrance;
- Chevron Products Company, Chevron El Segundo Refinery, El Segundo;
- Phillips 66 Company, Carson;
- Phillips 66 Company, Wilmington; and
- Valero Energy Corporation, Valero Wilmington Refinery, Wilmington

The Rule 1180 refinery fenceline and community air monitoring network began operation in January 2020. To satisfy the Rule 1180 air monitoring requirements, novel optical remote sensing, optical multi-pollutant analyzers, auto-GC and traditional analyzers have been deployed at fenceline and community air monitoring sites, making this monitoring network the first of its kind in terms of complexity and technologies deployed.

In addition, per Health and Safety Code section 47205.6, the district shall design, develop, install, operate, and maintain refinery-related community air monitoring systems.

Proposal

This action is to appropriate from prior year Rule 1180 fee revenue savings up to \$610,000 from the General Fund Undesignated (Unassigned) Fund Balance for Rule 1180 activities to MAD's FY 2023-24 and/or 2024-25 Budget (Org 42) Capital Outlays Major Objects and Services & Supplies Major Objects, as indicated in Tables 1 and 2.

Proposed Purchases through Sole Source

Gas Dilution Systems

Three gas dilution systems will be utilized for quality assurance, equipment verification, and equipment replacement purposes. Teledyne gas dilution systems are uniquely specialized to support the Rule 1180 community air monitoring operations. These gas dilution systems are currently deployed at all other Rule 1180 community air monitoring sites, therefore providing compatibility and continuity between all stations. The cost for up to three (3) Teledyne gas dilution systems will not exceed \$45,000.

Aethalometer

One aethalometer will be utilized for quality assurance and/or equipment replacement purposes. Aethalometers manufactured by Aerosol Magee Scientific are currently deployed at all Rule 1180 community air monitoring sites, therefore providing compatibility and continuity between all stations. The cost for one aethalometer from STI (authorized distributor for Aerosol Magee Scientific) will not exceed \$35,000.

Optical Table Installation

In June 2022, the Board authorized the purchase of an optical table, which was purchased from Thorlabs. This proposal would add funds for the installation of the table in the Rule 1180 laboratory space located in the Long Beach Office. The cost of the installation of the optical table from Thorlabs will not exceed \$5,000, as listed in Table 1.

Mirror Replacement and Spectrometer Add-on

Optical multi-pollutant analyzers manufactured by FluxSense are deployed at all Rule 1180 community air monitoring sites to measure VOCs and other air toxics on a comprehensive list of pollutants. Data produced by these analyzers is also used to issue Rule 1180 community air quality notifications. The analytical mirrors need replacement because there is substantial degradation of the mirror coating, which is impacting instrument performance. FluxSense's newly developed dielectric coated mirrors have been designed to last longer and improve overall instrument performance. Additionally, FluxSense developed a hardware add-on to the spectrometer system that would allow further improvement of instrument performance for selected compounds. FluxSense is

the only provider of these items due to the use of proprietary technology and their unique expertise. The cost of mirror replacements and spectrometer add-on from FluxSense will not exceed \$220,000, as listed in Table 1.

Annual Consumable Supplies and Annual Data Quality Assurance Services for Gas Chromatography Systems

Auto-GC systems manufactured by Tricorntech are deployed at all Rule 1180 community air monitoring sites to measure VOCs and other air toxics on a comprehensive list of pollutants. Consumables and routine maintenance components are required to ensure routine uninterrupted performance of all auto-GCs currently in operation. Additionally, data quality assurance service is required to ensure the validity and accuracy of the data generated by the auto-GCs. Tricorntech is the only provider of all these items due to the use of proprietary technology and the vendor's unique expertise. The cost of annual consumable supplies and annual data quality assurance services from Tricorntech will not exceed \$200,000, and \$80,000, respectively, as listed in Table 2.

Proposed Purchase through Solicitation to Prequalified Vendors

Linux Server

The advanced optical multi-pollutant analyzers deployed at Rule 1180 community monitoring sites collect massive amounts of raw spectroscopic data in addition to reporting final air pollutant concentrations. This raw data can be used for further analysis and for data quality assurance/quality control purposes. The purchase of a dedicated Linux server will allow additional data storage, processing, and analysis capabilities. This action is to execute contract(s) or purchase order(s) with vendor(s) selected from South Coast AQMD's List of Prequalified Vendors for a Linux server and associated support hardware in an amount not to exceed \$25,000, as listed in Table 1.

Sole Source Justification

Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for sole source purchases from Teledyne, STI, Thorlabs, FluxSense, and Tricorntech are made under Sections VIII.B.2.c (1): The unique experience and capabilities of the proposed contractor; VIII.B.2.c (2): The project involves the use of proprietary technology; and VIII.B.2.d (6): Projects requiring compatibility with existing specialized equipment. There are no other vendors who can provide this equipment and supplies meeting all required specifications and that are compatible with existing specialized equipment already in operation.

Benefits to South Coast AQMD

Funding for the implementation of Rule 1180 will allow South Coast AQMD to fulfill the community air monitoring requirements of its Rule 1180 program, which will result in benefits to environmental justice communities and others working and residing in the Basin near refineries. In addition, the district must fulfill the requirements of Health and Safety Code section 47205.6, which requires the district to design, develop, install, operate, and maintain refinery-related community air monitoring systems.

Resource Impacts

Sufficient funding is available in the Undesignated (Unassigned) Fund Balance from Rule 1180 prior year budget savings to support the activities outlined in this Board letter.

Attachments

Table 1: FYs 2023-24 and/or 2024-25 Proposed Capital Outlays Expenditures for Rule 1180

Table 2: FYs 2023-24 and/or 2024-25 Proposed Services and Supplies Expenditures for Rule 1180

Table 1
FYs 2023-24 and/or 2024-25
Proposed Capital Outlays Expenditures for Rule 1180

Description	Qty	Appropriation from Prior Year 's Budget Savings	Procurement Method
Gas Dilution Systems	Up to 3	\$45,000	Sole Source
Aethalometer	1	\$35,000	Sole Source
Installation of Optical Table*	1	\$5,000	Sole Source
Mirror Replacement and Spectrometer Add-on*	Up to 11	\$220,000	Sole Source
Linux Server*	1	\$25,000	Solicitation to Prequalified Vendors
Total		Up to \$330,000	

*Expenditures may be appropriated as Capital Outlays or Services and Supplies Major Object, as warranted

Table 2
FYs 2023-24 and/or 2024-25
Proposed Services and Supplies Expenditures for Rule 1180*

Description	Appropriation from Prior Year 's Budget Savings	Procurement Method
Annual Consumable Supplies for Automated Gas Chromatography Systems	\$200,000	Sole Source
Quality Assurance Services for Gas Chromatography Systems	\$80,000	Sole Source
Total	Up to \$280,000	

*Expenditures may be appropriated as Services and Supplies or Capital Outlays Major Object, as warranted.

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 4

PROPOSAL: Transfer and Appropriate Funds, Issue Solicitations and Purchase Orders for MATES VI

SYNOPSIS: Since 1987, South Coast AQMD has conducted five MATES to evaluate air toxics health risks in South Coast AQMD's jurisdiction. MATES V I measurements for a wide range of air toxics are anticipated to begin the first half of 2025. The collected data will be used to conduct air toxics modeling and quantify health impacts. These actions are to transfer up to \$5,024,725 from the Clean Fuels Program Fund to the General Fund for the MATES V I program, and appropriate funding to the Monitoring & Analysis and Planning, Rule Development, and Implementation divisions' budgets over FY 2023-24 through FY 2027-28 as needed. These actions are also to issue solicitations and purchase orders to support the goals and objectives of MATES VI.

COMMITTEE: Administrative, November 9, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Transfer up to \$5,024,725 from the Clean Fuels Program Fund (31) to the General Fund (01) to support the MATES VI program;
2. Appropriate up to \$5,024,725 from the Undesignated (Unassigned) Fund Balance to the Monitoring & Analysis Division (MAD) and Planning, Rule Development, and Implementation (PRDI) budgets to procure additional resources needed to complete MATES V I on an as-needed basis at any time over the period of FY 2023-24 through FY 2027-28, as shown in the Attachment;
3. Authorize the Executive Officer, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue a solicitation for a tire and brake wear study, in an amount not to exceed \$850,000;
4. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue sole source purchase orders for the following as listed in the Attachment and described in this letter:
 - a. Up to four condensation particle counters from TSI, Inc. in an amount not to exceed \$140,000;
 - b. Up to three aethalometers from Magee Scientific in an amount not to exceed \$120,000;

- c. One Xact 625i multi-metal monitor from SailBri Cooper, Inc. in an amount not to exceed \$165,000;
 - d. Up to three Xact 625i switching inlet systems from SailBri Cooper, Inc. in an amount not to exceed \$48,000;
 - e. Up to three continuous monitors for ethylene oxide from Aerodyne Research, Inc. in an amount not to exceed \$660,000;
 - f. Up to two continuous monitors for ammonia from Picarro, Inc. in an amount not to exceed \$180,000;
 - g. Up to two gas chromatograph mass spectrometer (GC-MS) instruments from Agilent Technologies in an amount not to exceed \$380,000; and
 - h. Up to four GC-MS canister autosamplers from Entech Instruments in an amount not to exceed \$88,000;
5. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue "Prior Bid, Last Price" purchase orders, cooperative agreement or solicitation(s) as needed and, based on results, issue purchase orders for the following items, as set forth in the Attachment and described in this letter:
- a. Up to three monitoring shelters in an amount not to exceed \$270,000;
 - b. Up to two vehicles in an amount not to exceed \$190,000; and
 - c. Up to three zero air generators in an amount not to exceed \$42,000;
6. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue solicitations and purchase orders for the following through a solicitation process, as set forth in the Attachment and described in this letter:
- a. One GC-MS thermal desorption system in an amount not to exceed \$175,000;
 - b. Up to 16 air toxics samplers in an amount not to exceed \$300,000;
 - c. Up to two gas dilution systems in an amount not to exceed \$60,000; and
 - d. One Linux computational server system in an amount not to exceed \$150,000;
7. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue solicitations and purchase orders in an amount not to exceed \$532,250 for various tools and flow devices, instrument refurbishment maintenance and repair, laboratory and field supplies, silanized canisters, Linux storage, and supplementary laboratory services, as set forth in the Attachment.

Wayne Natri
Executive Officer

Background

MATES is a Board environmental justice initiative that started back in 1987 with MATES I. South Coast AQMD previously conducted five MATES campaigns to characterize the concentration of airborne toxic compounds within the South Coast AQMD jurisdiction and to determine the region-wide cancer risks associated with major airborne carcinogens. However, as each successive MATES campaign builds on the previous work, each iteration added additional goals and objectives and employed more sophisticated measurement and modeling techniques. Results of MATES are used to provide public information about air toxics and associated health risks throughout the region, evaluate progress in reducing air toxics exposure, and provide direction to future toxics control programs. Previous MATES campaigns have also identified unknown air toxics sources and have been critical in the interpretation of data from special air toxics monitoring studies in communities throughout the region. MATES continues to be the most sophisticated regional air toxics analysis conducted in the nation, taking advantage of the extensive air quality monitoring, modeling, and analysis expertise and resources at the agency.

South Coast AQMD has initiated MATES VI and will begin measurements beginning in 2025. Similar to previous MATES campaigns, South Coast AQMD staff has convened a Technical Advisory Group (TAG) to provide technical guidance in the design of the study. The group includes experts from academia, health agencies, and government. MATES VI field measurements will be conducted over a one-year period at ten fixed sites to evaluate air toxics levels. MATES VI monitoring is being extended to the Coachella Valley for the first time. In addition, two of the ten monitoring locations will be sited adjacent to freeways to capture near-road air toxics impacts. MATES VI will also include measurements of ultrafine particle (UFP) and black carbon (BC) concentrations, which can be compared to the UFP and BC levels measured in MATES IV and MATES V, continuous measurement of metals, some of which are chemical tracers for non-exhaust vehicular emissions, and measurement of ammonia, a key precursor to PM_{2.5} formation in the region. Currently South Coast AQMD operates only one ammonia monitor in Coachella Valley and more measurements as part of MATES VI can help better understand the sources of ammonia across South Coast AQMD's jurisdiction. While MATES VI is focused on air toxic impacts, these ammonia measurements and particle speciation measurements will provide additional information about the sources and composition of PM_{2.5}, which will assist in the design of control strategies to attain federal PM_{2.5} standards.

In addition to the fixed site monitoring, MATES VI will include a special study to characterize emissions of ethylene oxide (EtO) in ambient air and at the near-road sites to assess the contribution of vehicular emissions to background EtO concentration levels. The TAG will assist with the overall design of this study, and a scope and project plan for this part of the MATES VI campaign will be developed through the TAG meetings.

South Coast AQMD already possesses some of the monitoring and laboratory equipment needed for MATES V I. However, additional instrumentation and replacement, repair, and calibration of some older equipment is required to complete all the proposed measurements and can be used after MATES VI for additional studies, special investigations, or community monitoring. Laboratory and field supplies are also needed to conduct MATES VI. In addition to equipment and supply needs, temporary staffing is necessary to meet the additional workload associated with MATES VI, as well as contractor support services for conducting tire-wear marker study, and to support study design, data analysis, and review.

Proposal

This action is to transfer and appropriate up to \$5,024,725 to the MAD and the PRDI budgets over FY 2023-24 through FY 2027-28 to purchase the necessary equipment and supplies, and retain temporary staff for the MATES V I program. A list of resource needs is detailed in the Attachment.

Solicitation

Tire and Brake Wear Study

Information about the chemical composition of tires and brakes used in commercial light and heavy-duty vehicles is instrumental to determine which measurements should be conducted to attribute PM mass and gas phase markers to these sources.

Measurements of these species require specialized instrumentation and expertise. This action is to issue a solicitation from qualified vendor(s), research lab(s) or educational institution(s) to assist with study design, sample analysis, provide access to database of brake and tire composition, and/or interpret measurement data. This information will be used to quantify the contribution of tire and brake wear towards ambient PM levels.

Therefore, this action is to authorize the Executive Officer to issue a solicitation for a tire and brake wear study for an amount not to exceed \$850,000.

Proposed Sole Source Purchase Orders

Condensation Particle Counters

The MATES V I campaign will include the measurement of UFPs, which will allow for an evaluation of trends in UFP levels since MATES IV. Since the majority of the number of particles in the atmosphere is in the ultrafine mode, counting the number of atmospheric particles provides a good indicator of ultrafine particle levels. The most common method for determining ambient particle number concentrations is to use Condensation Particle Counters (CPCs). CPCs currently are deployed at existing near-road and AB 617 community monitoring stations, but additional CPCs are needed for MATES VI. Therefore, this action is to authorize the Procurement Manager to issue a sole source purchase order with TSI, Inc. for an amount not to exceed \$140,000 for the purchase of up to four CPCs.

Aethalometers

Aethalometers are monitors that measure BC, which can be used to help estimate diesel particulate matter. Aethalometers are currently deployed at existing near-road and AB 617 community monitoring stations but additional aethalometers are needed for MATES V I. Therefore, this action is to authorize the Procurement Manager to issue a sole source purchase order with Magee Scientific for an amount not to exceed \$120,000 for the purchase of up to three aethalometers.

Xact 625i Multi-Metal Monitor

MATES VI will include novel continuous measurement of air toxic metals. The main sources of non-exhaust vehicular emissions that contribute to road dust are tire, brake and clutch wear, road surface wear, and other vehicle and road degradation. Measurement of metals provides better understanding regarding these non-exhaust vehicular sources to regional air toxic levels across South Coast AQMD's jurisdiction. Xact 625i multi-metal monitors already have been deployed in Environmental Justice communities under the AB 617 program, but an additional one is needed for a near-road site. Therefore, this action is to authorize the Procurement Manager to issue a sole source purchase order with SailBri Cooper Inc. for an amount not to exceed \$165,000 for the purchase of one Xact 625i monitor.

Xact 625i Switching Inlet Systems

The Xact 625i monitor requires the switching inlet system to be able to measure the metal content of both PM10 and PM2.5. The measurements at both size ranges can provide additional information about the potential sources of the measured air toxic metals. Therefore, this action is to authorize the Procurement Manager to issue a sole source purchase order with SailBri Cooper Inc. for an amount not to exceed \$48,000 for the purchase of up to three Xact 625i switching inlet systems to conduct particulate metal measurements.

Continuous Monitors for Ethylene Oxide

Aerodyne Research, Inc. developed a continuous monitor based on Tunable Infrared Laser Direct Absorption Spectroscopy (TILDAS) for direct measurements of EtO in real- and near-real time. When operated under ideal conditions, this instrument can achieve a detection limit for EtO close to typical background levels measured in the Basin using canister sampling followed by laboratory analysis (method TO-15A). This instrument has high sensitivity, has demonstrated field performance in the Basin with minimal data loss, and can be integrated easily with one of South Coast AQMD's mobile platforms for air toxic measurements (also developed by Aerodyne Research, Inc). Aerodyne's TILDAS-FD-SC-L1 would be used to obtain near-road and community-based measurements as part of MATES VI for an assessment of EtO diurnal variation which would be more difficult using sampling and laboratory analysis techniques. The approximate cost for one TILDAS-FD-SC-L1 and associated equipment is \$220,000. Therefore, this action is to authorize the

Procurement Manager to issue a sole source purchase order with Aerodyne Research, Inc. for an amount not to exceed \$660,000 for the purchase of up to three continuous monitors for ethylene oxide.

Continuous Monitors for Ammonia

MATES VI will also include the measurement of ammonia. Regional emission inventories are suspected to underestimate real-world ammonia emissions. This is mainly because emission contributions from motor-vehicles, biomass burning (e.g., wildfires and prescribed fires), dairy farms, agricultural fields, and atmospheric processes are still not fully characterized. Although ammonia isn't classified as an air toxic, it is recognized for causing both short-term and long-term respiratory health issues. Therefore, this action is to authorize the Procurement Manager to issue a sole source purchase order with Picarro, Inc. for an amount not to exceed \$180,000 for the purchase of up to two continuous monitors for ammonia.

Gas Chromatograph Mass Spectrometer Instruments

The laboratory currently has two gas chromatograph mass spectrometers (GC-MS) systems that are used for the measurement of ambient level gaseous air toxics. One of these instruments is approximately twenty years old and its reliability has been steadily declining. To ensure timely analysis of gaseous toxic samples collected in MATES VI, in particular for detection of toxic compounds at low concentrations, it is necessary to replace this GC-MS. Also, the laboratory has a need to expand its capability and analyze for additional semi-volatile organic compounds that are known to be associated with vehicular tire wear. This capability does not exist in the laboratory currently, and the analyses of these compounds will aid in evaluating any potential contributions of tire wear to overall risk as well as provide additional air toxics that the laboratory can identify and measure. This action is to authorize the Procurement Manager to issue a sole source purchase order with Agilent Technologies for up to two GC-MS instruments for an amount not to exceed \$380,000.

GC-MS Canister Autosamplers

The laboratory has a need for up to four additional canister autosamplers for existing gas chromatograph mass spectrometers. These autosamplers will allow for increased analytical throughput for the analysis of ambient level gaseous air toxics. This action is to authorize the Procurement Manager to issue a sole source purchase order with Entech Instruments for an amount not to exceed \$88,000 for up to four GC-MS canister autosamplers.

Proposed Purchase through “Prior Bid, Last Price” or Solicitation Process

Monitoring Shelters

MATES VI is expected to include measurements at near-road and ambient monitoring stations. Three monitoring shelters are required to expand the existing near-road and ambient monitoring stations to accommodate additional instrumentation and equipment. The estimated cost for up to three monitoring shelters is \$270,000. The

purchase will be made by Prior Bid, Last Price or through a solicitation process, as needed, followed by issuance of a purchase order.

Proposed Purchases through a Solicitation Process, “Prior Bid, Last Price” or Cooperative Agreement

Vehicles

There is a need to replace up to two of the older high-mileage vehicles. This will help with the installation of air monitoring equipment at all ten sites in preparation for MATES VI. These additional vehicles are also necessary to perform routine and non-routine calibration, maintenance, and repair of air monitoring equipment throughout this study. Staff proposes to purchase two ZEV’s (truck or van) to support field activities related to MATES VI for an amount not to exceed \$190,000. The vehicles will be selected through a solicitation process, “Prior Bid, Last Price” or Cooperative Purchasing Agreement. ZEV’s are available from vendors through cooperative purchasing under the State of California, Department of General Services, Procurement Division, and Alternative Fueled Vehicles Contract 122-23-23 A through I. These advanced technology vehicles will be assigned to field maintenance technicians and will be used for MATES VI, while supporting the agency’s commitment to use zero-emission technologies, where feasible.

Zero Air Generators

Zero air generators are necessary to deliver contaminant-free air required for the operation of air monitoring equipment in support of MATES VI measurements. The purchase will be made by “Prior Bid, Last Price” or through an informal solicitation, if necessary, as allowed by South Coast AQMD’s Procurement Policy and Procedure. The estimated cost for up to three zero air generators is \$ 42,000.

Proposed Purchase Through a Solicitation Process

GC-MS Thermal Desorption System

The laboratory has a need to expand its capability to analyze semi-volatile organic compounds (SVOCs) that are known to be associated with vehicular tire wear. Analysis of SVOCs will be performed using an EPA TO-17 based methodology and will aid in evaluating potential contributions of tire wear. This action is to authorize the Procurement Manager to release a solicitation, and based on the results, issue a purchase order for one GC-MS thermal desorption system for an amount not to exceed \$175,000.

Air Toxics Samplers

Air toxics samplers for measuring VOCs, carbonyls, and metals are in need of replacement. Therefore, this action is to authorize the Procurement Manager to release a solicitation, and based on the results, issue purchase orders for up to 16 air toxics samplers to measure VOCs, carbonyls, and metals for an amount not to exceed \$300,000.

Gas Dilution Systems

Up to two gas dilution systems are needed for the preparation of lower concentration standards to support the analysis of air toxics gases. Each toxic compound analyzed on the GC-MS requires calibration against standards at varying concentrations which must be prepared using gas dilution systems. Currently the laboratory does not have gas dilution systems to prepare calibration standards from multiple standards. This action is to authorize the Procurement Manager to release a solicitation, and based on the results, issue purchase orders for up to two gas dilution systems for an amount not to exceed \$60,000.

Linux Computational Server System

Emissions inventory and cancer risk estimation require a high-speed multi-processor performance Linux computing system and storage space due to large quantities of data and computations needed to meet the level of analysis performed for MATES VI. For example, on-road mobile source emissions processing alone requires multiple computational units to run continuously over several weeks. In addition, the process needs to be repeated for other sources of emissions as well. Chemical transport modeling and tracking specific sources of emissions demand several orders of magnitude more computational resources. MATES VI modeling analysis will utilize state-of-the art air quality model, sensor/transponder/satellite-based data to evaluate and improve the modeling performance. A comprehensive high performance computing server system is critical to cope with the ever-increasing computational demand of such state-of-the art computation tool and database. This action is to authorize the Procurement Manager to release a solicitation process, and based on the results, issue a purchase order for one Linux Computational Server System for an amount not to exceed \$150,000.

Outreach

In accordance with South Coast AQMD's Procurement Policy and Procedure, a public notice advertising the solicitations and inviting bids will be published in the local newspapers to leverage the most cost-effective method of outreach to South Coast AQMD's jurisdiction. Additionally, potential bidders may be notified utilizing South Coast AQMD's own electronic listing of certified minority vendors. Notice of the RFQ\RFP will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations and placed on South Coast AQMD's website (<http://www.aqmd.gov>) where it can be viewed by making the selection "Grants & Bids."

Sole Source Justification

Section VIII, B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for sole source purchases of the CPCs, aethalometers and Xact 625i multi-metal monitor, and switching inlet system are made under Section VIII.B.2.c(2): The items are available from only one source, and the project involves the use of proprietary technology. TSI is

the only manufacturer of water-based CPCs in the United States whose products have a long history of scientific evaluation and testing. Various CPC models have been extensively evaluated by South Coast AQMD staff over the past several years for the purpose of choosing the most appropriate instrument for long-term, unattended OPR measurements in studies such as MAIES. The aethalometers are similarly available from only one distributor, Magee Scientific. No other manufacturer or distributor sells a "seven-channel" BC monitor with similar technical specifications and pricing, as it involves the use of proprietary technology. The Xact 6201 is the only field x-ray fluorescence instrument that offers an Automated Data Analysis Plotting Toolset (ADAPI) package to analyze the measurements of over 40 different metals in ambient particles in real-time. The ADAPI package includes the hardware for on-site meteorological measurement and intuitive software which is accessed in the field or remotely through the onboard computer. The software platform generates multiple graphical reports in near real-time over user selected time periods to deliver insights on the temporal and directional variability trends of the measured metals. The metal data provided by the Xact 6201 is critical to satisfying the goals and objectives of MAIES v1. In addition, the Xact 6201 monitors require the switching inlet system to be able to measure the metal content of both PM10 and PM2.5. The measurements at both size ranges can provide additional information about the potential sources of the measured air toxic metals. Saitern Cooper Inc. is the only manufacturer of the Xact 6201 multi-metal monitor and switching inlet system.

The request for sole source purchases for continuous monitors for ethylene oxide and for ammonia from Aerodyne Research, Inc. and Picarro, Inc., respectively, are made under Section VIII.B.2.c(1)(2): The unique experience and capabilities of the contractor or contractor team, and the project involves the use of proprietary technology. The Aerodyne instrument is the only portable continuous monitor for ethylene oxide with a demonstrated capability of detecting concentrations of EtO near regional background levels on a continuous basis, with minimal instrument downtime. This continuous monitor for ethylene oxide is exclusively sold through Aerodyne Research, Inc. The Picarro instrument is the only continuous monitor for ammonia that provides a combination of portability and demonstrated capability for unattended long-term measurements of ammonia at background levels with minimal instrument downtime. This continuous monitor for ammonia is exclusively sold through Picarro, Inc.

The request for sole source purchase of the GC-MS instruments and the GC-MS canister autosamplers are made under Section VIII.B.2.d(6): Projects requiring compatibility with existing specialized equipment. Agilent Technologies is the manufacturer and supplier of the GC-MS systems currently used by South Coast AQMD to implement the NATTS program and used for analysis of samples for the ethylene oxide investigations. This system has been demonstrated to meet stringent TO-15A requirements, which are needed. Staff are trained on the use, repair, and maintenance of this equipment, facilitating cross-training and interoperability.

Consistency and compatibility amongst these GC-MS are critical to meeting the operational needs of the agency. The autosamplers manufactured by Entech Instruments are the only autosampler units compatible with the five Entech pre-concentrators operated by the laboratory.

Benefits to South Coast AQMD

The MATES studies conducted by South Coast AQMD provide essential information on air toxics levels in the South Coast AQMD's jurisdiction and present a unique opportunity to evaluate long-term trends in air toxics and their health impacts. South Coast AQMD continues to work toward reducing air toxics emissions through supporting cleaner technologies (including cleaner diesel technologies), rulemaking to address toxic emissions from mobile and stationary sources, and implementing air toxics monitoring and enforcement initiatives. The MATES VI program complements these efforts and provides information to track progress on reducing air toxics in the region along with the identification of sources contributing to the air pollution health risk.

Resource Impacts

Staff is requesting to transfer a total of up to \$5,024,725 from the Clean Fuels Program Fund (31) to be used on an as-needed basis over FYs 2023-24 through FY 2027-28 to cover the cost of resources shown in the Attachment. Section 40448.5(e) of the California Health and Safety Code provides that "when considering which clean fuels projects to promote, South Coast AQMD shall consider, among other factors potential effects on public health, ambient air quality, visibility within the region, and other factors determined to be relevant by South Coast AQMD." MATES V I will help establish an emissions baseline and toxic air contaminant risks for mobile sources, from which the benefits of clean fuel programs can be calculated.

The activities paid for by these funds are very closely related to emissions from mobile sources. Results from MATES V indicate that after scaling by cancer potency, about 88 percent of the carcinogenic air toxics emissions are attributed to mobile sources, with the remainder attributed to toxics emitted from stationary sources which include large industrial operations such as refineries and power plants, as well as smaller businesses such as gas stations and chrome plating facilities. Diesel exhaust, primarily emitted by mobile sources, accounted for approximately 50 percent of the total estimated air toxics risk, based on the MATES V monitoring data.

MATES V I will provide an update on the impact of mobile emission sources on air toxic exposure. The study will provide additional information for South Coast AQMD staff to promote clean fuel projects that will advance the commercialization of clean mobile source technologies.

Attachment

Proposed Resources for MATES VI

**Attachment
Proposed Resources for MATES VI***

Description	Org Unit	Qty	Major Objects	Procurement/ Contracting Method	Unit Cost	FY 2023-24 through FY 2027-28 Estimated Expenditures
Tire and Brake Wear Study Contract	PRDI	---	Services & Supplies	RFP	---	\$850,000
Condensation Particle Counters	MAD	Up to 4	Capital Outlay	Sole Source	\$35,000	\$140,000
Aethalometers	MAD	Up to 3	Capital Outlay	Sole Source	\$40,000	\$120,000
Xact 625i Multi-Metal Monitor	MAD	1	Capital Outlay	Sole Source	\$165,000	\$165,000
Xact 625i Switching Inlet Systems	MAD	Up to 3	Capital Outlay	Sole Source	\$16,000	\$48,000
Continuous Monitors for Ethylene Oxide	MAD	Up to 3	Capital Outlay	Sole Source	\$220,000	\$660,000
Continuous Monitors for Ammonia	MAD	Up to 2	Capital Outlay	Sole Source	\$90,000	\$180,000
GC-MS Instruments	MAD	Up to 2	Capital Outlay	Sole Source	\$190,000	\$380,000
GC-MS Canister Autosamplers	MAD	Up to 4	Capital Outlay	Sole Source	\$22,000	\$88,000
Monitoring Shelters	MAD	Up to 3	Capital Outlay	'Prior Bid, Last Price' or Solicitation	Varies	\$270,000
Vehicles	MAD	Up to 2	Capital Outlay	'Prior Bid, Last Price' or Solicitation	\$95,000	\$190,000
Zero Air Generators	MAD	Up to 3	Capital Outlay	'Prior Bid, Last Price' or Solicitation	Varies	\$42,000
GC-MS Thermal Desorption System	MAD	1	Capital Outlay	RFQ	\$175,000	\$175,000
Air Toxic Samplers	MAD	Up to 16	Capital Outlay	RFQ	Varies	\$300,000
Gas Dilution Systems	MAD	Up to 2	Capital Outlay	RFQ	\$30,000	\$60,000
Linux Computational Server System	PRDI	1	Capital Outlay	RFQ	\$150,000	\$150,000
Various Tools and Flow Devices	MAD	---	Services & Supplies	---	---	\$45,000

*Expenditures may be appropriated as Capital Outlays or Services and Supplies Major Object, as warranted.

Attachment (continued)
Proposed Resources for MATES VI*

Description	Org Unit	Qty	Major Objects	Procurement/ Contracting Method	Unit Cost	FY 2023-24 through FY 2027-28 Estimated Expenditures
Instrument Refurbishment, Maintenance, and Repair	MAD	---	Services & Supplies	---	---	\$45,000
Laboratory and Field Supplies	MAD	---	Services & Supplies	---	---	\$350,000
Silanized Canisters	MAD	Up to 30	Services & Supplies	---	\$1,000	\$30,000
Additional Linux Storage	PRDI	1	Services & Supplies	---	\$15,000	\$15,000
Supplementary Laboratory Analysis	MAD	Varies	Services & Supplies	---	Varies	\$47,250
Temporary Services	MAD	5	Services & Supplies	---	Varies	\$645,000
Mileage	MAD	45,000	Services & Supplies	---	\$0.655	\$29,475
					Total	\$5,024,725

*Expenditures may be appropriated as Capital Outlays or Services and Supplies Major Object, as warranted.

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 5

PROPOSAL: Issue Program Announcement and Execute Agreements for Zero-Emission Infrastructure Projects

SYNOPSIS: Zero-emission infrastructure for medium and heavy-duty trucks is critical to support the transition to zero-emission technologies. These actions are to: 1) Issue a Program Announcement to solicit applications for eligible infrastructure projects to support zero-emission medium and heavy-duty vehicles and equipment in the South Coast Air Basin; and 2) execute agreements for eligible projects based on the results of the Program Announcement. Funding will be provided by the Carl Moyer Program Fund (32), AB 617 Community Air Protection Program Fund (77) and other funding sources as they become available.

COMMITTEE: Technology, November 17, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Issue, and if necessary, re-issue Program Announcement (PA) #PA2024-02 to solicit infrastructure projects that support zero-emission heavy duty vehicles and equipment using the Carl Moyer Program Guidelines, with a targeted funding level of up to \$200 million; and
2. Based on the results of the PA, authorize the Chair (or by the Chair's designation, the Executive Officer) to execute agreements with selected applicants for eligible projects that can be completed in 2024 from the Carl Moyer Program Fund (32).

Wayne Nastri
Executive Officer

AK:MW:TL

Background

In order to achieve federal air quality targets for ozone and fine particulate matter, the goods movement sector needs to transition to zero-emission technologies where feasible. The 2022 AQMP cites the development of incentive programs to subsidize deployment of zero-emission infrastructure as an important mobile source control measure. In addition,

California is taking unprecedented steps to reduce toxic and climate change air pollution emitted from mobile sources. The Governor's Executive Order, N-79-20, set an ambitious target for the transportation and goods movement sectors that places the state on a path to carbon neutrality by 2045. CARB adopted the Advanced Clean Truck (ACT) Rule and the Advanced Clean Fleet (ACF) Rule to help with air quality and achieve the State's zero-emission goals for medium- and heavy-duty trucks.

While there is significant regulatory emphasis on vehicles and equipment to move towards zero-emission technology, equal emphasis must be placed on the development of a robust network of charging and hydrogen refueling infrastructure. Funding for infrastructure projects will enable the deployment of zero-emission equipment, provide shore power for marine vessels, and create robust supporting network for the zero-emission equipment.

Proposal

The action is to issue #PA2024-02 to solicit applications for infrastructure projects supporting zero-emission vehicles and equipment that can be funded in the near and longer term. Up to \$200 million may potentially be available for this PA. For eligible projects that can be completed in 2024, the funding source will be the Carl Moyer Program Fund (32) to ensure that Carl Moyer Program Fund liquidation deadlines are met. For eligible projects that will be completed after 2024, the funding sources will be from Carl Moyer Program Fund (32), AB 617 Community Air Protection Program Fund (77) and other funding sources as they become available, such as awards from federal grant programs, funds received through South Coast AQMD's Warehouse Indirect Source Rule 2305, and remediation funds received through CARB's At Berth regulation.

The Carl Moyer Program Guidelines approved by CARB on April 27, 2017, and any subsequent updates or changes, will be utilized for the evaluation of the infrastructure projects submitted under this solicitation. Applicants will be able to submit their applications online. This is a competitive solicitation and will close two months after it opens, and it can be re-opened any time thereafter if more funding becomes available. Near-term projects will be prioritized and expedited.

Additionally, this action is to authorize the Chair, or by the Chair's designation, the Executive Officer, to execute agreements using the Carl Moyer Program Fund (32) for eligible projects that can be completed in 2024 based on the results of the PA. South Coast AQMD staff will return to the Board to seek approval for eligible projects that will be completed after 2024.

It is anticipated that several different funding sources will be used to make awards under this PA. The use of several funding sources is anticipated; however, funding will likely still be limited and South Coast AQMD will also partner with applicants through submissions received under this PA to pursue funding under federal and/or state grant funding opportunities.

Outreach

In accordance with South Coast AQMD's Procurement Policy and Procedure, a public notice advertising the PAs and inviting applicants will be published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County's Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential applicants may be notified utilizing South Coast AQMD's own electronic listing of certified minority vendors. Notice of the PAs will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on South Coast AQMD's website (<http://www.aqmd.gov>) where it can be viewed by making menu selection "Grants & Bids." South Coast AQMD will post pre-recorded presentations and host meetings to provide program information and application assistance for applicants interested in participating in the Carl Moyer Program. Also, to the extent possible, staff will conduct additional in-person outreach to potential applicants through community outreach and engagement.

Benefits to South Coast AQMD

Successful implementation of supporting zero-emission projects is essential in deploying zero-emission equipment in the goods movement sectors. The infrastructure equipment funded under this PA will operate for many years, providing charging and fueling for zero-emission vehicles and equipment that will reduce emissions in the South Coast Basin.

Resource Impacts

The Carl Moyer Program Guidelines include the requirement that at least 50 percent of the program funds be expended on projects that will reduce emissions in disproportionately impacted areas, which is tracked on a cumulative basis for all air districts. At least half of the funding allocated under SB 1107 and collected under AB 923 will be awarded to projects in disproportionately impacted areas. The Carl Moyer Guidelines also require that at least 50 percent of all funding available for the Carl Moyer Program, including roll-over funds from previous years and any returned funds from projects that fall through, be allocated to projects that will reduce emissions in disproportionately impacted areas. AB 617 Community Air Protection Program funds must be expended on projects that impact designated AB 617 communities. Mitigation fees from the WAIRE Program must be utilized for projects located in the geographic area of the warehouses where fees were collected.

Attachment

Carl Moyer Program Announcement #PA 2024-02



**CARL MOYER MEMORIAL
AIR QUALITY STANDARDS ATTAINMENT PROGRAM
PROGRAM ANNOUNCEMENT
Infrastructure Projects**

**SOUTH COAST AQMD PROGRAM ANNOUNCEMENT
PA2024-02**

The South Coast Air Quality Management District (South Coast AQMD) is pleased to announce the availability of funds for infrastructure projects that support the deployment of zero emission heavy duty vehicles and other equipment.

SECTION I – PURPOSE

The purpose of this Program Announcement (PA) is to solicit zero emission infrastructure project applications. This PA will use multiple funding sources, including but not limited to Carl Moyer Program (CMP) and Community Air Protection Program (CAPP) funds, as well as other funding sources when they become available. The total funding amount for this solicitation is up to \$200 million. In addition, applications received under this PA may be used to partner with South Coast AQMD to apply for funding through state and/or federal grant opportunities.

All applications will be evaluated based on the criteria set forth in this PA, the CMP Guidelines, and any subsequent updates and modifications/advisories to the CMP Guidelines. This PA was prepared based on the latest version of the CMP Guidelines approved by the California Air Resources Board (CARB) on April 27, 2017, and all associated updates, which are available at: <https://ww2.arb.ca.gov/guidelines-carl-moyer>. The section of the guidelines specific to the implementation and funding of infrastructure projects is Chapter 10.

This PA generally identifies the equipment categories, project options and eligibility criteria to qualify for grant funding under this year's CMP.

Please note that depending upon the number of applications received in response to this PA, South Coast AQMD may prioritize the selection of projects to reduce emissions in and around Overburdened Communities (OBC) and low-income communities located within the South Coast Air Basin (SCAB). While South Coast AQMD encourages all eligible applications, this means that some projects may not be selected based on their domicile address, regardless of their cost-effectiveness. At least 50 percent of South Coast AQMD's CMP funds will be targeted for projects that meet the criteria of OBC or low-income community projects. Other non-CMP funding sources may have OBC and/or low-income status requirements that may limit South Coast AQMD's ability to award such funding to projects that do not meet applicable geographic or income requirements. The Office of Environmental Health Hazard Assessment (OEHHA) at the California Environmental Protection Agency (CalEPA) has developed the California Communities Environmental Health Screening Tool: CalEnviroScreen Version 4.0 (CalEnviroScreen 4.0). The CalEnviroScreen 4.0 tool will be used by South Coast AQMD to

identify projects that qualify as OBC projects, which is defined as scoring in the top 25th percentile and will strive to maximize the benefits to these communities. All applications will be assessed with the CalEnviroScreen tool to identify and verify if the project will benefit a OBC within the 25th percentile. This tool is available at:

<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

South Coast AQMD's CMP is administered locally through its Technology Advancement Office. South Coast AQMD reserves the right to allocate its CMP funds among the program categories or to specific projects in accordance with South Coast AQMD priorities.

Several funding sources likely will be used to support eligible applications received through this PA. Different funding sources have different liquidation deadlines and the timelines to complete projects may be used to provide awards through funding sources that match liquidation deadlines. In addition, it is South Coast AQMDs intention to fund as many eligible zero-emission infrastructure applications as possible, funding may be limited and South Coast AQMD may partner with applicants to pursue funding through state and/or federal grant funding opportunities.

SECTION II – LEGAL UPDATES AND AND DEFINITIONS

CONFLICT OF INTEREST

Applicants must address any potential conflicts of interest with other clients affected by actions performed by the firm on behalf of South Coast AQMD. Although the applicant will not be automatically disqualified by reason of work performed for such firms, South Coast AQMD reserves the right to consider the nature and extent of such work in evaluating the application. Conflicts of interest will be screened on a case-by-case basis by the South Coast AQMD General Counsel's Office. Conflict of interest provisions of the state law, including the Political Reform Act, may apply to work performed pursuant to this agreement. An example of a conflict of interest may occur when a consultant applying on behalf of an applicant for funding under the CMP is also contracted with South Coast AQMD.

COMPLIANCE WITH APPLICABLE LAWS

Applicants must comply with all federal, state, and local laws, ordinances, codes and regulations. If the application is eligible for funding, all vehicles and/or equipment to be purchased, or installed must be compliant with all applicable federal, state, and local air quality rules and regulations, and will maintain compliance for the full Agreement term.

COMPLIANCE WITH LABOR LAWS

If an application is deemed eligible, the applicant will be required to provide any labor violations that have occurred within the last three years to be further considered for an award. If awarded, the recipient will be required to notify South Coast AQMD in writing if they have been found by a court or federal or state agency to have violated labor laws. As part of their annual report, the recipient will complete a yearly certification in which they will either state that they have not been found by a court or federal or state agency to have violated labor laws or, if such violations have been found, the recipient will give South Coast AQMD details about those violations in the certification. If the recipient has previously provided that information to South Coast AQMD,

they will be required to reattach that previous notification to the certification and provide any additional details about those violations that have not previously been provided. The recipient’s yearly certification will be due at the same time as the annual progress reports. South Coast AQMD reserves the right to terminate the agreement with a recipient that has been found to have violated labor laws, and the Recipient may be required to return any and all agreement funds, as determined by South Coast AQMD. The recipient will also ensure that these requirements are included in all subcontracts.

STATEMENT OF COMPLIANCE

Government Code Section 12990 and California Administrative Code, Title II, Division 4, Chapter 5, require employers to agree not to unlawfully discriminate against any employee or applicant because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, sex, or age. A statement of compliance with this clause is included in all South Coast AQMD agreements.

ECONOMIC SANCTIONS (RUSSIA/UKRAINE)

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (EO) regarding sanctions in response to Russian aggression in Ukraine . Applicants who are considered eligible for CMP funds under this PA and received executed agreements from South Coast AQMD, are obligated to comply with existing economic sanctions imposed by the U.S. Government in response to Russia’s actions in Ukraine .

SOUTH COAST AQMD JURISDICTION

South Coast AQMD is the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties. This area of 10,743 square miles is home to approximately 17 million people –about half the population of the state of California. It is the second most populated urban area in the United States and one of the smoggiest. Visit <http://www.aqmd.gov/nav/about/jurisdiction> for more information.

SECTION III -- PROJECT CATEGORY

Project Category	Examples
New or Expansion of Infrastructure to fuel or power a zero-emission heavy-duty vehicle or equipment.	<ul style="list-style-type: none"> • Electric chargers for trucks, locomotive, cargo handling equipment, marine vessels • Hydrogen fueling stations for heavy duty equipment • Shore Power for marine vessels (not subject to CARB’s At-Berth regulation) • Electrification of agricultural irrigation pumps • Infrastructure for Transport Refrigeration Units (TRU)

INFRASTRUCTURE

Infrastructure projects that enable the deployment of advanced and cleaner technologies to support the State’s air quality goals are also eligible for CMP funding. Specifically, projects in this category involve the installation of fueling or energy infrastructure that will be used to fuel or power zero emission heavy-duty vehicles or equipment. **Natural gas fueling stations are no longer eligible for funding.**

Infrastructure projects will be scored based on the project location, total requested funding, the percentage of renewable source, public access ability, expected usage for the life of the project, fleet commitments to utilize the infrastructure, equipment throughput relative to cost, project implementation timeliness, cost-share, and other factors. Each scoring criterion will be weighted as shown in the table below. The project must exceed a minimum score to be recommended for funding. The priority for project selection may change based on the requirements of the fund sources that are available. Infrastructure projects are not subject to a cost-effectiveness limit but are subject to maximum limits prescribed by CARB .

Infrastructure Project Scoring Criteria

Criteria #	Criteria	Percentage
1	Renewable Sources	8%
2	Expected Throughput Usage per Cost	25%
3	Project Co-Funding	5%
4	Infrastructure Usage and Equipment Availability	30%
5	Project Location, Readiness and Implementation	29%
6	Application Completeness at Submittal	3%
	Total	100%

Applicants must provide cost information that specifies the amount of funding requested and the basis for that request by attaching vendor quotes to the application. Non-public entities must provide quotes from a minimum of two different vendors with the application. The vendor quotes must be dated within 90 days of the application submittal date. Applicants need to inform vendors of the time frame of the award process so that they can estimate prices based on the future/projected order/purchase date.

Eligible costs include planning and engineering, permitting, equipment necessary for the functional operation of the infrastructure, and installation. Operational costs are not eligible and should not be included in the vendor quotes.

Applicants shall include a description of the installation vendor selection process. Applicants must demonstrate that they either own the land on which the project will be located, or control it through a long-term lease, easement, or other legal arrangement, for the duration of the project life. Some projects may also require a case -by-case review by CARB.

Eligible infrastructure projects include, but are not limited to:

- Battery charging stations: New, conversion of existing, and expansion to existing battery charging stations for heavy-duty vehicles and equipment (not for light-duty vehicles).
- Hydrogen Fueling Station: New, conversion of existing, or expansion of existing hydrogen fueling station for heavy duty vehicles and equipment.
- Stationary Agricultural Station: Pump electrification .
- Shore Power: Shore-side electrification for projects not subject to CARB’s shore power regulation. Only a port authority, terminal operator, or marine vessel owner is eligible for this type of infrastructure project.

Timelines for project completion need to be clearly identified. Several different funding sources may be used for these projects and each of the funding sources have different liquidation deadlines that must be met. If the infrastructure project being submitted meets CMP eligibility and can be completed in 2024 please ensure to highlight this timeline.

If selected for funding, Carl Moyer Infrastructure awards begin at 50 percent of the eligible project cost for a private access project. Public access projects receive an additional 10 percent, and if a charging project utilizes renewable energy, the project will receive an additional 15 percent. Please refer to the Carl Moyer guidelines for detailed funding information.

The applicant must provide proof (i.e., letter of commitment from the fleet operator, purchase orders, etc.) that a sufficient number of supported vehicles/equipment be acquired and/or committed to utilize the infrastructure when the project is complete. For infrastructure expansion projects, documentation of increased throughput at the station is required to ensure the expansion is commensurate with projected fueling demand.

All projects funded need to be registered with the Department of Industrial Relations (DIR) and must comply with DIR requirements on labor practices which covers a broad prevailing wage. The CMP also specifies that applicants awarded an agreement must comply with applicable provisions of Labor Code Sections 1720-1861.

SECTION IV – APPLICATION SUBMITTAL REQUIREMENTS

Applicants must apply for CMP funding using South Coast AQMD’s CMP Online Grant Management System (GMS) at: www.aqmd.gov/moyer. In addition, all Business Information Forms including Conflict of Interest and Project Cost information, as described below, must also be submitted with the application. It is the responsibility of the applicant to ensure that all information submitted is accurate and complete. **Paper applications will not be accepted.**

PROJECT COST

Applicants must provide cost information that specifies the amount of funding requested and the basis for that request by attaching vendor quotes to the application. The vendor quotes must be dated within 90 days of the application submittal date. Applicants need to inform vendors of the time frame of the award process so that they can estimate prices based on the future/projected order/purchase date.

Purchase orders or other purchase commitments shall not be placed until after award approval by South Coast AQMD. Purchase orders may be placed after South Coast AQMD approval and in advance of a fully executed agreement, but these orders or commitments are placed at the applicant's own risk.

The CMP will fund only a percentage of the project cost of the infrastructure based on the type of project. No administrative or operational costs will be funded. All project costs must be clearly indicated in the application. In addition, applicants must disclose all sources of co-funding, including the name of the funding source and amount of funding in the application. All co-funding will be evaluated to determine whether it can be stacked with Carl Moyer funds.

APPLICATION SUBMISSION

All online applications must be submitted according to specifications set forth herein. Failure to adhere to these specifications may be cause for rejection of the application without evaluation.

Grounds for Rejection: An application may be immediately rejected if:

- Does not include correct documentation and other forms required.
- All applications are not signed by an individual authorized to represent the firm.

Staff Contact Information: South Coast AQMD staff contacts for this solicitation are listed under South Coast AQMD Staff Contacts and Additional Resources below. Applicants may contact South Coast AQMD staff to discuss their project prior to submitting an online application to ensure program eligibility.

Business Information Forms: All business information forms **must** be completed and submitted with the online application. Please note, if recommended for an award, you will be required to submit an updated Campaign Contribution Disclosure form at a later date. Download these forms at www.aqmd.gov/moyer. These business forms will also be available on the CM P GMS.

Electronic Submittal: A link to access South Coast AQMD's CMP GMS will be available by December 1, 2023 at: www.aqmd.gov/moyer. The CMP GMS allows applicants to submit applications electronically to South Coast AQMD and track the progress of their application(s).

Applications must be submitted through the CMP GMS. South Coast AQMD "Business Information Forms" requiring signatures must be scanned and uploaded to the electronic application in PDF format.

First-time users must register as a new user to access the system. Applicants will receive a confirmation email after all required documents have been successfully uploaded. A tutorial of the system will be provided at the pre-application workshops or online and you may contact staff if you would like additional assistance.

Third parties assisting in applications may create their own account on the CMP GMS that can be linked through the primary user account.

Missing Information – South Coast AQMD will email letters to applicants regarding the missing or incomplete information. Applicants will have fourteen (14) business days to provide any missing information requested in the letter. It will be the applicant’s responsibility to submit the missing or incomplete information within the time specified by South Coast AQMD staff. Only complete applications can move forward in the evaluation process.

Disposition of Applications - South Coast AQMD reserves the right to reject any or all applications. All responses become the property of South Coast AQMD. A copy of each application not selected for funding shall be retained for one year. Additional copies and materials will be returned only if requested and at the applicant's expense.

SECTION V – WORK STATEMENT/SCHEDULE OF DELIVERABLES

Prior to submitting the application, applicants must sign and agree to the terms and conditions of the requirements for submittal of additional project information to finalize an agreement and that all vehicles, engines or equipment shall be in operation within eighteen (18) months of agreement execution.

SCOPE OF WORK

The scope of work will describe tasks and deliverables that demonstrate compliance with the requirements of the CMP as administered by CARB and South Coast AQMD. The project applicant is responsible for developing detailed project plans and ordering equipment that complies with the program criteria and guideline requirements. In addition, alternative fuel project applicants must discuss their plan for refueling the proposed vehicles/equipment, and if appropriate, should provide a letter of agreement from their fuel provider (see Application forms).

At a minimum, any agreement for funding the proposed project must meet the following criteria:

- The infrastructure equipment must be installed within the boundaries of the SCAB.
- Provide appropriate recordkeeping during the project life (i.e., annual throughput/usage, hours of operation), including submission of annual reports as detailed below.
- Ensure that the project complies with all applicable rules and regulations, and the resulting emission reductions from the project are not required as a mitigation measure to reduce adverse environmental impacts that are identified in an environmental document prepared in accordance with the California Environmental Quality Act or the National Environmental Policy Act.
- If requested, recipient must provide a financial statement and bank reference, or other evidence of financial ability to fulfill agreement requirements.
- If requested, recipient must make all equipment and records available to South Coast AQMD or CARB for audit and inspections.

PAYMENT TERMS

For all projects except shore power projects, full payment will be made upon installation and commencement of operation of the funded equipment. For shore power projects, a progress payment schedule may be established that allows payment upon completion of key milestones, as

delineated in the agreement. Any tax obligation associated with an award is the responsibility of the Recipient.

DELIVERABLES

The agreement will describe how the project will be monitored and what type of information must be submitted as part of the reporting requirements. At a minimum, South Coast AQMD expects to receive an annual report for each year during the full agreement term, or project life, which provides the annual throughput, hours of operation, and operational and maintenance issues encountered and how they were resolved. South Coast AQMD reserves the right to verify the information provided.

Annual reporting forms are available online at: www.aqmd.gov/moyer

SECTION VI – APPLICATION EVALUATION/ RECIPIENTSELECTION CRITERIA

South Coast AQMD staff will evaluate all eligible online applications and make the final selection of project(s) to be funded. Each project will be evaluated based on two primary criteria: (1) the project’s status with respect to the disadvantaged community and low-income criteria prescribed by CARB. (2) the project’s using metrics that include, but are not limited to: fleet usage commitments, project location and readiness, expected usage/throughput and cost share.

SECTION VII – IMPORTANT PROGRAM INFORMATION

- Applicants must provide vendor quotes with their application to document the cost of the new replacement vehicle/equipment project (or engine for repower project). Applicants may be awarded up to the designated percentage of total cost for the specified type of project (new purchase, repower replacement and/or retrofit, infrastructure), subject to funding caps and program cost-effectiveness limits. All quotes must have been obtained within 90 days prior to the application submittal date.
- Any tax obligation or liabilities associated with the award is the responsibility of the grantee. Please consult your tax advisor on the tax liabilities of receiving a grant award under the CMP.
- No third-party contracts will be executed.
- Pre- and post-inspections on awarded projects will be conducted, as required. Inspections of all vehicles/engines/equipment may be conducted virtually via remote inspections depending on the status of the pandemic. Applicants must make all locations/equipment available for in-person or remote inspections unless otherwise specified during agreement preparation, or through updates from South Coast AQMD.
- It is the applicant’s responsibility to ensure that the most current information and requirements are reflected in a submitted project application. Applicants should check the CARB website for updates and advisories to the guidelines (www.arb.ca.gov/msprog/moyer/moyer.htm).

- In cases of conflict between CARB guidelines and South Coast AQMD criteria, the more stringent criteria will prevail. South Coast AQMD will post any new information and requirements on its CMP Web page at www.aqmd.gov/moyer.
- A project may be leveraged with other funding sources. The applicant must disclose all funding sources at the time of application and will be required to report all funding sources in the application. The sum of all grants and other funds applied toward the project shall (1) not exceed the total project cost for public agency applicants and (2) not exceed 85% of the total project cost for non-public agency applicants. In other words, the grantee must pay at least 15 percent of the project cost from non-public sources.

SECTION VIII – SCHEDULE OF EVENTS

Issue PA2024-02	December 1, 2023
Applications Open	December 5, 2023
Application Close	February 6, 2024 @ 1 PM PST
Workshops	Outreach information, pre-recorded presentations and other meetings (as needed) to be posted on www.aqmd.gov/moyer

Access to South Coast AQMD’s CMP Online GMS is provided at: www.aqmd.gov/moyer

SOUTH COAST AQMD STAFF CONTACTS AND ADDITIONAL RESOURCES

South Coast AQMD staff contacts are listed in Table 1. Copies of the PA, Business Information Forms and a sample South Coast AQMD CMP agreement may be accessed at: www.aqmd.gov/moyer.

Table 1: CMP Staff Contacts

Project Category	Staff Contact	Email
Infrastructure	Tom Lee Krystle Martinez David Chen Justin Joe George Wu Andrew Yoon	tlee@aqmd.gov kmartinez@aqmd.gov dchen@aqmd.gov jjoe@aqmd.gov gwu@aqmd.gov ayoon@aqmd.gov

CONTACT FOR ADDITIONAL INFORMATION

Questions regarding the content or intent of this PA, procedural matters or locations of workshops should be addressed to: carlmoyer@aqmd.gov

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 6

PROPOSAL: Establish Special Revenue Fund, Recognize Revenue, Execute Contracts and Reimburse General Fund to Demonstrate Fuel Cell Locomotive and Deploy Heavy-Duty Truck Charging and Fueling Infrastructure

SNYOPSIS: South Coast AQMD has been awarded up to \$76,250,003 from California State Transportation Agency's (CalSTA) Port and Freight Infrastructure Program to demonstrate a short line hydrogen fuel cell locomotive and deploy direct current fast chargers and hydrogen refueling dispensers. South Coast AQMD has also been allocated \$500,000 through the DOE through a FY 23 Congressional Direct Spending Request for the project. These actions are to: 1) establish the CalSTA Special Revenue Fund (89) and recognize, upon receipt, revenue up to \$76,250,003 from CalSTA and up to \$500,000 from DOE into Fund (89); 2) execute contracts with Wabtec Corporation for up to \$34,188,480 from CalSTA Special Revenue Fund (89) and Prologis Mobility, LLC for up to \$38,930,570 from CalSTA Special Revenue Fund (89) and up to \$11,679,171 from MSRC Fund (23); and 3) reimburse the General Fund up to \$3,630,953 from CalSTA Special Revenue Fund (89) to administer these projects.

COMMITTEE: Technology, November 17, 2023; Recommended for Approval

RECOMMENDED ACTION S:

1. Establish the California State Transportation Agency (CalSTA) Special Revenue Fund (89) and recognize, upon receipt, revenue up to \$76,250,003 from CalSTA and up to \$500,000 from DOE into Fund (89);
2. Authorize the Chair, or on the Chair's behalf, the Executive Officer, to execute contracts with:
 - a. Wabtec Corporation in an amount not to exceed \$34,188,480 to demonstrate a short line hydrogen fuel cell locomotive operating in and around Southern California, consisting of up to \$33,688,480 CalSTA funding and up to \$500,000 DOE funding from CalSTA Special Revenue Fund (89); and

- b. Prologis Mobility LLC. in amount not to exceed \$50,609,741 to deploy 376 direct current fast chargers and 19 hydrogen refueling dispensers at seven locations, consisting of up to \$38,930,570 from CalSTA Special Revenue Fund (89) and up to \$11,679,171 from MSRC Fund (23).
3. Reimburse the General Fund up to \$3,630,953 from CalSTA Special Revenue Fund (89) for administrative costs necessary to implement these projects.

Wayne Natri
Executive Officer

AK:MW

Background

To help achieve federal ozone standards and reduce NO_x, the 2022 AQMP showed the need to rapidly transition to zero emission technologies in the goods movement sector to reduce NO_x and PM_{2.5} emissions. In addition, the large diesel emission sources associated with the goods movement activities results in many neighboring communities having higher risks for cancer. The MATES V continued to show the highest cancer risk in communities near the San Pedro Bay Ports, along with those residing near freeways and intermodal facilities.

In January 2023, South Coast AQMD partnered with Prologis Mobility, LLC. and Wabtec Corporation to submit a proposal entitled “Freight Air Quality Solutions” (FAQS) to CalSTA under the 2022 Port and Freight Infrastructure Program (PFIP). The FAQS proposal included the deployment of direct current fast chargers (DCFC) and hydrogen refueling dispensers at seven locations to support zero emission drayage fleets and the demonstration of a short-line fuel cell locomotive that will transport cargo in and around Southern California, supporting the largest container port in the United States.

In July 2023, CalSTA awarded a PFIP grant to South Coast AQMD for FAQS project, followed by a kick-off meeting with CalSTA and project partners in September 2023. Also, in August 2023, the MSRC awarded Prologis Mobility LLC. \$11,679,171 to cost-share the deployment of DCFC and hydrogen refueling dispensers, and a FY23 Congressional Directed Spending request allocated \$500,000 to South Coast AQMD through the DOE to cost-share the fuel cell locomotive demonstration.

Proposal

This action is to establish the CalSTA Special Revenue Fund (89) to receive the \$76,250,003 award from CalSTA as well as \$500,000 from the DOE for the purpose of administering the FAQS project.

This action is to also authorize the execution of a contract with Prologis Mobility, LLC., one of the world's largest real estate logistics firms, for an amount not to exceed \$50,609,741 to deploy 376 DCFCs and 19 hydrogen refueling dispensers at seven locations, including Compton, Commerce, Long Beach, Ontario, Rancho Cucamonga, Van Nuys and Vernon. All the sites will have battery energy storage systems and on-site power generation provided by linear generators to create a resilient network. This part of the FAQS project is expected to initially support 2,100 zero emission trucks and potentially support a larger zero emission truck population of 16,000 trucks operating in the South Coast Air Basin.

This action is to also authorize the execution of a contract with Wabtec Corporation, one of the leading freight locomotive providers globally, for an amount not to exceed \$34,188,480, to design, develop, and demonstrate a short line liquid hydrogen fuel cell locomotive operating in and around Southern California ports. The locomotive will be fully built, commercially tested, validated, and demonstrated by a rail operator.

Sole Source Justification

Section VIII.B. 2 of the Procurement Policy and Procedure identifies four major provisions under which sole source award may be justified and section VIII.B.3 identifies four major provisions under which contracts funded in whole or in part with federal funds may be made as a sole source award. The request for sole source awards for the Wabtec and Prologis contracts is made under provision B.2. d.(1) Projects involving cost sharing by multiple sponsors. The proposed projects will include in-kind contributions and cost-share by Wabtec, Prologis, DOE and MSRC. Additionally for the Wabtec contract, the request for sole source award is made under B.3.c, which states the awarding federal agency or pass-through entity expressly authorizes non-competitive proposals in response to a written request from the non-Federal entity.

Benefits to South Coast AQMD

South Coast Air Basin is classified as an "extreme" nonattainment area for ozone under the Federal Clean Air Act. Successful deployment of chargers and fuel dispensers and the demonstration of fuel cell locomotive will help reduce Ozone and PM2.5 air pollution. The project supports the Technology Advancement Office Clean Fuel Program 2023 Plan Update under the categories of "*Electric/Hybrid Technologies,*" "*Hydrogen/Mobile Fuel Cell Technologies,*" and "*Zero Emission Infrastructure.*" The annual reductions of 632 tons of NOx, 1.7 tons of PM2.5 and 147,104 tons of CO2 can be expected from these projects.

Resource Impacts

The contract with Prologis Mobility, LLC. to deploy chargers and hydrogen fueling dispensers will not exceed \$50,609,741. This includes up to \$38,930,570 from the CalSTA Special Revenue Fund (89) and up to \$11,679,171 from MSRC Fund (23). The proposed project cost-share is shown in the table below:

Funding Source	Funding Amount	Percent
CalSTA	\$38,930,570	20
MSRC	\$11,679,171	6
Prologis Mobility LLC.	\$144,043,107	74
Total	\$194,652,848	100

The contract with Wabtec Corporation for the demonstration of the fuel cell locomotive will not exceed \$34,188,480 from the CalSTA Special Revenue Fund (89). This includes CalSTA funding of up to \$33,688,480 and DOE funding from a Congressional Directed Spending request of up to \$500,000. The proposed project cost-share is shown in the table below:

Funding Source	Funding Amount	Percent
CalSTA	\$33,688,480	80
DOE	\$500,000	1.2
Wabtec Corporation	\$7,922,119	18.8
Total	\$42,110,599	100

Up to \$3,630,953 will be reimbursed to the General Fund from CalSTA Special Revenue Fund (89) for administrative costs necessary to implement these projects.

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 7

PROPOSAL: Transfer and Appropriate Funds and Execute Sole Source Contract to Upgrade Fire Life Safety System at Headquarters Building

SYNOPSIS: South Coast AQMD's headquarters building periodically requires upgrades to its building infrastructure systems and equipment. This action is to transfer and appropriate \$720,000 from the Infrastructure Improvement Fund (Fund 02) to Administrative and Human Resources' FY 2023-24 Budget, Capital Outlays Major Object, and to approve a sole source contract with National Fire Safe to upgrade the building's fire life safety system. The current system was installed in 1991 with the construction of the building.

COMMITTEE: Administrative, November 9, 2023; Recommended for Approval

RECOMMENDED ACTION S:

1. Transfer and appropriate \$720,000 from the Infrastructure Improvement Fund (Fund 02) to Administrative and Human Resources' FY 2023-24 Budget, Capital Outlays Major Object, Capital Outlays account; and
2. Authorize the Executive Officer to execute a sole source contract with National Fire Safe, in an amount not to exceed \$720,000, to upgrade the fire life safety system in the South Coast AQMD headquarters building.

Wayne Natri
Executive Officer

AJO:BR:VL

Background

Built in 1991, South Coast AQMD's Diamond Bar headquarters building periodically requires repairs and upgrades to its operational and infrastructure systems and equipment. The current fire life safety system in use in the building is the original, first-generation system installed during construction. The system consists of a central monitoring and control panel that communicates with the smoke detectors, pull-stations, annunciators, and equipment control relays. When a fire condition is identified, the fire

life safety system activates audible and visual alarm signals, shuts down the air distribution system, and secures fire doors for containment.

After more than 30 years in service, the existing field devices have outlived their expected life cycle. Long-term planning, routine inspections and maintenance, and annual testing have sustained the fire life safety system's longevity.

Proposal

National Fail Safe designed, engineered, and installed the current fire life safety system. The company has continued to provide maintenance and emergency repairs to the system. National Fail Safe's extensive knowledge of the system and building infrastructure will allow for a phased upgrade and replacement process.

The proposed upgrade will provide for the latest generation of detection devices to be installed, which will increase communication speed and reliability, as well as enhance critical data storage and analytics. In addition, upgraded control panels will integrate with the building energy management systems, enabling remote monitoring and detailed alarm notifications.

Sole Source Justification

Staff recommends authorizing the Executive Officer to execute a sole source contract with National Fail Safe to upgrade the fire life safety system. Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole-source award may be justified. For the fire life safety system, the request for sole source contract with National Fail Safe is made under Sections VIII.B.2.b: Public health or property may be endangered by delay; VIII.B.2.c(1): The unique experience and capabilities of the proposed contractor or contractor team; and VIII.B.2.d(6): Projects requiring compatibility with existing specialized equipment.

Resource Impacts

The Infrastructure Improvement Special Revenue Fund (Fund 02) was established for capital outlay building-related improvement projects. Staff requests an appropriation of \$720,000 from Fund 02 to Administrative and Human Resources' FY 2023-24 Budget, Capital Outlays Major Object, Capital Outlays account.

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 8

PROPOSAL: Appoint Medical Member to Hearing Board and Appoint Alternate Medical Member to Hearing Board

SYNOPSIS: This action is to fill the Regular Medical Member vacancy on the South Coast AQMD Hearing Board for an unexpired term ending June 30, 2025. Based on the recommendation of the Hearing Board Advisory Committee, the Administrative Committee interviewed Dr. Jerry P. Abraham and Dr. Sharon Williams at its meeting on November 9, 2023 and made a final recommendation.

COMMITTEE: Administrative, November 9, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Appoint Dr. Jerry P. Abraham as the South Coast AQMD Hearing Board Regular Medical Member to fill the unexpired term ending June 30, 2025; and
2. Appoint Dr. Sharon Williams as the South Coast AQMD Hearing Board Alternate Medical Member to fill the unexpired term ending June 30, 2025.

Wayne Nastri
Executive Officer

FT

Background

The South Coast AQMD Hearing Board is a quasi-judicial body established by state law to provide relief from South Coast AQMD regulations under certain circumstances. The Hearing Board is a five-member board consisting of one engineer, one attorney, one medical professional and two public members. An alternate for each position is appointed to ensure there is sufficient representation on the Hearing Board when the primary member is otherwise unable to attend. Hearing Board members are appointed by, but act independently of the Governing Board.

Due to the passing of Dr. Allan Bernstein, who had been serving as the Regular Medical Member since 2019, a recruitment was opened from June 28, 2023 through August 18, 2023 to fill the vacant medical member position. The vacancy was posted on South Coast AQMD's website, job boards through partnership with Careers in Government, and social media platforms (X, Facebook, LinkedIn, and Instagram), CAPCOA, and

Careers in Government Boost; email notification to two University of California physician groups; and the Los Angeles, Orange Riverside, and San Bernardino Counties Medical Associations.

The Health and Safety Code requires that the Hearing Board medical member be a licensed physician with two or more years of practical experience. At the closing of the recruitment period, four applications were submitted for the medical member position; however, only two applicants met the minimum requirements: Dr. Jerry P. Abraham and Dr. Sharon Williams. Dr. Abraham is currently serving as the Alternate Medical Member on the Hearing Board, which has been a much more active role since the passing of Dr. Bernstein.

Pursuant to Health and Safety Code Section 40501.1(b), an advisory committee appointed by five members of the Governing Board reviewed the resumes of both candidates. The current Advisory Committee members are Guillermo Gonzalez, representing Supervisor Perez; Trung “Joe” Q. Ha, representing Supervisor Do; Loraine Lundquist, representing Supervisor Mitchell, Allison Mannos, representing Councilmember Raman; and William Sterling, representing Supervisor Hagman.

On October 27, 2023, the Advisory Committee met to discuss the qualifications of the two candidates and make a recommendation to the Administrative Committee. By a unanimous vote, the Advisory Committee ranked the candidates in the order enumerated below and recommended that both candidates be interviewed by the Administrative Committee.

- 1) Dr. Jerry Abraham
- 2) Dr. Sharon Williams

Proposal

The Administrative Committee interviewed both candidates and recommends that the Board appoints Dr. Jerry P. Abraham to the South Coast AQMD Hearing Board as the Regular Medical Member to fill the unexpired term ending June 30, 2025. Although the Administrative Committee did not take a formal vote to appoint Dr. Sharon Williams to the South Coast AQMD Hearing Board as the Alternate Medical Member because that potential action was not noticed, the members did express support for her being appointed as the Alternate Medical Member to fill the unexpired term ending June 30, 2025, that will be vacated by Dr. Jerry P. Abraham.

Fiscal Impacts

Sufficient funds are budgeted each year to compensate those who serve on the Hearing Board.

Attachments

Candidate Resumes

JERRY P. ABRAHAM, M.D., M.P.H, C.M.Q.**CURRICULUM VITAE****PERSONAL HISTORY****EDUCATION**

Texas Academy of Mathematics & Sciences TAMS University of North Texas	2000-2002
Bachelor of Science, Biology-Neuroscience Bachelor of Arts, Spanish & Portuguese Literature Emory University, College of Arts & Sciences	2002-2005
Master of Public Health Injury Epidemiology & Global Health Rollins School of Public Health, Emory University	2005-2007
Fellow, Global Injury Epidemiology Emory University, Rollins School of Public Health	2005-2008
Research Fellowship Injury Epidemiology & Global Health Harvard School of Public Health	2008-2011
Research Fellow Family Medicine, Health & Policy Economics University of Texas, School of Medicine	2011-2014
Doctor of Medicine Family and Community Medicine University of Texas, School of Medicine	2010-2014
Internship & Residency Family Medicine Residency Program University of Southern California USC	2014-2017
Integrative Medicine Certificate Program University of Arizona School of Medicine	2014-2017
Family Medicine Chief Resident Diabetes Fellowship Primary Care Education Consortium	2016-2017

Primary Care Metabolic Group	
Fellowship in Health Policy, Medical Quality & Faculty Development Eisner Family Medicine Clinic at Dignity Health California Hospital University of Southern California USC	2017-2018
LA CARE Physician Leadership Program Fellowship	2017-2019
Climate Health Organizing Fellowship CHOF Harvard Medical School – Cambridge Health Alliance CHEEA	2021-2022
American Medical Association AMA - Satcher Health Leadership Institute SHLI Medical Justice in Advocacy Fellowship MJAF	2022-Present
American Academy of Family Physicians AAFP Leading Physician Wellbeing LPW Fellowship	2023-Present

LICENSURE

Medical Board of California Physician & Surgeon [REDACTED]	2015-Present
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BOARD CERTIFICATIONS

Board Certification in Medical Quality American Board of Medical Quality	2015-Present
Board Certification in Family Medicine, [REDACTED] American Board of Family Medicine ABFM	2017-Present

OTHER CERTIFICATIONS

National Provider Identifier NPI, [REDACTED] Center for Medicare & Medicaid Services	2014-Present
Provider Enrollment, Chain, & Ownership System, PECOS #1932514874 Center for Medicare & Medicaid Services	2014-Present
Advanced Cardiovascular Life Support	2014-Present
Pediatric Advanced Life Support	2014-Present
Basic Life Support	2014-Present
Neonatal Resuscitation Program	2014-Present
Advanced Life Support in Obstetrics	2014-Present

Crisis Prevention Intervention	2014-Present
Hospital Fire & Life Safety	2014-Present
HIPAA Privacy Education Program	2014-Present
Collaborative Institutional Training Initiative Human Research	2014-Present
Merck Clinical Training Program for NEXPLANON	2014-Present
Controlled Substance Registration Certificate & X-Waiver [REDACTED]	2015-Present
Drug Enforcement Administration DEA	
Medication Assisted Treatment for Opioid Use Disorder	2016-Present

ACADEMIC APPOINTMENTS

Present Positions:

Clinical Assistant Professor, Joint Appointment Departments of Family Medicine and Psychiatry Charles R. Drew University of Medicine and Science	2022-Present
Fellowship Director (non-ACGME) COVID-19 Vaccine Fellowship Program Kedren Community Health Center, Inc.	2022-Present

Previous Positions:

Faculty & Attending Physician (Full Spectrum Family Medicine including uncomplicated Obstetrics) Eisner Family Medicine Center, Dignity Health California Hospital University of Southern California, Los Angeles, CA	2014-2019
Adjunct Clinical Professor, Family & Community Medicine University of Southern California, Keck School of Medicine Los Angeles, CA	2017-2019

PROFESSIONAL EXPERIENCE

Present Positions:

Medical Staff Member with Active Privileges Family Medicine Department	2014-Present
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Dignity Health, California Hospital Medical Center
Los Angeles, CA

In-Patient Pediatrics & In-Patient Adult Medicine 2019-Present
Attending Physician
Acute Psychiatric Hospital, Kedren Health
Los Angeles, CA

Attending Family Physician 2019-Present
Community Care Clinic
Kedren Health
Los Angeles, CA

Director & Chief Vaccinologist, Kedren Vaccines 2020-Present
Kedren Health
South Los Angeles, CA

Co-Director & Medical Director 2021-Present
CDU-Kedren Mobile Street Medicine
South Los Angeles, CA

Previous Positions:

Field Sales Manager, Sales Associate 2001-2002
The Southwestern Company
Orlando, FL

Residential Advisor 2002-2005
Emory University
Atlanta, GA

University Conferences 2002-2005
Emory University
Atlanta, GA

Academic Peer Advisor 2002-2005
Emory University
Atlanta, GA

Global Forum on Road Safety 2005-2008
The Taskforce for Child Survival & Development
Atlanta, GA

Global Injury Epidemiologist & Program Associate 2005-2008
The Taskforce for Child Survival & Development
Atlanta, GA

Global Burden of Diseases & Injuries (Gates 2008-2011
Foundation)
Harvard Institute for Global Health
Boston, MA

Global Burden of Diseases Injury Expert Group (The World Bank Group) Harvard Institute for Global Health Boston, MA	2008-2011
World Health Organization ICD-11 Chapter 19 & 20 Expert Group Harvard Institute for Global Health Boston, MA	2008-2011
Chief Resident Family Medicine Residency Program, University of Southern California	2014-2017
Faculty & Attending Physician (Full Spectrum Family Medicine including uncomplicated Obstetrics) Eisner Family Medicine Center, Dignity Health California Hospital University of Southern California, Los Angeles, CA	2014-2019
Adjunct Clinical Professor, Family & Community Medicine University of Southern California, Keck School of Medicine Los Angeles, CA	2017-2019

PROFESSIONAL ACTIVITIES

Committee Service:

1. President Pro-Tempore & Speaker Emory University Student Government Association	2002-2007
2. Student Government Association Emory University, Rollins School of Public Health	2004-2010
3. Member International Physicians for the Prevention of Nuclear War IPPNW	2004-2012
4. Dean's Council Emory University Alumni Association	2007-2009
5. Chair Gender & Sexuality Action Committee	2007-2010
6. President University of Texas Health Science Center at San Antonio	2008-2014
7. Member	2010-2014

Center for Medical Humanities & Ethics Advisory
Committee

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| 8. Member
University Libraries Committee | 2010-2014 |
| 9. Past Trustee
American College of Medical Quality ACMQ | 2010-2014 |
| 10. Delegate, International Federation of Medical
Students Association
60 th General Assembly August Meeting
Copenhagen, Denmark | 2011 |
| 11. Chair, International Federation of Medical Students
Associations
62 nd General Assembly March Meeting Organizing
Committee | 2011-2013 |
| 12. Delegate, International Federation of Medical
Students Associations
61 st General Assembly August Meeting
Mumbai, India | 2012 |
| 13. Host & Organizer
Empowering Physicians Conference | 2012 |
| 14. Member
Global Health Information Privacy & Protection
Steering Committee | 2012 |
| 15. Member, Board of Directors
American Board of Medical Quality ABMQ | 2012-2015 |
| 16. Secretary-Treasurer
Oakdell Townhomes Homeowners Association | 2013-2014 |
| 17. Chair
Quality Improvement & Patient Safety Housestaff
Committee | 2014-2017 |
| 18. Graduate Medical Education Committee GMEC
Dignity Health California Hospital Medical Center | 2014-2018 |
| 19. Chair, Young Physicians Committee
Los Angeles County Museum of Art | 2017-2017 |
| 20. Venture Partner
Divine Dips Vegan Ice Cream Shop, Los Angeles, CA | 2017-2019 |
| 21. Member | 2017-2020 |

Steering Committee, This Is Our Shot / Vacunate Ya
Vaccination Campaign

23. Volunteer Beit T'Shuvah Recovery Center & Temple	2018
24. Volunteer Beit T'Shuvah Recovery Center & Temple	2018
25. Campaign Member AMA Trustee	2018-2019
26. Campaign Member AMA Councilor	2018-2020
27. Member AMA Reference Committee F: Finance & Governance	2018-2020
28. Campaign Member AMA Speaker	2018-2020
29. Member Graduate Medical Education Committee GMEC Kedren Health	2019
30. Member Vaccine Equity Committee, Los Angeles County Department of Public Health	2019
31. Chair LACMA Delegation	2019-2020
32. Campaign Manager CMA Speaker	2019-2020
33. Vice Chair CMA Council on Membership, Bylaws & Governance CMBG	2019-2020
34. Member Medical Staff Medical Executive Committee MEC Kedren Health	2020-2021
35. Volunteer CMA Care for Caregivers	2020-2021
36. Volunteer International Medical Corps IMC	2020-2021
37. Member CMA Finance Committee	2020-2023

38. Organizing Fellow HMS/CHA Center for Health Equity, Education, & Advocacy: Climate Health Fellowship Program	2021
39. Member National Medical Fellowships	2010-Present
40. Member LACMA Executive Committee	2012-Present
41. Member Los Angeles County Department of Health Services Disaster Emergency Preparedness Surge Unit	2014-Present
42. Member LACMA Bylaws Committee	2015-Present
43. Member LACMA Finance Committee	2016-Present
44. Board Member LA Physician Aid Association LAPAA	2016-Present
45. Member Community Clinic Association of Los Angeles County CCALAC	2017-Present
46. Treasurer Little Tokyo Lofts Homeowners Association HOA	2018-Present
47. Host Committee American Society of Hiroshima-Nagasaki A-Bomb Survivors, Hiroshima International Council for Health Care of the Radiation-exposed HICARE	2018-Present
48. Member American Institute of Parliamentarians AIP	2018-Present
49. Member Climate Health Now CHN	2018-Present
50. Member Transitions Care Network TCN	2019-Present
51. Member CMA Ethnic Medical Organizations Section EMOS Bylaws Committee	2019-Present
52. Chair Graduate Medical Education Committee GMEC Kedren Health	2019-Present

53. Member CMA Committee on Nominations	2019-Present
54. Leader California Medical Association Climate Health Champions CCC	2019-Present
55. Board Member Pull for Progress Burkina Faso	2020-Present
56. Chair Bylaws Task Force Medical Executive Committee MEC Kedren Health	2020-Present
57. Medical Staff Los Angeles Surge Hospital	2020-Present
58. Member Black Health Trust BHT	2020-Present
59. Member Minority Health Institute MHI	2020-Present
60. Chair COVID-19 Task Force Kedren Health	2020-Present
61. Councilor AMA Council on Constitution & Bylaws CCB	2021-Present
62. Member California ETE Ending the Epidemics (HIV, STIs, Viral Hepatitis) Committee	2021-Present
63. Member LACDPH Ending the HIV Epidemic EHE Steering Committee	2021-Present
64. Treasurer LACPAC	2021-Present
65. Treasurer LAAFP	2021-Present
66. Chair Quality Assurance and Process Improvement Committee QAPI Kedren Health	2021-Present
67. Campaign Manager	2021-Present

CMA President	
68. Board Member Charles R. Drew Medical Society CRDMS	2022-Present
69. Member CDU Strategic Planning Retreat Committee	2022-Present
70. Member CMA Climate Health CME Planning Committee	2022-Present
71. Member Immunization Coalition of Los Angeles County ICLAC	2022-Present
72. Member CDU Pre-Clerkship Clinical Skills 1& 2 Curriculum Development & Planning Committee	2022-Present
73. President-Elect Los Angeles County Medical Association	2022-Present
74. Advisor, HIV Molecular Cluster Detection Community Advisory Board CAB California Department of Public Health CDPH	2022-Present
75. Member PacWest Reference Committee F: Governance & Finance	2022-Present
76. Member PacWest Reference Committee CC&B: Constitution and Bylaws - Advocacy on Ethics and Bylaws Matters	2022-Present
77. Medical Team Member Team for Health Consultation and Health Examination Services for Hiroshima and Nagasaki A-Bomb Survivors of North and South America	2022-Present
78. Committee Member Climate Health Now CHN Southern California Committee	2022-Present
79. Member Los Angeles Unified School District LAUSD - Local Education Agency LEA Collaborative Committee on Medi-Cal	2022-Present
80. Member CDU COVID-19 Academic Works in Progress Committee	2022-Present

81. Member 2022-Present
Project Targeting Environmental Neuro-Development
Risks TENDR Health Disparities Committee

82. Chair 2022-Present
LACMA Bylaws Committee

Professional Associations and Scholarly Societies:

1. Committee of Interns/Residents SEIU/CIR 2014-2017

2. American Association of Public Health Physicians 2004-Present
AAPHP

3. American Public Health Association APHA 2004-Present

4. American Medical Association AMA 2009-Present
Member ID #04813141421

5. American Academy of Family Physicians AAFP 2009-Present
Member ID #9068557

6. Association of American Medical Colleges 2009-Present
AAMC Member ID #11522185

7. American College of Medical Quality ACMQ 2009-Present

8. American Statistical Association 2010-Present

9. American Institute of Parliamentarians AIP 2010-Present

10. National Medical Association NMA 2010-Present

11. National Hispanic Medical Association NHMA 2010-Present

12. California Medical Association CMA 2013-Present

13. California Academy of Family Physicians CAFP 2013-Present

14. United States Pharmacopeia USP 2019-Present

Editorial & Peer-Review Services:

1. *The New Physician* 2002-2010
American Medical Student Association AMSA

2. *Journal of Injury Prevention* 2007-2010

3. *Pan American Journal of Public Health* 2007-2011
Pan American Health Association PAHO

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| 4. <i>International Journal of Injury Control and Safety Promotion</i> | 2007- 2011 |
| 5. <i>Medical Student International</i>
International Federation of Medical Students Associations IFMSA | 2010-2017 |
| 6. <i>American Journal of Medical Quality</i>
American College of Medical Quality ACMQ | 2010-2018 |
| 7. <i>Journal of Medical Systems</i> | 2021-2022 |

Consulting Activities:

- | | |
|---|--------------|
| 1. Medical Exemptions Appeals Committee
Granada Hills Charter School | 2022-Present |
| 2. Consultant
Community Fulfillment Foundation - CFF | 2022-Present |
| 3. Vaccine Consultant
Los Angeles Clippers | 2022-Present |
| 4. Work Group Consultant
National Academy of Medicine NAM Clinician Well Being CWB Collaborative | 2023-Present |

TEACHING

Medical Students:

- | | |
|--|--------------|
| 1. MS1 - MS4 Longitudinal Primary Care Rotation
Adjunct Clinical Professor, Family & Community Medicine
University of Southern California, Keck School of Medicine | 2017-2020 |
| 2. MS3 Family Medicine Clerkship Preceptor
(UCLA-CDU Prime)
UCLA David Geffen SOM, Family Medicine Department | 2019-Present |
| 3. MS1-MS4 Longitudinal Family Medicine Rotation
Assistant Professor, Family Medicine and Psychiatry (Joint Apt)
Charles R. Drew University CDU School of Medicine and Science | 2019-Present |

Premedical & Medical Student Mentoring:

- | | |
|---|--------------|
| 1. USC Family Medical Residency Program at California Hospital
University of Southern California | 2014-2019 |
| 2. PA Pipeline Program
University of Southern California, Keck School of Medicine | 2014-2019 |
| 3. National Youth Leadership Forum NYLF | 2003-Present |
| 4. National Medical Fellowships NMF Mentor | 2010-Present |
| 5. Mi Mentor | 2014-Present |
| 6. NMF Primary Care Leadership Program | 2016-Present |
| 7. AAFP Foundation Emerging Leaders Institute ELI | 2017-Present |
| 8. AMA Foundation Leadership Development Institute LDI Steering Committee | 2018-Present |
| 9. LMSA Medical Student Mentor and Advising Program, Chapter Advisor | 2019-Present |
| 10. NMA Cobb Institute Scholars Program Mentor | 2022-Present |

Resident & Fellow Teaching:

- | | |
|---|--------------|
| 1. PGY-1-3, Family Medicine Residency Program - Core Faculty
Adjunct Clinical Professor, Family & Community Medicine
University of Southern California, Keck School of Medicine | 2017-2020 |
| 2. PGY-1, Psychiatry Residency Primary Care Rotation (2 Months)
Assistant Professor, Family Medicine and Psychiatry (Joint Apt)
Charles R. Drew University School of Medicine | 2019-Present |
| 3. PGY-1-3, Family Medicine Residency - Street Medicine Rotation
Assistant Professor, Family Medicine and Psychiatry (Joint Apt)
Charles R. Drew University School of Medicine | 2019-Present |
| 4. COVID-19 Vaccine Fellow
Fellowship Director | 2020-Present |

Kedren Health & CDU School of Medicine

Resident & Fellow Mentoring:

1. PGY-1-3, Family Medicine Resident Advising -
Core Faculty
Adjunct Clinical Professor, Family & Community
Medicine
University of Southern California, Keck School of
Medicine 2017-2020
2. AAFP Family Medicine Resident and Fellow
Mentoring 2017-Present
3. AMA Resident & Fellow Section RFS Mentoring 2017-Present
4. PGY-1-4, Psychiatry Resident Advising
Assistant Professor, Family Medicine and Psychiatry
(Joint Apt)
Charles R. Drew University School of Medicine 2019-Present
5. PGY-1-3, Family Medicine Resident Advising
Assistant Professor, Family Medicine and Psychiatry
(Joint Apt)
Charles R. Drew University School of Medicine 2019-Present
6. CDU-AltaMed Health Careers Opportunity Program
HCOP Ambassador Academy
Charles R. Drew University School of Medicine 2022-Present

**RESEARCH, GRANTS, AND FELLOWSHIPS
RECEIVED**

1. University of Texas School of Medicine, Office of
Academic Enhancement Grant 2011-2014
Developing Student-Driven curriculum in
Health Policy & Economics, and Healthcare
Delivery Science
Health Care Payment Reform in Bexar County,
Texas
Understanding Medical Student Specialty
Choice
Factors Affecting Medical Student Perceptions
of Family Medicine
2. Community Service Learning Project Grant 2011-2014
Developing a SAFE SPACE program for
Medical Schools
PRIDE, an LGBTQA Student-Run Free Clinic
3. GE-NMF Primary Care Leadership Scholarship 2013

Achieving PCMH Status: Challenges Facing
FQHCs on the Gulf Coast

4. Weingart Foundation (\$100,000)	February 24, 2021
5. Annenberg Foundation (\$150,000)	March 31, 2021
6. California Community Foundation (\$175,000)	March 31, 2021
7. Hilton Foundation (\$100,000)	April 30, 2021
8. The Foundation Source (\$100,000)	June 1, 2021
9. LA County Center for Strategic Partnerships (\$100,000)	June 30, 2021
10. Community Clinic Association of Los Angeles County (\$55,000)	June 30, 2021
11. Public Health Institute (\$500,000)	September 1, 2021
12. Ahmanson Foundation (\$100,000)	October 1, 2021
13. Harbor Community Benefit Foundation (\$250,000)	February 1, 2022
14. Health Net (\$100,000)	February 1, 2022
15. Bloomberg Philanthropies (\$500,000)	March 31, 2022
16. Physicians for a Healthy California PHC (\$575,000)	September 20, 2022

RESEARCH COMMITTEES

1. ICD-11 Development Committee	2005-2012
2. WHO Injury Expert Research Group	2005-2012
3. CDC International Collaborative Effort ICE on Injury Statistics	2005-2012
4. Global Burden of Diseases and Injuries GBD Expert Group	2005-2012
5. Project TENDR Research Committee - NHMA Representative	2019-2021
6. CDU COVID-19 Working Research Group	2019-Present

HEALTH POLICY, LEGISLATIVE ADVOCACY, AND POLITICAL ACTIVITIES

1. U.S. Senate Committee on Health, Education, Labor, and Pensions HELP Hearing; “*The Examining Our COVID-19 Response: An Update from the Frontlines*” March 9, 2021
2. Meeting with U.S. Senator Dianne Feinstein (D-CA) March 9, 2021
2. Meeting with California Assemblymember Santiago March 19, 2021
3. Facebook Communities Summit 2021 Hearing
Witness, California State Assembly November 4, 2021
4. Select Committee on Infectious Diseases Hearing on Health Disparities & Achieving Health Equity (Chair Asm. Mike Gipson) November 30, 2021
5. Meeting with California Assemblymember Santiago March 15, 2022
6. Hearing Witness, Testimony before California State Assembly Committee on Business & Professions
Hearing on AB2098 Physicians & Surgeons Professional Conduct April 19, 2022
7. ETE Team #3 - End the Epidemics Legislative Meeting - Asm. Carrillo April 28, 2022
8. ETE Team #3 - End the Epidemics Legislative Meeting - Asm. Jones-Sawyer April 28, 2022
9. Climate Health Equity LA Series: Justice40 & Climate Equity Metrics for LA May 12, 2022
10. End the Epidemics/ ASM Philip Chen May 4, 2022
11. Meeting with LADPH, CDPH and CDC Director Walensky May 5, 2022
12. Lt. Gov. Eleni Kounalakis Fundraiser May 14, 2022
13. Fundraiser LAC Democratic Party 2022 JFK Awards May 14, 2022
14. Dr. Washington At-Home Fundraiser for Senator Sydney Kamlager May 15, 2022

15. LACBA/LACMA Medicare Fraud Enforcement	May 19, 2022
16. Launch of the University of California Center for Climate, Health and Equity Climate Change, Health, and the Fossil Fuel Industry	May 25, 2022
17. AMA Resolution Declaring Climate Change a Public Health Emergency	June 13, 2022
18. CHN Special Webinar: Applying the US Call to Action on Climate Health and Equity to Current Advocacy Opportunities in California	June 20, 2022
19. White House / Health & Human Services Office of Climate Change & Health Equity Pledge	June 30, 2022
20. Inaugural Ceremony of the IX Summit of the Americas	June 8, 2022
201. California Democratic Party COVID-19 Presentation	July 9, 2022
22. Rob Bonta for California Attorney General 2022 Event	July 12, 2022
23. L.A. REPAIR Community Engagement Partnership and Participatory Budgeting	July 13, 2022
24. Monkeypox LGBTQ Community Stakeholder Meeting	August 2, 2022
25. National Academy of Medicine NAM Grand Challenge Action Collaborative on Climate Health - Decarbonizing the Health Sector Talking about the Healthcare Divestment Campaign	September 20, 2022
26. Yes on Prop 30 Campaign Committee	October 25, 2022
27. Los Angeles, California Ballot Initiative Campaign Election Prop Party	October 30, 2022
28. American Society of Hiroshima and Nagasaki A-Bomb Survivors - Office of the General Consul of Japan	November 7, 2022
29. City of Los Angeles Inauguration of Mayor-Elect Karen Bass - Honored Guest	December 11, 2022
30. City of Carson Mayor and City Council Installation and Swearing in	December 13, 2022
31. LA City Council Councilor Curren Price Jr. Celebration	December 14, 2022

32. Ending the HIV Epidemic EHE in LA County Town Hall	January 25, 2023
33. Meeting with U.S. Congressman Tony Cárdenas (Mariah Philips)	February 13, 2023
34. Meeting with U.S. Congresswoman Linda Sanchez	February 14, 2023
35. Meeting with U.S. Congresswoman Sydney Kamlager-Dove (Gabrielle Howard)	February 14, 2023
36. Meeting with U.S. Senator Alex Padilla (D-CA)	February 14, 2023
37. Meeting with U.S. Congressman Ted Liu	February 15, 2023
38. Meeting with U.S. Congressman Ami Bera MD	February 15, 2023
39. Meeting with U.S. Congressman Raul Ruiz MD	February 15, 2023

HONORS AND SPECIAL AWARDS

1. Arnold P. Gold Humanism in Medicine Honor Society	2010
2. University of Texas School of Medicine Dean's Scholarship Award for Advocacy & Advancing Diversity in Medicine	2010-2014
3. General Electric-National Medical Fellowships Primary Care Leadership Program GE-NMF PCLP Scholar	2011
4. American Board of Family Medicine ABFM Pisacano Leadership Scholarship Finalist	2013
5. Bates Family Medicine Scholarship Award	2014
6. David Major Scholarship Award in Family Medicine	2014
7. Primomo Award for Excellence in Academic Family Medicine	2014
8. Primomo Award for Excellence in Community Service	2014

9. Primomo Award for Excellence in Geriatrics	2014
10. Primomo Award for Excellence in Family Medicine Research	2014
11. Paul Cutler Award for Clinical Excellence	2014
12. Texas Indo-American Physician Society Scholarship Award	2014
13. Forland Award for Humanism in Medicine	2014
14. Dean's Travel Scholarship Award	2014
15. Bowen-Vogt Scholarship Award for Medical Students	2014
16. American Academy of Family Physicians AAFP Award for Excellence in Graduate Medical Education GME	2016
17. CAFP Family Physician 2021 Hero of Family Medicine Award	2021
18. CMA Compassionate Physician Service Award	2021
19. Gay Men's Chorus of Los Angeles GMCLA Voice Award	2021
20. Patient Care Foundation PCF Physician Leadership Award	2021
21. Los Angeles Business Journal LABJ Physician of the Year Award	2021
22. Dangerman Hero Award for Outstanding Family & Community Medicine	2022
23. VAX-UP Challenge Winner (\$100,000)	2022
24. California Department of Public Health CDPH Community Service Award	2022
25. Los Angeles County Democratic Party LACDP Profile In Courage Award	2022
26. Young Women's Christian Association YWCA Women's Unsung Hero Award	2022
27. AMA Excellence In Medicine Award	2022

28. Association of Black Women Physicians ABWP Humanitarian Award	2022
29. South Central Prevention Coalition SCPC Humanitarian Award	2022
30. Los Angeles County Department of Public Health LACDPH Community Partners Value Award	2022
31. Community Build - Community Health Champion Award	2022
32. 102.3 FM KJLH Proven Achiever Award	2023

CME CONFERENCES ATTENDED

1. Clinician Well-Being and Resilience: What We Know and How We Move Forward	September 15, 2020
2. The Impact of Skin Color and Ethnicity on Clinical Diagnosis and Research	December 2, 2020
3. NHMA Campaign to Improve Influenza Vaccination Rates for Adult	November 5, 2020
4. Interpreting Electrocardiograms	December 9, 2020
5. COVID-19 Knowledge Dissemination and Exchange for CHW	October 13, 2021
6. AAFP Improving Vaccine Confidence Live Session	October 27, 2021
7. Cancer Screening in Primary Care: Addressing Disparities and the Potential of Improving Outcomes Through the Use of Liquid Biopsy	November 20, 2021
8. AAFP and Johnson & Johnson Enabling Session on Vaccine Equity	November 30, 2021
9. Cognitive Behavioral Therapy CBT for Chronic Pain	January 27, 2022
10. The nation's drug overdose epidemic: Helping children and families, patients with pain	April 2, 2022
11. CMA Virtual Grand Rounds: COVID-19 Update	April 2, 2022
12. CBHN Historical Racism and Impact on Health Disparities	April 7, 2022

13. Faith & Public Health	April 7, 2022
14. Does Public Health Need a Reboot?	April 8, 2022
15. USC KSOM PPHS Grand Rounds - Guest Speaker: Barbara Ferrer, Director LA County Dept of Public Health	April 13, 2022
16. Emerging Challenges and Clinical Updates in Primary Care 2022 Live Virtual Conference: Episode 2	April 30, 2022
17. Children's Health Conference In Collaboration with First 5 LA & DPH	May 19, 2022
18. CDC's PrEP Clinical Practice Guideline and Strategies for Ending the HIV Epidemic in the U.S.	May 19, 2022
19. California Endowment: Voting Rights Act: Health Equity & Justice Monday	May 23, 2022
20. The Healthy CA for All Commission Report: What does it say, what does it mean, and what do we do about it?	May 24, 2022
21. Health Justice Now: A Conversation with AAPI Advocates	May 24, 2022
22. PCSS Webinar: OUD in Hispanic/Latino Communities	May 24, 2022
23. Multifaceted Approaches to Combating Antimicrobial Resistance	May 24, 2022
24. Implementation Tools and Resources for Enhancing Equity-Focused PrEP Services Series	June 16, 2022
25. ICLAC 2022 Vaccine Forum	June 21, 2022
26. Coping with Hope: Learning from the Past and Innovating for the Future to End the HIV Epidemic	June 23, 2022
27. CDU In-Person Community Medical Presentation	June 30, 2022
28. CDU GME Community & Behavioral Health Rotation CBHR: Mock Project Presentations to Community	July 13, 2022
29. PCLP LA Project Showcase	July 29, 2022
30. Guest Speaker UCLA/CDU Pre-matriculation	August 2, 2022

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| 31. LBTQ Initiative - SPCB RFA Pre-Application Conference | August 31, 2022 |
| 32. NorCal Symposium on Climate, Health and Equity 2022 | September 22, 2022 |
| 33. Emerging Challenges and Clinical Updates in Primary Care 2022 Live Virtual Conference: Episode 12 | September 29, 2022 |
| 34. L.A. Care Behavioral Health Innovation Conference | October 1, 2022 |
| 35. National Academy of Medicine NAM Action Collaborative on Clinician Wellbeing Public Launch Event 2022 | October 3, 2022 |
| 36. National Academy of Medicine NAM Action Collaborative on Clinician Wellbeing: Leveraging the Role of Payers and Regulators in the Health Worker Wellbeing Movement | October 3, 2022 |
| 37. International Conference on Physician Health ICPH 2022 | October 13-15, 2022 |
| 38. AMA State Advocacy Summit SAS 2023 | January 7, 2023 |
| 39. American Institute of Parliamentarians AIP West Coast Practicum | January 12, 2023 |
| 40. National Association for Continuing Education NACE Conversations in Primary Care Conference 2023 | February 4, 2023 |
| 41. AMA National Advocacy Conference NAC (Washington, DC) | February 12-15, 2023 |
| 42. AMA-SHLI MJAF Organizing for Health 2023 - Training Series | February 16, 2023 |
| 43. AMA Racial Equity Institute: Groundwater Training | February 21, 2023 |

PUBLICATION AND BIBLIOGRAPHY

Research Papers (Peer-Reviewed):

1. Bhalla K, Harrison J, **Abraham JP**, Borse NN, Lyons R, Boufous S, Aharonson-Daniel L. Data sources for improving estimates of the global burden of injuries: call for contributors. *PLoS Medicine*. 2009 Jan; 20(6): 1. Cited in PubMed; PMID: 19166263. Publication Status: Published.
2. Bhalla K, Shahrzaz S, Bartels D, **Abraham JP**. Methods for developing country level estimates of the incidence of deaths and non-fatal injuries from road traffic crashes. *International Journal of Injury Control & Safety Promotion*. 2009 Dec; 16(4): 239-48. Cited in PubMed; PMID: 20183703. Publication Status: Published.
3. Naghavi M, Shahrzaz S, Bhalla K, Jafari N, Pourmalek F, Bartels D, **Abraham JP**, Motlagh ME. Adverse health outcomes of road traffic injuries in Iran after rapid motorization. *Archives of Iranian Medicine*. 2009 May; 12(3): 284-94. Cited in PubMed; PMID: 19400607. Publication Status: Published.
4. World Health Organization. (2009, November 19). Global Status Report on Road Safety: Time for Action. http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf, Publication Status: Published.
5. Bartels D, Bhalla K, Shahrzaz S, **Abraham JP**, Lozano R, Murray CJ. Incidence of road injuries in Mexico: A Country Report. *International Journal of Injury Control & Safety Promotion*. 2010 Sep; 17(3): 169-76. Cited in PubMed; PMID: 20182934. Publication Status: Published.
6. Vos T, Flaxman AD, Naghavi M, Lozano R, Michaud C, Ezzati M, Shibuya K, Salomon JA, Abdalla S, Aboyans V, **Abraham JP**. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 2012 Dec; 380(9859): 2163-96. Cited in PubMed; PMID: 23245607. Publication Status: Published.
7. Murray CJ, Vos T, Lozano R, Naghavi M, Flaxman AD, Michaud C, Ezzati M, Shibuya K, Salomon JA, Abdalla S, Aboyans V, **Abraham JP**, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 2012 Dec; 380(9859): 2197-223. Cited in PubMed; PMID: 23245608. Publication Status: Published.
8. Ubeda C, Espitia-Hardeman V, Bhalla K, Borse NN, **Abraham JP**, Dellinger A, Ferrante D, Peltzer R. National burden of road traffic injuries in Argentina. *International Journal of Injury Control & Safety Promotion*. 2011 Jun; 19(1): 9-18. Cited in PubMed; PMID: 21660797. Publication Status: Published.
9. Lozano R, Naghavi M, Foreman K, Lim S, Shibuya K, Aboyans V, **Abraham JP**, et al.. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 2012 Dec; 380(9859): 2095-128. Cited in PubMed; PMID: 23245604. Publication Status: Published.
10. Murray, CJL; Aboyans V; **Abraham JP**; et al.. The Global Burden of Disease Study 2010 Country Results: A Global Public Good. *The Lancet*. 2013 Mar; 381(9871): 965-970. Publication Status: Published.

11. Murray, CJL; **Abraham JP**; et al.. The State of US Health, 1990-2010: Burden of Diseases, Injuries and Risk Factors. JAMA. 2013 Aug; 310(6): 591-608. Cited in PubMed; PMID: 23842577. Publication Status: Published.

Research Papers & White Papers (Non-Peer Reviewed):

1. **Abraham JP**. "Ethnobotanical Uses of Medicinal Plants by Shamans in the Amazon Rainforest." Senior Thesis, Emory University. Publication Status: Published. May 1, 2005.
2. **Abraham JP**. "Multivariate Analysis of Restraint Use & Injury Severity in Older Child Passengers." Master's Thesis, Emory University. Publication Status: Published. August 1, 2007.
3. **Abraham JP**, Yeh PH, Leykum L, Ratner A. Health Care Payment Reform in Bexar County. manuscript prepared and submitted to various journals for review. Publication Status: Pending. August 16, 2011.
4. **Abraham JP**. LGBT Medical Education Curriculum Development Resource Guide. submitted to the Curriculum Committee, The University of Texas School of Medicine (San Antonio). Publication Status: Published. October 27, 2011.
5. **Abraham JP**. Medical School Grade Reform: A Literature Review. Submitted to the Curriculum Committee, University of Texas School of Medicine (San Antonio). Publication Status: Published. December 9, 2011.
6. **Abraham JP**, et al.. The Annual Student Report: Findings & Recommendations of the Student Concerns Survey.
<https://docs.google.com/document/d/1MvBM3VbD1NynX0gWn3MHDhDhYCCfXKRLoxnorutRCjE/>. February 15, 2012.
7. Yu, A; **Abraham JP** ; Porter, A; Moore, N; Askin, E; Leykum, L. "Student-driven curricula on health care delivery, policy & economics." AAMC Academic Medicine (manuscript submitted). Publication Status: Published. February 1, 2013.
8. **Abraham JP**, Mitchell J, McAuthor R, Uzoije P, Trimm RF. Achieving NCQA-PCMH Recognition: Challenges for Federally Qualified Health Centers (FQHCs). General Electric-National Medical Fellowship Annual Report. 2013 Sep; Publication Status: Submitted.

Other Articles, Editorials, Letters to the Editor:

1. **Abraham, JP**. (2005, May 1). Ethnobotanical Uses of Medicinal Plants by Shamans in the Amazon Rainforest. Senior Thesis, Emory University. Publication Status: Published.
2. **Abraham, JP**. (2007, August 1). Multivariate Analysis of Restraint Use & Injury Severity in Older Child Passengers. Master's Thesis, Emory University. Publication Status: Published.
3. **Abraham JP**, Yeh PH, Leykum L, Ratner A. (2011, August 16). Health Care Payment Reform in Bexar County. manuscript prepared and submitted to various journals for review. Publication Status: Pending.
4. **Abraham, JP**. (2011, October 27). LGBT Medical Education Curriculum Development Resource Guide. submitted to the Curriculum Committee, The University of Texas School of Medicine (San Antonio). Publication Status: Published.

5. **Abraham, JP.** (2011, December 9). Medical School Grade Reform: A Literature Review. Submitted to the Curriculum Committee, University of Texas School of Medicine (San Antonio). Publication Status: Published.
6. Yu, A; **Abraham, JP**; Porter, A; Moore, N; Askin, E; Leykum, L. (2013, February 1). Student-driven curricula on health care delivery, policy & economics. AAMC Academic Medicine (manuscript submitted). Publication Status: Published.

Research Poster Presentations:

1. **Abraham JP**, Bartolomeos K, de Silva C, Zacharias F, Zacharias E, Bhalla K. (2010). Estimating the Burden of Injuries in Mozambique. Poster presented at: World Injury Conference; London, United Kingdom.
2. Bhalla K, **Abraham JP**, Abdalla S. (2010). Analytical Methods for Common Types of Data Sources in sub-Saharan Africa. Poster presented at: World Injury Conference; London, United Kingdom.
3. Eze U, Abdalla S, Abdella K, Koranteng A, Mtonga R, Bartolomeos K, **Abraham JP**, Bhalla K. (2010). Injuries in Nigeria, Sudan, Ethiopia, Ghana, Uganda, Zambia and Mozambique. Poster presented at: World Injury Conference; London, United Kingdom.
4. **Abraham JP**, Minard J, Alonzo C, Clifton N, Reece-Nguyen T, Esterl R, Jackson J, Shibazaki K, Klugman C. (2012). Creating a SAFE SPACE for LGBTQ+ Medical Students & Residents in Texas - A Community Service Learning Project. Poster Presentation presented at: AMSA Empowering Future Physicians Conference; San Antonio, TX.
5. **Abraham JP**, Guzman J, Hobza C, Kapudia A, McLeod C, Berggren R, Stone, M. (2014). Access Care Texas: Getting our ACT Together for Health. Poster presented at: Community Service Learning CSL Conference 2014. University of Texas School of Medicine. San Antonio, TX.
6. **Abraham JP**, Hobza C, Hotchkin S, Jackson J, Berggren R, Stone, M. (2014). ACT Together for Health: Developing an Effective Public Health Communications & Messaging Strategy. Poster presented at: Community Service Learning CSL Conference 2014. University of Texas School of Medicine. San Antonio, TX.
7. **Abraham JP**, Guzman J, Hobza C, Breier L, Castle C, Ferris J, Field C, Flores V, Jensen S, Kapudia A, McLeod C, Koch K, Lomeli S, Lucio S, Mandujano S, Mark A, Oloba P, Richardson A, Riniker K, Sarmiento J, Shaw L, Villanueva G, Wasson E, Zubour R, Berggren R, Stone, M. (2014). ACT Together for Health: Grassroots Organizing Ethical Principles. Poster presented at: Community Service Learning CSL Conference 2014. University of Texas School of Medicine. San Antonio, TX.
8. **Abraham JP.** (2014). Creating a Quality Improvement & Patient Safety Committee for Interns and Residents. Poster presented at: CIR/SEIU Quality Improvement + Patient Safety 2nd Annual Summit. Los Angeles, CA.
9. **Abraham JP.** (2015). Medical Quality Opportunities for Medical Students and Residents. Poster presented at: ACMQ West Coast Quality Improvement Symposium. University of Southern California. Los Angeles, CA.

10. **Abraham JP**, Aribindi V, Brodie B, Hall J, Huang D, Jerdonek A, Lee P, Nicewarner H, Robinson R, Wegman M, Wen T. (2015). Review of Medical Quality Opportunities for Physicians-in-Training. Poster presented at: Medical Quality 2015, Washington, DC.

Research Oral Presentations:

1. Rosenberg M, Hayes E, Kluglein S, **Abraham JP**. (2007). Closing the Gap in Road Safety. Oral Presentation presented at: 2nd UNStakeholders Forum on Global Road Safety, UN Palais des Nations.; Geneva, Switzerland.
2. **Abraham JP**. (2008). Multivariate Analysis of Restraint Use & Injury Severity in Older Child Passengers. Oral Presentation presented at: American Public Health Association; San Diego, CA.
3. Bhalla K, Koranteng A, Abdalla S, Abdella K, Eze U, Mtonga R, **Abraham JP**. (2010). Architecture of Data Sources for Measuring Injuries in Africa. Oral Presentation presented at: World Injury Conference; London, United Kingdom.
4. **Abraham JP**. (2011). Policy Writing 101 for International Medical Students. Oral Presentation presented at: International Federation of Medical Student Associations IFMSA August Meeting of the General Assembly. Copenhagen, Denmark.
5. **Abraham JP**, Porter A, Bready L. (2011). Graduate Medical Education Funding Crisis. Oral Presentation presented at: AAMC & AMSA:GME Funding Crisis Town Hall; San Antonio, TX.
6. **Abraham JP**. (2012). Developing an IFMSA Policy Statement on the Decade of Action for Global Road Safety. Oral Presentation presented at: International Federation of Medical Student Associations IFMSA August Meeting of the General Assembly. Delhi, India.
7. **Abraham JP**, Real E, Gardner D, Rhodes D, Fowler A, Young V, Kelly P, Riniker K, Berggren R, Flores I. (2012). Meeting the Social Mission: Health Science Education Through Community Collaborations. Oral Presentation presented at: Community Service Learning Conference; San Antonio, TX.
8. **Abraham JP**, Minard J, Alonzo C, Clifton N, Reece-Nguyen T, Esterl R, Jackson J, Shibazaki K, Klugman C. (2012). SAFE SPACE, A Community Service Learning Project. Oral Presentation presented at: AMSA Empowering Future Physicians Conference; San Antonio, TX.
9. **Abraham JP**. (2012). Medical Education Curriculum Reform. Oral Presentation presented at AMSA Empowering Future Physicians Conference. San Antonio, TX.
10. **Abraham JP**. (2012). The Future of Primary Care. Oral Presentation presented at AMSA Empowering Future Physicians Conference. San Antonio, TX.
11. **Abraham JP**. (2012). Professional Development for Pre-Medical Students. Oral Presentation presented at AMSA Empowering Future Physicians Conference. San Antonio, TX.
12. **Abraham JP**. (2013). Achieving NCQA PCMH Status: Challenges for FQHCs on the Gulf Coast. Oral Presentation presented at: GE-NMF Primary Care Leadership Program Research Symposium; Mobile, AL.
13. **Abraham JP**. (2014). OUT for Health: Creating a LGBTQ+ Network for Texas Medical Schools. Oral Presentation presented at: AMSA Empowering Future Physicians Fall Conference. San Antonio, TX.

14. **Abraham JP**, Holly J. Recognition & Accreditation Are Good, But PCMH Culture is King. (2015). Oral Presentation presented at: 7th National Patient-Centered Medical Home Summit; Philadelphia, PA.

Peer Reviewed Online Publication:

1. World Health Organization. (2009, November 19). Global Status Report on Road Safety: Time for Action. http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf, Publication Status: Published.

Non-Peer Reviewed Online Publication:

1. **Abraham JP**, et al.. (2012, February 15). The Annual Student Report: Findings & Recommendations of the Student Concerns Survey. <https://docs.google.com/document/d/1MvBM3VbD1NynX0gWn3MHDhDhYCCfXKRLoxnoru>

Peer Reviewed Book Chapters:

1. Bhalla K, Shahraz S, **Abraham JP**, Bartels D, Yeh PH. (2011). Methods, Data Sources and Estimates of the National Incidence of Road Injuries. In Bhalla K (Ed.), Road Injuries in 18 Countries (pp. 1-100). Washington, DC: The World Bank.
2. Bhalla, K; Harrison, J; Shahraz, S; **Abraham, JP**; Bartels, D; Yeh PH; Naghavi, M; Lozano, R; Vos, T; Phillips, D; Chou, D; Wurtz, B; Gonzalez-Medina, D; Murray CJL. (2013). Data Sources, Methods, and Estimates of the National Incidence of Road Injuries. In Bhalla, K (Ed.), Burden of Road Injuries in sub-Saharan Africa (pp. 7-94). Washington, DC: The World Bank.
3. Rosenberg M, Hayes E, **Abraham JP**. (2006). Making Roads Safe in Latin America and the Caribbean. In Rosenberg M (Ed.), Making Roads Safe (pp. 1-100). Atlanta, Georgia: The World Bank.

LECTURES AND PRESENTATIONS GIVEN

1. "CIR/SEIU 2nd Annual Quality Improvement & Patient Safety Summit Committee of Interns & Residents CIR." Los Angeles Athletic Club LAAC, Los Angeles, CA. September 27, 2014.
2. "Morbidity & Mortality Report: Code Status Miscommunication & Advance Care Planning." USC Family Medicine Residency Program at Dignity Health - California Hospital, Los Angeles, CA. November 14, 2014.
3. "University of Southern California Quality Improvement Symposium" University of California Keck School of Medicine, Los Angeles, CA. January 10, 2015.
4. "Improving Patient Safety in Graduate Medical Education: Providing Resident Physicians Adequate Supervision & Training." University of Southern California Family Medicine Residency Program at Dignity Health California Hospital, Los Angeles, CA. June 19, 2015.
5. "Strategies for Increasing Underrepresented Minorities in the Health Professions." Community Mental Health Center. University of Southern California Family Medicine Pathways Pipeline Program, Los Angeles, CA. August 11, 2015.

6. "Morbidity & Mortality Report: Delay of Care of Chronic Kidney Disease Resulting in End-Stage Renal Disease." University of Southern California Family Medicine Residency Program at Dignity Health California Hospital, Los Angeles, CA. October 21, 2015.
7. "Creating a Los Angeles Consortium for Health Careers Pipelines Program." Facilitator, California Medical Association Foundation (CMAF), Los Angeles, CA. March 3, 2016.
8. "Journal Club: Adverse Effects of Proton Pump Inhibitors." University of Southern California Family Medicine Residency Program at Dignity Health California Hospital, Los Angeles, CA. August 2, 2016.
9. "Medicare Access & Children's Health Insurance Program Reauthorization Act (MARCA): MARCA Rules, Sustained Growth Rate (SGR) is dead." Medical Staff, Dignity Health California Hospital Medical Center, Los Angeles, CA. October 15, 2016.
10. "Gun Violence as A Public Health Crisis: How Research Informs Public Policy." Moderator, American Medical Association Interim Meeting of the House of Delegates, Orlando, FL. November 11, 2016.
11. "Treating Violence like a Contagious Disease: Gun Violence as a Public Health Crisis." Facilitator, American Medical Association Interim Meeting of the House of Delegates, Orlando, FL. November 12, 2016.
12. "Putting Gun Violence in Context: What Do We Know? What Can Physicians Do?" Facilitator, American Medical Association Interim Meeting of the House of Delegates, Orlando, FL. November 12, 2016.
13. "Morbidity & Mortality Report: Undiagnosed Pre-Eclampsia." University of Southern California Family Medicine Residency Program at Dignity Health California Hospital, Los Angeles, CA. December 11, 2016.
14. "Careers in Primary Care Panel Discussion." University of Southern California Primary Care Physician Assistant Pipeline Program, Los Angeles, CA. May 06, 2017.
15. "Achieving Health Equity in America: Looking Back and Moving Forward with Health Reform." Facilitator, American Medical Association Interim Meeting of the House of Delegates, Orlando, FL. June 09, 2017.
16. "Introduction to Organized Medicine." Medical Student Body, University of Southern California, Keck School of Medicine, Los Angeles, CA. November 07, 2017.
17. "Introduction to Organized Medicine." Medical Student Body, College of Osteopathic Medicine, Western University, Pomona, CA. January 29, 2018.
18. "Primary Care & Underserved Populations: Challenges & Opportunities." Family Medicine Interest Group (FMIG), University of Southern California, Keck School of Medicine, Los Angeles, CA. April 09, 2018.

19. "Improving the Health of Individuals Released from Incarceration." Panelist, Los Angeles County Department of Healthcare Services (DHS) & Los Angeles Care, Los Angeles, CA. April 24, 2018.
20. "Kaiser Permanente Introduction to Health Policy & Organized Medicine." Kaiser Permanente Community Medicine Fellowship, Los Angeles, CA. May 4, 2018.
21. "Dementia & Mental Health: A Primary Care Perspective." Los Angeles Urban League Guild, Los Angeles, CA. May 19, 2018.
22. "An Introduction to Health Policy: Medical Quality & Public Health." Psychiatry & Family Medicine Resident Orientation, Charles Drew University, Los Angeles, CA. July 6, 2018.
23. "Network Building & Social Capital in Primary Care." Primary Care Leadership Program Learning Day, National Medical Fellowships (NMF), Altamed, Los Angeles, CA. July 18, 2018.
24. "Research & Scholarly Activity Reactor Panel." Primary Care Leadership Program, National Medical Fellowships, Altamed, Los Angeles, CA. July 26, 2018.
25. "Primary Care for Vulnerable Patients with Chronic Pain." Los Angeles CARE Physician Leadership Program, Los Angeles, CA. August 8, 2018.
26. "Introduction to Careers in Primary Care." University of Southern California Primary Care Physician Assistant Pipeline Program, Los Angeles, CA. May 11, 2019.
27. "Kaiser Permanente Introduction to Health Policy & Organized Medicine." Kaiser Permanente Community Medicine Fellowship, Los Angeles, CA. May 13, 2019.
28. "Careers in Primary Care." Primary Care Leadership Program, National Medical Fellowships (NMF), Altamed, Los Angeles, CA. July 26, 2019.
29. "COVID-19 Legislative Briefing for Assembly District 64." Assemblymember Mike Gipson, AD64, Los Angeles, CA. March 30, 2020.
30. "COVID-19 Town Hall for Assembly District 58." Assemblymember Cristina Garcia, AD58, Los Angeles, CA. March 31, 2020.
31. "Telemedicine in the Time of Coronavirus." Grand Rounds, Good Samaritan Hospital, Los Angeles, CA. April 8, 2020.
32. "COVID-19 Town Hall for Assembly District 55." California State Assembly, Los Angeles, CA. May 20, 2020.
33. "COVID-19 Healthcare Roundtable." Tri Counties Democratic Club, Los Angeles, CA. June 4, 2020.
34. "Soul Talk with the CDP African-American Caucus." California Democratic Party, Los Angeles, CA. June 13, 2020.
35. "Strengthening our Communities: A Virtual Town hall on Racial Justice." Congressmember Karen Bass, Lucille Roybal-Allard, & Judy Chu, Los Angeles, CA. June 24, 2020.

36. "Mental Health and COVID-19: Eliminate Disparities." Los Angeles, CA. July 18, 2020.
37. "Trauma Informed Care in the Medical Home, A Population Based Approach to Caring for Communities in the Context of COVID-19." LA Care Conferencing, Los Angeles, CA. July 21, 2020.
38. "Immunity and Scope of Practice Issues During COVID-19." Cooperative of American Physicians, Los Angeles, CA. July 22, 2020.
39. "Resilience Session - The Behavioral Health Impacts of COVID-19" Health Homes Program, Los Angeles, CA. July 24, 2020.
40. "Courageous Conversations II for AMA Ambassadors." American Medical Association, Los Angeles, CA. July 26, 2020.
41. "LGBTAA: Queer & Now Panel Discussion." Gay, Lesbian & Straight Education Network, Los Angeles, CA. July 29, 2020.
42. "COVID-19 Vaccines and Treatments: An Inside Look at What Lies Ahead." Aspen Ideas: Health & Mount Sinai Health System, Los Angeles, CA. September 10, 2020.
43. "LGBTQ Professionals in Healthcare - Guided Networking." Out Professionals, Los Angeles, CA. September 10, 2020.
44. "The Twindemic - Planning for the Influenza Season During COVID-19." Afternoon Teach, Los Angeles, CA. September 16, 2020.
45. "Advancing the Response to COVID-19: Sharing Promising Programs and Practices for Racial and Ethnic Minority Communities." Human Health Services Office of Minority Health, Los Angeles, CA. September 17, 2020.
46. "Residency Application Process: Current Challenges and Potential Solutions." American Medical Association, Los Angeles, CA. September 28, 2020.
47. "Misinformation and Mistrust: COVID-19 Conversations on Race and Gender Equity." Duke University Clinical & Translational Science Institute CTSI and Social Science Research Institute SSRI, Los Angeles, CA. October 2, 2020.
48. "The 2020 Election: LGBTQ Electeds, the LGBTQ Vote, and the Future of LGBTQ Rights." The University of California, Los Angeles, Los Angeles, CA. November 10, 2020.
49. "LA County Commission on HIV Annual Meeting." Los Angeles County Board of Supervisors, Los Angeles, CA. November 12, 2020.
50. "Policy Cafe, No Going Back: Charting a Path Toward an Equitable LA." Community Clinics Association of Los Angeles County CICALAC, Los Angeles, CA. November 13, 2020.

51. "When Two Pandemics Meet: HIV and COVID-19 in the Hispanic LGBTQ Community." National Hispanic Medical Association NHMA, Los Angeles, CA. December 1, 2020.
52. "The National COVID-19 Surge and Hope for 2021." Grand Rounds, Los Angeles, CA. December 8, 2020.
53. "Health + Justice: Inequities in the COVID-19 Vaccine Rollout." Los Angeles, CA. February 24, 2021.
54. "IMMAWII Covid 19 Panel." I'll Make Me a World in Iowa, Los Angeles, CA. February 27, 2021.
55. "Black/African American COVID-19 Media Briefing." The LAGRANT Foundation, Los Angeles, CA. March 8, 2021.
56. "A Gathering of Faiths and Government: COVID 19 The Vaccine & Lessons Learned." The City of Los Angeles, Los Angeles, CA. March 11, 2021
57. "COVID-19 Vaccine Eligibility Guidance for People Experiencing Homelessness." California Department of Housing & Community Development, March 19, 2021.
58. "California Virtual Town Hall: COVID-19 Update." Los Angeles County Department of Public Health LACDPH, Los Angeles, CA. March 20, 2021.
59. "COVID-19 Lectures." Medical Education Speakers Network MESN, Los Angeles, CA. April 9, 2021.
60. "Shot of Faith: Town Hall." Genesis Church, Los Angeles, CA. April 10, 2021.
61. "Shot of Faith Town Hall." First Church of God Center of Hope, Los Angeles, CA. April 13, 2021.
62. "Public Health & Practice Perspectives on Equity." LA Care Conferencing Learning & Development Training, Los Angeles, CA. April 15, 2021.
63. "Shot of Faith Town Hall." California State Baptist Convention, Los Angeles, CA. April 16, 2021.
64. "Shot of Faith Interview." LA Focus, Los Angeles, CA. April 19, 2021.
65. "Shot of Faith Town Hall." Calvary Baptist Church, Los Angeles, CA. April 21, 2021.
66. "Coming Out of Quarantine Town Hall." American Associates of Family Medicine AAFM, Los Angeles, CA. April 25, 2021.

67. "Shot of Faith Town Hall." Mt. Zion Baptist Church, Los Angeles, CA. April 28, 2021.
68. "California Democratic Party CDP Convention Presentation on MICRA and FIPA." California Democratic Party CDP, Los Angeles, CA. March 4, 2022
69. "Shot of Faith Town Hall." LoveLand Church, Los Angeles, CA. May 5, 2021.
70. "Shot of Faith Town Hall. "Faithful Central, Los Angeles, CA. May 10, 2021.
71. "Shot of Faith, Town Hall." Greater St. John, Los Angeles, CA. May 12, 2021.
72. "Telemedicine Lectures." Medical Education Speakers Network MESN, Los Angeles, CA. May 14, 2021.
73. "Coming Out of Quarantine...A Town Hall for Our Community and our Seniors." African American Firefighter Museum, Los Angeles, CA. May 16, 2021.
74. "Government Accountability Office GAO Annual Meeting." United States Government Accountability Office, Los Angeles, CA. May 18, 2021.
75. "UCSD School of Medicine ANES 223 Spr 2021 Health Policy Course." The University of California, San Diego, San Diego, CA. May 17, 2021.
76. "AD55 COVID-19 Town Hall." Mayor Rodriguez, Walnut Hill, CA. May 20, 2021.
77. "COVID-19 Vaccine Update from the Frontlines." Charles R. Drew University Medical Society, Los Angeles, CA. May 20, 2021.
78. "USC Public Health Practicum Experience." The University of Southern California, Los Angeles, CA. May 21, 2021.
79. "NMA Regional Conference." National Medical Association, Los Angeles, CA. May 21, 2021.
80. "COVID-19 Community Leadership Summit." The University of California, Los Angeles, Charles R. Drew University of Medicine, & The California Community Foundation, Los Angeles, CA. May 21, 2021.
81. "South Asian LGBTQ Mental Health." Los Angeles, CA. May 23, 2021.
82. "Health Literacy Conference 2021 Keynote Address Panel." Integrated Healthcare Association, Los Angeles, CA. May 25, 2021.
83. "Shot of Faith Town Hall." New Mt. Calvary, Los Angeles, CA. May 25, 2021.
84. "Telemedicine Lectures." Medical Education Speakers Network MESN, Los Angeles, CA. May 28, 2021.

85. "If It Were Your Family What Would You Want? A Balanced and Informed Approach to Reinstating Family Presence." Planetree International & American Nurses Foundation, Los Angeles, CA. June 2, 2021.
86. "Healthcare Roundtable on COVID-19." Tri-Counties Democratic Club, Los Angeles, CA. Jun 4, 2021
87. "AMA Plenary Session: Transforming health care for a post-pandemic world." American Medical Association AMA, Los Angeles, CA. June 5, 2021.
88. "Shot of Faith Town Hall." The Way Christian Center, Los Angeles, CA. June 7, 2021.
89. "Shot of Faith Town Hall." Friendship Baptist Church, Los Angeles, CA. June 8, 2021.
90. "Leadership in Action Case Study: Kedren Community Health Center." Bay Area Health Equity Speaker Series, Los Angeles, CA. June 15, 2021.
91. "Shot of Faith Town Hall." New Mt. Pleasant Church, Los Angeles, CA. June 17, 2021.
92. "Black and African American Statewide Media Briefing." California Department of Public Health CDPH, Los Angeles, CA. June 17, 2021.
93. "COVID-19 and its Exacerbation of Health Inequities." The University of Southern California & The Public Policy Institute, Los Angeles, CA. June 18, 2021.
94. "COVID-19 in Los Angeles Discussion Forum." The University of Southern California Gher Family Center for Health System Science and Innovation, Los Angeles, CA. June 18, 2021.
95. "Shot of Faith Town Hall." Future Community Church, Los Angeles, CA. June 22, 2021.
96. "Shot of Faith Town Hall." Ebenezer Missionary Baptist Church, Los Angeles, CA. June 27, 2021.
97. "Shot of Faith Town Hall." Mount Calvary Church, Los Angeles, CA. June 29, 2021.
98. "Shot of Faith Town Hall." West Side Church of God & Fresno Churches, Los Angeles, CA. June 29, 2021.
99. "Shot of Faith Town Hall." New Mt. Pleasant Church, Los Angeles, CA. July 1, 2021.
100. "Shot of Faith Town Hall." Genesis Church, Los Angeles, CA. July 6, 2021.
101. "Shot of Faith Town Hall." California Christian Center of LA, Los Angeles, CA. July 7, 2021.

102. "Shot of Faith Town Hall" True Faith Missionary Baptist Church, Los Angeles, CA. July 13, 2021.
103. "Shot of Faith Town Hall." Gracepointe Faith Church, Emmanuel Temple Apostolic Church, & The Well Ministries International, Los Angeles, CA. July 19, 2021.
104. "NAACP Statewide Press Conference." National Association for the Advancement of Colored People, Los Angeles, CA. July 24, 2021.
105. "A Conversation w/ Dr. Abraham on the COVID-19 Frontlines (Addressing Vaccine Hesitancy)." WebMD, Los Angeles, CA. July 27, 2021.
106. "Planning for Fall: Pediatric Immunizations and the California COVID-19 Vaccination Program." California Department of Public Health CDPH, Los Angeles, CA. July 28, 2021.
107. "CA Safe Schools For All Health Panels - Central Valley/Sacramento." California Department of Public Health, CPDH, Los Angeles, CA. July 28, 2021.
108. "CA Safe Schools For All Health Panels - Los Angeles." California Department of Public Health, CPDH, Los Angeles, CA. July 29, 2021.
109. "CA Safe Schools For All Health Panels - Los Angeles." California Department of Public Health, CPDH, Los Angeles, CA. August 5, 2021.
110. "An Expert Witness, Public Health Hearing on COVID-19." Los Angeles County Board of Supervisors, Los Angeles, CA. August 11, 2021.
111. "COVID-19 Vaccines for Foster Families." Allies for Every Child, Los Angeles, CA. August 10, 2021.
112. "Board District 7 Meeting." Los Angeles Unified School District LAUSD, Los Angeles, CA. August 11, 2021.
113. "Town Hall." Assemblymember Jones Sawyer, Los Angeles, CA. August 12, 2021.
114. "Town Hall." Black Health Trust, Los Angeles, CA. August 22, 2021.
115. "Gardena Jazz Festival." The City of Gardena, Los Angeles, CA. August 22, 2021.
116. "COVID-19 Update." Baptist Ministers Conference, Los Angeles, CA. August 23, 2021.
117. "COVID-19 Update with LA City Controller Ron Galperin." The City of Los Angeles, Los Angeles, CA. August 25, 2021.
118. "LA Civil & Human Rights & Equity Office Grand Opening & Press Conference." The Los Angeles Civil & Human Rights & Equity Office, Los Angeles, CA. September 13, 2021.

119. “KJLH Panel Discussion: Take a Shot!” Kindness, Joy, Love, & Happiness Radio KJLH, Los Angeles, CA. September 15, 2021.
120. “Healing Together.” Black Vax, Los Angeles, CA. September 15, 2021.
121. “AAFP Vaccine Hesitancy CME.” American Academy of Family Physicians AAFP, Los Angeles, CA. October 13, 2021.
122. “PCE Live Webinar - Post COVID Care.” LA Care Conferencing, Los Angeles, CA. August 12, 2021.
123. “Board District 7 Meeting” Los Angeles Unified School District LAUSD, Los Angeles, CA. August 12, 2021.
124. “COVID-19 Townhall for Sheet Metal Cutters & Welders.” Paramount Medals, Los Angeles, CA. August 13, 2021.
125. “COVID-19 Town Hall.” Verbum Dei High School, Los Angeles, CA. August 16, 2021.
126. “CCALAC Policy Cafe, Pandemic Pivot: Regaining Lost Ground on LA’s Invisible Epidemics.” Community Clinics Association of Los Angeles County CCALAC, Los Angeles, CA. September 17, 2021.
127. “CMA President-Elect Candidate Forum on the Climate Crisis.” California Medical Association CMA, Los Angeles, CA. September 17, 2021.
128. “SoCal AME Conference - 5th District Meeting.” African Methodist Episcopal Church, Los Angeles, CA. September 19, 2021.
129. “To Vaccinate or Not?! A Public Debate.” Black Vax, Los Angeles, CA. September 19, 2021.
130. “CHW Certification Speaker.” Iowa Chronic Care Consortium, Los Angeles, CA. September 22, 2021.
131. “State of the City Forum.” St John's Cathedral, Los Angeles, CA. September 22, 2021.
132. “COVID-19 Town Hall.” Safe Place for Youth, Los Angeles, CA. September 23, 2021.
133. “Dispelling Myths About the COVID-19 Vaccine.” The University of Southern California, Los Angeles Geffen School of Medicine, Los Angeles, CA. September 28, 2021.
134. “Town Hall.” Rivera Community of Schools, Los Angeles, CA. September 28, 2021.
135. “Town Hall for COVID-19 Booster Shot for Age 65+ and High-Risk Individuals.” California Department of Public Health CDPH, Los Angeles, CA. September 29, 2021.

136. "Town hall." Rivera Community of Schools, Los Angeles, CA. September 29, 2021.
137. "Town Hall." Carson Community of Schools, Los Angeles, CA. September 29, 2021.
138. "Town Hall " Wilmington Community of Schools, Los Angeles, CA. September 30, 2021.
139. "Town hall." San Pedro Community of Schools, Los Angeles, CA. September 30, 2021.
140. "Town Hall on Racism & Health Equity." California Medical Association CMA, Los Angeles, CA. September 30, 2021.
141. "Interview w/ LA Focus Editor Ms. Lisa Collins." A Shot of Faith Campaign, Los Angeles, CA. October 1, 2021.
142. "BD7 Conversation: Student Vaccine Mandate." Los Angeles Unified School District LAUSD, Los Angeles, CA. October 6, 2021.
143. "Physicians for a Healthy California NEPO Summit 2021." California Medical Association CMA, Los Angeles, CA. October 8, 2021.
144. "Faith Leader Town Hall on COVID-19 Vaccines." Los Angeles Unified School District, Los Angeles, CA. Oct 10, 2021.
145. "COVID Vaccination Town Hall." Fremont Community of Schools, Los Angeles, CA. October 14, 2021.
146. "Johnson & Johnson A Conversation on Racial Health Disparities Series" Johnson & Johnson, Los Angeles, CA. October 15, 2021.
147. "USC CVN Presentation - South Los Angeles." The University of Southern California, Los Angeles, CA. October 16, 2021.
148. "Panel Session 1: Optimizing Health Service Delivery through Innovation and Technology." International Association of Providers of AIDS Care Los Angeles, CA. October 20, 2021.
149. "Eritrea Conference." Los Angeles, CA. October 24, 2021.
150. "School Parent Education on Vaccinations Town Hall." Friends of GALA - Los Angeles Unified School District LAUSD, Los Angeles, CA. October 25, 2021
151. "Community Partner Meeting Update on COVID-19 Vaccinations." BIG:LEAP, Los Angeles, CA. October 27, 2021
152. "CMA Physicians Depoliticizing Climate: A Conversation." California Medical Association CMA, Los Angeles, CA. October 28, 2021.

153. “Parent Town Hall Meeting - Spanish.” Camino Nuevo Charter Academy, Los Angeles, CA. November 2, 2021.
154. “LAUSD Vaccine Presentation.” Los Angeles Unified School District LAUSD, Los Angeles, CA. November 4, 2021.
155. “Town Hall.” Wilmington Community of Schools, Los Angeles, CA. November 4, 2021.
156. “COVID Conversations #9: COVID 19 Vaccines 5- 11 Year Olds.” California Immunization Coalition, Los Angeles, CA. November 4, 2021.
157. “LAUSD Vaccination Presentation.” Los Angeles Unified School District LAUSD, Los Angeles, CA. November 5, 2021.
158. “Plenary Session on COVID-19 & Health Equity w/ Dr. Peter Hotez.” American Medical Association AMA, Los Angeles, CA. November 6, 2021.
159. “Science and Storytelling: Making Physicians’ Voices the Loudest in the Room.” American Medical Association AMA, Los Angeles, CA. November 6, 2021.
160. “COVID-19 Town Hall Meeting.” ISANA Academies, Los Angeles, CA. November 8, 2021.
161. “COVID-19 Frontline Series: A Light in the Darkness: New Virus-neutralizing Monoclonal Antibodies and Other Speaker, Point-of-Care Therapies Recently Granted Emergency Use Authorization for Patients with COVID-19.” Med Learning Group, Los Angeles, CA. November 9, 2021.
162. “LAUSD Vaccination Presentation.” Los Angeles Unified School District, Los Angeles, CA. November 9, 2021.
163. “How to Talk to Parents about COVID-19 Vaccination for Children.” United States Department of Health and Human Services HHS, Los Angeles, CA. November 10, 2021.
164. “COVID-19 Vaccines Presentation.” Pilgrim School, Los Angeles, CA. November 10, 2021.
165. “Decarbonizing the Health Sector and Building Climate Resilience.” National Academy of Medicine NAM, Los Angeles, CA. November 11, 2021.
166. “Town Hall on COVID-19.” Los Angeles County, Los Angeles, CA. November 18, 2021.
167. “Advancing Equity: Healthcare Barriers for Gender-Diverse Populations.” Centene, Los Angeles, CA. November 19, 2021.
168. “Shot of Faith Town Hall.” Cain Memorial AME, Los Angeles, CA. November 23, 2021.

169. "LAUSD Fall LEA Collaborative Meeting." Los Angeles Unified School District LAUSD, Los Angeles, CA. November 29, 2021.
170. "Town Hall." Wilmington Community of Schools, Los Angeles, CA. December 16, 2021.
171. "Living in a Post-COVID World: Where Are We Going? What's Your Plan?" Black Health Trust, Los Angeles, CA. January 9, 2022.
172. "COVID Update." California Missionary Baptist State Convention, Los Angeles, CA. January 26, 2022.
173. "Black History Month Event." L.A. Care, Los Angeles, CA. February 3, 2022.
174. "Revolutionizing Access to Care in the Black Community." LA Care Health Plan, Los Angeles, CA. February 3, 2022.
175. "Roundtable on COVID-19." Black & African-American Media, Los Angeles, CA. February 22, 2022.
176. "The Ellen Show." The Ellen Show, Los Angeles, CA. March 8, 2022.
177. "Fireside Chat with Revry: Emerging Diverse Founders & Leaders." Gaingels LA, Los Angeles, CA. March 9, 2022.
178. "Councilor Curren Price Campaign Launch." LA City Council Councilor Curren Price, Los Angeles, CA. March 22, 2022.
179. "Fostering Well-being through Connection and Communication." American Medical Association AMA, Los Angeles, CA. March 29, 2022.
180. "Councilor Curren Price Event." LA City Council Councilor Curren Price, Los Angeles, CA. April 1, 2022.
181. "Story of Us." Climate Health Now, Los Angeles, CA. April 13, 2022.
182. "COVID-19: Who Have We Left Behind? And What Have We Left Behind?" American Association of Family Physicians AAFP, Los Angeles, CA. April 20, 2022.
183. "Brothers, Can We Talk? A Community Conversation and Wellness Event for Black Men." California Department of Public Health CDPH, Los Angeles, CA. April 24, 2022.
184. "CDU Community Forum - April 2022." Charles R. Drew University of Medicine, Los Angeles, CA. April 26, 2022.
185. "Back to the Basics: Talking with Patients about COVID-19 Vaccines." #ThisISOurShot, Los Angeles, CA. May 5, 2022

186. "MICRA Modernization Presentation." Los Angeles County Medical Association LACMA, Los Angeles, CA. May 5, 2022
187. "Gender Affirming Community of Practice." Denver Prevention Training Center, Los Angeles, CA. May 10, 2022.
188. "UCLA Research Day Keynote Address – Democratization of Health." The University of California, Los Angeles Geffen School of Medicine, Los Angeles, CA. May 11, 2022.
189. "38th Annual UCLA-Affiliated Multi-Campus Family Medicine Research Day." The University of California, Los Angeles Geffen School of Medicine, Los Angeles, CA. May 11, 2022.
190. "Lifesaving COVID-19 Antiviral Treatments" Charles R. Drew University School of Medicine, Los Angeles, CA. May 18, 2022.
191. "CDU WIP featuring Dr. Angela Venegas-Murillo and Dr. Dilara Üsküp." Charles R. Drew University School of Medicine, Los Angeles, CA. May 18, 2022.
192. "KJLH Women's Health Symposium (Panel Discussion and Breakout Session)." Kindness, Joy, Love, & Happiness Radio KJLH, Los Angeles, CA. May 21, 2022.
193. "Angeleno Corps Health Equity Career Panel." Angeleno Corps, Los Angeles, CA. June 3, 2022.
194. "Monkeypox: An Update for CBOs Serving LGBTQ+ Californians." California Department of Public Health CDPH, Los Angeles, CA. June 16, 2022.
195. "CHMC FMRP Health Policy & Advocacy for Family Medicine Residents." California Hospital Medical Center & The University of Southern California, Los Angeles, CA. August 18, 2022.
196. "Community Meeting on MPX." AVATAR LA, Los Angeles, CA. August 24th, 2022.
197. "Rock the Vax COVID-19 and HIV Webinar." First African Methodist Episcopal Church, Los Angeles, CA. September 14, 2022.
198. "CRDMS COVID Lecture." Charles R. Drew Medical Society, Los Angeles, CA. September 23, 2022.
199. "Community MPX Prevention Strategy Meeting." LA County Department of Public Health LACDPH, Los Angeles, CA. September 27, 2022.
200. "Leveraging the Role of Payers and Regulators in the Health Worker Well-Being Movement." National Academy of Medicine NAM, Los Angeles, CA. October 3, 2022.
201. "Panel Discussion, Climate Crisis and Public Health." The New Yorker Festival - The Nature Conservancy, Los Angeles, CA. October 7, 2022.

202. "Mingle at the Mansion, COVID-19 and Beyond." Charles R. Drew Medical Society, Los Angeles, CA. October 8, 2022.
203. "Systematic Impact of COVID-19 & MPX on Communities of Color." Bridge Builders Foundation - Omega Psi Phi Fraternity, Los Angeles, CA. October 11, 2022.
204. "Race as a Risk Factor and Environmental Racism." American Medical Student Association - Racism in Medicine Course, Los Angeles, CA. October 11, 2022.
205. "COVID-19 Update." Community Response System of South Los Angeles CRSSLA Public Health Committee, Los Angeles, CA. October 13, 2022.
206. "CDU Community Forum on COVID-19." Charles R. Drew University School of Medicine, Los Angeles, CA. October 25th, 2022.
207. "UCLA Color of Care Film Screening & Panel." The University of California Los Angeles Geffen School of Medicine, Los Angeles, CA. October 26, 2022.
208. "COVID: Where We've Been and Where We Are Going As a Community?" Ethiopian Community LA ECLA, Los Angeles, CA. October 29, 2022.
209. "LA Healthcare Awards." Patient Care Foundation PCF, Los Angeles, CA. November 4, 2022.
210. "Sabbath Town Hall Series COVID-19 Update." South Central Prevention Coalition, Los Angeles, CA. November 27, 2022.
211. "CDU Health Care Opportunities Program HCOP Academy Retreat." Charles R. Drew University School of Medicine, Los Angeles, CA. December 2, 2022.
212. "Premiere - *Vaccinate Watts*." Santa Clarita Film Festival, Los Angeles, CA. December 9, 2022.
213. "Health Justice & Systems of Care HJSC Guest Lecturer: Healthcare Reform: History, Current Developments & Future Prospects." USC Keck School of Medicine KSOM, January 18, 2023.
214. "Translational Perspectives on Pre-Exposure Prophylaxis PrEP for HIV", panelist, UCLA Center for HIV Identification, Prevention, and Treatment Services CHIPTS and UCLA Clinical and Translational Science Institute CTSI, January 18, 2023.
215. "USP Convention Joint Sector Meeting- Trust in Vaccines: Ensuring quality from development to distribution", January 26, 2023.
216. USC Family Medicine Research Day Symposium Keynote Speaker, February 1, 2023.
217. AMA Healthcare & Climate Change: Prioritizing Health Equity, February 1, 2023.

SIGNIFICANT MEETINGS ATTENDED

1. Catholic Hospital Association CHA 2020 Virtual Assembly, June 8, 2020.
2. American Academy of Family Physicians AAFP National Conference of Constituency Leaders NCCL, June 13, 2020.
3. State of Reform: “Virtual Conversation: Black Leadership in U.S. Health Care and Health Policy.”, June 19, 2020.
4. Global Health Care, LLC: “Summit on Health System Recovery from the COVID-19 Pandemic.”, June 22, 2020.
5. Harvard University Radcliffe Institute for Advanced Study: “Amplifying Community Voices: LGBTQ Health and Wellbeing during COVID-19.”, June 26, 2020.
6. The National Black Justice Coalition: “Black & LGBTQ: At the Intersection of a Racist & Homo/Transphobic CJ System.”, June 30, 2020.
7. Charles R. Drew University M. Alfred Haynes Lecture Series: “The Long Road Home.”, July 15, 2020.
8. National Hispanic Medical Association NHMA COVID-19 Virtual Briefing Series: “COVID-19 Impact on Health Care Delivery.”, July 22, 2020.
9. Blue Shield of California Promise Health Plan Community Conversation Series: “Community Conversation with Senator Holly J. Mitchell.”, July 27, 2020.
10. American Medical Association AMA-ASSN: “Medical Education Update: UME & GME Innovations.”, August 6, 2020.
11. Medical Societies Consortium on Climate and Health: “Storytelling training: Health Voices for Climate Action.”, August 11, 2020.
12. American Psychological Association APA Town Hall: “APA Addresses Structural Racism, Part Two: The March Continues.”, August 24, 2020.
13. National Hispanic Medical Association NHMA: “COVID-19 Virtual Briefing Series: Dealing with the New Normal.”, August 26, 2020.
14. American Medical Association AMA: “Foundation Update: Philanthropy in Action.”, August 26, 2020.
15. United States Health and Human Services US HHS National Center for Vital Health Statistics NCVHS Privacy Subcommittee Meeting, September 14, 2020.

16. Stanford University Sean N. Parker Center for Allergy & Asthma Research: “NorCal Symposium on Climate and Pandemic Resilience in Health Care.”, September 25, 2020.
17. Climate Awakening: “Breaking the Silence: Sharing Climate Emergency Feelings.”, November 25, 2020.
18. Soulforce Nonviolence Workshop w/ Rav. Lawson, December 19, 2020.
19. Emory University: “Community Conversation on Allyship as a Journey.”, January 5, 2021
20. California Medical Association CAM: “Strategies to Translate Existing CMA Climate Policies Into Action w/ Yvonne Choong, CMA VP.”, January 8, 2021.
21. Kedren Vaccines and LA City & County Native American Indian Native Alaskan Commission COVID-19 Vaccine Committee Meeting, April 8, 2021
22. California Democratic Party LGBTQ Caucus: “Harvey Milk Day Celebration & Pride Season Kick Off.”, May 22, 2021.
23. University of California, Los Angeles Presentation: “Policy and Research Priorities to End the Epidemics of HIV, Viral Hepatitis, STIs, and Overdose.”, November 10, 2021.
24. American Medical Association House of Delegates: “Protecting Our Planet: Energy Efficiency.”, November 15, 2021.
25. Center for HIV Identification, Prevention, and Treatment Service CHIPTS & The San Diego Center for AIDS Research SDCFAR: “World AIDS Day 2021 Event: Addressing Inequities and Syndemics to End the HIV Epidemic.”, December 1, 2021.
26. United States Pharmacopeia & Fight the Fakes Alliance: “Global Solutions to Confront Substandard and Falsified COVID-19 Vaccines.”, December 6, 2021.
27. 2021 World AIDS Day California Council of Behavioral Health Agencies: “Addressing Behavioral Health: A Critical Component To Ending The HIV Epidemic In The U.S.”, December 6, 2021.
28. American Medical Association AMA Scope of Practice Summit, December 15, 2021.
29. Interagency Coordinating Committee on the Validation of Alternative Methods: “Communities of Practice: New Approach Methodologies to Assess Developmental Neurotoxicity.”, January 25, 2022.
30. San Francisco Department of Public Health: “Financing HIV PrEP Webinar.”, February 23, 2022.
31. California Department of Public Health CDPH LGBTQIA Initiative Conference, February 25, 2022.

32. Alameda-Contra Costa Medical Association: “Medical Society Event: Adding Environmental Sustainability to Your Medical Practice.”, March 1, 2022.
33. Physicians for Social Responsibility Los Angeles: “Improving Public Health in California through Emission Reduction Strategies.”, March 5, 2022.
34. Medical Society Consortium on Climate and Health: “Accelerating Climate Solutions: From Urgency to Impact for Health and Equity.”, March 6, 2022.
35. National Committee for Quality Assurance NCQA President Margaret O’Kane: “Fireside Chat on Post-Pandemic Healthcare Delivery.”, March 10, 2022.
36. USC Center for Political Future Screening: "Be My Voice" with Masih Alinejad and Sen. Barbar Boxer.”, March 10, 2022.
37. California Department of Public Health CDPH: “Ending the HIV, HCV, and STI Epidemics Strategic Plan: CA Statewide Town Hall.”, March 18, 2022.
38. LA City Community Engagement Team: “Rebuilding the Public Trust: The Road to a More Ethical LA”, March 24
39. National Academy of Medicine NAM: “Action Collaborative on Decarbonizing the US Health Sector Virtual Meeting.”, March 29, 2022.
40. United States Pharmacopeial Convention: “Supply Chain Exchange Series: Preparedness for increased resiliency and bolstering key points along the medicines supply chain.”, March 30, 2022.
41. American Medical Association AMA Board of Trustees Panel: “The Nation’s Drug Overdose Epidemic: Helping Children and Families, Patients with Pain, Tuesday.” April 5, 2022.
42. Liberty Hill Climate Equity LA Series: “Community-Driven Climate Resilience and Adaptation in LA.”, April 7, 2022 .
43. Los Angeles County Medical Association LACMA: “The Future is Now: The Successful Medical Enterprise in Challenging Times.”, April 11, 2022.
44. Emory University President Gregory L. Fenves Lecture Presentation: “The Future Starts with You, Los Angeles.”, April 12, 2022.
45. American Medical Association AMA Science and Public Health Update, April 13, 2022.
46. Climate Equity LA Series: “Community-Driven Climate Resilience and Adaptation in LA.”, April 14, 2022.
47. California Black Health Network CBHN: “Historical Racism and Impact on Health Disparities.”, April 5, 2022.

48. Western Regional Advocacy Project: “Standing United for Our Rights: Convening Against CARE Court.”, April 8, 2022.
49. Los Angeles County Medical Association LACMA: “The Future is Now: The Successful Medical Enterprise in Challenging Times.”, April 8, 2022.
50. American Medical Association AMA Science and Public Health Update. April 12, 2022.
51. Climate Equity LA Series: “Community-Driven Climate Resilience and Adaptation in LA.”, April 13, 2022.
52. Climate Health Organizing Fellows CHOF Special Talk with Director of U.S. Office of Health and Human Services HHS - John Balbus. April 14, 2022.
53. American Medical Political Action Committee AMPAC Stakeholder Update, April 25, 2022.
54. California Department of Public Health CDPH: “End the Epidemics: Racial Justice Training”. April 26, 2022.
55. EHMI Communities, Climate Change, and Health Equity - State-Level Implementation, May 24, 2022.
56. Amazon Web Services AWS: “Industry Innovators: Healthcare & Life Sciences”, June 16, 2022.
57. Intermountain Healthcare: “Raising the Bar: Engaging Leadership in a Comprehensive Equity Strategy”, July 26, 2022.
58. California Department of Public Health CDPH Monkeypox LGBTQ Community Stakeholder Meeting, August 2, 2022.
59. American Medical Association AMA LGBTQ Advisory Committee Town Hall on Section Consideration, August 25, 2022.
60. California Medical Association CMA Medical Group Advocacy Symposium, August 31, 2022.
61. Wellcare Training 22-593: “Strengthening Cultural Humility, Dismantling Implicit Bias in Healthcare and Social Services”, September 8, 2022.
62. California Community Foundation: “COVID-19 Findings and Perspectives from South LA and Southeast LA: Doing What Needed to be Done”, September 14, 2022.
63. ViiV Healthcare, HIV Medication presentation with Eddie Vs and Dr. William King, September 21, 2022.
64. Los Angeles County Department of Public Health LACDPH Monkeypox Stakeholder Update at St. John’s Hospital, September 27, 2022.

65. National Academy of Medicine NAM Convening: “Leveraging the Role of Payers and Regulators in the Health Worker Well-Being Movement”, Public Launch Event, October 3, 2022.
66. California’s Climate Leadership: Advancing Health and Equity in Climate Policy Moderator, CMA Climate Health Symposium, October 21, 2022.
67. California Medical Association CMA 151st House of Delegates Annual Session, October 22, 2022.
68. Project TENDR Annual Meeting, October 24, 2022.
69. Longitudinal Course Development and Bidirectional Curriculum Integration Workshop ft. UC Davis Dr. Michael Wilkes, October 24, 2022.
70. The Sierra Health Foundation SHF California Equitable Recovery Initiative CERI Grantwriters Workshop, October 24, 2022.
71. LA County Homelessness Initiative Meeting, October 24, 2022.
72. Robert Wood Johnson Foundation RWJF Health Policy Fellowship Meeting, October 25, 2022.
73. Columbia University Mailman School of Public Health, “Field Epidemiology Response to the Climate Health Crisis: Air Pollution”, October 26, 2022.
74. LANCET Countdown on Climate Change & Health Public Launch Event, October 26, 2022.
75. Association of State and Territorial Health Officials ASTHO - MSM Satcher Health Leadership Institute SHLI, Diverse Executives Leading in Public Health DELPH, “Insight and Inspiration: Start With Why - Experience the Simon Sinek Golden Circle”, October 26, 2022.
76. National Hispanic Medical Association NHMA COVID-19 Briefing Session #18: Understanding Long COVID and the Future of Vaccinations, October 26, 2022.
77. American Medical Association Alliance AMAA "Launching Your Alliance Drug Education Program" Workshop, October 27, 2022.
78. Columbia University Mailman School of Public Health - Global Consortium on Climate Health Education; Climate and Health Advocacy Boot Camp, October 27, 2022.
79. The Washington Post, “Protecting Our Planet Series: The Role of Technology”, October 28, 2022.
80. Climate for Health Ambassador Community Meeting, November 1, 2022.
81. Ending the Epidemics ETE Campaign All California Meeting (LA LGBT Center), November 2, 2022.
82. AMA Advocacy Webinar Series: “What Congress Needs to Do Now”, November 3, 2022.
83. California Department of Public Health CDPH Hepatitis B Listening Session, November 3, 2022.

84. National Minority Quality Forum NMQF Scholars: “Treatment Access & Health Equity: Protecting Copay Assistance to Improve Patient Outcomes”, November 4, 2022.
85. CDU Public Health Disparities Meeting with Republic of Sierra Leone Diplomat, November 7, 2022.
86. Health and Human Services Region 10 LGBTQ+ Monkeypox Update, November 10, 2022.
87. National Hispanic Medical Association NHHF Foundation Gala, Thursday, November 17, 2022.
88. Trans Latinas Garras Fashion Show, November 19, 2022.
89. City of Los Angeles Reparations Advisory Commission, “Homecoming Part II: An Evening of Collective Memory, Shared Experience, and Envisioning Reparations for Black Angelenos Within the City of Los Angeles.”, November 29, 2022.
90. Columbia University Mailman School of Public Health - “Global Consortium on Climate Health Education; Field Epidemiology Response to the Climate and Health Crisis: Flooding”, November 30, 2022.
91. National Academy of Medicine NAM: “Emerging Fairer & Stronger from COVID-19: Health System Imperatives”, November 30, 2022.
92. AMA Alliance Leadership Bootcamp - Day 1, December 1, 2022.
93. Health and Human Services HHS Office of Intergovernmental and External Affairs IEA MPOX Stakeholder Meeting, December 1, 2022.
94. World AIDS Day Noche de las Memorias - The Wall Las Memorias AIDS Monument Los Angeles, December 1, 2022.
95. AMA Alliance Leadership Bootcamp, December 2, 2022.
96. National Medical Quality Fellowship NMQF-SHC: “Protecting Our Families from the Threat of Influenza”, December 2, 2022.
97. Shared Harvest Fund SHF Fireside Chat, December 4, 2022.
98. AMA Fighting Scope of Practice Expansion, December 5, 2022.
99. California Immunization Coalition: “Vaccination Communication: Inoculating Against Misinformation”, December 6, 2022.
100. Health and Human Services HHS Office of Intergovernmental and External Affairs IEA Respiratory Syncytial Virus (RSV) Stakeholder Briefing, December 7, 2022.
101. California Department of Public Health DPH MPX Community Listening Session, December 7, 2022.

102. Pacific AIDS Education and Training Center PAETC: “PrEP Ready! Community of Practice - Session #2: PrEP Outreach & Engagement Strategies”, December 7, 2022.
103. City of LA Climate Emergency Mobilization Office CEMO Community Report Back: Pathways to Healthy Homes through Equitable Building Decarbonization, December 7, 2022.
104. National Academy of Medicine's Climate Communities Listening Session, Thursday, December 8, 2022.
105. National Association for Continuing Education NACE Conversations in Primary Care CME Conference 2022, December 10, 2022.
106. American Association for the Advancement of Science AAAS, Science, Technology, Engineering, Mathematics, and Medicine STEM, White House Equity Summit, December 12, 2022.
107. Med Learning Group CME: “Weight Loss as a Treatment Strategy for Patients with Type 2 Diabetes and Obesity: Practical Strategies for Primary Care Physicians”, December 12, 2022.
108. National Hispanic Medical Association NHMA Organizational Training with The Food and Drug Administration FDA, December 12, 2022.
109. Climate Reality Bay Area: “Fostering Resilience in the Climate Crisis”, December 13, 2022.
110. “COVID-19 Federal Incident Response Plan - Federal Plan for Equitable Long-Term Recovery and Resilience” ELTRR Partner Briefing, December 14, 2022.
111. Columbia University Global Consortium on Climate & Health Keystone Symposium: “Climate Health & Infectious Disease Threats”, December 14, 2022.
112. LA Care Enhanced Care Management ECM, “Children and Youth Town Hall”, Wednesday, December 14, 2022.
113. California Department of Public Health CDPH Mental Health Webinar for Clinicians, December 14, 2022.
114. CDPH Physicians for a Healthy California PHC Test-to-Treat T2T Equity Project ECHO, December 14, 2022.
115. California Black Health Network: “Looking Ahead: Cancer Breakthroughs in Screening and Early Detection”, December 14, 2022.
116. US Chamber of Commerce 2023 State of American Business, January 12, 2023.
117. Housing Authority of the City of Los Angeles HACLA Watts LA Work Source Center Collaborative Partners Meeting, January 12, 2023.
118. African Communities Public Health Coalition Ribbon Cutting, January 12, 2023.
119. Department of Mental Health DMH + UCLA Full Service Partnership FSP “Community of Practice: Promoting Productive Roles”, January 17, 2023.

120. AMA STEPS Forward Webinar Series: “Improving Environmental Stability in your Medical Practice”, January 18, 2023.
121. UCLA Center for Health Policy Research CHPR: “Mental Health & COVID-19: An Economic & Social Crisis”, Wednesday, Jan 25-
122. National Football League NFL Players Association Physician Dr. Thomas Mayer, *Battling Healthcare Burnout* book signing, January 25, 2023.
123. South Central HIV Consortium, January 27, 2023.
124. Equitable Health Measurement: Supporting Community Voices, Systems, and Partnerships, January 31, 2023.
125. National Hispanic Medical Association NHMA Briefing Series Session #19: “Mediating the COVID-19, Influenza, and RSV Tridemic in Latinx Communities”, January 31, 2023.
126. California Immunization Coalition CIC Vaccination Communication: “Inoculating Against Misinformation Q + A”, January 31, 2023.
127. AMA New Congress, “New Majorities & New Power Dynamics”, February 1, 2023.
128. Pacific AETC “The Invisible Patient: Cultural Approaches to HIV Care and Prevention Among Black Women”, February 3, 2023.
129. “How the AMA is fighting for physicians and patients in Washington—and how you can help”, February 7, 2023.
130. Physician Aid Association LA PAA Annual Meeting, February 8, 2023.
131. Cambridge Health Alliance CHA Center for Health Equity Education & Advocacy CHEEA Climate Health Organizing Fellowship CHOF Special Session on Climate Reparations, February 10, 2023.
132. Medical Society Consortium on Climate Health MSCCH Annual Meeting 2023, Washington, DC, March 24, 2023.
133. “The All of Us Research Workbench: Opportunities for Community-Based Researchers”, February 21, 2023.
134. LA CARE “Listening to Black Californians: How the HealthCare System Affects Their Pursuit of Good Health”, February 22, 2023.

DIGITAL MEDIA PORTFOLIO

CMA NEWS 10.18.22 | CMA Climate Health Panel Discussion

<https://www.cmadocs.org/newsroom/news/view/ArticleId/49918/Still-time-to-register-for-Friday-39-s-climate-health-panel-discussion>

LA THIS WEEK 10.17.22 | In Conversation with Dr. Abraham

https://youtu.be/rdmHpEJ_do0

AMA NEWS 10.11.22 | US Health System Must Come to Terms with Its Environmental Impact

<https://www.ama-assn.org/delivering-care/public-health/us-health-system-must-come-terms-its-environmental-impact>

THE NEW YORKER 10.07.22 | The Power of Nature to Improve Public Health

<https://festival.newyorker.com/tickets/the-power-of-nature-to-improve-public-health/>

LA CITY VIEW 35 10.03.22 | LA Currents: COVID-19 Update w/ Dr. Abraham

<https://youtu.be/ZPQUNyKAgh4>

SPECTRUM NEWS 09.20.22 | Inside the Issues w. Alex Cohen: COVID-19 Boosters Update w. Dr. Abraham

<https://spectrumnews1.com/ca/la-west/inside-the-issues-full-episode/2022/09/20/former-usc-dean-pleads-guilty-in-bribery-case->

AMA NEWS 09.15.22 | AMA-SHLI Medical Justice in Advocacy Fellows

<https://www.ama-assn.org/delivering-care/health-equity/medical-justice-advocacy-fellows>

KJBU 99.3FM 09.13.22 | CDPH Interview: COVID-19 Update

<https://refuelagency-my.sharepoint.com/:f/p/jweipz/Epo1PxZ0QpdKmn6SX8b6MogBf8LeSBBWyriTqGE1hm0c2g?e=dKBnKH>

AMA NEWS 08.24.22 | When fighting climate change, don't overlook health equity

<https://www.ama-assn.org/delivering-care/public-health/qa-when-fighting-climate-change-don-t-overlook-health-equity>

CMA NEWS 08.23.22 | CMA to Host Panel Discussion on Climate Health Crisis

<https://www.cmadoes.org/newsroom/news/view/ArticleId/49857/CMA-to-host-panel-discussion-on-climate-health-crisis>

https://www.cmadoes.org/event-info/sessionaltcd/CMA22_1021_CLIMATE/t/understanding-the-climate-health-crisis-and-how-california-physicians-can-make-an-impact==FC25C46F-0C75-43A5-AD57-2400AFD17552/CommsMisc22-TEST

LAAFP NEWSLETTER 08.10.22 | Declaring Climate Change a Public Health Emergency

<https://www.laafp.org/2022/08/08/editorial-jerry-abraham-md-mph-cmq-4/>

KCRW PRESS PLAY W. MADELEINE BRAND 10.09.22 | 60 Doses Become Hundreds: Doctor Stretches MPX Vax in South LA

<https://www.kcrw.com/news/shows/press-play-with-madeleine-brand/vaccines-guns-immigration-cannabis-fall-tv/monkeypox-black-latino-communities>

LAIST 08.05.22 | Health Officials Worry MPX Vaccines Aren't Reaching LA's Underserved Communities

<https://laist.com/news/health/health-officials-worry-that-monkeypox-vaccines-arent-reaching-las-underrepresented-communities>

LACMA MONDAY Rx 07.26.22 | Monkeypox Outbreak, COVID-19, LACMA Solutions

<https://www.ladocs.org/news-events/news/monday-rx-monkeypox-outbreak-covid-19-25-minimum-wage-lacma-solutions-portal-and-upcoming-events.aspx>

CBS NEWS 07.25.22 | COVID-19 and MPX Cases are on the rise in the US

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LA SENTINEL 02.18.21 | California State Governor Gavin Newsom Visits Kedren Hospital

<https://lasentinel.net/california-state-governor-gavin-newsom-visits-kendren-hospital-observing-the-success-of-the-co-pilot-initiative-of-vaccination-distribution-in-impacted-communities.html>

UNITED PRESS INTERNATIONAL UPI 02.20.21 | COVID-19 cases pass 28 million in U.S., deaths near 500,000

https://www.upi.com/Top_News/US/2021/02/20/COVID-19-cases-pass-28-million-in-US-deaths-near-500000/1171613837212/

CBS NEWS 02.16.21 | US COVID-19 cases and deaths decline

https://www.youtube.com/watch?v=9_jdUHX3vY

SPECTRUM INSIDE THE ISSUES w/ ALEX COHEN 02.19.21 | Equitable Vaccine Distribution

<https://www.facebook.com/2601761/videos/10103008256187307/>

LA TIMES 02.18.21 | Black People Still Aren't Getting COVID Vaccines. This Pastor Isn't Having It

<https://www.latimes.com/california/story/2021-02-18/coronavirus-covid-vaccine-equity-black-church-kedren-south-los-angeles>

SAN FRANCISCO CHRONICLE | California's Positivity Rate Drops Sharply, A Promising Indicator for Reopening

<https://www.sfchronicle.com/bayarea/article/California-s-coronavirus-positivity-rate-has-15957740.php>

CALIFORNIA GOVERNOR VISITS KEDREN'S VACCINE PROGRAM

<https://twitter.com/CAGovernor/status/1361824179511648259?s=20>

<https://www.facebook.com/photo?fbid=10103005977214387&set=a.869274385027>

https://www.tiktok.com/@gavinnewsom/video/6930024247465200902?lang=en&is_copy_url=0&is_from_webapp=v2&sender_device=pc&sender_web_id=6930314450668144134

NEWS AGENCY AMERICA 02.16.21 | California Governor Gavin Newsom Visits Kedren Vaccines

https://youtu.be/r_5nvADttPU

UNITED PRESS INTERNATIONAL UPI 02.16.21 | New COVID-19 Cases, Deaths Tick Up in U.S. Amid Biden Vaccine Push

https://www.upi.com/Top_News/US/2021/02/17/New-COVID-19-cases-deaths-tick-up-in-US-amid-Biden-vaccine-push/2021613561182/

FINANCIAL TIMES 02.16.21 | EU announces fresh vaccine deal with Moderna

<https://www.ft.com/content/a6cd1bc8-f6e0-4e32-8399-6fde8b71c579>

CNN 02.16.21 | Fauci Says A COVID-19 Vaccine Could Be Needed Annually

https://www.cnn.com/world/live-news/coronavirus-pandemic-vaccine-updates-02-17-21/h_6a55a182559142d78a548af4705bfc79

THE GUARDIAN 02.16.21 | Latinos & Black Americans See Lowest COVID Vaccination Rates New Data Shows

<https://www.theguardian.com/world/2021/feb/17/coronavirus-vaccinate-us-black-latino-race>

FRANCE 24 & AFP | Race to Vaccinate: African Americans Being Left Behind in the US

<https://www.france24.com/en/tv-shows/inside-the-americas/20210211-race-to-vaccinate-african-americans-being-left-behind-in-the-us>

<https://www.france24.com/fr/%C3%A9missions/cap-am%C3%A9riques/20210211-aux-%C3%A9tats-unis-les-noirs-am%C3%A9ricains-sont-les-grands-perdants-de-la-campagne-de-vaccination>

CNN 02.14.21 | COVID-19 Cases Have Declined Sharply -- These Factors Will Determine How Pandemic Unfolds From Here

<https://www.cnn.com/2021/02/14/health/us-coronavirus-sunday/index.html>

LA TIMES 02.22.21 | Gov. Admits Problems w/ Vaccine Rollout in Latino & Black Communities
<https://www.latimes.com/california/story/2021-02-21/governor-admits-problems-covid-19-vaccine-rollout-latino-black-communities>

LA TIMES 02.14.21 | New State Data Break Down Vaccine Distribution by Age, Race, Gender, & Show Disparities
<https://www.latimes.com/california/story/2021-02-14/state-data-on-vaccine-distribution-reveals-disparities>

LA TIMES 02.13.21 | California Adds Millions to COVID-19 Vaccine Eligibility List But Frustrating Waits, Shortages Loom
<https://www.latimes.com/california/story/2021-02-13/california-covid-19-vaccine-shortages-delays>

KTLA 02.20.21 | Data showing vaccination rates by community reveal inequities in LA County
<https://ktla.com/news/local-news/inequities-in-vaccination-coverage-are-clear-l-a-county-health-officials-say/>

KTLA 02.09.21 | COVID-19 vaccine slow to reach LA County communities hit hard by pandemic
<https://ktla.com/news/local-news/covid-19-vaccine-slow-to-reach-l-a-county-communities-hit-hard-by-pandemic/>

AP 03.17.21 | Bungling wastes shots in US in COVID-19 battle
<https://www.shine.cn/news/world/2103176059/>

LA CITY CHANNEL 35 | COVID-19: Overcoming Vaccine Reluctance & Access Barriers in Black & Brown Communities
<https://youtu.be/xwQvmU9EAg4>
<https://fb.watch/3ByG7QuH4O/>

TMZ LIVE 02.08.21 | Dr. Jerry Abraham Creates Awesome COVID Vaccine Distribution Model to Serve Minority Communities
<https://www.tzm.com/2021/02/08/dr-jerry-abraham-los-angeles-kedren-clinic-vaccines-black-brown-people/>
<https://youtu.be/QBltrI6owdw>

MSNBC RACHEL MADDOW SHOW 02.05.21 | Removing Barriers is Key to Getting Vaccine to Underserved Communities
<https://www.msnbc.com/rachel-maddow/watch/removing-barriers-is-key-to-getting-vaccine-to-underserved-communities-100619845748>
<https://www.nbc.com/the-rachel-maddow-show/video/rachel-maddow-2521/4298087>
<https://youtu.be/GRiBcuwBeFc>
<https://www.facebook.com/jerryabraham/videos/10102998454924117/>
<https://twitter.com/maddowblog/status/1357887778638462977>

BLACK NEWS CHANNEL BNC 02.04.21 | Los Angeles Vaccine Supply Shortage

<https://blacknewschannel.com/fuel/02-04-21-bnc-prime-los-angeles-vaccine-supply-shortage/>

CBS THIS MORNING 02.03.21 | South Los Angeles Hospital Removes Barriers for Minority Communities Seeking Vaccines

<https://www.cbsnews.com/video/south-los-angeles-hospital-removes-barriers-for-minority-communities-seeking-vaccine/>

<https://youtu.be/8JpO8cbZ4Ik>

THE GRIO 02.08.21 | Los Angeles doctor fights to ensure vaccine distribution in Black community

<https://thegrio.com/2021/02/08/los-angeles-doctor-ensure-vaccine-distribution-black-community/>

NBC NEWS 02.11.21 | They're Chasing the Dreams of Getting a COVID-19 Vaccination

<https://www.nbcnews.com/news/us-news/they-re-chasing-dream-getting-covid-19-vaccination-n1257520>

CBS LOS ANGELES 02.09.21 | LA County Working To Address Racial Disparities In Distribution Of COVID-19 Vaccines

<https://losangeles.cbslocal.com/video/5280480-la-county-working-to-address-racial-disparities-in-distribution-of-covid-19-vaccines/>

<https://youtu.be/n4ZHsJ0pUxM>

BLACK HEALTH TRUST 02.07.21 | Vaccine Inequities & A National Call to Action: What can we do to help bridge the Vaccine Inequity Gap?

<https://youtu.be/nNcbecjAl4k>

KPCC LAist 02.05.21 | Morning Brief: LA's Vaccine Inequity Mirrors The Rest of the Country

<https://laist.com/latest/post/20210208/morning-briefing-february-8-laist-los-angeles>

NPR TAKE TWO 02.04.21 | Communities of Color Struggle for Vaccination Equity

<https://www.scpr.org/programs/take-two/2021/02/04/21540/>

KFI AM.640 NEWS 02.02.21 | Local Doctor Figures Out How To Distribute Vaccines Equitably in Los Angeles County

<https://kfiam640.iheart.com/featured/gary-and-shannon/content/2021-02-02-local-doctor-has-figured-out-how-to-distribute-vaccines-equitably/>

KPCC LAist 02.05.21 | Why Do LA's Black And Latino Residents Have Lower Vaccination Rates?

<https://laist.com/latest/post/20210205/why-do-LAs-black-and-latino-residents-have-lower-vaccination-rates>

SPECTRUM NEWS 1 02.09.21 | South LA Clinic Will Continue to Give First Doses of COVID-19 Vaccine

<https://spectrumnews1.com/ca/la-west/coronavirus/2021/02/09/south-la-clinic-will-continue-to-give-first-doses-of-covid-19-vaccine>

<https://www.facebook.com/2601761/videos/10103003361920457/>

NBC LOS ANGELES | People With Disabilities Feel Abandoned by State Leaders on Vaccine Rollout

<https://www.nbclosangeles.com/news/local/people-with-disabilities-feel-abandoned-by-state-leaders-on-vaccine-rollout/2515930/>

LA TIMES 02.12.21 | California to open COVID-19 vaccine to people with cancer, obesity, other conditions

<https://www.latimes.com/california/story/2021-02-12/california-opens-covid-vaccine-disabled-high-risk-people>

NBC TODAY SHOW 02.01.21 | Unequal Access to Coronavirus Vaccine Spurs Mounting Outrage

<https://www.today.com/video/unequal-access-to-coronavirus-vaccine-spurs-mounting-outrage-100334149944>

NBC LOS ANGELES 01.29.21 | Volunteer Disaster Team Provides Support at KEDREN HEALTH COVID-19 Vaccine Distribution Program

<https://www.nbclosangeles.com/on-air/volunteer-disaster-team-provides-support-at-kedren-health-center/2514389/>

LA TIMES 03.09.21 | California makes it easier for anyone to get COVID-19 vaccine by volunteering

<https://www.latimes.com/california/story/2021-03-09/california-makes-it-easier-to-sign-up-as-a-covid-19-vaccine-site-volunteer>

KNX AM1070 NEWS RADIO 03.05.21 | New COVID-19 vaccination site to open at USC Tuesday, Uber partnership will allow South LA residents to get vaccinated

<https://www.radio.com/knx1070/news/state/new-covid-19-vaccination-site-opens-at-usc-tuesday>

CBS FACE THE NATION 01.31.21 | Challenges of Vaccinating All Grows

https://www.cbs.com/shows/face-the-nation/video/P_WQeIkGSvhS_0wVR7syQLkOUNf9QSKf/01-31-richmond-lamont-suarez-gottlieb-jackson/

CBS LOS ANGELES | South LA Clinic Rushes To Administer 600 Expiring COVID-19 Vaccine Doses

<https://losangeles.cbslocal.com/2021/01/29/south-la-clinic-administers-600-expiring-covid-19-vaccine-doses/>

https://youtu.be/U5c8XYa_cj4

INSIDE EDITION | Those Hoping to Get 'Leftover' Vaccine Doses Wait Nearly 15 Hours

https://youtu.be/_fGIpJEMyvK

LA TIMES | How a South L.A. doctor is beating the system and distributing vaccines equitably
<https://www.latimes.com/california/story/2021-01-29/coronavirus-covid-vaccine-equity-hospital-south-lo-s-angeles-kedren-health>

LA TIMES | Letter to the Editor: ‘Vaccine chasers’ aren’t the story; South L.A. doctors fighting inequities are
<https://www.latimes.com/opinion/story/2021-01-26/vaccine-chasers-inequity>

AFP NEWS AGENCY | ‘Vaccine chasers’ stake out Los Angeles hospitals, hoping for shot
<https://youtu.be/2bggS3jLDio>

SPECTRUM NEWS 1 | Doctor's Tenacity Brings Vaccinations to South LA
<https://spectrumnews1.com/ca/la-west/coronavirus/2021/01/11/doctor-s-tenacity-brings-vaccinations-to-south-la>

SPECTRUM NEWS 1 | South LA Clinic Needs Volunteers to Ramp up Vaccinations
<https://spectrumlocalnews.com/nc/coastal/coronavirus/2021/01/20/south-la-clinic-needs-volunteers-to-ramp-up-vaccinations>
<https://www.facebook.com/2601761/videos/10103003365258767/>

SPECTRUM SOCAL IN 17 | California’s Vaccine Rollout
<https://spectrumnews1.com/ca/la-east/coronavirus/2021/02/11/california-s-vaccine-rollout-and-road-to-recovery--are-we-there-yet->

SPECTRUM SOCAL IN 17 | A local doctor shares what life is like on the front lines, doling out life-saving vaccines in South Los Angeles
<https://spectrumnews1.com/ca/la-east/socal-in-17/2021/01/28/what-dr--anthony-fauci-has-to-say-about-california-lifting-stay-home-orders>

LA PODCAST | CA’s vaccine rollout is now the worst in the country. What are the ethics of vaccine chasing?
<https://thelapod.com/episode/november-strain/>

FOX 11 LOS ANGELES 02.10.21 | Vaccine Chasers Lining Up at South LA Hospital
<https://youtu.be/h7UG3l5YjwE>

LA TIMES 01.23.21 | Young L.A. ‘vaccine chasers’ crowd unofficial standby lines in hopes of a shot
<https://www.latimes.com/california/story/2021-01-23/standby-lines-backdoor-vaccine-access>

INSIDE THE ISSUES w/ ALEX COHEN | Diversifying the Healthcare Workforce During the COVID-19 Pandemic
<https://vimeo.com/503637567>

the password: insidetheissues

NHK WORLD TOKYO & FUJI NEWS JAPAN | Young People in the US Seeking Surplus Vaccines

<https://www.fnn.jp/articles/-/138285>

COMPLEX | Young L.A. Residents Are Flocking to Vaccine Distribution Sites to Get Leftover Shots

<https://www.complex.com/life/2021/01/young-la-residents-are-flocking-to-vaccine-distribution-sites-to-get-leftover-shots>

LA THIS WEEK | LA City Mayor Eric Garcetti Visits Kedren Community Health Center Site

<https://youtu.be/jfoBIKGsry8>

UNITED PRESS INTERNATIONAL UPI | South LA Physician Finds Workarounds to Distribute Vaccines Equitably

https://www.upi.com/News_Photos/view/upi/88ee0e3f9adc79997be3daffc2b5f9d8/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/News_Photos/view/upi/22b493f1a087c3cef73635375ad82eba/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/Top_News/US/2021/02/05/New-COVID-19-deaths-in-US-top-5000-to-set-new-single-day-record/2411612533207/

https://www.upi.com/News_Photos/view/upi/65aa8e45dd8bd6d3a44bce47f75aa339/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/News_Photos/view/upi/67c76da477ba3f11655bf08993fada15/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/News_Photos/view/upi/7a8dbdd2f0310ae5d9a2e8c5465e98ef/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/News_Photos/view/upi/157fdaeccd96dda161e31f5bb54bb791/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

https://www.upi.com/News_Photos/view/upi/b1c08fdd6e0bd82a22ede75b9538a87d/South-LA-Physician-Finds-Workarounds-to-Distribute-Vaccines-Equitably/

UNITE HERE LOCAL 11 | Local 11 Members in LACounty Eligible for COVID-19 Vaccine

<https://www.unitehere11.org/vaccine-appointment>

UCLA EPIDEMIOLOGY | Grant Submission Video for Data Volunteers

<https://vimeo.com/518877474/47a0af2a26>

KEDREN 03.24.21 | Vaccine Program Volunteers Celebration: The Little Kedren That Could

<https://youtu.be/GQbU393oRco>

STATE OF CALIFORNIA VACCINATE ALL 58 04.21.21 | 'A Shot of Faith' Town Hall

https://youtu.be/eIB1xKF7_Mw

ALAMY STOCK PHOTOS | Kedren Vaccines

<https://www.alamy.com/search/imageresults.aspx?imgt=0&qt=kedren+vaccines+jerry+abraham>

GETTY IMAGES | Kedren Vaccines

<https://www.gettyimages.com/photos/kedren?family=editorial&phrase=kedren&sort=mostpopular#licensing>

SHUTTERSTOCK IMAGES | Kedren Vaccines

<https://www.shutterstock.com/editorial/search/kedren>

Dear South Coast AQMD,

My name is Sharon Williams, I am a double-board certified physician in Allergy & Immunology and Internal Medicine. I am also a Fellow of the American College of Allergy and Immunology. I was a Microbiology major in undergrad, and completed my medical school training at University of Arizona College of Medicine-Tucson. I then went on to complete residency at St. Mary's/Harbor-UCLA Medical Center in Internal Medicine, and subsequently completed my fellowship in Allergy & Immunology at the University of California, Irvine. I have a broad clinical focus in areas of asthma, seasonal and perennial aeroallergens, chronic sinusitis, occupational allergy/respiratory disease, atopic eczema, and adult immunodeficiencies. I have published in peer-reviewed journals on immunodeficiency, asthma, and drug allergy. Due to these accomplishments and overlapping interests, I believe I am qualified for a position as Hearing Board Member with South Coast AQMD. As an Allergist & Immunology, as well as former microbiologist, studying air pollution and treating patients who are suffering from it as well as finding strategies to mitigate it is part of my daily job. I am applying for the Hearing Board Medical Member position for South Coast AQMD as an opportunity to apply my education and background in air quality to help guide implementation of clean air quality in southern California. My hobbies include running, going to the beach, and spending time with family and friends.

Thank you for your consideration.

Sincerely,

Sharon Williams

SHARON WILLIAMS, M.D., FAAAAI

Fellow of the American College of Allergy, Asthma, & Immunology,
A Collaborating Organization of the Environmental Protection Agency
Double-Board Certified Diplomate

American Board of Allergy & Immunology; American Board of Internal Medicine

EDUCATION

<i>Fellowship</i>	University of California, Irvine/Children's Hospital of Los Angeles Allergy & Immunology Irvine, CA	2016-2018
<i>Residency</i>	St. Mary Medical Center/Harbor-UCLA Internal Medicine Residency Program Long Beach, CA	2013-2016
<i>Internship</i>	St. Mary Medical Center/Harbor-UCLA Internal Medicine Residency Program Long Beach, CA	2013-2014
<i>Doctor of Medicine</i>	University of Arizona College of Medicine Tucson, Arizona	2009-2013
<i>Bachelor of Science</i> <i>Minor of Arts</i>	Arizona State University, Tempe, AZ Bachelor of Science, Microbiology Minor of Arts, Religious Studies Tempe, AZ Summa Cum Laude	2005-2008

LICENSURE/CERTIFICATIONS

Medical Board of California, Physician and Surgeon License, active	11/2014 - current
Arizona Medical Board, Physician License, active	05/2020- current
Florida Board of Medicine, Telehealth Medical Doctor, active	02/2021- current
West Virginia Board of Medicine, Telehealth, active	12/2021- current
DEA Registration	2014- current
Diplomate, American Board of Internal Medicine, 2016, participating in MOC	Active, recert 2026
Diplomate, American Board of Allergy and Immunology, 2019, participating in MOC	Active, recert 2029

ACADEMIC HONORS AND AWARDS

UCLA Solomon Scholar Research Award, UCLA David Geffen Internal Medicine Residency	2015
Patient Advocate Award St. Mary Medical Center/Harbor-UCLA Internal Medicine Residency	2014
Distinction in Community Service Award, Commitment to Underserved People University of Arizona, College of Medicine	2009-2013
Leadership and Outreach Award, University of Arizona College of Medicine	2011
Graduated Summa Cum Laude, Arizona State University	2007

PROFESSIONAL/WORK EXPERIENCE

Sharon Williams, MD, Allergy & Immunology Practice	Nov 2020 – current
Veteran's Health Administration Directive 1190, Peer Review for Quality Management, Medical Advisory Opinion, and Subject Matter Expert	Nov 2021- current
Medicare Beneficiaries Chronic Disease Management, Health Risk Assessment, Supervising Physician Directive of ACA 2010, CDC, and DHHS	May 2020- current
Science 37, Physician Investigator, Clinical Trials	Jan 2022- current
Rhonda Myers MD PhD, Allergist & Immunologist, Private Practice, Irvine, CA	Jan 2020 - Nov 2020
Allergy & Asthma Care Center, Allergist & Immunologist, Group Practice, Long Beach, CA Included Clinical Trials	Jul 2018 - Dec 2019

PROFESSIONAL MEMBERSHIPS

Fellow of American College of Allergy, Asthma, & Immunology	2016- current
Clinical Immunology Society	03/2018- current
American Contact Dermatitis Society	05/2018- current
American Academy of Allergy, Asthma, & Immunology	2016- 2020
Los Angeles Society of Allergy, Asthma & Clinical Immunology	2014- 2018
American College of Physicians	2013-2016
American Medical Association	2013-2016

PROFESSIONAL SERVICE

Department of Medicine Committee, St. Mary Medical Center	2014-2016
Pharmacy, Therapeutics, Infection Control, & Patient Safety Committee, St. Mary Medical Center	2014-2016
Quality Improvement Committee, UC Irvine Medical Center	2016-2018
Regarding IVIG dosing, Epinephrine pen education, Contact Dermatitis Patch testing handouts, Hand Hygiene control measures, and Influenza Vaccination	
Patient Safety Committee, UC Irvine Medical Center	2016-2018

VOLUNTEER EXPERIENCE/EXTRACURRICULAR ACTIVITIES

Medical Mission Trip, Windhoek, Namibia	<i>April-May 2023</i>
Medical Mission Trip, Maseno, Kenya	<i>June-July 2009</i>
Disaster Relief Mission Trip, New Orleans, Louisiana	<i>July 2007</i>
Shubitz Clinic for Uninsured, Patient Care, University of Arizona College of Medicine	<i>2009-2013</i>
Women's Clinic for Uninsured, Patient Care, University of Arizona College of Medicine	<i>2009-2013</i>
Wesley Clinic for Uninsured, Patient Care, University of Arizona College of Medicine	<i>2011-2013</i>
MedSET teaching underprivileged students, Volunteer, University of Arizona	<i>2009-2011</i>
Healer's Art Course, University of Arizona College of Medicine	<i>2010</i>
Organic Chemistry Tutor, Arizona State University, Tempe, Arizona	<i>2007</i>
Patient Care Level 1 Trauma Center, Scottsdale Healthcare Osborn Hospital	<i>2006-2007</i>
Patient Services in Oncology Department, Scottsdale Healthcare Shea Hospital	<i>2006-2007</i>

CLINICAL RESEARCH TRIALS

08/2022- current **A Multicenter, Randomized, Double-blind, Parallel-group, Event-driven, Decentralized, Phase IIIb Study Comparing PT027 With PT007 Administered as Needed in Participants 12 Years of Age and Older With Asthma (BATURA)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: AstraZeneca

03/2019-12/2019 **Extension Study to Evaluate the Safety and Tolerability of Tezepelumab in Adults and Adolescents With Severe, Uncontrolled Asthma (DESTINATION)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: AstraZeneca

03/2019-12/2019 **Study to Evaluate Tezepelumab in Adults & Adolescents With Severe Uncontrolled Asthma (NAVIGATOR)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: AstraZeneca

03/2019-12/2019 **Phase 3 Multi-Center, Long-Term Extension Study Investigating the Efficacy and Safety of Abrocitinib, With or Without Topical Medications, Administered to Subjects Aged 12 Years and Older with Moderate to Severe Atopic Dermatitis (B7451015)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Pfizer

03/2019-12/2019 **Phase 3 Randomized Withdrawal, Double-Blind, Placebo-Controlled, Multi-Center Study Investigating the Efficacy and Safety of PF-04965842 in Subjects Aged 12 Years and Over, with Moderate to Severe Atopic Dermatitis with the Option of Rescue Treatment in Flaring Subjects (B7451014)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Pfizer

03/2019-12/2019 **Phase 3 Randomized Withdrawal, Double-Blind, Placebo-Controlled, Multi-Center Study Investigating the Efficacy and Safety of PF-04965842 in Subjects Aged 12 Years and Over, with Moderate to Severe Atopic Dermatitis with the Option of Rescue Treatment in Flaring Subjects (B7451014)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Pfizer

03/2019-12/2019 **Randomized, Double-Blind, Placebo-Controlled, Phase 2a Study to Assess the Efficacy and Safety of REGN3500 Monotherapy and Combination of REGN3500 Plus Dupilumab in Adult Patients With Moderate-to-Severe Atopic Dermatitis (R3500-AD-1798)**. Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study; Sponsor: Regeneron Pharmaceuticals; Collaborator: Sanofi

03/2019-12/2019 **Open-Label Extension Study to Assess the Long-Term Safety and Efficacy of Dupilumab in Patients \geq 6 Months to $<$ 18 Years of Age With Atopic Dermatitis (R668-AD-1434).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study; Sponsor: Regeneron Pharmaceuticals; Collaborator: Sanofi

03/2019-12/2019 **A Phase III Study of Safety and Efficacy of Ligelizumab in the Treatment of Chronic Spontaneous Urticaria in Adolescents and Adults Inadequately Controlled With H1-antihistamines.** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Novartis

09/2019-12/2019 **Multi-center, Randomized, Double-blind, Active and Placebo-controlled Study to Investigate the Efficacy and Safety of Ligelizumab (QGE031) in the Treatment of Chronic Spontaneous Urticaria (CSU) in Adolescents and Adults Inadequately Controlled With H1-antihistamines (CQGE031C2302).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Novartis Pharmaceuticals

09/2019-12/2019 **Phase 2B, Randomized, Double Blind, Vehicle Controlled, Parallel Group, Dose Ranging Study to Assess the Efficacy, Safety, Tolerability and Pharmacokinetics of PF-06700841 Cream Applied Once or Twice Daily for 6 Weeks in Participants with Mild or Moderate Atopic Dermatitis (B7931022).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Pfizer

03/2023- current **A Study to Investigate the Prevention of COVID-19 with VYD222 in Adults With Immune Compromise and in Participants Aged 12 Years or Older Who Are at Risk of Exposure to SARS-CoV-2 (VYD222-PREV-001).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Invivyd, Inc.

01/2022-03/2022 (study-wise pause) **A Phase 2/3 Randomized, Double-blind, Placebo-Controlled Trial to Evaluate the Efficacy and Safety of ADG20 in the Prevention of COVID-19 (EVADE).** Sharon Williams, MD. Pharmaceutical sponsored study: Adagio

06/2023- current: **A Study of Donanemab (LY3002813) in Participants With Early Alzheimer's Disease (TRAIL-BLAZER-ALZ 2) (15T-MC-AAACI).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Eli Lilly

08/2023- current: **A Donanemab (LY3002813) Prevention Study in Participants With Alzheimer's Disease (TRAIL-BLAZER-ALZ 3) (15T-MC-AAACM).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Eli Lilly

09/2023- current: **A randomized, double-blind, placebo-controlled multicenter study to evaluate the effect of inclisiran on preventing major adverse cardiovascular events in high-risk primary prevention patients (VICTORION-1 PREVENT) (CKJX839D12302).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Novartis

06/2023- current: **Study of Inclisiran to Prevent Cardiovascular (CV) Events in Participants With Established Cardiovascular Disease (VICTORION-2P) (CKJX839B12302).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Novartis

06/2023- current: **A Phase 3, Multicenter, Randomized, Double-blind, Placebo-controlled Study of the Efficacy, Safety and Biomarker Effects of AIZ-801 in Subjects with Early Alzheimer's Disease and APOE4/4 Genotype (APOLLOE4) (ALZ-801-AD301).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Alzheon Inc.

06/2023- current: **An Open-Label, Non-Randomized, Prospective Observational Cohort Study to Assess Post-Procedural Outcomes in Two Cohorts of Women who Chose to Undergo Either Hysteroscopic Sterilization (Essure®) or Laparoscopic Tubal Sterilization (BAY 1454032-18894).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Bayer Healthcare Pharmaceuticals Inc.

06/2023- current: **Prospective Clinical Trial to Detect Liver Cancer through Quantification of cfDNA Methylation in Blood Samples (CLiMB) (LAM-2018-01).** Sub-Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: Helio Genomics

06/2023- current: **A Phase 3 Study to Evaluate the Safety and Efficacy of Elagolix in Combination with Estradiol/Norethindrone Acetate in Subjects with Moderate to Severe Endometriosis-Associated Pain (M14-702).** Principal Investigator: Sharon Williams, MD. Pharmaceutical sponsored study: AbbVie

PUBLICATIONS/PRESENTATIONS

Journal of Allergy and Clinical Immunology: In Practice. "Successful rapid desensitization to intravenous bevacizumab using a 14-step protocol: case report" Sharon Williams, M.D., Amrita Khokhar, M.D., Asal Gharib, M.D., J Allergy Clin Immunol Pract. 2017 Nov - Dec;5(6):1746-1747. doi: 10.1016/j.jaip.2017.04.043. Epub 2017 Jun 9

American Academy of Allergy, Asthma, and Immunology Poster Session “IgA Monoclonal Gammopathy of Undetermined Significance (MGUS) in a Young Woman With Selective IgM Deficiency,” Sharon Julie Williams, M.D., Sudhanshu Agrawal M.S, Sudhir Gupta M.D., Ph.D., M.A.C.P., presented April 2017.

Archivum Immunologiae et Therapiae Experimentalis, “Anaphylaxis to IVIG,” Sharon Julie Williams, M.D., Sudhir Gupta, M.D., Ph.D., MACP, Arch Immunol Ther Exp (Warsz). 2017 Feb;65(1):11-19. doi: 10.1007/s00005-016-0410-1. Epub 2016 Jul 13.

Annals of Allergy, Asthma, and Immunology, “Dynamic Airway Collapse—A Frequently Misdiagnosed Asthma Mimicker”Varaz Bozoghlian, M.D., Sharon Williams, M.D., Heba Ismail, M.D., and Ravi Gutta, M.D., Ann Allergy Asthma Immunol. 2016 Jan;116(1):87-8. doi: 10.1016/j.anai.2015.10.023. Epub 2015 Nov 17.

“Reconstitution of IgG Subclasses Following Immunoglobulin Therapy in CVID and Hypogammaglobulinemia”, with mentor Sudhir Gupta, M.D., Ph.D., M.A.C.P., under investigation/chart review since August 2017.

LA County Inter-City Infectious Disease Scholarly Activity Presentation at Harbor-UCLA and St. Mary Medical Center, “A Case of Cerebral Malaria,” Sharon Williams, M.D., Chester Choi, M.D., MHA, MACP, December 2015.

UCLA Solomon Scholars, “Refractory Asthma and the ‘Frown Sign,” Sharon Julie Williams, MD, Varaz Bozoghlian, MD, Ravi Gutta, MD, June 2015.

American College of Physicians, “Photograph Negative Eosinophilia,” (A Case of Chronic Eosinophilic Pneumonia) Sharon Williams, M.D, Ronnie Alas, M.D., MohsenRofoogaran, D.O., Ravi Gutta, M.D., October 15, 2014.

Los Angeles Society of Allergy, Asthma & Clinical Immunology, “A Rare Culprit of DRESS Syndrome,” Sharon Williams, M.D., Ravi Gutta, M.D., Sept 27, 2014

LECTURES

Intranasal Steroids Use for Nasal Polyps, Veterans Affairs Long Beach Medical Center, Allergy	2018
Chronic Urticaria, UC Irvine, Allergy & Immunology	2017 & 2018
Cytokines and Cytokine Receptors, UC Irvine, Basic & Clinical Immunology	2017
Monocytes and Macrophages, UC Irvine, Basic & Clinical Immunology	2017
Journal Club, Hyper-IgM Syndrome, UC Irvine, Basic & Clinical Immunology	2017
Journal Club, Xolair in Moderate - Severe Asthma, UC Irvine, Allergy & Immunology	2018
Fellowship Planning Day, Department of Medicine UCI	2017
Contact Dermatitis, UC Irvine, Allergy & Immunology	2016
Neutrophils: Development, UC Irvine, Basic & Clinical Immunology	2016
Tumor Immunity Lecture at UC Irvine, Basic & Clinical Immunology	2017
Drug Allergy, Internal Medicine Case Conference at Veterans Affairs Long Beach Medical Center	2017

BASIC RESEARCH

Dr. Tatiana Ugarova, Ph.D

Center for Metabolic and Vascular Biology
Supported by **National Institute of Health** Arizona State University, Tempe, Arizona. Research on Integrin receptor $\alpha\text{D}\beta\text{2}$ which plays a Role in chronic inflammation, to help further understand the inflammatory nature of metabolic syndrome and proliferation of adipose tissue via adipocyte precursors

2007-2008

BOARD MEETING DATE : December 1, 2023

AGENDA NO. 9

REPORT: Legislative, Public Affairs and Media Report

SYNOPSIS: This report highlights the October 2023 outreach activities of the Legislative, Public Affairs and Media Office, which includes Major Events, Community Events/Public Meetings, Environmental Justice Update, Speakers Bureau/Visitor Services, Communications Center, Public Information Center, Small Business Assistance, Media Relations, and Outreach to Community Groups and Federal, State and Local Governments.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Wayne Natri
Executive Officer

DA:LT:PC:RY:SP:mc

BACKGROUND

This report summarizes the activities of the Legislative, Public Affairs and Media Office for October. The report includes Major Events, Community Events/Public Meetings, Environmental Justice (EJ) Update, Speakers Bureau/Visitor Services, Communications Center, Public Information Center, Small Business Assistance, Media Relations, and Outreach to Community Groups and Governments.

MAJOR EVENTS (HOSTED AND SPONSORED)

Each year, staff engage in hosting and sponsoring several major events throughout South Coast AQMD's four-county jurisdiction to promote, educate, and provide important information to the public regarding reducing air pollution, protecting public health, and improving air quality while minimizing economic impacts.

Taste of Soul

On October 21, staff hosted an information booth at the 18th Annual Taste of Soul Family Festival in South Los Angeles which drew over 300,000 attendees. Staff demonstrated the mobile app, how to file air quality complaints, as well as shared information on incentive programs for residents.

COMMUNITY EVENTS/PUBLIC MEETINGS

Staff engaged with residents and stakeholders of diverse communities to provide information about the agency, incentive programs, and ways individuals can help reduce air pollution through events and meetings sponsored by South Coast AQMD, or in partnership with others. Attendees typically receive information regarding the following:

- Tips on reducing their exposure to smog and its negative health effects;
- How to file a complaint;
- Clean air technologies and their deployment;
- Invitations to or notices of conferences, seminars, workshops, and other public events;
- South Coast AQMD incentive programs;
- Funding/grant opportunities by South Coast AQMD and partner agencies;
- Ways to participate in South Coast AQMD's rules and policy development; and
- Assistance in resolving air pollution-related problems.

Staff attended and/or provided information and updates at the following October events and meetings:

South Bay Association of Chambers of Commerce

On October 3, staff attended the South Bay Association of Chambers of Commerce Board of Directors meeting to announce the Public Workshop for Proposed Amended Rule 1180 and Proposed Rule 1180.1 related to refinery fence line and community air monitoring.

Reach Out Jurupa Valley

On October 3, staff attended the Reach Out Jurupa Valley community meeting. Staff provided information on how to file a complaint, the mobile app, Replace Your Ride, and other programs.

Commerce Clean Air Day

On October 4, staff participated in the City of Commerce Clean Air Day event. Staff provided information on how to file air quality complaints, the mobile app, Replace Your Ride, and other programs.

Gateway Cities Council of Governments

On October 4, staff participated in the Gateway Cities Council of Government's Board of Directors meeting. Staff provided an update on enforcement of the Rule 2305 - Warehouse Indirect Source Rule.

San Gabriel Valley Council of Governments

On October 4, staff participated in the San Gabriel Valley Council of Government's Energy, Environment & Natural Resources Committee meeting to announce an upcoming presentation by South Coast AQMD on U.S. EPA's Climate Pollution Reduction Grant program.

San Bernardino Area Chamber of Commerce

On October 7, staff hosted an information booth at the 10th Annual Rendezvous Back to Route 66 event in San Bernardino. Information on South Coast AQMD was shared with attendees such as Replace Your Ride, residential and commercial electric landscaping incentives, and how to file complaints.

South Pasadena Chamber of Commerce

On October 11, staff attended the South Pasadena Chamber of Commerce Legislative Affairs Committee meeting to provide program updates on Check Before You Burn, Replace Your Ride, and residential and commercial electric landscaping incentives.

South Bay Cities Council of Governments

On October 12, staff attended the South Bay Cities Council of Governments meeting. Staff announced the upcoming Public Workshop for Proposed Amended Rule 1180 and Proposed Rule 1180.1 related to refinery fence line and community air monitoring.

Southeast Los Angeles Community Environmental Health Workshop

On October 14, staff participated in U.S. EPA's Southeast Los Angeles Community Environmental Health Workshop in Huntington Park. Staff provided information on how to file air quality complaints, the mobile app, and Replace Your Ride.

Riverside County Health Coalition

On October 18, staff attended the Riverside County Health Coalition meeting in Moreno Valley. Staff shared information on how to file air quality complaints and Replace Your Ride.

Coachella City Council

On October 25, staff attended the Coachella City Council meeting to provide information on Check Before You Burn Program, the mobile app, and how to file air quality complaints.

San Gabriel Valley Economic Partnership

On October 25, staff presented at the San Gabriel Valley Economic Partnership Legislative Action Committee meeting on U.S. EPA's Climate Pollution Reduction Grant program. Staff also updated attendees on Check Before You Burn.

Orange County Council of Governments

On October 26, staff participated in the Orange County Council of Governments Board of Directors meeting to provide updates on Check Before You Burn and compliance assistance training.

California State University, Northridge Resource Fair

On October 29, staff participated in California State University, Northridge, Resource Fair in Pacoima. Staff provided information on how to file air quality complaints, South Coast AQMD's mobile app, and Check Before You Burn.

ENVIRONMENTAL JUSTICE (EJ) UPDATE

The following are key EJ-related activities in which staff participated during October. These events and meetings involve communities affected disproportionately from adverse air quality impacts.

U.S. EPA Webinar

On October 10, staff participated in U.S. EPA Healthy and Resilient Communities webinar entitled, "Benefits of the Environment, Revitalization, and Environmental Cleanup." The webinar focused on how to access technical services, goal setting, and how to track outcomes.

Affordable Housing and Sustainable Communities

On October 18, staff participated in the Affordable Housing and Sustainable Communities public workshop on housing construction, zero-emission transit, and social service programs for residents.

CARB Public Workshop

On October 24, staff participated in CARB's public workshop on projects targeted for disadvantaged communities to offset legacy engine emissions.

SPEAKERS BUREAU/VISITOR SERVICES

South Coast AQMD regularly receives requests for staff to speak on air quality-related issues from a wide variety of organizations, such as trade associations, chambers of commerce, community-based groups, schools, hospitals, and health-based organizations. South Coast AQMD also hosts visitors from around the world who meet with staff on a wide range of air quality issues.

Cal Poly Pomona

On October 27, engineering students from Cal Poly Pomona visited South Coast AQMD headquarters, which included a lab and campus tour. Staff also presented an overview of South Coast AQMD, and air quality issues.

COMMUNICATION CENTER STATISTICS

The Communication Center handles calls on South Coast AQMD's main line, 1-800-CUT-SMOG®, the Spanish line, and after-hours calls to those lines. Total calls received in the month of October are summarized below:

Calls to South Coast AQMD's Main Line and 1-800-CUT-SMOG®	2567
Calls to South Coast AQMD's Spanish Line	24
Total Calls	2591

PUBLIC INFORMATION CENTER STATISTICS

The Public Information Center (PIC) handles phone calls and assists individuals who walk in for general information. Email advisories provide information on upcoming meetings and events, program announcements and alerts on time-sensitive issues. Information for the month of October is summarized below:

Calls Received by PIC	51
Calls to Automated System	208
Total Calls	259
Visitor Transactions	147
Email Advisories Sent	31,711

SMALL BUSINESS ASSISTANCE

South Coast AQMD notifies local businesses of proposed regulations so they can participate in the agency's rule development process. South Coast AQMD works with other agencies and governments to identify efficient, cost-effective ways to reduce air pollution and shares that information broadly. Staff provided personalized assistance to small businesses over the telephone, at South Coast AQMD headquarters and via virtual on-site consultation, as summarized below for October.

- Provided permit application assistance to 165 companies, and
- Processed 96 Air Quality Permit Checklists.

Types of businesses assisted:

Architecture Firms	Gas Stations	Retail Facilities
Auto Body Shops	Manufacturing Facilities	Schools
Construction Firms	Other Businesses	Warehouses
Engineering Firms	Restaurants	

MEDIA RELATIONS

The Media Office handles all South Coast AQMD outreach and communications with television, radio, newspapers and all other publications, and media operations. The October report is listed below:

Major Media Interactions	128
Press Releases	12
News Carousel	4

Major Media Topics:

- **Dust Advisory:** The Desert Sun requested information on the connection between Hurricane Hilary and dust advisories in the Coachella Valley. Response was provided.
- **Chiquita Canyon Landfill:** The Signal requested confirmation on the number of Notices of Violation received by the landfill in late September and early October. Response was provided.
- **Port ISR:** Southern California News Group and LA Business Journal requested information on current actions the ports are taking to reduce emissions and information on upcoming public meetings. Responses were provided.
- **Lawn & Garden Incentive Program:** ABC7 requested information on the Commercial Lawn & Garden program. Response was provided.
- **Port of Los Angeles:** Southern California News Group inquired about equipment technology and testing methods referenced in a recent action by the Los Angeles Board of Harbor Commissioners.
- **Odor Complaints:** Univision 34 requested information on where residents can report odors and poor air quality in their neighborhood. Response was provided.
- **Baker Commodities:** LAist requested a comment on Baker’s latest court filings and ongoing court hearings. Provided available documents, but unable to comment on pending litigation.
- **Warehouse ISR:** Law306 requested general information on the rule. Response was provided.
- **Technology Advancement:** Social Justice podcast requested an interview with our technology advancement office. Working on gathering details on the podcast and topics for discussion.
- **Ports ISR Education:** Working on identifying specific reporters to begin outreach and education on port-related issues.

- **Marathon Refinery Ammonia Emissions:** E&E News requested information regarding the increase of ammonia emissions from Marathon. Response in progress.
- **Lead Contamination:** PBS looking for information on our efforts at Exide. Gathering additional information.
- **Windblown Dust Advisory (10/9, 10/11, 10/21, 10/27 & 10/29):** Pitched advisory to media outlets resulting in media coverage.
- **Wildfire Smoke Advisory (10/31):** Pitched advisory to media outlets resulting in coverage.
- **Hexavalent Chromium NOV:** Pitched press release to local media outlets.

News Releases:

- **South Coast AQMD Issues Violation to Chrome Plating Facility for Release of Hexavalent Chromium, Failure to Maintain Equipment – October 5, 2023 (English and Spanish):** Informed public of an NOV issued due to elevated levels of hexavalent chromium.
- **South Coast AQMD Issues Windblown Dust Advisory for the Coachella Valley – October 9 and 11, 2023 (English and Spanish):** Informed the public of elevated levels of dust (PM10) caused by gusty winds in the Coachella Valley.
- **South Coast AQMD Issues Windblown Dust Advisory for the Coachella Valley and San Geronio Pass – October 21, 2023 (English and Spanish):** Informed the public of elevated levels of dust caused by high winds and elevated particle pollution (PM10) levels.
- **South Coast AQMD Issues Windblown Dust Advisory for the Coachella Valley and Parts of the Inland Empire – October 27, 2023 (English and Spanish):** Informed the public of elevated levels of dust caused by gusty Santa Ana winds.
- **South Coast AQMD Issues Windblown Dust Advisory for the Coachella Valley, Parts of the Inland Empire, and Orange County – October 29, 2023 (English and Spanish):** Informed the public of an expanded dust advisory.
- **South Coast AQMD Issues Wildfire Smoke Advisory Due to Highland Fire – October 31, 2023 (English and Spanish):** Informed the public of a smoke advisory caused from the Highland Fire.

Social Media Posts:

- [AQI Forecast \(9/29\)](#): 1,236 Impressions
- [AQI Forecast \(10/7\)](#): 1,504 Impressions
--RT by @LAFDtalk
- [AQI Forecast \(10/17\)](#): 1,531 Impressions
--RT by @LAFDtalk, @AIRNow
- [AQI Forecast \(10/24\)](#): 719 Impressions
--RT by @AIRNow

News Carousel:

- **“Participate in California Clean Air Day on October 4”** – Linked to the website about the event.
- **“Hot, stagnant days with strong sunlight can cause poor air quality.”** –Linked to the website to sign up for air alerts.
- **“Register for Compliance Training to better understand air quality regulations, control technologies, and industry clean air requirements”** – Linked to the website for registration.
- **“Keep up with the Latest News from South Coast AQMD – View the current edition of the Advisor newsletter”** – Linked to the Advisor newsletter.

OUTREACH TO COMMUNITY GROUPS AND FEDERAL, STATE AND LOCAL GOVERNMENTS

Communication was conducted in October with elected officials and/or staff from the following state and federal offices:

- U.S. Senator Tom Carper
- U.S. Senator Alex Padilla
- U.S. Representative Pete Aguilar
- U.S Representative Ken Calvert
- U.S. Representative Judy Chu
- U.S. Representative Robert Garcia
- U.S. Representative Frank Pallone
- Senator Catherine Blakespear
- Senator Lena A. Gonzalez
- Senator Caroline Menjivar
- Senator Dave Min
- Senator Josh Newman
- Senator Anthony Portantino
- Senator Henry Stern
- Assemblymember Lisa Calderon
- Assemblymember Wendy Carrillo
- Assemblymember Phillip Chen
- Assemblymember Mike Fong
- Assemblymember Laura Friedman
- Assemblymember Eduardo Garcia
- Assemblymember Mike Gipson
- Assemblymember Josh Lowenthal
- Assemblymember Tina McKinnor
- Assemblymember Al Muratsuchi
- Assemblymember Cottie Petrie-Norris
- Assemblymember Sharon Quirk-Silva
- Assemblymember James Ramos
- Assemblymember Eloise Gomez Reyes
- Assemblymember Luz Rivas
- Assemblymember Miguel Santiago

Outreach was conducted personally and virtually in October to communicate with elected officials or staff from the following cities:

Agoura Hills	Eastvale	Los Angeles
Alhambra	El Monte	Lynwood
Anaheim	El Segundo	Malibu
Arcadia	Fontana	Manhattan Beach
Artesia	Fullerton	Maywood
Azusa	Gardena	Menifee
Baldwin Park	Glendale	Mission Viejo
Banning	Glendora	Monrovia
Beaumont	Grand Terrace	Montclair
Bell	Hawaiian Gardens	Montebello
Bell Gardens	Hawthorne	Monterey Park
Bellflower	Hemet	Moreno Valley
Beverly Hills	Hermosa Beach	Murrieta
Big Bear Lake	Hidden Hills	Newport Beach
Bradbury	Highland	Norco
Brea	Huntington Park	Norwalk
Buena Park	Indian Wells	Ontario
Burbank	Indio	Orange
Calabasas	Industry	Palm Desert
Calimesa	Inglewood	Palm Springs
Canyon Lake	Irvine	Paramount
Carson	Irwindale	Pasadena
Cathedral City	Jurupa Valley	Perris
Cerritos	La Cañada Flintridge	Pico Rivera
Chino	La Habra	Placentia
Chino Hills	La Habra Heights	Pomona
Claremont	La Mirada	Rancho Cucamonga
Coachella	La Palma	Rancho Mirage
Colton	La Puente	Rancho Palos Verdes
Commerce	La Quinta	Redlands
Compton	La Verne	Redondo Beach
Corona	Lake Elsinore	Rialto
Covina	Lake Forest	Riverside
Cudahy	Lakewood	Rolling Hills
Culver City	Lawndale	Rolling Hills Estates
Desert Hot Springs	Loma Linda	Rosemead
Diamond Bar	Lomita	San Bernardino
Downey	Long Beach	San Dimas
Duarte	Los Alamitos	San Fernando

San Gabriel	South El Monte	West Covina
San Jacinto	South Gate	West Hollywood
San Marino	South Pasadena	Westlake Village
Santa Ana	Stanton	Whittier
Santa Clarita	Temecula	Wildomar
Santa Fe Springs	Temple City	Yorba Linda
Santa Monica	Torrance	Yucaipa
Seal Beach	Upland	
Sierra Madre	Vernon	
Signal Hill	Walnut	

Staff represented South Coast AQMD in October and/or provided updates or a presentation to the following governmental agencies and business organizations:

Alhambra Chamber of Commerce
 Arcadia Chamber of Commerce
 Azusa Chamber of Commerce
 Claremont Chamber of Commerce
 Clean Power Alliance
 Coachella Valley Association of Governments
 Covina Chamber of Commerce
 Duarte Chamber of Commerce
 El Monte/South El Monte Chamber of Commerce
 Foothill Gold Line Construction Authority
 Foothill Transit
 Gateway Cities Council of Governments
 Glendora Chamber of Commerce
 Greater Monterey Park Chamber of Commerce
 Harbor Association of Industry and Commerce
 Industry Business Council
 Inland Valley Development Agency
 Irwindale Chamber of Commerce
 La Verne Chamber of Commerce
 League of California Cities
 Los Angeles County Sanitation Districts
 METRO
 Metrolink
 Monrovia Chamber of Commerce
 OmniTrans
 Ontario International Airport Authority
 Orange County Business Council
 Orange County Transportation Authority

Pasadena Chamber of Commerce
Pomona Chamber of Commerce
Puente Hills Habitat Preservation Authority
Rosemead Chamber of Commerce
San Bernardino Area Chamber of Commerce
San Bernardino County Transportation Authority
San Dimas Chamber of Commerce
San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy
San Gabriel Valley Council of Governments
San Gabriel Valley Economic Partnership
San Gabriel Valley Mosquito & Vector Control District
San Marino Chamber of Commerce
Santa Ana Chamber of Commerce
Sierra Madre Chamber of Commerce
South Bay Association of Chambers of Commerce
South Bay Cities Council of Governments
South Pasadena Chamber of Commerce
Southern California Association of Governments
Southern California Edison
Temple City Chamber of Commerce
The Metropolitan Water District of Southern California
Valley Industry & Commerce Association
Western Riverside Council of Governments

In October, staff represented South Coast AQMD and/or provided updates or a presentation to the following community and educational groups and organizations:

Cal Poly Pomona
Cal State University, Northridge
Cal State University, San Bernardino
Colton Joint Unified School District
Discovery Cube Los Angeles
League of Women Voters
Pasadena City College
San Bernardino City Unified School District
San Bernardino Valley College
San Gabriel Mountains Community Collaborative
The Nature Conservancy
Trust for Public Land
University of California, Riverside

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 10

REPORT: Report to Legislature and CARB on South Coast AQMD's Regulatory Activities for Calendar Year 2022

SYNOPSIS: South Coast AQMD is required by law to submit a report to the Legislature and CARB on its regulatory activities for the preceding calendar year. The report is to include a summary of each rule and rule amendment adopted by South Coast AQMD, number of permits issued, denied, or cancelled, emission offset transactions, budget and forecast, and an update on the Clean Fuels program. Also included is the Annual RECLAIM Audit Report, as required by RECLAIM Rule 2015 - Backstop Provisions.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:

Receive and file the attached report and direct staff to forward the final report to the Legislature.

Wayne Natri
Executive Officer

DA:LTO:RAR:HC

Background

In 1990, the Legislature directed South Coast AQMD to provide an annual review of its regulatory activities (SB 1928, Presley), and specified the type of information required (Health and Safety Code § 40452). Many of the required elements overlap with other requirements of separate legislation. For example, information on South Coast AQMD's Clean Fuels Program is a requirement of this report but is also a separate requirement under legislation passed in 1999 (SB 98, Alarcón). The purpose of this report is to fill in pieces of additional data needed to compile a comprehensive regulatory overview. Most of the information included in this report is not new but is simply a compilation of information previously seen by the Board.

The specific requirements of this report include:

- A summary of each major rule and rule amendment adopted by the Board;
- The number of permits to operate or permits to construct that were issued, denied, cancelled or not renewed;
- Data on emission offset transactions and applications during the previous year;
- The budget and forecast of staff increases or decreases for the following fiscal year;
- An identification of the source of all revenues used to finance South Coast AQMD's activities;
- An update on South Coast AQMD's Clean Fuels program; and
- The annual RECLAIM Audit Report. It is included as required by South Coast AQMD Rule 2015: Backstop Provisions.

Attachment

Report to the Legislature on the Regulatory Activities of South Coast AQMD for Calendar Year 2022.¹

¹ Due to the bulk of these materials, chapters III, IV and V of the report can be found online at <http://www.aqmd.gov/home/research/documents-reports>. Anyone who would like to obtain a hard copy of these materials may do so by contacting South Coast AQMD's Public Information Center at (909) 3962001.

**REPORT TO THE LEGISLATURE ON THE
REGULATORY ACTIVITIES OF THE
SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT**

**Pursuant to
Chapter 1702, Statutes of 1990 (SB 1928)**



August 2023
Cleaning the Air that We Breathe ...

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

GOVERNING BOARD

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Senator (Ret.)
Senate Rules Committee Appointee

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Councilmember, South Pasadena
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Cities of Orange County Representative

Jose Luis Solache
City Counsel, Lynwood
Cities of Los Angeles County Representative

Wayne Natri
Executive Officer

TABLE OF CONTENTS

	<u>PAGE No.</u>
EXECUTIVE SUMMARY	3
CHAPTER I	
RULE DEVELOPMENT, CEQA, AND SOCIOECONOMIC IMPACT ANALYSES	
• Rule Adoptions and Amendments in 202 2 and CEQA Alternatives	3
• Socioeconomic Impact Analyses	12
CHAPTER II	
ENGINEERING AND PERMITTING ACTIVITIES	
• Engineering and Permitting	35
• Annualized Emissions Reduction Credit (ERC) and Short-Term Emission Reduction Credit (STERC) Transactions for Fiscal Year 2020-2021 (California Health and Safety Code Section 40452)	105
CHAPTER III	
BUDGET AND WORK PROGRAM FISCAL YEAR 2022-2023 (Attachment as a link)	108
CHAPTER IV	
CLEAN FUELS PROGRAM 2021 ANNUAL REPORT AND 2022 PLAN UPDATE (Attachment as a link)	109
CHAPTER V	
ANNUAL RECLAIM AUDIT REPORT FOR 2020 COMPLIANCE YEAR (Attachment as a link)	110

EXECUTIVE SUMMARY

Introduction

South Coast Air Quality Management District (South Coast AQMD) is subject to internal and external reviews of its air quality programs. These include annual reviews of South Coast AQMD's budget, forecast and proposed operating budget for the upcoming fiscal year, and compliance program audits. In addition, South Coast AQMD is required to submit to the California Air Resources Board (CARB) and State Legislature an annual review of its regulatory activities for the preceding calendar year. The attached report satisfies this latter requirement, which is mandated pursuant to Chapter 1702, Statutes of 1990 (SB 1928, Presley), Section 40452 of the California Health and Safety Code.

Rule and Plan Development Projects Approved in 2022 and CEQA Alternatives

This section contains a summary of the adoption or amendment of each rule and plan development project approved by the South Coast AQMD Governing Board in the preceding calendar year (e.g., 2022). Each summary contains information about the estimated emission reductions, cost-effectiveness, alternatives considered pursuant to the requirements in the California Environmental Quality Act (CEQA), socioeconomic impacts, and sources of funding.

South Coast AQMD operates under a regulatory program certified by the Secretary for Resources pursuant to Public Resources Code Section 21080.5 and California Environmental Quality Act (CEQA) Guidelines Section 15251(l) and implemented pursuant to South Coast AQMD Rule 110. The adoption or amendment of South Coast AQMD rules and regulations are subject to South Coast AQMD's certified regulatory program for CEQA, while the adoption or amendment of plans such as the Air Quality Management Plan (AQMP) are not. Having a certified regulatory program means South Coast AQMD can incorporate its environmental analyses into CEQA documents other than environmental impact reports (EIRs), negative declarations (NDs), or mitigated NDs (MNDs) without being subject to a limited number of specific CEQA requirements identified in Public Resources Code Section 21080.5. Instead, all CEQA documents prepared by South Coast AQMD pursuant to its certified regulatory program are either called an Environmental Assessment (EA), or some variant of an EA such as a Subsequent or Supplemental EA, or Addendum to an EA. For any rule or plan development project that is determined to be exempt from CEQA, regardless of whether the project is subject to the South Coast AQMD's certified regulatory program, a Notice of Exemption, while not required, can be prepared.

In 2022, the South Coast AQMD Governing Board adopted or amended the following major rules, regulations, and plan projects for which a public workshop was conducted: Rules 218.2, 218.3, 219, 403.2, 429, 429.2, 461, 461.1, 1115, 1134, 1135, 1147, 1147.2, 1168, 1460, and 1480, Regulation III (which is comprised of Rules 301, 303, 304, 304.1, 306, 307.1, 308, 309, 311, 313, 314, 315, 316, and 320), and the 2022 AQMP. Refer to Chapter 1 for more details regarding these approved major rule/regulation and plan projects.

Socioeconomic Impact Assessments

Health and Safety Code Sections 40440.8 and 40728.5 require that South Coast AQMD perform socioeconomic impact assessments for its rules and regulations that will significantly affect air quality or emissions limitations. Prior to implementing the requirements of Health and Safety Code, South Coast AQMD staff had been evaluating the socioeconomic impacts of its actions pursuant to a 1989 Governing Board Resolution. Additionally, South Coast AQMD staff assesses socioeconomic impacts of CEQA alternatives analyzed for rules with significant cost and emission reduction impacts.

The elements of socioeconomic impact assessments include direct effects on various types of affected industries and businesses in terms of control costs and cost-effectiveness as well as public health benefits associated with AQMPs. Additionally, South Coast AQMD staff uses an economic model developed by Regional Economic Models, Inc. (REMI) to analyze the potential direct and indirect socioeconomic impacts of South Coast AQMD rules on Los Angeles, Orange, Riverside, and San Bernardino Counties. These impacts include, but are not limited to, employment and competitiveness.

In 2022, the South Coast AQMD identified and analyzed potential socioeconomic impacts of four new rules (Rule 403.2, Rule 461.1, Rule 1147.2 and Rule 1460) and amendments to two existing rules (Rule 1147 and Rule 1168) that will significantly affect air quality or emissions limitations. Additionally, a socioeconomic impact assessment is prepared annually for Rule 320 because it contains a requirement for an automatic annual California Consumer Price Index (CPI) adjustment to most fees paid to South Coast AQMD. Similarly, a socioeconomic impact assessment was also prepared for the amendments to Regulation III – Fees. Finally, staff prepared a Socioeconomic Report in order to inform decision-makers and stakeholders about the potential costs and benefits of the 2022 AQMP and how the associated socioeconomic impacts would affect communities within the region.

Engineering and Permitting

Background

Section 40452 of the California Health and Safety Code requires that the South Coast AQMD (SCAQMD) submit an annual report to both the state board and Legislature that summarizes its regulatory activities for the preceding calendar year. Paragraph (b) of Section 40452 requires that the annual report include data on “the number of permits to operate or to construct, by type of industry, that are issued and denied, and the number of permits to operate that are not renewed.” Paragraph (c) of section 40452 requires that the annual report also includes data on emission offset transactions and applications during the previous fiscal year, including an accounting of the number of applications for permits for new or modified sources that were denied because of the unavailability of emission offsets. In addition, SCAQMD Rule 2015 requires submittal of the annual Regional Clean Air Incentives Market (RECLAIM) Audit Report for the 2022 Compliance Year to the Legislature.

The following paragraphs provide a brief summary for each report.

Permitting Data – Calendar Year 2022

During calendar year 2022, South Coast AQMD dispositioned a total of 5,931 applications. Most of these applications were for Permits to Operate (1,785), Plans (1,220), Area Sources & Certified/ Registrations (1,134), and Changes of Operators (910). Also, 941 permits were not renewed. This data, broken down into nine different categories, is summarized in Table 1.

Table 2 contains a breakdown of permits dispositioned (in the nine categories) by type of industry. The type of industry was based on North American Industry Classification System (NAICS) codes, which were provided by the applicant at the time of application filing. The top three NAICS codes were 445110 – Supermarkets and Other Grocery Retailers, 447110/447190 – Gasoline Service Stations, and 811121 - Automotive Body, Paint, and Interior Repair and Maintenance.

Emission Offset Transactions Data – Fiscal Year 2021/2022

During fiscal year 2021-2022, a total of 37 emission offset transactions were completed, which includes 26 transactions for reactive organic gases (ROG), 4 transactions for oxides of nitrogen (NO_x), 2 transactions for oxides of sulfur (SO_x), and 5 transactions for particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀). There were no transactions for carbon monoxide (CO). The amounts of emissions offsets transferred, by pollutant, include 504 pounds per day of ROG, 20 pounds per day of NO_x, 46 pounds per day of SO_x, and 11 pounds of PM₁₀ (see Table 3 in the Annualized Publication of Emission Reduction Credit (ERC) and Short-Term Emission Reduction Credit (STERC) Transactions for Fiscal Year 2021-22 (California Health and Safety Code 40452)). No banking applications resulting in the issuance of new emission offsets for ROG, NO_x, SO_x, CO or PM₁₀ were processed. Additionally, no applications were denied for a permit for a new source for the reason of failure to provide the required emission offsets. (See Table 4 in the Annualized Publication of Emission Reduction Credit (ERC) and Short-Term Emission Reduction Credit (STERC) Transactions for Fiscal Year 2021-22 (California Health and Safety Code 40452).

RECLAIM Audit Report

The REgional CLean Air Incentives Market (RECLAIM) program was adopted in 1993 to provide facilities with flexibility in achieving the same emissions reduction goals as would have been achieved under the traditional command and control approach, while lowering the cost of compliance. To ensure RECLAIM is achieving its goal, South Coast AQMD Rule 2015 - Backstop Provisions, requires preparation of an annual audit report on the program. This Annual RECLAIM Audit Report assesses emission reductions, availability of RECLAIM Trading Credits (RTCs) and their average annual prices, job impacts, compliance issues, and other

measures of performance for the twenty-fourth year of this program. The results of the annual audit show that RECLAIM continues to meet its aggregate emission goals and all other specified objectives.

As discussed in more detail in the audit report (see Chapter V), a total of 237 facilities were in the RECLAIM program at the end of Compliance Year 2021. Audited NOx emissions from RECLAIM facilities were 22% less than programmatic NOx allocations, and audited SOx emissions were 17% less than programmatic SOx allocations. The vast majority of RECLAIM facilities complied with their allocations during the 2021 compliance year (95% of NOx facilities and 97% of SOx facilities).

A total of over \$1.58 billion in RTCs has been traded since the adoption of RECLAIM, of which \$21.8 million occurred in calendar year 2022 (compared to \$22.0 million in calendar year 2021), excluding swaps. The annual average prices of discrete-year NOx and SOx RTCs and infinite-year block (IYB – trades that involve blocks of RTCs with a specified start year and continuing in perpetuity) NOx and SOx RTCs reported in January 2023 and April 2023 show that the average 12-month and 3-month rolling average price for Compliance Year 2023 NOx RTCs exceeded the applicable Rule 2002 price thresholds, and the annual price per ton threshold for Compliance Years 2021 through 2025 exceeded Rule 2015 thresholds. As such, the provisions of Rule 2002 (f)(1)(H) and Rule 2015 (b)(6) triggered subsequent action to conduct assessments of the RECLAIM program and provide recommendations to the Board. These assessments and recommendations were reported to the Governing Board on June 3, 2022, and August 5, 2022. At the March 3, 2023 Governing Board meeting, the Board resolved that the circumstances have not changed and continuing analysis is not required.

In Compliance Year 2021, RECLAIM facilities reported a net loss of 1,381 jobs, representing 1.70% of their total employment. The RECLAIM program also met other applicable requirements including meeting the applicable federal offset ratio under New Source Review and having no significant seasonal fluctuation in emissions. Additionally, there is no evidence that RECLAIM resulted in any increase in health impacts due to emissions of air toxics.

Refer to Chapter V for the “Annual RECLAIM Audit Report for 2020 Compliance Year. ”

Budget and Work Program

Refer to Chapter II for the Fiscal Year 2023-2023 Budget Report.

Clean Fuels Programs

2022 Annual Report

In calendar year 2022, the South Coast AQMD Clean Fuels Program executed 21 new contracts, projects or studies and modified five continuing projects adding dollars toward research, development, demonstration, and deployment projects as well as technology assessment and transfer of alternative fuel and clean fuel technologies. South Coast AQMD’s Clean Fuels Program contributed over \$7.4 million in partnership with other governmental organizations,

private industry, academia, and research institutes, and interested parties, with total project costs of approximately \$74.1 million. The \$7.4 million includes \$304,000 recognized into the Clean Fuels Fund as pass-through funds from project partners for project administration by the Clean Fuels Program. Additionally, in calendar year 2022, the Clean Fuels Program continued to leverage outside funding opportunities, securing new awards totaling almost \$3.3 million from federal, state, and local funding opportunities. The significant project scope of a few key contracts executed in 2022 resulted in high leveraging of Clean Fuels dollars. Typical historical leveraging is \$4 for every \$1 in Clean Fuels funding. In 2022, South Coast AQMD exceeded this upward trend with almost \$10 leveraged for every \$1 in Clean Fuels funds. Leveraging dollars and aggressively pursuing funding opportunities is critical given the magnitude of needed funding identified in the 2022 AQMP to achieve NAAQS.

The projects or studies executed in 2022 included a diverse mix of advanced technologies. The following core areas of technology advancement for 2022 executed contracts (in order of funding percentage) include:

1. Electric and Hybrid Vehicle Technologies and Infrastructure (including battery electric and hybrid electric trucks developed by OEMs and container transport technologies with zero emission operations);
2. Technology Assessment and Transfer/Outreach;
3. Engine Systems/Technologies (including alternative and renewable fuels for truck and rail applications);
4. Hydrogen and Mobile Fuel Cell Technologies and Infrastructure;
5. Stationary Clean Fuels Technologies (including microgrids and renewables);
6. Fuel and Emissions Studies;
7. Fueling Infrastructure and Deployment (NG and renewable fuels); and
8. Emissions Control Technologies; and
9. Health Impacts Studies

During calendar year 2022, South Coast AQMD supported a variety of projects and technologies, ranging from near-term to long-term research, development, demonstration, and deployment activities. This “technology portfolio” strategy provides South Coast AQMD the ability and flexibility to leverage state and federal funding while also addressing the specific needs of the Basin. Projects included significant battery electric and hybrid electric technologies and infrastructure to develop and demonstrate medium- (MD) and heavy- (HD) vehicles in support of transitioning to near-zero and zero emission goods movement; development, demonstration, and deployment of large displacement ultra-low NOx engines; and demonstration of hydrogen fuel cell MD and HD vehicles and infrastructure.

In addition to the 26 executed contracts and projects, 46 research, development, demonstration and deployment projects or studies and 11 technology assessment and transfer contracts were completed in 2022. As of January 1, 2023, there were 74 open contracts in the Clean Fuels Program.

In accordance with California H&SC Section 40448.5.1(d), this annual report must be submitted to the state legislature by March 31, 2023, after approval by the South Coast AQMD Board.

2023 Plan Update

The Clean Fuels Program is re-evaluated annually to develop the annual Plan Update based on a reassessment of the technology progress and direction for the agency. The Program continually seeks to support the development and deployment of cost-effective clean fuel technologies with increased collaboration with OEMs to achieve large scale deployment. The design and implementation of the Clean Fuels Program Plan must balance the needs in the various technology sectors with technology readiness on the path to commercialization, emission reduction potential and co-funding opportunities. For several years, the state has focused a great deal of attention on climate change and petroleum reduction goals, but South Coast AQMD has remained committed to developing, demonstrating, and commercializing technologies that reduce criteria pollutants, specifically NO_x, and toxic air contaminants (TACs). Most of these technologies address the Basin's need for NO_x and TAC reductions and garner reductions in greenhouse gases (GHG) and petroleum use. Due to these co-benefits, South Coast AQMD has been successful in partnering with the state and public/private partnerships to leverage its Clean Fuels funding.

To identify technology and project opportunities where funding can make a significant difference in deploying cleaner technologies in the Basin, South Coast AQMD engages in outreach and networking efforts. These activities range from close involvement with state and federal collaboratives, partnerships, and industrial coalitions, to the issuance of Program Opportunity Notices (PONs) to solicit project ideas and concepts and Requests for Information (RFIs) to determine the current state of technologies and their development and commercialization challenges. Additionally, unsolicited proposals from OEMs and other clean fuel technology developers are regularly received and reviewed. Potential development, demonstration and certification projects resulting from these outreach and networking efforts are included conceptually within the 2023 Clean Fuels Plan Update.

Assembly Bill (AB) 617 requires reduced exposure to communities most impacted by air pollution; TAO conducts additional outreach to AB 617 communities regarding available zero and near-zero emission technologies and incentives to accelerate deployment of cleaner technologies. Cleaner technologies such as near-zero and zero-emission HD trucks are now included in the Community Emission Reduction Plans (CERPs) for these AB 617 communities, and an RFP for a zero emission HD truck loaner program is being developed and will be released in 2023. This program will allow smaller fleets and independent owner operators to learn about zero emission trucks by trying them out in their business operations. This program is being funded through Community Air Protection Program (CAPP) funds but utilizes zero emission truck technologies developed under the Clean Fuels Program.

Since 2020, CARB has adopted several critical milestone regulations for reducing emissions from on-road HD mobile sources. These regulations include: 1) Advanced Clean Truck (ACT) regulation which mandates an increasingly higher percentage of zero emission truck sales

starting in 2024, 2) Omnibus Low NOx regulation which requires lower exhaust NOx standards on HD engines starting in 2024, and 3) HD Vehicle Inspection and Maintenance Program for removing high emitters from legacy trucks. CARB is also taking the proposed Advanced Clean Fleets regulation as well as the 2022 State Implementation Plan (SIP) Strategy for Board consideration in 2023.

On the federal level, U.S. EPA has finalized a national low NOx truck rule in December 2022. The “Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards,” sets more stringent emissions from HD vehicles starting in model year 2027. This regulation is one of three rulemakings planned under the EPA Clean Trucks Plan. Two additional rulemakings are planned for 2023 that would include Phase 3 heavy-duty GHG standards and light- (LD) and MD vehicle standards for model years 2027.² Both the federal and state low-NOx regulations complement various zero emission regulations and will together bring much needed mobile source NOx reductions to the South Coast Air Basin.

On May 7, 2021, South Coast AQMD adopted the Warehouse Actions and Investments to Reduce Emissions (WAIRE) program to reduce NOx and DPM emissions from indirect sources such as warehouse facilities. The San Pedro Bay Ports implemented the Clean Truck Fund (CTF) to generate funds for achieving the goal of zero emission drayage trucks by 2035. Despite these major efforts, additional NOx emission reductions in the South Coast Air Basin are needed to meet ozone attainment target deadlines.

The Plan Update includes projects to develop, demonstrate and commercialize a variety of technologies, from near-term to long-term commercialization, that are intended to provide significant emission reductions over the next five to ten years. Areas of focus include:

- Developing and demonstrating technologies to reduce emissions from goods movement and Port related activities, including zero emission drayage trucks and infrastructure;
- Developing and demonstrating ultra-low NOx, gaseous and liquid alternative/renewable fueled, large displacement/high efficiency engines and HD zero emission engine technologies;
- Mitigating criteria pollutant emissions from the production of renewable fuels, such as renewable natural gas, diesel and hydrogen as well as other renewable, low/zero carbon fuels and waste streams;
 - Producing transportation fuels and energy from renewable and waste stream sources;

1 <https://ww2.arb.ca.gov/capp>

2 Final Rule and Related Materials for Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards | US EPA

- Developing and demonstrating electric-drive (fuel cell, battery, plug-in hybrid and non-plug-in hybrid) technologies across LD, MD and HD platforms;
- Establishing large-scale hydrogen fueling and electric vehicle (EV) charging infrastructure to support LD, MD and HD zero emission vehicles;
- Ultra-fast, higher power charging for HD battery electric vehicles;
- Developing and demonstrating zero emission microgrids that utilize battery energy storage systems and onsite clean power generation to support transportation electrification demands associated with goods movement and freight handling activities.

Potential projects across ten core technologies by funding priority:

- Hydrogen / Mobile Fuel Cell Technologies;
- Electric / Hybrid Technologies (battery electric and hybrid electric trucks and container transport technologies with zero emission operations);
- Zero Emission Infrastructure (especially large-scale fueling and production facilities and stations that support MD and HD vehicles);
- Engine Systems / Technologies (alternative and renewable fuels for truck and rail applications);
- RNG Infrastructure (renewable natural gas and renewable fuels);
- Stationary Clean Fuel Technologies (microgrids that support EV and Hydrogen infrastructure and renewables);
- Fuel and Emission Studies;
- Emission Control Technologies;
- Health Impact Studies within disadvantaged communities; and
- Technology Assessment and Transfer / Outreach
- These potential projects for 2023 total \$19.8 million of Clean Fuels funding, with the anticipation of total project costs of \$118.7 million, leveraging \$6 for every \$1 of Clean Fuel funds spent. Some proposed projects may also be funded by other funding sources, such as state and federal grants for clean fuel technologies, incentive programs such as AB 617 CAPP funding, Volkswagen Mitigation, and Carl Moyer, and other mitigation funds.

CHAPTER I
RULE DEVELOPMENT, CEQA, and SOCIOECONOMIC IMPACT ANALYSES

RULE DEVELOPMENT PROJECTS APPROVED IN 2022 AND CEQA ALTERNATIVES

This section summarizes each adoption, amendment, and plan development project approved by the South Coast AQMD Governing Board in the preceding calendar year (i.e., 2022). Each summary provides information about the estimated emission reductions, cost-effectiveness, alternatives considered, if applicable, pursuant to the requirements in the CEQA, socioeconomic impacts, and sources of funding.

Projects undertaken by public agencies are subject to CEQA. For any proposal that is either not a “project” or determined to be exempt from CEQA, no further action is required. However, if a project has the potential to create significant or less than significant adverse effects on the environment, then an environmental analysis is necessary. Typically, South Coast AQMD’s development of rules/regulations and plans are considered to be a “project” as defined by CEQA. If the project is not considered exempt, then the adoption of new rules and plans, or the amendment to existing rules and plans require a comprehensive CEQA document that contains an environmental impact analysis which includes the following:

- Identification of potentially significant adverse environmental impacts evaluated based on environmental checklist topics;
- Identification of feasible measures, if any, to mitigate significant adverse environmental impacts to the greatest extent feasible;
- If necessary, a discussion and comparison of the relative merits of feasible project alternatives that generally achieve the goals of the project, but may generate fewer or less severe adverse environmental impacts; and,
- Identification of environmental topics not significantly adversely affected by the project.

If significant adverse environmental impacts are identified, feasible mitigation measures, if any, and alternatives must be identified and an analysis of the relative merits of each alternative is required. However, if the CEQA document concludes that no significant adverse environmental impacts would be generated by a proposed project, neither the identification of feasible mitigation measures nor an analysis of CEQA alternatives to the project is required. However, even if a project is determined not to have significant environmental impacts, the CEQA document will contain a focused analysis of the potential environmental impacts.

South Coast AQMD operates under a regulatory program certified by the Secretary for Resources pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(l) and implemented pursuant to South Coast AQMD Rule 110. The adoption or amendment of South Coast AQMD rules and regulations are subject to South Coast AQMD’s certified regulatory program for CEQA, while the adoption or amendment of plans such as the AQMP are not. Having a certified regulatory program means that the South Coast AQMD can incorporate its environmental analyses into CEQA documents other than environmental impact reports (EIRs), negative declarations (NDs), or mitigated NDs (MNDs) without being subject to a limited number of specific CEQA requirements identified in Public Resources Code Section 21080.5. Instead, all CEQA documents prepared by South Coast AQMD pursuant to its certified regulatory program are either called an Environmental Assessment (EA), or some variant of an EA such as a Subsequent or Supplemental EA, or Addendum to an EA. For any rule or plan

development project that is determined to be exempt from CEQA, regardless of whether the project is subject to the South Coast AQMD's certified regulatory program, a Notice of Exemption, while not required, can be prepared.

In 2022, the South Coast AQMD Governing Board adopted or amended the following major rules, regulations, and plan projects for which a public workshop was conducted, and which are presented in sequential order according to the month of project approval. Alternatives are summarized only for those projects identified as having potentially significant impacts requiring an alternatives analysis pursuant to CEQA.

JANUARY 7, 2022

Two projects were approved by the South Coast AQMD Governing Board in January:

- 1. Amended Rule 1135 – Emissions of Oxides of Nitrogen from Electricity Generating Facilities, and Adopted Rule 429.2 – Startup and Shutdown Exemption Provisions for Oxides of Nitrogen from Electricity Generating Facilities:** Rule 1135 was amended to: 1) remove ammonia limits which are addressed instead during permitting; 2) reference Rule 429.2 for startup and shutdown requirements; 3) reference the amended and adopted Rule 218-series rules relating to requirements for Continuous Emission Monitoring Systems (CEMS); 4) revise the requirements for diesel internal combustion engines located on Santa Catalina Island; and 5) provide additional clarifications for continuity throughout the rule. Rule 429.2 was adopted to establish startup and shutdown requirements applicable to combustion equipment subject to Rule 1135. Specifically, Rule 429.2 contains the following elements: 1) an exemption of electricity generating units from Rule 1135 nitrogen oxides (NOx) concentration limits during startup and shutdown events for specified durations; 2) limit the number of scheduled startup events; 3) establish best management practices during startup and shutdown events; and 4) establish recordkeeping requirements. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and AB 617.

- 2. Adopted Rule 461.1 – Gasoline Transfer and Dispensing for Mobile Fueling Operations, Amended Rule 461– Gasoline Transfer and Dispensing, and Amended Rule 219– Equipment Not Requiring a Written Permit Pursuant to Regulation II:** Rule 461.1 was adopted to minimize emissions of volatile organic compounds (VOC) and toxics from mobile fueling operations. It established requirements applicable to: 1) an owner or operator of a mobile fueler conducting retail or non-retail mobile fueling operations; and 2) any person who installs, repairs, maintains, supplies, sells, or offers for sale components of a mobile fueler, conducts any test for a mobile fueler, or manufactures California Air Resources Board (CARB) certified control equipment or the associated components thereof. Rule 461 was amended to remove specific provisions pertaining to the requirements and emissions control equipment associated with mobile

fueling operations since these requirements were included in Rule 461.1 and to address outdated definitions and provisions. Rule 219 was amended to: 1) remove mobile fuelers from the existing exemption; 2) add two separate exemptions for retail and non-retail mobile fuelers along with the new lower cumulative capacity mobile fueler thresholds from Rule 461.1; and 3) allow mobile fuelers that were previously exempt to continue to be exempt until July 1, 2022. The combined implementation of Rules 219, 461, and 461.1, were concluded to result in less than significant increases of VOC and toxic emissions and associated public health risk from mobile fueling operations. A Final EA was prepared for the project and the analysis concluded that there would be no significant adverse environmental impacts; thus, no alternatives analysis was required.

Estimated Emission Reductions: Not Quantified. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and CARB Subvention Funding.

FEBRUARY 4, 2022

One project was approved by the South Coast AQMD Governing Board in February:

Amended Rule 1134 – Emissions of Oxides of Nitrogen from Stationary Gas Turbines: Rule 1134 was amended to apply to facilities which have been previously participating in the NOx cap-and-trade remove ammonia limits for selective catalytic reduction systems that will be addressed during permitting, clarify applicable NOx concentration limits for recuperative gas turbines, and incorporate a narrow exemption for use of liquid fuel for turbines used at health facilities during natural gas curtailments. Other amendments included an update to provisions for Continuous Emission Monitoring Systems, remove startup and shutdown permit requirements which will be addressed in Rule 429 – Start-Up and Shutdown Exemption Provisions for Oxides of Nitrogen, and provide other clarifications. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not Applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and AB 617.

MARCH 4, 2022

One project was approved by the South Coast AQMD Governing Board in March:

Amended Rule 1115 – Motor Vehicle Assembly Line Coating Operations: Rule 1115 was amended to: 1) update the VOC emission limits for coatings used in automotive assembly line processes and for other miscellaneous materials used at motor vehicle assembly coating operations to comply with United States Environmental Protection Agency (U.S. EPA) Reasonably Available Control Technology requirements and their recommended 2008 Control Techniques Guidelines for Automobile and Light-Duty

Truck Assembly Coatings; 2) separate the previously combined purpose and applicability subdivision into two parts; 3) revise the applicability requirements to include automotive parts that are coated during the vehicle assembly process and exclude activities that would be subject to Rule 1151; 4) add new and modify existing definitions of terms; 5) update recordkeeping requirements; 6) revise the methods of analysis to include an additional test method for determining VOC and solids content of coatings and to update the criteria for determining transfer efficiency; and 7) delete the exemptions for trunk coatings, interior coatings, sealers, deadeners, and accent and stripe coatings. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees and Annual Operating Fees.

APRIL 1, 2022

One project was approved by the South Coast AQMD Governing Board in April:

Adopted Rule 1147.2 – NO_x Reductions from Metal Melting and Heating Furnaces: Rule 1147.2 was proposed to apply to facilities currently or formerly participating in the NO_x RECLAIM program pursuant to South Coast AQMD Regulation XX, as well as non-RECLAIM facilities. Rule 1147.2 was adopted to reduce NO_x emissions and limit carbon monoxide (CO) emissions from metal melting furnaces, metal heat treating furnaces, and metal heating and forging furnaces which require a South Coast AQMD permit at RECLAIM, former RECLAIM, and non-RECLAIM facilities. Rule 1147.2 requirements apply to defined equipment categories and include: 1) NO_x and CO emission limits with compliance schedules; 2) monitoring, reporting, and recordkeeping requirements; and 3) exemptions from specific provisions. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: 0.50 ton of NO_x per day. *Cost-Effectiveness:* \$12,100 per ton of NO_x reduced. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and AB 617.

MAY 6, 2022

Two projects were approved by the South Coast AQMD Governing Board in May:

- 1. Amended Rule 1147 – NO_x Reductions from Miscellaneous Sources:** The following amendments to Rule 1147 were proposed to apply to facilities currently or formerly participating in the NO_x RECLAIM program pursuant to South Coast AQMD Regulation XX, as well as non-RECLAIM facilities: 1) expand the applicability to include non-RECLAIM, RECLAIM, and former RECLAIM facilities that operate gaseous fuel-fired

combustion equipment with a rated heat input of greater than or equal to 325,000 British thermal units per hour; 2) establish NO_x emission limits for all miscellaneous permitted equipment categories, and a CO emission limit of 1,000 ppmv for applicable equipment, depending on the application and process temperature as well as implementation timeframes; 3) establish interim limits for equipment located at former RECLAIM facilities to prevent backsliding for any RECLAIM facility exiting the RECLAIM program prior to the effective dates of the NO_x and CO emission limits; 4) add new and modify existing definitions of terms; and 5) update requirements for monitoring, reporting, and recordkeeping. Equipment achieving the current Rule 1147 concentration limits will be required to meet the proposed concentration limits by July 1, 2023, or when the burner would reach 32 years of age, whichever would be later. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: 1.59 ton of NO_x per day. *Cost-Effectiveness:* Ranges from \$5,000 to \$49,000 per ton of NO_x reduced. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding:* Permit Fee, Emission Fees, Annual Operating Fees, and AB 617.

- 2. Amended Regulation III – Fees, and Amended Rule 1480 – Ambient Monitoring and Sampling of Metal Toxic Air Contaminants:** Regulation III, which is comprised of Rules 301, 303, 304, 304.1, 306, 307.1, 308, 309, 311, 313, 314, 315, and 316, was amended to increase most fees by 6.5 percent to be consistent with the California Consumer Price Index. In addition, Regulation III was also amended to: 1) increase the Rule 1180 community air monitoring annual operating and maintenance fees; 2) add a new equipment category in Rule 301 to correct permit fee rates for certain spray booths; 3) add Rule 1109.1 plans to list of plans subject to existing Rule 306; 4) add Rule 463 Floating Roof Tank Seal Certifications to the list of plans subject to existing Rule 306; 5) add Operation, Maintenance, and Monitoring Plans for Petroleum Refineries to the list of plans subject to existing Rule 306; 6) clarify the applicable permit processing fees in Rule 301; and 7) remove an existing fee exemption for Rule 1466 notification. Rule 1480 was amended to relocate the fees specific to conducting monitoring/sampling and evaluating plans to Rules 301 and 306, respectively. Other administrative amendments were incorporated for continuity and consistency. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* None, not required. *Socioeconomic Impact:* See Socioeconomic Impact Analysis section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees, Area Source Fees and AB 617.

JUNE 3, 2022

One project was approved by the South Coast AQMD Governing Board in June:

Adopted Rule 403.2 – Fugitive Dust from Large Roadway Projects: Rule 403.2 was adopted to supplement the existing regulatory requirements in Rule 403 – Fugitive Dust, to reduce air quality impacts to nearby receptors resulting from fugitive dust generated by onsite activities associated with construction and/or demolition activities of a large roadway, including any adjacent bridge, overpass, or onramp. A large roadway is designated as functional classification “Interstate” (FC1) or “Other Freeway or Expressway” (FC2) pursuant to the Federal Highway Administration. Rule 403.2 restricts aggregate crushing and grinding operations or the maintenance of a material pile within 100 feet of an area of public exposure or 250 feet of a sensitive receptor from occurring unless: 1) a water misting dust control system is used during aggregate crushing and grinding operations to prevent visible dust emissions from exceeding 100 feet in length in any direction, and the materials being recycled are generated from the large roadway project; and 2) for material piles, a material pile cover or equivalent method to control fugitive dust approved by Executive Officer is used. An area of public exposure means any area within the property line of any office, commercial or industrial property as well as any park, or open space/recreational facility, including associated structures and amenities specifically designated by a governmental agency or private entity for recreational purposes. For activities conducted within 500 feet of an area of public exposure or within 1,000 feet of a sensitive receptor, Rule 403.2 requires the: 1) implementation of enhanced fugitive dust control measures as currently required for Rule 403 Large Projects; 2) installation of signage around the project perimeter; and 3) appointment of a dust control supervisor responsible for ensuring rule compliance. In addition, Rule 403.2: 1) requires advance notification prior to the commencement of work for activities conducted within 1,000 feet of an area of public exposure or sensitive receptor; 2) requires recordkeeping, and 3) exempts large roadway project activities conducted during emergency, life-threatening situations, or by essential service utilities to provide electricity, natural gas, telephone, water, or sewer during service outages and emergency disruptions. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: Not quantified. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impacts Assessment section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and CARB Subvention Funding.

AUGUST 5, 2022

No rules or plans were adopted or amended by the South Coast AQMD Governing Board in August.

SEPTEMBER 2, 2022

Two rules were approved by the South Coast AQMD Governing Board in September:

- 1. Amended Rule 429 – Startup and Shutdown Provisions for Oxides of Nitrogen:** Rule 429 was amended to: 1) establish requirements during startup and shutdown events to limit NO_x and CO emissions; 2) provide an exemption from NO_x and CO concentration limits in various Regulation XI rules during startup and shutdown events for specified durations; 3) limit the frequency of scheduled startup events; 4) establish best management practices; 5) add new and modify existing definitions of terms; and 6) enhance existing notification and recordkeeping requirements. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not required. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees and CARB Subvention Funding.

- 2. Amended Rule 218.2 – Continuous Emission Monitoring System: General Provisions, and Amended Rule 218.3 – Continuous Emission Monitoring System: Performance Specifications:** Rules 218.2 and 218.3 were amended to: 1) include more specificity to the Executive Officer’s discretion on CEMS recertification requirements and the exemption provision; 2) extend the recordkeeping period; 3) provide more time for submitting the relative accuracy test audit report; 4) include an option to validate and accept data that would fall in a monitoring gap for dual range analyzers; 5) add specifications for conducting mass emission calculations data substitution procedures; and 6) clarify the method for linearity error checks. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: None. *Cost-Effectiveness:* Not applicable. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees, and Annual Operating Fees.

OCTOBER 7, 2022

No rules or plans were adopted or amended by the South Coast AQMD Governing Board in October.

NOVEMBER 4, 2022

Two projects were approved by the South Coast AQMD Governing Board in November:

- 1. Adopted Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations:** Rule 1460 was adopted to supplement existing requirements in South Coast AQMD Rule 403 to further reduce community exposure to fugitive dust emissions from metal recycling facilities and metal shredding facilities that process and recycle scrap metal. Rule 1460 includes the following provisions which: 1) require water to be sprayed during facility operations; 2) establish a vehicle speed limit; 3) require all areas where metal recycling and metal shredding activities occur to be paved in order to

minimize fugitive dust and track out; 4) require facilities to register with South Coast AQMD, install facility contact signage, and conduct housekeeping and recordkeeping activities; and 5) require facilities located near sensitive receptors to monitor wind speeds and cease specified activities during high winds. Rule 1460 also contains best management practices which provide options for minimizing fugitive dust from metal storage piles by: 1) spraying water; 2) installing three-sided enclosures; or 3) applying covers. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

Estimated Emission Reductions: Not quantified reduction of fugitive particulate matter (PM) emissions and community exposure. *Cost-Effectiveness:* Not required. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impacts Assessment section. *Source(s) of Funding:* Permit Fees, Emission Fees, Registration Fee, Annual Operating Fees, and Rule 1460 Registration Fees.

- 2. Amended Rule 1168 – Adhesive and Sealant Applications:** Rule 1168 was amended to: 1) prohibit the use of tertiary-Butyl Acetate (t-BAC) and paraChlorobenzotrifluoride (pCBtF) in adhesives and sealants due to toxicity concerns; 2) delay the effective dates of VOC limits or maintain the existing VOC limits for certain categories of adhesives and sealants where the technology assessment demonstrated the effective dates or VOC limits in the October 2017 version of Rule 1168 are not feasible; 3) create additional subcategories of regulated products to better characterize and refine VOC limits; 4) allow Opteon 1100 (cis-1,1,1,4,4,4-hexafluoro-2-butene/HFO-1336mzz-Z) as a VOC-exempt compound for Two-Component Foam Sealants used in an industrial or professional setting contingent upon an Office of Environmental Health Hazard Assessment (OEHHA) evaluation; 5) establish 10 new categories and subcategories based on the technology assessment; and 6) remove definitions, update, clarify, and streamline rule language.

A Final Subsequent Environmental Assessment (SEA) was prepared which tiers off the previously certified Final Environmental Assessment (EA) prepared for the amendments to Rule 1168 that were adopted on October 6, 2017 (referred to herein as the October 2017 Final EA for Rule 1168). The analysis in the Final SEA concluded that significant and unavoidable adverse air quality impacts during operation would occur due to delayed and permanent forgone VOC emission reductions which were not previously analyzed in the October 2017 Final EA for Rule 1168. No feasible mitigation measures were identified that would reduce these impacts to the less than significant levels. The following four alternatives were analyzed in the Final SEA:

Alternative A – No Project: Alternative A, the no project alternative, is what would occur if amendments to Rule 1168 were not approved. Under Alternative A, adhesives, sealants, sealant primers and adhesive primers would have to comply with the VOC emission limits in the October 2017 version of Rule 1168. Compliance with these VOC limits was projected to result in approximately 1.38 tons per day (tpd) of VOC emission reductions. However, manufacturers of

certain adhesives and sealants indicated that they needed more time to develop compliant products or cannot meet the applicable VOC limits by the January 1, 2023, effective date due to technological limitations, creating potential compliance issues, and likely resulting in the originally projected VOC emission reductions not being fully achieved. Moreover, under Alternative A, t-BAc and pCBtF would continue to be classified as VOC-exempt solvents and as such, could continue to be used in formulating adhesives and sealants that would be subject to the October 2017 version of Rule 1168 and manufacturers would have the opportunity in the future to develop additional products formulated with these toxic compounds. Therefore, under Alternative A, the potential for new formulations of adhesives and sealants containing t-BAc and pCBtF could increase the existing toxicity impacts and associated health risks.

Alternative B – More Stringent Proposed Project: Alternative B contemplated imposing more stringent requirements with less flexibility or relief to those subject to the rule. Under Alternative B, the required effective date to meet the proposed VOC limits would be six months earlier than the proposed project for the categories of One-Component Foam Sealant and Higher Viscosity CPVC Welding Cement while the effective date to meet the proposed VOC limit for Top and Trim Adhesive, Clear, Paintable, Immediately Water-Resistant Sealant, and Rubber Vulcanization Adhesive would need to occur 12 months earlier than the proposed project. All other elements would be the same under Alternative B as for the proposed project.

Alternative C – Less Stringent Proposed Project: Alternative C contemplated fewer requirements, higher (less stringent) emission limits to be achieved, and more flexibility or relief to those subject to the rule. Under Alternative C, the categories of Top and Trim Adhesive, One-Component Foam Sealant, Higher Viscosity CPVC Welding Cement, Clear, Paintable, Immediately Water-Resistant Sealant, and Rubber Vulcanization Adhesive would have an additional 12 months to meet the proposed VOC limits. All other elements would be the same under Alternative C as for the proposed project.

Alternative D – Extended Effective Dates for VOC Limits in October 2017 Version of Rule 1168: Alternative D proposed that the following categories of adhesives and solvents would meet the VOC limits in the October 2017 version of Rule 1168, but with an effective date of January 1, 2030 instead of January 1, 2023: One-Component Foam Sealant, Single Ply Roof Membrane Adhesive (including both subcategories of with and without EPDM/TPO), All Other Roof Sealants, All Other Roof Adhesives, and CPVC Welding Cement for Life Safety Systems. All other elements would be the same under Alternative D as for the proposed project.

The South Coast AQMD Governing Board certified the Final SEA and approved the project as proposed.

Estimated Emission Reductions: 0.42 and 0.28 ton per day (tpd) delayed and foregone emission reductions of VOC, respectively. *Cost-Effectiveness:* Not required. *CEQA Alternatives:* Four alternatives were analyzed, see alternatives described above. *Socioeconomic Impact:* Yes, see Socioeconomic Assessments section. *Source(s) of Funding:* Permit Fees, Emission Fees, and Annual Operating Fees and Area Source Fees.

DECEMBER 2, 2022

One plan was approved by the South Coast AQMD Governing Board in December:

Adopted 2022 Air Quality Management Plan (AQMP): The 2022 AQMP, the planning document that sets forth policies and measures to achieve federal and state ambient air quality standards in the region, was adopted in accordance with the U.S. EPA standards. U.S. EPA strengthened the National Ambient Air Quality Standard (NAAQS) for ground-level 8-hour ozone in 2015, by lowering the primary and secondary 8-hour ozone standard to 70 parts per billion. In addition, the 2022 AQMP contains control measures and strategies which have been developed to bring the South Coast Air Basin and the Coachella Valley into attainment with this standard by 2037. The 2022 AQMP control measures and strategies were developed to achieve this NAAQS by focusing on reducing emissions of NO_x, which are precursors to the formation of ozone, and other air pollutants. The 2022 AQMP is comprised of the following control measures which address stationary point and area and mobile sources: 1) the South Coast AQMD's Stationary and Mobile Source Control Measures; 2) control measures identified in the 2022 State Strategy for the State Implementation Plan by the California Air Resources Board; and 3) approved Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures provided by the Southern California Association of Governments. The 2022 AQMP also includes emission inventories, the most current air quality data, updated growth projections, new modeling techniques, demonstrations of compliance with state and federal Clean Air Act requirements, and an adoption and implementation schedule for the control strategies. The 2022 AQMP is designed to protect and improve public health for those living, working, and visiting the region within South Coast AQMD's jurisdiction.

A Final Program Environmental Impact Report (EIR) was prepared for the project and analysis concluded that impacts to the following environmental topic areas would be significant and unavoidable: 1) air quality during construction; 2) energy; 3) hazards and hazardous materials; 4) hydrology and water quality; 5) noise; and 6) solid and hazardous waste. The following four alternatives were analyzed in the Final Program EIR:

Alternative 1 - No Project Alternative: Alternative A, the no project alternative, is what would occur if the 2022 AQMP was not adopted and instead, the 2016 AQMP, which was adopted in March 2017, would continue to be implemented. The ozone portion and the 24-hour PM_{2.5} standard elements of the 2016 AQMP have been approved by the U.S. EPA into the state implementation plan (SIP). Although Alternative 1 would not generate any additional significant adverse impacts to any environmental topic areas beyond those identified for the 2016 AQMP, neither would Alternative 1 provide any of the air quality benefits, or meet any project objectives, including the primary project objective of complying with the 2015 federal 8-hour ozone standard (70 ppb). All remaining necessary

emission reductions to demonstrate attainment would be obtained through implementing federal CAA Section 182(e)(5), the methods of which are currently unknown.

Alternative 2 – Mobile Source Reduction Only: Under Alternative 2, only mobile source control measures proposed by both CARB and the South Coast AQMD would be implemented. Alternative 2 would achieve over 90 tons per day of NO_x emission reductions, but additional emission reductions through implementing federal CAA Section 182(e)(5) would be needed to comply with the federal 8-hour ozone standard (70 ppb).

Alternative 3 – Early Implementation of Control Measures: Under Alternative 3, the timeframe for implementing the proposed control measures would occur three years earlier so that all measures would be fully implemented by 2034.

Alternative 4 – All Regulatory/Non-Incentive Alternative: Under Alternative 4, only non-incentive control measures that could be directly implemented by the South Coast AQMD and/or CARB, and for which the South Coast AQMD and/or CARB has the authority to regulate would be implemented. Excluding incentive measures under Alternative 4 means that 6.8 tons per day of additional NO_x emission reductions would need to be achieved through other control measures in order to attain the 70 ppb 8-hour ozone standard. The additional emission reductions needed to compensate for the excluded incentive measures could come from any of the stationary source measures through implementing federal CAA Section 182(e)(5) measures, which are currently unknown.

The South Coast AQMD Governing Board certified the Final Program EIR and approved the project.

Estimated Emission Reductions: 124 tons of NO_x per day. *Cost Effectiveness:* \$1,500 to \$2,420,100 per ton of NO_x reduced and \$27,600 to \$50,400 per ton of VOC reduced, depending on the control measure. *CEQA Alternatives:* Four alternatives were analyzed, alternatives described above. *Socioeconomic Impact:* See Socioeconomic Impact Analysis section. *Sources of Funding:* Area Source Fees, CARB Subvention Funding, Permit Fees, Emission Fees, Annual Operating Fees, Transportation Fees, and Mobile Source Fees.

SOCIOECONOMIC IMPACT ASSESSMENTS

Health and Safety Code Sections 40440.8 and 40728.5 require that South Coast AQMD perform socioeconomic impact assessments for its rules and regulations that will significantly affect air quality or emissions limitations. Prior to implementing the requirements of Health and Safety Code, South Coast AQMD staff had been evaluating the socioeconomic impacts of its actions pursuant to a 1989 Governing Board Resolution. Additionally, South Coast AQMD staff assesses socioeconomic impacts of CEQA alternatives analyzed for rules and plans with significant cost and emission reduction impacts.

The elements of socioeconomic impact assessments include direct effects on various types of affected industries and businesses in terms of control costs and cost-effectiveness, as well as public health benefits associated with AQMPs. Additionally, South Coast AQMD staff uses an economic model developed by Regional Economic Models, Inc. (REMI) to analyze the potential direct and indirect socioeconomic impacts of South Coast AQMD rules on Los Angeles, Riverside, Orange, and San Bernardino Counties. These impacts include, but are not limited to, employment and competitiveness.

In 2022, the South Coast AQMD identified and analyzed potential socioeconomic impacts of four new rules (Rule 403.2, Rule 461.1, Rule 1147.2, and Rule 1460) and amendments to two existing rules (Rule 1147 and Rule 1168) that will significantly affect air quality or emissions limitations. Additionally, a socioeconomic impact assessment is prepared annually for Rule 320 because it contains a requirement for an automatic annual California Consumer Price Index (CPI) adjustment to most fees paid to South Coast AQMD. Similarly, a socioeconomic impact assessment was also prepared for the amendments to Regulation III – Fees. Finally, staff prepared a Socioeconomic Report in order to inform decision-makers and stakeholders about the potential costs and benefits of the 2022 AQMP and how the associated socioeconomic impacts would affect communities within the region.

NEWLY ADOPTED RULES WITH SOCIOECONOMIC IMPACTS

Rule 461.1- Gasoline Transfer and Dispensing for Mobile Fueling Operations (Adopted January 8, 2022)

Rule 461.1, which was adopted on January 8, 2022, applies to retail and non-retail mobile fuelers that are transferring or dispensing gasoline. Rule 461.1 is expected to affect 80 mobile fuelers across 38 Petroleum and Petroleum Products Merchant Wholesale facilities (North American Industry Classification System [NAICS] 424720) within South Coast AQMD's jurisdiction. Additionally, mobile fuelers that are not equipped with vapor recovery systems are expected to incur slightly increased costs for conversion to meet Amended Rule 461 requirements, but the number of operational units is presently indeterminate. Costs related to Rule 461.1 are expected to be minimal due to the overlap with existing requirements for Rule 461. The jobs and other regional economic impacts of Rule 461.1 are expected to be minimal.

Rule 1147.2 = NOx Reduction from Metal Melting and Heating Furnaces (Adopted April 1, 2022)

Rule 1147.2, which was adopted on April 1, 2022, established NOx and CO emission limits for metal melting, metal heat treating, and metal heating and forging units at non-RECLAIM, RECLAIM, and former RECLAIM facilities.

Approximately 21 RECLAIM facilities and approximately 65 non-RECLAIM facilities would be affected by Rule 1147.2. Out of these 86 affected facilities, 50 facilities are expected to incur additional compliance costs through burner replacement or installation of (Selective Catalytic Reduction) The remaining facilities may incur minor additional cost impacts, since units meet the alternative NOx limit, and they will meet the final NOx limit at the end of the useful life of their existing burner.

Out of the 50 affected facilities, 47 facilities are under the manufacturing sector (NAICS 31-33), two under wholesale trade (NAICS 42), and one under retail trade (NAICS 44-45). The average annual compliance cost of Rule 1147.2 was estimated at \$2.8 to \$3.2 million. Rule 1147.2 was projected to result in an annual average of 69 jobs forgone annually from 2023 to 2048. The 69 jobs forgone represent less than 0.0006 percent of total annual average jobs (about 11.6 million) in the region. The majority of jobs forgone are expected to occur in the manufacturing sector with an average of 22 jobs foregone per year. The jobs foregone do not necessarily represent the loss of an existing job, it can also represent a job that will not be created in the future.

Rule 403.2 – Fugitive Dust from Large Roadway Projects (Adopted June 3, 2022)

Rule 403.2, which was adopted on June 3, 2022, is designed to reduce potential fugitive dust impacts to communities near large roadway projects. Based on the number of active large roadway projects published by Caltrans in 2022, staff conservatively estimates that approximately 50 large roadway projects annually in the South Coast AQMD jurisdiction could be subject to requirements of the proposed rule. Many of the affected projects fall in the construction industry (NAICS 23).

Within the affected facility universe, most of the projects are under the authority of Caltrans and other publicly operated entities, however, most large roadway projects are contracted out to and conducted by privately owned and operated construction companies. Some of the project contractors subject to the requirements of Rule 403.2 may be classified as small businesses. Of the currently identified active roadway projects potentially subject to Rule 403.2, 17 are in Los Angeles County, 10 are in Orange County, 6 are in Riverside County, and 15 are in San Bernardino County.

The average annual compliance cost for Rule 403.2 is estimated at approximately \$1 million. A regional economic model was not used to simulate jobs and macroeconomic impacts since the resultant impacts would be too small relative to the baseline regional economy to reliably determine any impacts from the modeling analysis.

Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations (Adopted November 4, 2022)

Rule 1460, which was adopted on November 4, 2022, was designed to reduce fugitive dust emissions from metal recycling and metal shredding facilities by requiring housekeeping and best management practice provisions. Rule 1460 is estimated to affect about 200 facilities, five of which are South Coast AQMD permitted metal shredding facilities. The affected facilities are primarily within the Recyclable Material Merchant Wholesalers sector (NAICS 423930). Some of the facilities subject to Rule 1460 requirements may be classified as small businesses.

The total annual cost of the Rule 1460 is expected to be approximately \$800,000 across the universe of affected facilities. Most estimated costs are attributable to fugitive dust mitigation measures. The regional macroeconomic job impacts of Rule 1460 are expected to be minimal.

RULE AMENDMENTS WITH SOCIOECONOMIC IMPACTS

Rule 1147 – NO_x Reduction from Miscellaneous Sources (Amended May 6, 2022)

Rule 1147, which was amended on May 6, 2022, applies to RECLAIM and non-RECLAIM facilities. This rule was amended to update the NO_x emission limits and establish new CO limits to reflect BARCT emission limits for applicable equipment categories.

Rule 1147 potentially affects 3,000 facilities with new NO_x emission limits for miscellaneous combustion equipment. 1,300 facilities will incur recurring source test costs to demonstrate compliance with current emission limits until future replacement or retrofit of combustion equipment, with an approximate annual cost of \$1,300 per facility. Out of the 3,000 facilities, only 68 facilities are expected to incur cost impacts for the replacement or retrofit of equipment to meet the emission limits.

Most facilities affected by Rule 1147 will be required to meet the emission limits upon the future replacement of combustion equipment based on the expected useful life of 32 years. The majority of the affected facilities with compliance costs belong to the manufacturing sector. The average annual compliance cost of Rule 1147 is estimated at \$2.9 to \$3.2 million. For facilities incurring one-time capital cost impacts, the average compliance cost annualized over the equipment life is estimated at \$17,000 to \$21,000 per year.

An average of 82 to 84 jobs are projected to be forgone annually from 2023 to 2058 depending on real interest rate used, one percent and four percent, respectively. The jobs forgone represents less than 0.0005 percent of total annual average jobs (about 11.6 million) in the region. The majority of jobs forgone are expected to occur in the manufacturing sector. Textile mills and textile product mills (NAICS 313 and 314) are projected to experience about 13 percent of the total jobs foregone (11 in total). The jobs foregone do not necessarily represent the loss of an existing job, it can also represent a job that will not be created in the future.

Rule 1168 – Adhesive and Sealant Applications (Amended November 4, 2022)

Rule 1168, which was amended on November 4, 2022, delays VOC limit effective dates or increase VOC limits for certain categories where the technology assessment demonstrated the proposed effective dates or limits are not feasible. This rule amendment will result in the elimination of two toxic solvents, t-BAc and pCBtF, and some of the VOC emission reductions projected in the October 2017 amendments to Rule 1168 will be delayed or foregone; therefore, a cost effectiveness assessment is not required.

The socioeconomic impact assessment included affected industries and a range of probable costs due to the prohibition of t-BAc and pCBtF related to manufacturer's reformulation work and the difference in production cost of the alternative solvents due to the prohibited t-Bac and pCBtF solvents. Considering potential cost savings using alternative solvents and additional costs on reformulation and reporting, staff estimates the average annual cost of the rule amendment is \$397,000 across all affected solvent manufacturers. The compliance cost may potentially be passed through to consumers or to end-users in the construction and other manufacturing industry sectors, some of which may be small businesses. However, minimal job impacts are expected as a result of the estimated compliance cost.

Regulation III – Fees and Rule 1480 – Ambient Monitoring and Sampling of Metal Toxic Air Contaminants (Amended May 6, 2022)

The amendments to the Regulation III added new or increased fees which are necessary to provide more specific cost recovery for other regulatory actions taken by the agency. The amendments also included other minor administrative changes which have no fee impact. Additionally, two fees were relocated from Rule 1480 to Rule 301 in an effort to maintain consistency by including all fees within Regulation III.

The fee impacts by each amendment are shown in the following table for fiscal year (FY) 2022-23, FY 2023-24, FY 2024-25 and thereafter. The fee impacts in total are estimated be \$330,500 in FY 2022-23, \$426,500 in FY 2023-24, and \$517,500 in FY 2024-25 and beyond. The update to Rule 1180 Community Air Monitoring Annual Operation and Maintenance Fees (O&M) Fees is the amendment with the most significant fee impact. All other amendments result in relatively minor fee impacts.

Estimated Fee Impacts by Amendment and Fiscal Year

Amendment	FY 2022-23	FY 2023-24	FY 2024-25 and thereafter
Update Rule 1180 Community Air Monitoring O&M Fees	\$231,000	\$327,000	\$418,000
New Equipment Category for HEPA/ULPA Spray Booths	\$40,000	\$40,000	\$40,000
Add Rule 1109.1 Plans as Subject to Annual Review Fees	\$5,000	\$5,000	\$5,000
Add Plans Required by Federal Regulations for Refinery Related Equipment as Subject to Annual Review Fees	\$9,000	\$9,000	\$9,000
Add Floating Roof Tank Seal Certifications as Subject to Plan Evaluation Fees	\$14,000	\$14,000	\$14,000
Update Permit Fee for a Subsequent Application When A Permit to Construct Expires	\$3,500	\$3,500	\$3,500
Remove Fee Exemption for Rule 1466 Notification Updates	\$28,000	\$28,000	\$28,000
Total	\$330,500	\$426,500	\$517,500

The manufacturing sector is expected to incur the largest fee impacts with an increase in fees of \$290,000 in FY 2022-23, \$387,000 in FY 2023-2024 and \$478,000 in FY 2024-25 and thereafter, which comprises a 92 percent share of the average fee impacts of Regulation III. Within the manufacturing sector the petroleum and coal products manufacturing industry would incur an 84 percent share of the fee impacts, primarily as a result of the increase in Rule 1180 Community Air Monitoring Annual O&M Fees that will be incurred by facilities in this industry.

ONGOING SOCIOECONOMIC IMPACTS FROM ANNUAL AUTOMATIC FEE ADJUSTMENTS

Ongoing Implementation of Rule 320 - Automatic Adjustment Based on Consumer Price Index (CPI) for Regulation III Fees

Pursuant to Rule 320 and South Coast AQMD's statutory fee authority (e.g., Health and Safety Code Section 40510), most fees within Regulation III were increased by 6.5 percent, consistent with the change in the California Consumer Price Index (CPI) from December 2020 to December 2021. The October 29, 2010, South Coast AQMD Governing Board Resolution requires an assessment of the increase in fee rates based on the previous year's CPI by March 15 of every year. A socioeconomic analysis was conducted to assess the impacts of such adjustment.

The analysis provides background information, historical revenue trends, sectoral distributions, and estimated increased fee revenue from the CPI adjustment of South Coast AQMD fees. This report considers a 6.5 percent increase in CPI applying to the fees reported collected in FY 2020-2021 and calendar year 2021. Nearly all facilities regulated by South Coast AQMD, covering most economic sectors, would be affected by the fee increases.

The across-the-board CPI-based fee-rate increase of 6.5 percent is projected to bring additional revenue totaling \$6.44 million to South Coast AQMD. The manufacturing sector would incur the largest increase in fees (approximately \$2.62 million for about 3,400 facilities), followed by the services sector (approximately \$1.14 million for about 9,800 facilities) and the retail trade sector (approximately \$0.92 million for about 4,200 facilities). Within the manufacturing sector, the petroleum and coal products manufacturing industry, mostly comprised of refineries, would experience an increase of approximately \$1.10 million.

SOCIOECONOMIC IMPACT ASSESSMENTS OF THE 2022 AQMP

In 2022, the South Coast AQMD analyzed potential socioeconomic impacts of the 2022 AQMP. This assessment was conducted using two major modeling tools: the Regional Economic Model, Inc. (REMI)'s Policy Insight Plus, a policy simulation program for regional macroeconomic impacts, and the U.S. Environmental Protection Agency's environmental Benefits Mapping and Analysis program (BenMAP). Total incremental costs, inclusive of the cost of incentives, were compiled for proposed control measures with quantified emission reductions. Modeled air quality data for the Basin, together with mathematical functions and parameters based on the most updated epidemiological and economic studies, were used in BenMAP to quantify public health benefits due to reduced exposure to air pollution. Public health benefits were combined with incremental costs to estimate a range of regional jobs and other macroeconomic impacts from implementing the Final 2022 AQMP. Projected changes in health risk and monetized public health benefits were also used to analyze how implementation of the Final 2022 AQMP may affect environmental justice (EJ) in the Basin, as evaluated by a number of alternative metrics.

Key Findings in the Final 2022 AQMP Socioeconomic Report

Between 2023 and 2037, the implementation of the 2022 AQMP is projected to result in an annual average cost of \$2.85 billion, incremental to the business-as-usual case. Nearly 57 percent

or about \$1.61 billion of the annual incremental cost is related to mobile source control strategies, and these strategies are expected to lead to about 80 percent of the emission reductions needed to attain the 8-hour ozone standard by 2037. The remaining 43 percent of the annual amortized average cost, or \$1.24 billion, is associated with reducing stationary and area source emissions in the Basin which account for about 20 percent of the necessary emission reductions for regional air quality attainment. The relatively high cost to reduce stationary and area source emissions is largely due to the need to deploy zero-emission technologies for source categories that are already subject to stringent NOx emission standards, but it is also associated with the sheer volume of devices that contribute to area source emissions, such as household appliances and heaters. As of today, zero-emission alternatives in almost all applications are still more costly, especially for large industrial combustion process. In addition to improving air quality, zero emission technology contributes to achieving other federal and state goals for greenhouse gas reductions and is often pursued first to achieve those goals. Costs shown here for the 2022 AQMP therefore also overlap with some costs for achieving greenhouse gas goals. The following table presents a summary of the costs of the 2022 AQMP.

**Cost Summary of the 2022 AQMP
Measures Annual Average (2023-2037)**

Measures	Annual Amortized Average (Billions of 2021 dollars)				Percent of Total Annualized Cost
	Remaining Incremental Cost		Incentives	Total Incremental Cost	
Stationary and Area Sources	\$1.12	+	\$0.12	= \$1.24	43.5%
Mobile Sources	\$1.44	+	\$0.17	= \$1.61	56.5%
All Sources	\$2.56	+	\$0.29	= \$2.85	100%

(Note: Numbers may not sum due to rounding.)

Air pollution continues to be linked to increases in death rates (mortality) as well as increases in illness and other health effects (morbidity). Implementing the 2022 AQMP would significantly reduce the numerous harmful health effects associated with exposure to air pollution. In total, it was estimated that about 1,600 annual premature deaths will be avoided by 2032, and about 3,000 annual premature deaths avoided by 2037. On average between 2025-2037 about 1,500 premature deaths would be avoided per year due to improved air quality as a result of implementing the 2022 AQMP control measures. Other health benefits included annually 8,700 fewer hospitalizations, 1,450 fewer emergency room visits related to asthma, other respiratory and cardiovascular illnesses, and nearly 163,000 fewer days of absences from work and school. As presented in the following table, these public health benefits have an estimated value of \$134.3 billion, cumulatively from 2025 to 2037, or \$19.4 billion annually by 2037.

Monetized Public Health Benefits of the 2022 AQMP

	Average Annual 2025-2037 (Billions of 2021 dollars)
Mortality-related benefits	\$18.7
<i>Long-Term Ozone Exposure</i>	\$4.2
<i>Long-Term PM2.5 Exposure</i>	\$14.4
Morbidity-related benefits	\$0.7
Grand Total	\$19.4

The four-county regional economy currently generates more than a trillion dollars in gross domestic product (GDP) and supplies more than 10 million jobs. Without implementing the 2022 AQMP, baseline jobs in the region are expected to grow at an annualized rate of 0.44 percent from 2023 to 2037. Whether health benefits are included or excluded in the job impact analysis, the trajectory of regional job growth would remain positive throughout.

As presented in the following table, when the impact of public health benefits are combined with the impact of incremental costs of the proposed control measures, the resulting job impacts would be on average 17,000 jobs foregone when compared to the annual baseline jobs between 2023 and 2037, and an annualized growth rate of 0.41 percent. This is equivalent to a 0.03 percentage point slowdown in job growth relative to the projected employment baseline during the same period. If excluding health benefits, about 29,000 jobs on average are forecasted to be foregone, resulting in a decline to 0.39 percent annualized growth between 2023 and 2037, which is equivalent to a 0.05 percentage point slowdown in job growth relative to the projected employment baseline.

Job Scenarios of 2022 AQMP Implementation

	Incremental Costs & Health Benefits Included	Incremental Costs & No Health Benefits Included
2022 AQMP	<ul style="list-style-type: none"> • 0.41% annualized job growth between 2023 and 2037, compared to the baseline job growth rate of 0.44% • 17,000 jobs foregone on average in an economy with over 10 million jobs 	<ul style="list-style-type: none"> • 0.39% annualized job growth between 2023 and 2037 compared to the baseline job growth rate of 0.44% • 29,000 jobs foregone on average in an economy with over 10 million jobs

Jobs Foregone = Loss of Existing Jobs + Forecasted Jobs Not Created

Conclusion

Overall, the implementation of the 2022 AQMP is expected to result in \$2.85 billion of average annual incremental cost, while generating public health benefits of \$19.4 billion annually, which is well above the estimated incremental cost. This includes avoiding 1,500 premature deaths, 830,000 asthma symptoms, and 8,700 asthma-related hospital admissions. Cumulatively up to 2037, public health benefits are projected to amount to \$134.3 billion in present value. In an economy with more than a trillion dollars in regional GDP and more than 10 million jobs across the four counties, these costs and benefits were projected to result in relatively minor job impacts and would not alter the region's long-term job growth. Additionally, overall health risk inequality is expected to decrease throughout the region. While all residents would benefit from reductions in air pollution-related health risk, a higher per capita benefit is anticipated to accrue in EJ communities, as a result of implementing the 2022 AQMP.

CHAPTER II
ENGINEERING AND PERMITTING ACTIVITIES

ENGINEERING & PERMITTING

JASON ASPELL DEPUTY EXECUTIVE OFFICER

At a Glance:	
FY 2022-23 Adopted	\$27.1M
FY 2023-24 Budget	\$28.7M
% of FY 2023-24 Budget	14.6%
Total FTEs FY 2022-23 Budget	176

DESCRIPTION OF MAJOR SERVICES:

Engineering & Permitting (E&P) is responsible for processing applications for Permits to Construct & Operate, and special services. The permit processing activities involve approximately 330 major facilities that have been issued Title V Federal Operating permits, about 230 facilities in the RECLAIM program, and over 25,000 large and small business operations. In addition, staff also participates in activities with other agencies, assists with Economic Development and Business Retention programs, provides engineering support to other divisions, and evaluates and implements permit backlog reduction and permit streamlining activities, including automation and other permit processing modernization efforts.

ACCOMPLISHMENTS:

RECENT:

- Initiated aggressive promotional and recruitment efforts to reduce elevated E&P vacancy rate after hiring freeze and increased staff retirements during the COVID pandemic period. This included the promotion of 2 Senior Engineering Managers, 6 Supervising AQ Engineers, 12 Senior AQ Engineers, and the onboarding of 15 new engineers during the calendar year.
- Reached out to and hired former district engineering staff from South Coast AQMD as temporary employees to assist with permit processing duties.
- Continued permit streamlining efforts by:
 - Processing almost 1,800 Permits to Construct and over 6,100 applications for Permits, Plans, and ERC during Fiscal Year (FY) 2021-22; and
 - Focusing on reducing aged permit applications to the extent possible.
- Continued efforts to reach the 3,000 - 3,500 (less RECLAIM transition applications, less Permits to Construct issued) target from FY 2020-21.
- Achieved and maintained the timely completion rate for new permit applications by processing over 70 percent of new permit applications within 180 days of being deemed complete.

- Issued 180 Title V renewal and modification permits in calendar year 2022.
- Implemented new return-to-office teleworking policy and increased in-office levels of production and processing of applications and permits.
- Continued development of Online Permit Processing tools and other automation efforts.
- Continued support for online applicants for dry cleaning equipment, gasoline dispensing facilities, automotive refinishing spray booths, negative air machines, char broilers, and small heaters and boilers. Over 500 applications were filed online during calendar year 2022.
- New Emergency IC Engine online permitting module made available to interested stakeholders to apply for a registration permit for smaller certified emergency IC engines.
- Maintained and surpassed Division's Permit Streamlining goal of application delivery to Permitting Teams within an average of 4 business days.
- Continued implementation of EPA Title V Program Audit Findings Action Plan.
- Continued efforts to post all newly issued Title V permits to the internet for online public access on an ongoing basis.
- Participated in public meetings to address public concerns regarding high toxic risks and emissions.
- Assisted in developing and amending South Coast AQMD Rules and Regulations such as Reg. III, Reg. XI, Reg. XIII, Reg. XIV, and other amendments called for under AB 617, including Reg. XX, and incorporating updated Best Available Retrofit Control Technology (BARCT).
- Initiated implementation of Rule 1109.1 which includes significant permit application and plan requirements.
- Amended Best Available Control Technology Guidelines which included cleaner emission requirements for emergency diesel engines at major sources.
- Participated in AB 617 Community Meetings and in the Community Emissions Reduction Plan (CERP) implementation with respect to permitting crosschecks.
- Provided Pre- and Post-application conferences to help permit applicants.
- Participated, reviewed, and provided permit remedies to permit holders throughout calendar year 2022 from Fee Review cases.
- Provided technical support to IM to test and troubleshoot CLASS programs issues.
- Continued to provide engineering support and/or expert testimony in Hearing Board cases throughout calendar year 2022.
- Continued to maintain the Certified Permitting Professional (CPP) program by reaching out to existing CPP holders to provide support and to update and confirm contact information.
- Conducted a CPP exam for 13 individuals seeking certification as Permitting Professionals, using Risk Management and COVID-19 distancing guidelines to ensure a secure and safe testing process for all those involved.
- Prepared Federal New Source Review (NSR) Equivalency Determination Reports pursuant to Rule 1315.
- Prepared annual report on the NOx and SOx RECLAIM Program in accordance with Rule 2015.

ANTICIPATED:

- Continue to fill vacancies at all levels and utilize former district engineering staff to assist with permit inventory reduction efforts.
- Continue to provide training to new engineers and newly promoted seniors and supervisors by offering a range of learning opportunities, including in-house workshops, online courses, and external training programs, to ensure they have the skills and knowledge necessary to succeed in their roles.
- Work towards reducing the pending permit applications inventory excluding Permits to Construct issued and RECLAIM transition applications to maintain levels at or near 3,000, and total pending applications inventory to below 3,500.
- Continue to maintain the timely completion rate for new permit applications by processing 75 to 80 percent of new permit applications within 180 days of being deemed complete.
- Monitor and reduce average permit application residence times.
- Continue to complete timely renewal of Title V permits.
- Continue to implement action plan to further improve Title V program pursuant to EPA's recommendations:
 - a) Continue to prepare expanded Statement of Basis (SOB) for all initial Title V permits, at least 10 percent of Title V renewals, and all De-Minimis and Significant Title V revisions,
 - b) Continue efforts to develop automated capability to publish Title V permits online,
 - c) Provide more detailed accounts of applicable federal requirements in Title V permits,
 - d) Provide public with online access to all issued Title V permits, and
 - e) Develop formal policy for sources exiting the Title V program.
- Continue efforts to streamline and expedite permit issuance through:
 - a) Equipment certification/registration programs ,
 - b) Streamlined standard permits,
 - c) Enhancement of permitting systems (including electronic permitting) ,
 - d) Expedited Permit Processing Program,
 - e) Maintaining adequate staff resources,
 - f) Improve technical training, and
 - g) Revisiting policies and rules.
- Expand the outreach of the online permitting and permit automation tools for dry cleaning, gasoline dispensing facilities, automotive spray booths, negative air machines, small heaters, and boilers, char broilers , and future modules.
- Continue the development and deployment of Phase II Online Permitting efforts:
 - a) Existing internal and external-facing Permit Application Status Dashboard, and implement enhancements based on user feedback
 - b) Remaining Rule 222 Filing & Registration Forms
 - c) Registration/Certification for Emergency Generators
 - d) 400-E-xx Permit Application Forms, and
 - e) Future enhancements to Dry Cleaning, Gasoline Dispensing and Automotive Spray Booth modules.

- Continue permit processing modernization efforts through the development of a plan and business model that will facilitate transition to electronic permit application submittal and processing and can be deployed as soon as the development of electronic smart permit applications forms is complete.
- Resume implementation of the staff recognition program, recognizing top performing individuals and teams to help maintain high morale and acknowledge performance.
- Continue to improve and monitor the operational and permitting efficiency of permitting teams by:
 - a) Streamlining workflow,
 - b) Enhancing permitting tools,
 - c) Standardizing permit conditions,
 - d) Reviewing and updating outdated Permitting Policies and Procedures, and
 - e) Standardizing time and processing status metrics for monitoring permit applications through completion.
- Continue soliciting stakeholder input on permit application backlog reduction and permit streamlining efforts through Permit Streamlining Task Force subcommittee meetings.
- Continue certification testing of Certified Permitting Professionals (CPPs).
- Continue to improve customer services and public outreach by:
 - a) Providing public education by attending public meetings and addressing public concerns,
 - b) Aiding permit applicants through pre- and post-conferences, and
 - c) Providing permitting information for Public Record requests.
- Continue to evaluate the optional Expedited Permitting Program and propose improvements if warranted.
- Continue to update and expand the Permit Processing Handbook.
- Review and comment on Rule 1402 Risk Reduction Plans.
- Continue to provide critical input in developing and amending South Coast AQMD Rules.
- Continue to provide critical input to Compliance & Enforcement in enforcing South Coast AQMD Rules.
- Continue to provide support in Fee Review cases and Hearing Board cases.
- Continue to prepare Federal NSR Equivalency Determination Reports pursuant to Rule 1315.
- Continue to prepare annual report on the NO_x and SO_x RECLAIM Program in accordance with Rule 2015.
- Continue to provide critical guidance to PRDI in developing a streamlined NSR process for facilities exiting the RECLAIM program.
- Develop options for training of new engineers, and newly promoted seniors and supervisors.
- Continue implementation of Rule 1109.1 application processing and reporting (refinery rule associated with RECLAIM sunset)
- Continue to assist PRDI with the development of PAR 1405 to reduce emissions and associated health risks of ethylene oxide.
- Continue to support the development and rollout of the Source Testing portal, an online platform designed to streamline the process of collecting and reporting data on air

emissions. Collaborate with IM and other divisions to ensure that the portal is user-friendly, efficient, and fully compliant with relevant regulations.

- Revisit policies on public notices to ensure accessibility to affected community members.

ORGANIZATIONAL CHART:

POSITION SUMMARY: 176 FTEs

Engineering & Permitting	Amended FY 2022-23	Change	Budget FY 2023-24
Administration	4	-	4
Engineering	139	5	144
Operations	28	-	28
Total	171	5	176

POSITION DETAIL:

<u>FTEs</u>	<u>Title</u>
94	Air Quality Engineer
1	Air Quality Specialist
1	Assistant Deputy Executive Officer
2	Data Technician
1	Deputy Executive Officer
1	Office Assistant
6	Administrative Assistant I
2	Senior Administrative Assistant
23	Senior Air Quality Engineer
8	Senior Air Quality Engineering Manager
17	Senior Office Assistant
2	Staff Specialist
13	Supervising Air Quality Engineer
3	Program Supervisor
<u>2</u>	<u>Supervising Office Assistant</u>
176	Total FTEs

Permitting Data

During calendar year 2022, South Coast AQMD dispositioned a total of 5,931 applications. Most of these applications were for Permits to Operate (1,785), Plans (1,220), Area Sources & Certified/ Registrations (1,134), and Changes of Operators (910). Also, 941 permits were not renewed. This data, broken down into nine different categories, is summarized in Table 1, below

Table – 1 Permit Applications Completed in Calendar Year 2022	
Type	Count
Permits to Construct	234
Permits to Operate (PO)*	1,785
Changes of Operator (C/O)	910
Denials	2
Cancellations	468
Emission Reduction Credits (ERCs)	56
Plans	1,220
Title V (TV)/RECLAIM	122
Area Sources & Certified/Registrations	1,134
Total	5,931
<i>Permits Not Renewed</i>	941

*This includes 1,257 applications for Permit to Construct that were issued as Permits to Construct/Operate.

Table 2, on the following pages, contains a breakdown of permits dispositioned (in the nine categories) by type of industry. The type of industry was based on North American Industry Classification System (NAICS) codes, which were provided by the applicant at the time of application filing. The top three NAICS codes were 445110 – Supermarkets and Other Grocery Retailers, 447110/447190 – Gasoline Service Stations, and 811121 - Automotive Body, Paint, and Interior Repair and Maintenance.

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
111320	Citrus (except Orange) Groves	0	0	0	0	0	0	1	0	0	1
111332	Grape Vineyards	0	0	0	0	0	0	1	0	0	1
111333	Strawberry Farming	1	0	0	0	0	0	0	0	0	1
111998	All Other Miscellaneous Crop Farming	2	0	0	0	1	0	2	1	0	6
112111	Beef Cattle Ranching and Farming	0	1	0	0	0	0	0	0	0	1
112990	All Other Animal Production	0	0	0	0	0	0	2	0	0	2
115114	Postharvest Crop Activities (except Cotton Ginning)	0	0	0	0	0	0	0	7	0	7
115210	Support Activities for Animal Production	0	0	0	0	0	3	2	0	0	5
211111	Crude Petroleum and Natural Gas Extraction – crude petroleum	9	0	4	0	0	18	2	6	3	42

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	extraction										
211112	Natural Gas Liquid Extraction	0	0	1	0	0	0	0	1	1	3
211120	Crude Petroleum Extraction	4	35	2	0	0	0	2	0	4	47
211130	Natural Gas Extraction	2	0	2	0	1	0	0	0	1	6
212319	Other Crushed and Broken Stone Mining and Quarrying	0	0	0	0	0	3	0	0	1	4
212321	Construction Sand and Gravel Mining	0	0	1	0	10	0	0	1	0	12
213111	Drilling Oil and Gas Wells	2	1	0	0	0	0	0	0	0	3
213112	Support Activities for Oil and Gas Operations	3	4	1	0	1	0	1	1	0	11
221112	Fossil Fuel Electric Power Generation	0	0	13	0	0	4	0	8	7	32
221115	Wind Electric Power Generation	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
221118	Other Electric Power Generation	1	0	35	0	0	5	9	22	4	76
221121	Electric Bulk Power Transmission and Control	0	0	0	0	0	0	1	0	0	1
221122	Electric Power Distribution	0	0	0	0	0	0	2	0	0	2
221210	Natural Gas Distribution	0	0	5	0	0	0	2	3	1	11
221310	Water Supply and Irrigation Systems	26	7	4	0	0	6	17	30	0	90
221320	Sewage Treatment Facilities	0	0	1	0	0	14	4	13	0	32
236115	New Single-Family Housing Construction (except For-Sale Builders)	48	1	0	0	0	0	4	9	0	62
236116	New Multifamily Housing Construction (except For-Sale Builders)	0	0	0	0	0	1	2	1	0	4
236117	New Housing	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	For-Sale Builders										
236118	Residential Remodelers	0	0	0	0	0	0	0	1	0	1
236210	Industrial Building Construction	0	2	0	0	0	0	1	0	0	3
236220	Commercial and Institutional Building Construction	35	0	0	0	0	0	10	6	0	51
237110	Water and Sewer Line and Related Structures Construction	0	2	0	0	0	0	2	0	0	4
237120	Oil and Gas Pipeline and Related Structures Construction	0	0	1	0	0	0	0	0	0	1
237130	Power and Communication Line and Related Structures Construction	24	0	0	0	0	0	0	4	0	28
237210	Land Subdivision	0	2	0	0	0	0	27	6	0	35

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
237310	Highway, Street, and Bridge Construction	0	0	1	0	0	0	0	7	0	8
238110	Poured Concrete Foundation and Structure Contractors	0	0	0	0	0	0	1	13	0	14
238160	Roofing Contractors	0	0	0	0	0	0	0	1	0	1
238210	Electrical Contractors and Other Wiring Installation Contractors	4	0	0	0	1	0	1	0	0	6
238220	Plumbing, Heating, and Air-Conditioning Contractors	1	0	0	0	0	0	8	0	0	9
238310	Drywall and Insulation Contractors	0	0	0	0	0	0	0	5	0	5
238320	Painting and Wall Covering Contractors	10	7	1	0	0	1	0	2	0	21

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
238340	Tile and Terrazzo Contractors	0	0	0	0	0	0	0	8	0	8
238350	Finish Carpentry Contractors	0	2	0	0	0	0	0	0	0	2
238910	Site Preparation Contractors	25	0	0	0	0	0	1	4	0	30
238990	All Other Specialty Trade Contractors	62	0	0	0	0	0	1	0	0	63
311211	Flour Milling	0	0	5	0	0	0	0	4	0	9
311224	Soybean and Other Oilseed Processing	0	0	0	0	0	0	0	1	0	1
311412	Frozen Specialty Food Manufacturing	1	0	0	0	0	0	0	6	0	7
311421	Fruit and Vegetable Canning	0	0	0	0	0	0	3	1	0	4
311511	Fluid Milk Manufacturing	0	0	0	0	0	4	0	1	0	5
311612	Meat Processed from Carcasses	2	0	0	0	0	0	1	0	0	3
311710	Seafood Product Preparation and Packaging	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
311811	Retail Bakeries	0	0	0	0	0	0	0	2	0	2
311812	Commercial Bakeries	0	0	0	0	0	1	4	6	1	12
311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour	0	0	0	0	0	0	1	5	2	8
311830	Tortilla Manufacturing	0	0	1	0	0	0	0	11	0	12
311911	Roasted Nuts and Peanut Butter Manufacturing	0	0	0	0	0	0	0	2	0	2
311919	Other Snack Food Manufacturing	0	0	1	0	0	1	0	10	0	12
311920	Coffee and Tea Manufacturing	0	0	0	0	0	0	0	4	0	4
311930	Flavoring Syrup and Concentrate Manufacturing	0	0	0	0	0	0	1	19	0	20
311942	Spice and Extract Manufacturing	0	0	6	0	0	4	0	14	0	24

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
311999	All Other Miscellaneous Food Manufacturing	0	0	0	0	1	0	0	3	0	4
312111	Soft Drink Manufacturing	0	2	1	0	0	0	1	3	0	7
312112	Bottled Water Manufacturing	1	0	0	0	0	0	0	0	0	1
312120	Breweries	3	0	2	0	0	0	1	7	2	15
312140	Distilleries	0	0	12	0	0	0	0	0	0	12
312230	Tobacco Manufacturing	0	37	0	0	0	0	0	0	0	37
313210	Broadwoven Fabric Mills	0	0	0	0	0	0	0	5	1	6
313310	Textile and Fabric Finishing Mills	0	0	0	0	0	1	0	3	1	5
313320	Fabric Coating Mills	0	0	0	0	0	2	0	0	0	2
314110	Carpet and Rug Mills	0	0	0	0	0	0	0	4	0	4
314120	Curtain and Linen Mills	0	0	0	0	0	0	0	14	0	14
314910	Textile Bag and Canvas Mills	0	0	1	0	0	0	0	1	0	2
315240	Women's, Girls', and Infants' Cut and Sew	0	0	0	0	1	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Apparel Manufacturing										
316110	Leather and Hide Tanning and Finishing	0	0	0	0	0	0	0	1	0	1
321918	Other Millwork (including Flooring)	0	0	1	0	0	0	0	0	0	1
321920	Wood Container and Pallet Manufacturing	0	1	0	0	0	1	0	0	0	2
322121	Paper (except Newsprint) Mills	0	0	2	0	0	0	0	4	0	6
322130	Paperboard Mills	6	0	0	0	0	0	0	0	0	6
322211	Corrugated and Solid Fiber Box Manufacturing	1	0	1	0	0	3	0	6	4	15
322212	Folding Paperboard Box Manufacturing	0	0	2	0	0	0	2	2	1	7
322220	Paper Bag and Coated and Treated Paper Manufacturing	0	0	0	0	0	2	0	6	0	8

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
323111	Commercial Printing (except Screen and Books)	3	10	2	0	0	0	3	2	2	22
324110	Petroleum Refineries	8	0	30	0	1	14	8	49	11	121
324121	Asphalt Paving Mixture and Block Manufacturing	0	19	6	0	0	0	0	8	1	34
324122	Asphalt Shingle and Coating Materials Manufacturing	1	0	0	0	0	0	1	8	2	12
324191	Petroleum Lubricating Oil and Grease Manufacturing	1	0	2	0	0	4	0	11	1	19
325110	Petrochemical Manufacturing	0	43	0	0	0	1	2	0	0	46
325120	Industrial Gas Manufacturing	0	0	0	0	0	0	0	1	1	2
325180	Other Basic Inorganic Chemical Manufacturing	0	0	2	0	0	0	0	15	1	18

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
325211	Plastics Material and Resin Manufacturing	0	0	2	0	0	2	0	9	4	17
325212	Synthetic Rubber Manufacturing	0	0	1	0	0	0	0	0	0	1
325311	Nitrogenous Fertilizer Manufacturing	0	0	2	0	0	0	0	0	0	2
325411	Medicinal and Botanical Manufacturing	0	12	0	0	0	0	0	0	0	12
325412	Pharmaceutical Preparation Manufacturing	2	10	0	0	0	0	3	3	1	19
325414	Biological Product (except Diagnostic) Manufacturing	0	0	1	0	0	0	0	4	0	5
325510	Paint and Coating Manufacturing	0	2	0	0	0	4	0	3	0	9
325520	Adhesive Manufacturing	0	0	1	0	0	1	0	5	2	9
325611	Soap and Other Detergent Manufacturing	0	0	0	0	0	0	0	1	0	1
325612	Polish and Other	0	3	0	0	0	0	1	0	0	4

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Sanitation Good Manufacturing										
325620	Toilet Preparation Manufacturing	0	0	14	0	0	0	0	5	0	19
325992	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing	0	8	0	0	0	0	0	0	0	8
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	0	0	0	0	0	0	0	1	1	2
326111	Plastics Bag and Pouch Manufacturing	0	0	1	0	0	0	0	0	0	1
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	0	0	1	0	0	0	0	0	0	1
326130	Laminated Plastics Plate, Sheet (except	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Packaging), and Shape Manufacturing										
326140	Polystyrene Foam Product Manufacturing	0	0	0	0	0	0	0	1	1	2
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	0	0	0	0	0	0	0	4	0	4
326199	All Other Plastics Product Manufacturing	3	0	9	0	11	2	3	46	1	75
326211	Tire Manufacturing (except Retreading)	0	0	0	0	0	0	1	0	0	1
326220	Rubber and Plastics Hoses and Belting Manufacturing	0	0	0	0	0	0	0	1	0	1
326291	Rubber Product Manufacturing for Mechanical Use	0	6	0	0	0	0	0	0	0	6
326299	All Other Rubber Product Manufacturing	0	0	1	0	0	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing	0	1	0	0	0	0	0	0	0	1
327120	Clay Building Material and Refractories Manufacturing	0	0	0	0	0	0	0	1	0	1
327211	Flat Glass Manufacturing	0	0	1	0	0	0	0	0	0	1
327310	Cement Manufacturing	0	6	0	0	3	0	0	1	0	10
327320	Ready-Mix Concrete Manufacturing	0	5	1	0	0	1	0	12	0	19
327331	Concrete Block and Brick Manufacturing	0	0	3	0	0	0	0	7	0	10
327390	Other Concrete Product Manufacturing	0	0	5	0	0	0	1	2	0	8
327420	Gypsum Product Manufacturing	0	0	0	0	0	0	0	2	1	3
327992	Ground or Treated Mineral and Earth Manufacturing	0	0	1	0	0	6	0	0	1	8

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
331110	Iron and Steel Mills and Ferroalloy Manufacturing	0	0	0	0	0	0	0	1	0	1
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	0	0	0	0	0	0	0	7	0	7
331221	Rolled Steel Shape Manufacturing	0	0	0	0	0	0	0	2	0	2
331313	Alumina Refining and Primary Aluminum Production	0	0	0	0	0	0	1	0	1	2
331315	Aluminum Sheet, Plate, and Foil Manufacturing	0	0	0	0	1	0	0	1	0	2
331318	Other Aluminum Rolling, Drawing, and Extruding	0	0	0	0	0	0	0	0	1	1
331420	Copper Rolling, Drawing, Extruding, and	0	0	0	0	0	0	0	2	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Alloying										
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	0	0	0	0	0	0	0	1	0	1
331513	Steel Foundries (except Investment)	0	0	0	0	0	0	0	1	0	1
331523	Nonferrous Metal Die-Casting Foundries	1	3	0	0	0	0	0	9	0	13
331524	Aluminum Foundries (except Die-Casting)	0	0	1	0	0	0	0	0	0	1
331529	Other Nonferrous Metal Foundries (except Die-Casting)	0	0	1	0	0	0	0	1	1	3
332111	Iron and Steel Forging	0	0	4	0	0	0	0	4	0	8

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
332112	Nonferrous Forging	0	0	3	0	0	1	0	5	2	11
332117	Powder Metallurgy Part Manufacturing	0	2	0	0	0	0	0	0	0	2
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)	0	0	0	0	0	0	0	1	0	1
332312	Fabricated Structural Metal Manufacturing	0	11	0	0	0	0	0	8	0	19
332313	Plate Work Manufacturing	0	0	0	0	0	0	0	1	0	1
332321	Metal Window and Door Manufacturing	0	6	2	0	0	0	0	8	0	16
332322	Sheet Metal Work Manufacturing	0	0	2	0	0	0	0	2	0	4
332323	Ornamental and Architectural Metal Work Manufacturing	0	0	0	0	0	0	0	0	1	1
332431	Metal Can Manufacturing	0	0	1	0	0	0	1	0	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
332439	Other Metal Container Manufacturing	0	0	0	0	0	0	0	0	1	1
332710	Machine Shops	2	9	0	0	0	0	0	1	0	12
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	0	0	10	0	0	5	0	7	0	22
332811	Metal Heat Treating	0	0	0	0	0	0	0	6	0	6
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	0	12	0	0	0	6	1	18	1	38
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	1	2	12	0	0	9	8	16	0	48
332911	Industrial Valve Manufacturing	0	0	0	0	0	0	0	3	0	3
332912	Fluid Power Valve and Hose Fitting Manufacturing	5	10	0	0	0	1	0	5	0	21

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
332913	Plumbing Fixture Fitting and Trim Manufacturing	0	0	0	0	0	0	0	4	0	4
332919	Other Metal Valve and Pipe Fitting Manufacturing	0	0	0	0	0	5	0	0	0	5
332991	Ball and Roller Bearing Manufacturing	0	0	0	0	0	0	0	1	0	1
332996	Fabricated Pipe and Pipe Fitting Manufacturing	6	0	0	0	1	4	2	6	2	21
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0	7	0	0	0	0	0	0	0	7
333249	Other Industrial Machinery Manufacturing	0	0	0	0	0	0	0	1	0	1
333314	Optical Instrument and Lens Manufacturing	0	0	1	0	0	0	0	2	0	3
333318	Other Commercial	0	0	1	0	0	0	0	1	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	and Service Industry Machinery Manufacturing										
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	0	0	0	0	0	2	0	0	0	2
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	0	0	0	0	0	0	0	1	0	1
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	0	0	1	0	0	0	0	4	0	5
333618	Other Engine Equipment Manufacturing	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
333911	Pump and Pumping Equipment Manufacturing	0	0	0	0	0	0	0	3	0	3
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	0	1	0	0	0	0	0	0	0	1
334112	Computer Storage Device Manufacturing	0	0	0	0	0	0	1	0	0	1
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	1	0	0	0	0	0	6	1	0	8
334290	Other Communications Equipment Manufacturing	0	2	0	0	0	0	0	1	0	3
334412	Bare Printed Circuit Board Manufacturing	0	5	0	0	0	0	0	0	0	5

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
334413	Semiconductor and Related Device Manufacturing	0	0	0	0	0	0	2	7	0	9
334417	Electronic Connector Manufacturing	0	0	0	0	0	0	0	2	0	2
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	0	0	0	0	0	0	0	6	0	6
334419	Other Electronic Component Manufacturing	0	27	0	0	0	0	0	0	0	27
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	0	0	3	0	0	0	5	2	0	10
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	0	1	1	0	0	0	0	8	1	11

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
334514	Totalizing Fluid Meter and Counting Device Manufacturing	0	0	0	0	0	0	0	1	0	1
334516	Analytical Laboratory Instrument Manufacturing	0	0	0	0	0	0	0	1	0	1
334614	Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing	0	3	2	0	0	0	0	0	0	5
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	0	0	0	0	0	0	0	1	0	1
335311	Power, Distribution, and Specialty Transformer Manufacturing	0	0	2	0	0	0	0	0	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
335312	Motor and Generator Manufacturing	0	0	0	0	0	4	0	0	0	4
335314	Relay and Industrial Control Manufacturing	0	1	0	0	0	0	0	2	0	3
335911	Storage Battery Manufacturing	0	0	7	0	0	0	0	1	0	8
335931	Current-Carrying Wiring Device Manufacturing	1	0	0	0	0	0	0	8	0	9
335991	Carbon and Graphite Product Manufacturing	0	0	1	0	0	0	0	1	0	2
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	0	0	1	0	2	0	0	3	0	6
336111	Automobile Manufacturing	0	5	0	0	0	0	0	5	1	11
336211	Motor Vehicle Body Manufacturing	0	0	1	0	0	0	0	1	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
336214	Travel Trailer and Camper Manufacturing	0	0	3	0	0	0	0	0	0	3
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing	0	0	0	0	0	0	0	1	0	1
336390	Other Motor Vehicle Parts Manufacturing	0	0	0	0	0	0	1	0	2	3
336411	Aircraft Manufacturing	4	0	10	0	0	0	3	2	0	19
336412	Aircraft Engine and Engine Parts Manufacturing	0	12	3	0	0	4	5	1	2	27
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	0	0	2	0	0	1	0	4	0	7
336414	Guided Missile and Space Vehicle Manufacturing	0	2	0	0	0	0	0	4	0	6
336415	Guided Missile and Space Vehicle Propulsion	1	0	4	0	0	7	0	0	0	12

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Unit and Propulsion Unit Parts Manufacturing										
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	0	0	5	0	0	2	1	8	2	18
337110	Wood Kitchen Cabinet and Countertop Manufacturing	0	1	0	0	0	0	0	2	0	3
337121	Upholstered Household Furniture Manufacturing	0	0	0	0	0	0	0	1	0	1
337122	Nonupholstered Wood Household Furniture Manufacturing	0	0	0	0	0	1	0	5	0	6
337125	Household Furniture (except Wood and Metal) Manufacturing	0	1	0	0	0	0	0	4	0	5

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
339112	Surgical and Medical Instrument Manufacturing	0	0	1	0	0	0	10	1	0	12
339114	Dental Equipment and Supplies Manufacturing	0	0	0	0	0	0	0	6	0	6
339115	Ophthalmic Goods Manufacturing	0	0	1	0	0	0	0	1	0	2
339920	Sporting and Athletic Goods Manufacturing	0	22	0	0	0	0	0	0	0	22
339950	Sign Manufacturing	0	0	0	0	0	0	0	12	0	12
339999	All Other Miscellaneous Manufacturing	7	0	0	0	0	0	1	6	0	14
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	0	0	0	0	0	0	2	0	0	2
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	0	0	0	0	0	0	0	3	0	3
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	0	23	0	0	0	0	0	0	0	23
423440	Other Commercial Equipment Merchant Wholesalers	3	0	0	0	0	0	0	1	0	4
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	0	0	0	0	0	0	1	0	0	1
423490	Other Professional Equipment and Supplies Merchant Wholesalers	0	0	0	0	0	0	1	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1	0	0	0	0	0	1	5	2	9
423520	Coal and Other Mineral and Ore Merchant Wholesalers	0	0	0	0	0	0	1	0	0	1
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0	0	0	0	0	0	0	1	0	1
423690	Other Electronic Parts and Equipment Merchant Wholesalers	0	0	0	0	0	0	0	1	0	1
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant	3	0	0	0	0	0	0	0	0	3

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Wholesalers										
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	0	0	2	0	0	0	0	0	0	2
423830	Industrial Machinery and Equipment Merchant Wholesalers	0	0	0	0	0	0	0	4	0	4
423840	Industrial Supplies Merchant Wholesalers	0	0	0	0	0	2	0	2	0	4
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	0	1	0	0	0	0	0	0	0	1
423860	Transportation Equipment and Supplies (except Motor	0	0	11	0	0	0	1	0	0	12

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Vehicle) Merchant Wholesalers										
423930	Recyclable Material Merchant Wholesalers	0	4	2	0	0	0	0	5	0	11
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0	0	0	0	0	0	0	1	0	1
424210	Drugs and Druggists' Sundries Merchant Wholesalers	2	0	0	0	0	0	1	5	0	8
424340	Footwear Merchant Wholesalers	0	0	0	0	0	0	0	1	0	1
424410	General Line Grocery Merchant Wholesalers	0	0	0	0	0	6	1	13	0	20
424420	Packaged Frozen Food Merchant Wholesalers	0	0	1	0	0	0	0	0	0	1
424460	Fish and Seafood	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Merchant Wholesalers										
424470	Meat and Meat Product Merchant Wholesalers	0	0	0	0	0	0	0	4	0	4
424490	Other Grocery and Related Products Merchant Wholesalers	0	6	0	0	0	0	16	11	0	33
424590	Other Farm Product Raw Material Merchant Wholesalers	0	0	0	1	0	0	0	1	0	2
424690	Other Chemical and Allied Products Merchant Wholesalers	0	0	1	0	0	2	1	6	0	10
424710	Petroleum Bulk Stations and Terminals	0	47	11	0	2	2	7	12	4	85
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk	3	5	1	0	0	0	0	13	0	22

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Stations and Terminals)										
424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	1	0	0	0	0	0	0	0	0	1
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0	0	0	0	0	1	0	1	0	2
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	0	0	1	0	0	2	1	1	1	6
441110	New Car Dealers	0	10	1	0	0	0	0	2	0	13
441120	Used Car Dealers	0	2	0	0	0	1	0	0	0	3
441310	Automotive Parts and Accessories Stores	0	0	0	0	0	0	1	3	0	4
441320	Tire Dealers	0	0	0	0	0	0	1	0	0	1
442110	Furniture Stores	1	0	0	0	0	0	0	4	0	5

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
443142	Electronics Stores	1	0	0	0	0	0	5	0	0	6
444110	Home Centers	2	0	0	0	0	0	0	0	0	2
444190	Other Building Material Dealers	0	0	0	0	0	0	1	3	0	4
444220	Nursery, Garden Center, and Farm Supply Stores	0	0	0	0	0	0	0	2	0	2
445110	Supermarkets and Other Grocery Retailers (except Convenience Retailers)	273	1	0	0	0	0	187	14	0	475
445120	Convenience Stores	0	1	0	0	0	0	1	7	0	9
445291	Baked Goods Retailers	3	0	0	0	0	0	0	0	0	3
445299	All Other Specialty Food Stores	1	0	0	0	0	0	0	2	0	3
445310	Beer, Wine, and Liquor Stores	0	0	0	0	0	0	1	1	0	2
446110	Pharmacies and Drug Stores	22	0	0	0	0	0	12	1	0	35

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
446120	Cosmetics, Beauty Supplies, and Perfume Stores	0	0	0	0	0	0	0	5	0	5
446191	Food (Health) Supplement Stores	0	0	0	0	0	0	1	0	0	1
447110	Gasoline Stations with Convenience Stores	0	137	15	0	1	2	0	68	1	224
447190	Other Gasoline Stations	0	2	6	0	4	2	3	91	0	108
448150	Clothing Accessories Stores	0	0	0	0	0	0	1	0	0	1
451120	Hobby, Toy, and Game Stores	1	3	0	0	0	0	0	0	0	4
451211	Book Stores	0	0	0	0	0	0	2	0	0	2
452111	Department Stores (except Discount Department Stores)	0	0	0	0	0	0	4	0	0	4
452112	Discount Department Stores – insignificant perishable	0	0	1	0	0	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	grocery sales										
452210	Department Stores	0	2	1	0	0	0	19	3	0	25
452311	Warehouse Clubs and Supercenters	0	0	1	0	3	1	1	3	0	9
452319	All Other General Merchandise Stores	1	0	0	0	0	0	0	0	0	1
452910	Warehouse Clubs and Supercenters	0	0	0	0	1	0	0	1	0	2
453110	Florists	1	0	0	0	0	0	3	1	0	5
453220	Gift, Novelty, and Souvenir Stores	0	0	0	0	0	0	0	2	0	2
453910	Pet and Pet Supplies Stores	0	0	0	0	0	0	0	1	0	1
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0	0	0	0	0	0	3	5	0	8

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
454110	Electronic Shopping and Mail-Order Houses	0	1	0	0	0	0	0	0	0	1
454310	Fuel Dealers	1	3	0	0	0	0	0	1	0	5
457120	Other Gasoline Stations	0	15	0	0	0	0	0	9	0	24
481219	Other Nonscheduled Air Transportation	0	1	0	0	0	0	0	0	0	1
484110	General Freight Trucking, Local	1	1	2	0	0	0	1	14	0	19
484121	General Freight Trucking, Long-Distance, Truckload	5	0	0	0	0	0	1	6	0	12
485111	Mixed Mode Transit Systems	0	3	0	0	0	0	0	0	0	3
485113	Bus and Other Motor Vehicle Transit Systems	0	0	0	0	0	0	1	0	0	1
485310	Taxi and Ridesharing Services	0	0	0	0	0	0	3	1	0	4
485320	Limousine Service	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
486110	Pipeline Transportation of Crude Oil	0	0	1	0	0	0	0	0	0	1
486910	Pipeline Transportation of Refined Petroleum Products	0	0	0	0	0	0	2	5	1	8
487110	Scenic and Sightseeing Transportation, Land	1	6	0	0	0	0	0	0	0	7
487990	Scenic and Sightseeing Transportation, Other	1	0	0	0	0	0	0	0	0	1
488111	Air Traffic Control	0	1	0	0	0	0	0	0	0	1
488119	Other Airport Operations	1	2	1	0	0	0	1	1	0	6
488190	Other Support Activities for Air Transportation	0	1	0	0	0	0	2	3	2	8
488310	Port and Harbor Operations	0	0	0	0	0	0	1	3	0	4
488320	Marine Cargo Handling	0	0	0	0	0	0	0	3	0	3

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
488410	Motor Vehicle Towing	0	2	0	0	0	0	0	0	0	2
488490	Other Support Activities for Road Transportation	1	0	0	0	0	0	0	0	0	1
488510	Freight Transportation Arrangement	0	0	1	0	0	0	0	7	0	8
488999	All Other Support Activities for Transportation	1	0	0	0	0	0	3	5	1	10
491110	Postal Service	0	0	0	0	0	0	1	0	0	1
493110	General Warehousing and Storage	8	6	2	0	0	0	1	14	0	31
493190	Other Warehousing and Storage	0	0	1	0	0	0	1	2	0	4
511110	Newspaper Publishers	0	0	1	0	0	0	0	0	0	1
511130	Book Publishers	0	0	0	0	0	0	0	1	0	1
511199	All Other Publishers	0	0	1	0	0	0	0	1	0	2
512110	Motion Picture and Video Production	2	0	1	0	0	2	7	3	0	15

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
512131	Motion Picture Theaters (except Drive-Ins)	1	0	0	0	0	0	0	1	0	2
512191	Teleproduction and Other Postproduction Services	0	0	0	0	0	0	0	3	0	3
512199	Other Motion Picture and Video Industries	1	0	0	0	0	0	1	0	0	2
512250	Record Production and Distribution	0	1	0	0	0	0	0	0	0	1
515120	Television Broadcasting	0	0	1	0	0	0	1	0	0	2
515210	Cable and Other Subscription Programming	0	3	0	0	0	0	3	0	0	6
517110	Wired Telecommunications Carriers	0	0	0	0	0	0	12	0	0	12
517112	Wireless Telecommunications Carriers (except Satellite)	10	0	1	0	0	0	0	1	0	12
517311	Wired	1	0	0	0	0	0	2	2	0	5

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Telecommunications Carriers										
517312	Wireless Telecommunications Carriers (except Satellite)	7	0	14	0	0	0	46	13	0	80
517410	Satellite Telecommunications	0	0	0	0	0	0	1	0	0	1
517911	Telecommunications Resellers	2	0	0	0	0	1	82	5	0	90
517919	All Other Telecommunications	0	0	0	0	0	0	2	1	0	3
518210	Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services	1	0	0	0	0	0	2	4	0	7
519120	Libraries and Archives	0	0	0	0	0	0	3	0	0	3
522110	Commercial Banking	0	0	0	0	0	0	1	0	0	1
522120	Savings Institutions	0	0	0	0	0	0	1	0	0	1
522130	Credit Unions	0	0	0	0	0	0	8	1	0	9

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
522298	All Other Nondepository Credit Intermediation	0	0	0	0	0	0	1	0	0	1
522310	Mortgage and Nonmortgage Loan Brokers	0	0	0	0	0	0	5	0	0	5
522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities	0	0	0	0	0	0	0	1	0	1
522390	Other Activities Related to Credit Intermediation	0	0	0	0	0	0	2	0	0	2
523110	Investment Banking and Securities Dealing	0	1	0	0	0	0	0	0	0	1
523910	Miscellaneous Intermediation	1	3	0	0	0	0	1	5	0	10
523920	Portfolio Management	0	1	0	0	0	0	0	0	0	1
523930	Investment Advice	0	0	0	0	0	0	1	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
524113	Direct Life Insurance Carriers	0	4	0	0	0	0	5	0	0	9
524126	Direct Property and Casualty Insurance Carriers	1	0	0	0	0	0	2	0	0	3
524210	Insurance Agencies and Brokerages	1	0	0	0	0	0	1	1	0	3
525910	Open-End Investment Funds	0	0	0	0	0	0	2	0	0	2
525990	Other Financial Vehicles	0	1	0	0	0	0	1	0	0	2
531110	Lessors of Residential Buildings and Dwellings	1	3	0	0	0	0	6	7	0	17
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	0	5	0	0	0	0	15	18	0	38
531190	Lessors of Other Real Estate Property	0	0	0	0	0	0	2	1	0	3

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
531210	Offices of Real Estate Agents and Brokers	2	0	0	0	0	0	34	7	0	43
531311	Residential Property Managers	0	0	0	0	0	0	1	0	0	1
531312	Nonresidential Property Managers	1	11	0	1	0	0	14	13	0	40
531390	Other Activities Related to Real Estate	0	0	0	0	0	0	0	1	0	1
532111	Passenger Car Rental	0	0	0	0	0	0	0	2	0	2
532210	Consumer Electronics and Appliances Rental	0	1	0	0	0	0	0	0	0	1
532289	All Other Consumer Goods Rental	0	0	0	0	0	0	0	1	0	1
532299	All Other Consumer Goods Rental	0	0	0	0	0	0	2	0	0	2
532490	Other Commercial and Industrial Machinery and Equipment	1	0	1	0	0	0	1	9	0	12

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Rental and Leasing										
541110	Offices of Lawyers	10	2	0	0	0	0	5	0	0	17
541213	Tax Preparation Services	0	0	0	0	0	0	0	3	0	3
541219	Other Accounting Services	0	0	0	0	0	0	1	0	0	1
541310	Architectural Services	0	0	0	0	0	0	2	0	0	2
541320	Landscape Architectural Services	0	0	0	0	0	0	0	3	0	3
541330	Engineering Services	2	0	1	0	0	0	6	29	0	38
541380	Testing Laboratories and Services	0	0	0	0	0	2	2	0	0	4
541410	Interior Design Services	0	0	0	0	0	0	1	0	0	1
541511	Custom Computer Programming Services	1	0	0	0	0	3	0	1	0	5

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
541512	Computer Systems Design Services	0	0	1	0	0	0	0	1	0	2
541611	Administrative Management and General Management Consulting Services	2	2	0	0	0	1	3	1	0	9
541613	Marketing Consulting Services	1	0	0	0	2	0	0	2	0	5
541618	Other Management Consulting Services	3	0	1	0	0	0	0	1	0	5
541620	Environmental Consulting Services	66	0	2	0	3	0	0	28	0	99
541690	Other Scientific and Technical Consulting Services	0	0	1	0	0	0	0	1	0	2
541711	Research and Development in Biotechnology –	1	0	0	0	0	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	nanobiotechnologies research and experimental development laboratories										
541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology) – nanotechnology research and experimental development laboratories	1	0	0	0	0	0	3	5	0	9
541713	Research and Development in Nanotechnology	0	1	0	0	0	0	0	1	0	2
541714	Research and Development in Biotechnology (except	1	0	0	0	0	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Nanobiotechnology)										
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	1	0	0	0	0	0	0	0	0	1
541720	Research and Development in the Social Sciences and Humanities	1	0	0	0	0	0	0	0	0	1
541810	Advertising Agencies	1	0	0	0	0	0	3	0	0	4
541820	Public Relations Agencies	0	0	0	0	0	0	0	1	0	1
541860	Direct Mail Advertising	0	0	0	0	0	0	1	0	0	1
541910	Marketing Research and Public Opinion Polling	0	0	0	0	0	0	5	2	0	7
541921	Photography	0	0	0	0	0	0	1	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Studios, Portrait										
541990	All Other Professional, Scientific, and Technical Services	0	0	0	0	0	0	5	2	0	7
551112	Offices of Other Holding Companies	3	6	0	0	0	0	1	3	1	14
561110	Office Administrative Services	0	1	1	0	0	0	4	3	1	10
561210	Facilities Support Services	32	0	0	0	0	0	1	29	0	62
561311	Employment Placement Agencies	0	0	0	0	0	0	1	2	0	3
561320	Temporary Help Services	0	0	0	0	0	0	1	0	0	1
561421	Telephone Answering Services	0	0	0	0	0	0	2	0	0	2
561499	All Other Business Support Services	1	0	0	0	0	0	8	12	0	21
561510	Travel Agencies	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
561621	Security Systems Services (except Locksmiths)	0	0	0	0	0	0	0	1	0	1
561710	Exterminating and Pest Control Services	0	0	0	0	0	0	1	1	0	2
561720	Janitorial Services	0	0	0	0	0	0	0	3	0	3
561790	Other Services to Buildings and Dwellings	12	0	0	0	0	0	1	4	0	17
561910	Packaging and Labeling Services	0	0	1	0	0	1	0	0	0	2
561990	All Other Support Services	2	0	5	0	0	1	2	18	1	29
562111	Solid Waste Collection	0	0	2	0	0	0	0	0	0	2
562211	Hazardous Waste Treatment and Disposal	1	0	12	0	0	3	5	7	1	29
562212	Solid Waste Landfill	0	0	5	0	0	2	2	11	0	20
562219	Other Nonhazardous	6	0	0	0	0	0	0	2	0	8

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Waste Treatment and Disposal										
562910	Remediation Services	58	0	0	0	0	0	32	7	0	97
562920	Materials Recovery Facilities	0	2	3	0	0	0	0	4	0	9
562998	All Other Miscellaneous Waste Management Services	1	0	0	0	0	0	0	0	0	1
611110	Elementary and Secondary Schools	1	0	0	0	0	0	64	8	0	73
611210	Junior Colleges	4	0	2	0	0	0	41	3	0	50
611310	Colleges, Universities, and Professional Schools	2	0	5	0	0	0	39	5	0	51
611610	Fine Arts Schools	1	2	0	0	0	0	0	0	0	3
611691	Exam Preparation and Tutoring	0	0	0	0	0	0	0	2	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
611699	All Other Miscellaneous Schools and Instruction	0	0	0	0	0	0	2	2	0	4
621111	Offices of Physicians (except Mental Health Specialists)	1	1	0	0	0	0	5	5	0	12
621112	Offices of Physicians, Mental Health Specialists	0	0	0	0	0	0	1	0	0	1
621210	Offices of Dentists	0	2	0	0	0	0	2	0	0	4
621310	Offices of Chiropractors	0	0	0	0	0	0	1	0	0	1
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	0	0	0	0	0	0	1	0	0	1
621399	Offices of All Other Miscellaneous Health Practitioners	1	0	0	0	0	0	0	2	0	3
621420	Outpatient Mental Health	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	and Substance Abuse Centers										
621491	HMO Medical Centers	0	0	15	0	0	0	2	1	2	20
621493	Freestanding Ambulatory Surgical and Emergency Centers	0	0	0	0	0	1	0	1	0	2
621498	All Other Outpatient Care Centers	2	0	0	0	0	0	0	0	0	2
621511	Medical Laboratories	0	1	0	0	0	0	0	0	0	1
621610	Home Health Care Services	0	0	0	0	0	0	1	1	0	2
621999	All Other Miscellaneous Ambulatory Health Care Services	0	0	0	0	0	0	1	1	0	2
622110	General Medical and Surgical Hospitals	0	4	7	0	0	0	40	18	8	77
622210	Psychiatric and Substance Abuse Hospitals	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	0	0	0	0	0	0	2	0	0	2
623110	Nursing Care Facilities (Skilled Nursing Facilities)	1	1	0	0	0	0	3	0	0	5
623311	Continuing Care Retirement Communities	1	0	0	0	0	0	0	1	0	2
623312	Assisted Living Facilities for the Elderly	1	0	0	0	0	0	0	0	0	1
623990	Other Residential Care Facilities	0	0	0	0	0	0	4	1	0	5
624110	Child and Youth Services	1	0	0	0	0	0	0	0	0	1
624190	Other Individual and Family Services	2	0	0	0	0	0	1	3	0	6
624410	Child Care Services	0	0	0	0	0	0	3	1	0	4

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities	0	0	0	0	0	0	2	0	0	2
712110	Museums	0	0	0	0	0	0	1	0	0	1
713110	Amusement and Theme Parks	4	0	1	0	0	1	1	3	1	11
713910	Golf Courses and Country Clubs	1	0	0	0	0	0	2	2	0	5
713930	Marinas	0	1	0	0	0	0	0	0	0	1
713940	Fitness and Recreational Sports Centers	3	0	1	0	0	0	4	1	0	9
721110	Hotels (except Casino Hotels) and Motels	6	4	0	0	0	2	14	1	1	28
721120	Casino Hotels	0	0	0	0	0	0	0	2	0	2
721214	Recreational and Vacation Camps (except Campgrounds)	0	0	0	0	0	0	0	1	0	1
722320	Caterers	1	0	0	0	0	0	0	0	0	1
722410	Drinking Places (Alcoholic Beverages)	1	0	0	0	0	0	0	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
722511	Full-Service Restaurants	24	5	0	0	0	0	3	6	1	39
722513	Limited-Service Restaurants	43	0	1	0	0	0	5	3	0	52
811111	General Automotive Repair	30	30	1	0	0	0	3	21	0	85
811112	Automotive Exhaust System Repair	0	0	0	0	0	0	0	1	0	1
811113	Automotive Transmission Repair	0	0	0	0	0	0	0	2	0	2
811118	Other Automotive Mechanical and Electrical Repair and Maintenance	0	2	1	0	0	0	0	1	0	4
811121	Automotive Body, Paint, and Interior Repair and Maintenance	2	72	10	0	0	3	1	93	0	181
811192	Car Washes	0	1	1	0	0	1	0	3	0	6
811198	All Other Automotive Repair and Maintenance	0	0	0	0	0	0	1	1	0	2

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
811211	Consumer Electronics Repair and Maintenance	0	0	0	0	0	0	0	1	0	1
811212	Computer and Office Machine Repair and Maintenance	0	0	0	0	0	0	0	1	0	1
811219	Other Electronic and Precision Equipment Repair and Maintenance	0	0	1	0	0	0	0	1	0	2
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0	0	1	0	0	0	1	2	0	4
811412	Appliance Repair and Maintenance	4	0	0	0	0	0	0	2	0	6
811420	Reupholstery and Furniture Repair	0	0	0	0	0	0	1	0	0	1
812112	Beauty Salons	0	0	0	0	0	0	0	1	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
812199	Other Personal Care Services	0	0	0	0	0	0	1	0	0	1
812210	Funeral Homes and Funeral Services	0	10	0	0	0	2	0	8	0	20
812220	Cemeteries and Crematories	0	0	0	0	0	5	3	5	0	13
812320	Drycleaning and Laundry Services (except Coin-Operated)	0	11	0	0	0	0	1	26	0	38
812331	Linen Supply	0	4	6	0	0	0	0	1	2	13
812910	Pet Care (except Veterinary) Services	0	0	0	0	0	0	1	0	0	1
812921	Photofinishing Laboratories (except One-Hour)	0	0	0	0	0	0	2	0	0	2
812930	Parking Lots and Garages	0	0	0	0	0	0	2	0	0	2
812990	All Other Personal Services	0	0	0	0	0	0	1	0	0	1
813110	Religious Organizations	0	0	0	0	0	1	9	6	0	16

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
813410	Civic and Social Organizations	0	0	0	0	0	0	4	0	0	4
813910	Business Associations	0	0	0	0	0	0	0	1	0	1
813920	Professional Organizations	0	0	0	0	0	0	1	0	0	1
813990	Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)	1	0	0	0	0	0	6	2	0	9
921110	Executive Offices	9	7	1	0	0	2	3	2	1	25
921130	Public Finance Activities	0	0	0	0	0	0	1	0	0	1
921190	Other General Government Support	7	0	0	0	0	5	5	0	1	18
922120	Police Protection	1	0	0	0	0	0	2	3	0	6
922160	Fire Protection	1	0	0	0	0	0	0	0	0	1
922190	Other Justice, Public Order, and Safety Activities	0	0	0	0	0	0	2	1	0	3

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
923110	Administration of Education Programs	0	0	0	0	0	0	1	0	0	1
923130	Administration of Human Resource Programs (except Education, Public Health, and Veterans' Affairs Programs)	0	0	0	0	0	0	1	0	0	1
924110	Administration of Air and Water Resource and Solid Waste Management Programs	1	0	2	0	0	0	4	1	0	8
924120	Administration of Conservation Programs	0	0	0	0	0	0	0	1	0	1
925110	Administration of Housing Programs	0	0	0	0	0	0	1	0	0	1
925120	Administration of Urban Planning and	0	0	0	0	0	0	1	0	0	1

Table 2- Calendar Year 2022 Disposition Type by NAICS Code

NAIC (Revised)	NAIC Desc (Revised)	Area Source/Registration	C/O	Cancelled	Denial	ERC	Permit to Construct	Plans	PO	RECLAIM /TV	Grand Total
	Community and Rural Development										
926120	Regulation and Administration of Transportation Programs	1	0	0	0	0	0	2	4	0	7
926130	Regulation and Administration of Communications, Electric, Gas, and Other Utilities	6	0	1	0	0	4	4	11	5	31
926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors	0	0	0	0	0	0	0	1	0	1
927110	Space Research and Technology	0	0	0	0	0	0	2	0	0	2
928110	National Security	0	0	1	0	0	4	2	0	1	8
XXXXXX	Uncategorized	71	44	13	0	5	5	50	74	0	262
Grand Total		1,134	910	468	2	56	234	1,220	1,785	122	5,931

Annualized Publication of Emission Reduction Credit (ERC) And Short-Term Emission Reduction Credit (STERC) Transactions for Fiscal Year 2021-22 ¹ (California Health and Safety Code Section 40452)

Pursuant to paragraph (c) of section 40452 of the California Health and Safety Code, this report summarizes data on emission offset transactions and applications, by pollutant, during the previous fiscal year. Note that during Fiscal Year 2021-22, no applications were denied for a permit for a new source for the reason of failure to provide the required emission offsets.

Table 3 summarizes privately held Emission Reduction Credit (ERC) and Short-Term Emission Reduction Credit (STERC) transactions for Fiscal Year 2021-22, including totals, by pollutant, of the number of emission offset transactions and the quantity of emission offsets transferred in units of pounds per day and tons per year. Table 4 summarizes ERC banking applications processed during Fiscal Year 2021-22, including the number of newly generated STERCs by pollutant in units of pounds per day and tons per year.

Tables 5 and 6 provide details on the amount of each emission offset transaction and processed ERC banking application, respectively.

Table 3: Emission Offset Transactions – Fiscal Year 2021-22

Criteria Pollutant	Number of Emission Offset Transfer Transactions ²				Quantity of Emission Offsets Transferred ³ (lb/day)				Annualized Quantity of Emission Offsets Transferred ³ (ton/year ⁴)			
	ERC	STERC ₆	STERC ₆	TOTAL	ERC	STERC ₅	STERC ₆	TOTAL	ERC	STERC ₅	STERC ₆	TOTAL
ROG	16	10	0	26	258	246	0	504	47.1	45	0	92.1
NOX	4	0	0	4	20	0	0	20	3.7	0	0	3.7
SOX	2	0	0	2	46	0	0	46	8.4	0	0	8.4
CO	0	0	0	0	0	0	0	0	0	0	0	0
PM10	3	2	0	5	3	8	0	11	0.6	1.5	0	2.1

Table 4: Emission Offset Applications – Fiscal Year 2021-22

Criteria Pollutant	Number of Banking Applications Resulting in the Issuance of New STERCs ⁷	Quantity of Emission Reductions Achieved (STERCs) ⁸ (lb/day)	Annualized Quantity of Emission Reductions Achieved ⁸ (ton/year ⁹)
ROG	0	0	0
NOX	0	0	0
SOX	0	0	0
CO	0	0	0
PM10	0	0	0

¹ This report does not include RECLAIM Trading Credit (RTC) transactions.

² Includes all emission offset certificates that transferred ownership.

³ Includes the total amount of emission offsets transferred.

⁴ Sum of individual transactions in Table 3 .

⁵ STERC transfer transactions including the long-term emission offset, those that have an ending year of 9999.

⁶ STERC transfer transactions not including the long-term emission offset in which the emission offset with the greatest year is treated like a long-term emission offset.

⁷ Includes all emission offset applications resulting in the generation of new certificates.

⁸ Includes the total amount of emission offsets generated.

⁹ Sum of individual transactions in Table 4.

**Table 5: Emission Offset Transaction Summary – Fiscal Year 2021-22
Sorted by Pollutant and Amount**

SCAQMD NO.	POLLUTANT	AMOUNT (LB/DAY)	AMOUNT (TON/YR)	TYPE	START YEAR	END YEAR
SC2122-001	ROG	3	0.5	ERC	N/A	N/A
SC2122-002	ROG	4	0.7	ERC	N/A	N/A
SC2122-003	ROG	4	0.7	ERC	N/A	N/A
SC2122-004	ROG	1	0.2	ERC	N/A	N/A
SC2122-005	ROG	1	0.2	ERC	N/A	N/A
SC2122-006	ROG	4	0.7	STERC	2021	9999
SC2122-007	ROG	1	0.2	ERC	N/A	N/A
SC2122-008	ROG	2	0.4	ERC	N/A	N/A
SC2122-009	ROG	14	2.6	ERC	N/A	N/A
SC2122-010	ROG	3	0.5	ERC	N/A	N/A
SC2122-011	ROG	72	13.1	STERC	2021	9999
SC2122-012	ROG	2	0.4	STERC	2021	9999
SC2122-013	ROG	121	22.1	STERC	2018	9999
SC2122-014	ROG	8	1.5	STERC	2021	9999
SC2122-015	ROG	1	0.2	ERC	N/A	N/A
SC2122-016	ROG	22	4	ERC	N/A	N/A
SC2122-017	ROG	1	0.2	ERC	N/A	N/A
SC2122-018	ROG	22	4	ERC	N/A	N/A
SC2122-019	ROG	1	0.2	ERC	N/A	N/A
SC2122-020	ROG	86	15.7	ERC	N/A	N/A
SC2122-021	ROG	11	2	STERC	2021	9999
SC2122-022	ROG	92	16.8	ERC	N/A	N/A
SC2122-023	ROG	7	1.3	STERC	2021	9999
SC2122-024	ROG	7	1.3	STERC	2021	9999
SC2122-025	ROG	7	1.3	STERC	2021	9999
SC2122-026	ROG	7	1.3	STERC	2021	9999
Total		504	92.1		N/A	

Table 5, Continued

SCAQMD NO.	POLLUTANT	AMOUNT (LB/DAY)	AMOUNT (TON/YR)	TYPE	START YEAR	END YEAR
SC2122-027	NOX	4	0.7	ERC	N/A	N/A
SC2122-028	NOX	12	2.2	ERC	N/A	N/A
SC2122-029	NOX	2	0.4	ERC	N/A	N/A
SC2122-030	NOX	2	0.4	ERC	N/A	N/A
Total		20	3.7		N/A	

Table 5, Continued

SCAQMD NO.	POLLUTANT	AMOUNT (LB/DAY)	AMOUNT (TON/YR)	TYPE	START YEAR	END YEAR
SC2122-031	SOX	20	3.7	ERC	NA	NA
SC2122-032	SOX	26	4.7	ERC	NA	NA
Total		46	8.4	N/A		

Table 5, Continued

SCAQMD NO.	POLLUTANT	AMOUNT (LB/DAY)	AMOUNT (TON/YR)	TYPE	START YEAR	END YEAR
N/A	CO	No Records				
Total		0	0	N/A		

Table 5, Continued

SCAQMD NO.	POLLUTANT	AMOUNT (LB/DAY)	AMOUNT (TON/YR)	TYPE	START YEAR	END YEAR
SC2122-033	PM10	7	1.3	STC	2014	9999
SC2122-034	PM10	1	0.2	STC	2015	9999
SC2122-035	PM10	1	0.2	ERC	N/A	N/A
SC2122-036	PM10	1	0.2	ERC	N/A	N/A
SC2122-037	PM10	1	0.2	ERC	N/A	N/A
Total		11	2.1	N/A		

**Table 6: Emission Offset Application Summary – Fiscal Year 2021-22
Sorted by Pollutant and Amount**

SCAQMD NO.	POLLUTANT	AMOUNT ¹⁰ (LB/DAY)	AMOUNT ¹⁰ (TON/YR)	TYPE	START YEAR	END YEAR
N/A	No Records					
Total		N/A	N/A	N/A		

¹⁰ To avoid over counting, only long-term emission offsets, those that have an ending year of 9999, are quantified.

**CHAPTER III
FISCAL YEAR 2023-2024 BUDGET**

Due to the bulk of this material, Chapter III is available online at www.aqmd.gov/docs/default-source/finance-budgets/fy-2023-24/adopted-fy-2023-24-budget.pdf . Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD 's Public Information Center at (909)396-2001.

CHAPTER IV
CLEAN FUELS PROGRAM 2022 ANNUAL REPORT AND 2023 PLAN UPDATE

Due to the bulk of this material, Chapter IV is available online at <http://www.aqmd.gov/docs/default-source/technology-research/annual-reports-and-plan-updates/2022-annual-report-2023-plan-update.pdf>. Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD's Public Information Center at (909)396-2001.

CHAPTER V
ANNUAL RECLAIM AUDIT REPORT FOR 2021 COMPLIANCE YEAR

Due to the bulk of this material, Chapter V is available online at <http://www.aqmd.gov/docs/default-source/reclaim/reclaim-annual-report/2021-reclaim-report.pdf> . Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD 's Public Information Center at (909)396-2001.

[↑ Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 11

REPORT: Hearing Board Report

SYNOPSIS: This reports the actions taken by the Hearing Board during the period of October 1 through October 31, 2023.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Cynthia Verdugo-Peralta
Hearing Board Chair

ft

Attached are the following two summaries: **October 2023 Hearing Board Cases**, and **Rules From Which Variances and Orders for Abatement Were Requested in 2023**. An index of South Coast AQMD Rules is also attached.

There were no appeals filed during the period of October 1 to October 31, 2023.

Report of October 2023 Hearing Board Cases

Case Name and Case No. (South Coast AQMD Attorney)	Rules	Reason for Petition/Hearing	South Coast AQMD Position/Hearing Board Action	Type and Length of Variance or Order	Excess Emissions
1. County of San Bernardino – Fleet Management Case No. 6070-11 (K. Manwaring)	203(b)	This public entity was forced to use their emergency ICE, which is currently at 147.7 hours of the 200 annual permitted hours, due to a SCE outage that occurred beyond Petitioner’s reasonable control.	Not Opposed/Granted	Ex Parte EV granted commencing 10/27/23 and continuing until the SV hearing scheduled for 11/16/23, or until final compliance is reached, or whichever comes first.	TBD
2. Juanita’s Foods Case No. 6243-1 (K. Roberts)	203(b)	A new permit was requested to increase monthly throughput, which resulted in increased emissions and the need for control equipment under BACT requirements.	Opposed/Granted	RV granted commencing 10/31/23 and continuing through 12/31/23, the FCD.	PM: 0.99 lb/day
3. LARICS CCT LMR Case No. 6234-2 (Consent Calendar)	203(b)	Malfunctioning auto transfer switch triggered the emergency ICE, due to low voltage caused by dead leg of the 3-phase service.	Not Opposed/Granted	RV granted commencing 10/19/23 and continuing through 12/31/23, the FCD.	NOx: 2.6200 g/bhp-hr CO: 0.2900 g/bhp-hr PM: 0.1100 g/bhp-hr PM10: 0.1056 g/bhp-hr ROG: 0.2900 g/bhp-hr SOx: 0.0049 g/bhp-hr
4. LARICS MDI LMR Case No. 6234-3 (Consent Calendar)	203(b)	Due to severe weather multiple (5) SCE power outages caused the emergency ICE to operate for 196 hours of their 200-annual allotted hours per year.	Not Opposed/Granted	RV granted commencing 10/19/23 and continuing through 12/31/23, the FCD.	NOx: 2.68 g/bhp-hr CO: 0.66 g/bhp-hr PM: 0.10 g/bhp-hr ROG: 0.11 g/bhp-hr SOx: 0.0047 g/bhp-hr

Case Name and Case No. (South Coast AQMD Attorney)	Rules	Reason for Petition/Hearing	South Coast AQMD Position/Hearing Board Action	Type and Length of Variance or Order	Excess Emissions
5. Orange Carwash Inc. Case No. 6246-1 (J. Jones)	203(b) 461(e)(6)(C)	Petitioner failed the Method Test 6 pressure test, due to the vent line for the subterranean storage tanks.	Not Opposed/Granted	Ex Parte EV granted commencing 10/20/23 and continuing for 30 days, through 11/19/23, whichever comes first.	VOC: TBD
6. Shadow Wolf Energy, LLC Case No. 6244-1 (K. Manwaring)	203(b) 218.1 2004(f)(1) 2012(c)(2)(B) 3002(c)(1)	Petitioner failed to perform a RATA by the 9/30/23 deadline.	Not Opposed/Granted	IV period is granted for a total of 90 days, commencing 10/11/23, or until the RV hearing scheduled for 11/16/23, whichever comes first.	None

Acronyms

BACT: Best Available Control Technology
CO: Carbon Monoxide
EV: Emergency Variance
ICE: Internal Combustion Engine
FCD: Final Compliance Date
IV: Interim Variance
NOx: Oxides of Nitrogen
PM: Particulate Matter
PM10: Particulate Matter ≤ 10 microns
RATA: Relative Accuracy Test Audit
ROG: Reactive Organic Gases
RV: Regular Variance
SOx: Oxides of Sulfur
SV: Short Variance
TBD: To Be Determined
VOC: Volatile Organic Compound

Rules from Which Variances and Orders for Abatement were Requested in 2023

Rules	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total Actions
202(a)								1					1
202(c)								1					1
203(b)	2	7	16	4	7	9	4	9	6	5			69
204									1				1
218(b)(2)			1			2							3
218.1										1			1
218.1(b)(4)(C)			1			2							3
401(b)(1)								2					2
402	1					1	1		1				4
407(a)								1					1
415(f)				1									1
415(g)				1									1
431.1(c)(2)					3								3
431.1(f)(1)(A)					2								2
461(e)(2)(A)(i)				1									1
461(e)(6)(C)										1			1
463(c)									1				1
463(c)(2)(B)		1											1
464(b)(1)(A)					1								1
464(b)(2)					1								1
464(b)(3)					1								1
1100									1				1
1100(e)(2)(A)	1	2											3
1100(e)(2)(B)			2										2
1100(e)(3)(A)			1										1
1110.2		1							1				2
1128							1						1
1146									1				1
1146(c)(1)			1				1						2
1146(c)(1)(I)			1										1
1146(c)(1)(J)	1	2											3
1146(e)(1)			2				1						3
1147							1						1
1148.1(d)(8)									1				1

Rules from Which Variances and Orders for Abatement were Requested in 2023

Rules	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total Actions
1150.1						1		1					2
1173(d)(1)(B)									1				1
1176(e)(1)					1								1
1176(e)(2)					1								1
1178(d)(3)(D)		1											1
1196					1								1
1196(d)									1				1
1196(d)(1)						1	1	1					3
1196(e)									1				1
1196(f)(8)(a)								1					1
1196(f)(10)								1					1
1303(a)(1)									1				1
1303(b)(1)						1		1					2
1302(b)(2)						1		1	1				3
1430(h)(14)								2					2
1470(c)(2)(C)(i)								1					1
1470(c)(4)A)	1						1						2
2004									1				1
2004(b)								1					1
2004(f)(1)		4	3	1	1	2	1	6	2	1			21
2005								1					1
2006								1					1
2012									1				1
2012(c)(2)(B)										1			1
2012(d)(1)(a)(ii)								1					1
2012(d)(2)		1											1
3002(c)(1)		5	3	1	4	5	1	6	2	1			28
CA H&S Code 41700							1		1				2
CA H&S Code 41701								2					2

**SOUTH COAST AQMD RULES AND REGULATIONS INDEX
2023 HEARING BOARD CASES AS OF OCTOBER 31, 2023**

REGULATION II – PERMITS

- Rule 202 Temporary Permit to Operate
- Rule 203 Permit to Operate
- Rule 218 Continuous Emission Monitoring
- Rule 218.1 Continuous Emission Monitoring Performance Specifications

REGULATION IV – PROHIBITIONS

- Rule 401 Visible Emissions
- Rule 402 Nuisance
- Rule 407 Liquid and Gaseous Air Contaminants
- Rule 415 Odors from Rendering Facilities
- Rule 431.1 Sulfur Content of Gaseous Fuels
- Rule 461 Gasoline Transfer and Dispensing
- Rule 463 Organic Liquid Storage
- Rule 464 Wastewater Separators

REGULATION XI - TOXICS AND OTHER NON-CRITERIA POLLUTANTS

- Rule 1100 Implementation Schedule for NOx Facilities
- Rule 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines
- Rule 1128 Paper, Fabric, and Film Coating Operations
- Rule 1146 Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters
- Rule 1147 NOx Reductions from Miscellaneous Sources
- Rule 1150.1 Control of Gaseous Emissions from Municipal Solid Waste Landfills
- Rule 1176 VOC Emissions from Wastewater Systems
- Rule 1178 Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities
- Rule 1196 Clean On-Road Heavy-Duty Public Fleet Vehicles

REGULATION XIII – NEW SOURCE REVIEW

Rule 1303 Requirements

REGULATION XIV - TOXICS AND OTHER NON-CRITERIA POLLUTANTS

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

Rule 2005 New Source Review for RECLAIM

Rule 2006 Permits

Rule 2012 Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions

REGULATION XXX – TITLE V PERMITS

3002 – Requirements

CALIFORNIA HEALTH AND SAFETY CODE

§41700 Prohibited Discharges

§41701 Restricted Discharges

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 12

REPORT: Civil Filings and Civil Penalties Report

SYNOPSIS: This report summarizes monthly penalties and legal actions filed by the General Counsel's Office from October 1 through October 31, 2023. An Index of South Coast AQMD Rules is attached with the penalty report.

COMMITTEE: Stationary Source, November 17, 2023, Reviewed

RECOMMENDED ACTION:
Receive and file.

Bayron T. Gilchrist
General Counsel

BTG:cr

	<u>Civil Filings</u>	<u>Violations</u>
1. SK Asset Management, LLC County of Los Angeles Superior Court – Small Claims Case No.: 23IWSC01444; Filed 10.03.23 (CL) NOV No.: P74301 R.1403 - Asbestos Emissions from Demolition/Renovation Activities California Health and Safety Code § 42402		1
		1 Violations

Attachments

October 2023 Penalty Report

Index of South Coast AQMD Rules and Regulations

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

Settlement Penalty Report (10/01/2023 - 10/31/2023)

Total Penalties

Civil Settlement: \$418,385.50
MSPAP Settlement: \$119,777.28

Total Cash Settlements: \$538,162.78

Fiscal Year through 10/31/2023 Cash Total: \$1,654,477.28

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
Civil						
45489	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	3002	10/11/2023	KCM	P75409	\$2,850.00
188973	AID BUILDERS, INC.	1403, 40 CFR 61.145	10/03/2023	EC	P65049	\$32,000.00
101656	AIR PRODUCTS AND CHEMICALS, INC.	1118, 1173	10/03/2023	RM	P63394, P63395, P65096	\$7,020.00
800196	AMERICAN AIRLINES, INC.	2004	10/04/2023	DH	P66135, P66147, P76070	\$11,700.00
199754	BLACKGEM PROPERTIES. LLC	1403, 40 CFR 61.145	10/23/2023	EC	P78603	\$900.00
22911	CARLTON FORGE WORKS	2004, 3002	10/19/2023	DH	P68316, P69535, P69799, P74265	\$40,521.00
196236	CET CONSTRUCTION CO, INC.	1403	10/04/2023	ND	P76102, P76103, P76104	\$25,000.00
127800	COLLISION EXPERTS	203	10/13/2023	SH	P69915, P76254	\$500.00
182561	COLTON POWER, LP	218, 218.1, 2004, 2012, 3002	10/19/2023	DH	P66085, P66096, P66098, P68680	\$14,638.00
19823	CREE OIL LTD (RIEDEL LEASE)	203, 1148.1, 1173	10/18/2023	JL	P69293, P73268	\$9,953.00
10983	EASTERN MUNICIPAL WATER DISTRICT	1403	10/05/2023	ND	P76101	\$3,500.00
190276	IRVINE RANCH MARKET	1415.1	10/26/2023	BT	P67022	\$32,000.00
77084	KAISER PERMANENTE HOSPITAL	203	10/25/2023	KCM	P66803, P66836	\$1,000.00
68968	LA CO., ISD/NETWORK SERVICES DIVISION	H&S 42402	10/18/2023	JL	P73039	\$500.00
200614	LA STRADA PIPELINE, INC.	403	10/04/2023	JL	P79302	\$3,513.00
197900	LB3	403	10/18/2023	MR	P75413, P75416	\$3,500.00
190670	NORMA OVIEDO	1403	10/19/2023	NS	P69208, P69209, P69210, P69211	\$10,000.00
113091	P&M OIL COMPANY	203, 463, 1148.1	10/04/2023	RM	P69260, P73301, P73304, P75663	\$9,150.00
173488	PG&J ENVIRONMENTAL	221, 1403, 40 CFR 61.145	10/13/2023	RM	P67499, P69831, P69843, P70529, P74583, P78958	\$27,752.00
17953	PACIFIC CLAY PRODUCTS, INC.	2004, 2012, 3002	10/24/2023	JL	P73510, P79204	\$9,350.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
140552	PERFORMANCE COMPOSITES, INC.	3002	10/03/2023	KCM	P69547, P75313	\$4,900.00
123391	PLASKOLITE, INC.	203, 402, H&S 41700	10/04/2023	JL	P73696, P76356	\$7,026.00
167402	REPUBLIC SERVICES, INC.	403	10/10/2023	JL	P76401	\$2,342.00
147968	S&K STATE STREET SERVICE, INC.	461	10/04/2023	JL	P70182	\$935.00
192073	S&S COASTAL FOODS, LLC	1403, 40 CFR 61.145	10/03/2023	NAS	P70411	\$6,282.50
4242	SAN DIEGO GAS & ELECTRIC	1110.2, 2004, 2012, 2012 Appendix A, 3002	10/03/2023	SH	P66073, P66080, P73206, P73322, P73336	\$37,500.00
184301	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	1148.2, 2004	10/03/2023	RM	P69299, P74257, P74266	\$11,335.00
117851	SHORE TERMINALS, LLC	203, 1173	10/04/2023	MR	P74067, P74077, P74078	\$18,000.00
159612	SIGNATURE FLIGHT SUPPORT	203, 461	10/10/2023	JL	P62787, P67743	\$2,341.00
36644	SO ORANGE CO. WASTEWATER AUTHORITY	H&S 42402	10/03/2023	DH	P74713	\$351.00
137508	TONOGA INC, DBA TACONIC	2004, 2012, 2012 Appendix A	10/24/2023	SP	P70020, P78701	\$75,000.00
800265	UNIV OF SO CAL (EIS & NSR USE ONLY)	3002	10/19/2023	EC	P73564	\$1,171.00
193323	ZENITH ENERGY WEST COAST TERMINALS, LLC	463, 2004	10/04/2023	JL	P68678, P75505	\$5,855.00
Total Civil Settlements : \$418,385.50						

MSPAP						
187567	ARCO AM/PM TESORO REFINING & MKTG CO.	203, 461	10/13/2023	VA	P70195	\$3,786.00
194399	ATC SEQUOIA, LLC	203	10/13/2023	CL	P63990	\$971.00
161900	BEVERLY HILLS OIL, INC.	461, H&S 41960.2	10/06/2023	CL	P77703	\$1,456.00
154539	BLVD 5, INC.	461	10/13/2023	CL	P72981	\$459.00
43214	CAL HWY PATROL	461	10/06/2023	CL	P78552	\$1,381.00
194295	CALIFORNIA TOWER, INC.	203	10/13/2023	CL	P63989	\$921.00
51886	CHEVRON DLR	461, H&S 41960.2	10/20/2023	CL	P69898	\$1,531.00
174026	COACHELLA OIL CORP. - BAHMAN NATANZI	461	10/06/2023	CL	P73124	\$1,742.00
184343	DREAM HOLLYWOOD - 6417 SELMA HOTEL	203	10/06/2023	CL	P76514	\$971.00
170654	FOUNTAIN SHELL, INC.	203, 461	10/06/2023	CL	P74848	\$1,380.00
198172	HOTEL DIEU	203	10/27/2023	CL	P76520	\$3,472.78
183247	IMAGE FUEL, INC.	203, 461	10/06/2023	CL	P74850	\$921.00
192127	JD FUEL, INC.	461	10/13/2023	CL	P78652	\$1,927.00
198028	KOIA ANAHEIM FACILITY, LLC	1146	10/06/2023	CL	P75611	\$3,845.00
186084	LA PALMA 76	461	10/06/2023	VA	P78660	\$878.00
194733	LGM PHARMA	3002	10/06/2023	CL	P76403	\$460.00
98247	MAIN ST SERVICE STATION, INC.	203	10/06/2023	CL	P69896	\$671.00
104004	MICROMETALS, INC	3002	10/06/2023	CL	P65658, P69934, P70330	\$8,779.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
166385	MINA FANAR, INC.	203, 461	10/06/2023	VA	P76165	\$2,108.00
58302	MOBIL DLR, VICHAI SANGNGEONON	203, 461	10/06/2023	VA	P75709	\$5,855.00
183855	MOLLER RETAIL #6120	461	10/06/2023	CL	P69892	\$1,071.00
197311	MRJV	403	10/06/2023	CL	P75411	\$3,684.00
144090	NEW CINGULAR WIRELESS-AT&T MOBILITY	203	10/20/2023	VA	P78306	\$937.00
188581	NOIL USA INC., COWLES	203, 461	10/06/2023	CL	P78668	\$2,052.00
117723	OIL OPERATORS, INC.	203	10/06/2023	CL	P73338	\$971.00
197718	OLTMANS CONSTRUCTION CO	403	10/06/2023	CL	P73819, P76253	\$10,815.00
164999	PILOT TRAVEL CENTERS LLC	461	10/13/2023	VA	P75722	\$2,108.00
153952	PRENA LUCKY 777 MARKET, INC.	461	10/06/2023	CL	P75714	\$6,126.00
111238	RIBOST TERMINAL, LLC.	203	10/06/2023	CL	P74076	\$2,042.00
191206	RIVERSIDE CENTER FOR SPIRITUAL LIVING	1403, 40 CFR 61.145	10/06/2023	CL	P72910	\$7,272.00
155670	SAM'S UNIVERSAL AM/PM	461	10/06/2023	CL	P74840	\$1,531.00
46484	SAROYAN LUMBER, CO.	402, 1137, H&S 41700	10/06/2023	CL	P73884	\$6,126.00
169990	SPS TECHNOLOGIES, LLC	3002	10/06/2023	CL	P75803	\$1,155.00
137899	STUDIO CITY 76	461, H&S 41960.2	10/06/2023	CL	P77709	\$1,531.00
183653	UNITED ROCK PRODUCTS CORP.	403	10/20/2023	CL	P74468, P74469	\$13,594.00
194208	USC VERDUGO HILLS HOSPITAL	1146, 1470	10/06/2023	CL	P76508	\$10,681.00
167466	WOANNA, INC.	203, 461	10/06/2023	VA	P78656	\$2,195.00
11369	WORTMANN OIL ,CO.	461	10/06/2023	CL	P72979	\$766.00
140890	Y.S.T., INC.	203, 461	10/20/2023	CL	P77718	\$1,606.00
Total MSPAP Settlements: \$119,777.28						

SOUTH COAST AQMD'S RULES AND REGULATIONS INDEX
OCTOBER 2023 PENALTY REPORT

REGULATION II - PERMITS

- Rule 203 Permit to Operate
- Rule 218 Continuous Emission Monitoring
- Rule 218.1 Continuous Emission Monitoring Performance Specifications
- Rule 221 Plans

REGULATION IV - PROHIBITIONS

- Rule 402 Nuisance
- Rule 403 Fugitive Dust - *Pertains to solid particulate matter emitted from man-made activities.*
- Rule 461 Gasoline Transfer and Dispensing
- Rule 463 Storage of Organic Liquids

REGULATION XI - SOURCE SPECIFIC STANDARDS

- Rule 1110.2 Emissions from Gaseous- and Liquid-Fueled Internal Combustion Engines
- Rule 1118 Emissions from Refinery Flares
- Rule 1137 PM10 Emission Reductions from Woodworking Operations
- Rule 1146 Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters
- Rule 1148.1 Oil and Gas Production Wells
- Rule 1148.2 Hydraulic Fracturing of Oil and Gas Wells
- Rule 1173 Fugitive Emissions of Volatile Organic Compounds

REGULATION XIV - TOXICS

- Rule 1403 Asbestos Emissions from Demolition/Renovation Activities
- 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
- Rule 2012 Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions
- Appendix A
- Rule 2012 Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions

SOUTH COAST AQMD'S RULES AND REGULATIONS INDEX
OCTOBER 2023 PENALTY REPORT

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

41700 Prohibited Discharges

41960.2 Gasoline Vapor Recovery

42402 Violation of Emission Limitations – Civil Penalty

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 13

REPORT: Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects

SYNOPSIS: This report provides a listing of environmental documents prepared by other public agencies seeking review by South Coast AQMD between October 1, 2023 and October 31, 2023, and proposed projects for which South Coast AQMD is acting as lead agency pursuant to CEQA.

COMMITTEE: Mobile Source, November 17, 2023, Reviewed

RECOMMENDED ACTION:
Receive and file.

Wayne Natri
Executive Officer

SR:MK:MM:BR:SW:ET

Background

The California Environmental Quality Act (CEQA) Statute and Guidelines require public agencies, when acting in their lead agency role, to provide an opportunity for other public agencies and members of the public to review and comment on the analysis in environmental documents prepared for proposed projects. A lead agency is when a public agency has the greatest responsibility for supervising or approving a proposed project and is responsible for the preparation of the appropriate CEQA document.

Each month, South Coast AQMD receives environmental documents, which include CEQA documents, for proposed projects that could adversely affect air quality. South Coast AQMD fulfills its intergovernmental review responsibilities, in a manner that is consistent with the Board's 1997 Environmental Justice Guiding Principles and Environmental Justice Initiative #4, by reviewing and commenting on the adequacy of the air quality analysis in the environmental documents prepared by other lead agencies.

The status of these intergovernmental review activities is provided in this report in two sections: 1) Attachment A lists all of the environmental documents prepared by other public agencies seeking review by South Coast AQMD that were received during the reporting period; and 2) Attachment B lists the active projects for which South Coast AQMD has reviewed or is continuing to conduct a review of the environmental documents prepared by other public agencies. Further, as required by the Board's October 2002 Environmental Justice Program Enhancements for fiscal year (FY) 2002-03, each attachment includes notes for proposed projects which indicate when South Coast AQMD has been contacted regarding potential air quality-related environmental justice concerns. The attachments also identify for each proposed project, as applicable: 1) the dates of the public comment period and the public hearing date; 2) whether staff provided written comments to a lead agency and the location where the comment letter may be accessed on South Coast AQMD's website; and 3) whether staff testified at a hearing.

In addition, the South Coast AQMD will act as lead agency for a proposed project and prepare a CEQA document when: 1) air permits are needed; 2) potentially significant adverse impacts have been identified; and 3) the South Coast AQMD has primary discretionary authority over the approvals. Attachment C lists the proposed air permit projects for which South Coast AQMD is lead agency under CEQA.

Attachment A – Log of Environmental Documents Prepared by Other Public Agencies and Status of Review, and Attachment B – Log of Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies

Attachment A contains a list of all environmental documents prepared by other public agencies seeking review by South Coast AQMD that were received pursuant to CEQA or other regulatory requirements. Attachment B provides a list of active projects, which were identified in previous months' reports, and which South Coast AQMD staff is continuing to evaluate or prepare comments relative to the environmental documents prepared by other public agencies. The following table provides statistics on the status of review¹ of environmental documents for the current reporting period for Attachments A and B combined²:

¹ The status of review reflects the date when this Board Letter was prepared. Therefore, Attachments A and B may not reflect the most recent updates.

² Copies of all comment letters sent to the lead agencies are available on South Coast AQMD's website at: <http://www.aqmd.gov/home/regulations/ceqa/commenting-agency>.

Statistics for Reporting Period from October 1, 2023 to October 31, 2023	
Attachment A: Environmental Documents Prepared by Other Public Agencies and Status of Review	58
Attachment B: Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies (which were previously identified in the August 2023, and September 2023 reports)	14
Total Environmental Documents Listed in Attachments A & B	72
<i>Comment letters sent</i>	<i>24</i>
<i>Environmental documents reviewed, but no comments were made</i>	<i>36</i>
<i>Environmental documents currently under going review</i>	<i>12</i>

Staff focuses on reviewing and preparing comments on environmental documents prepared by other public agencies for proposed projects: 1) where South Coast AQMD is a responsible agency under CEQA (e.g., when air permits are required but another public agency is lead agency); 2) that may have significant adverse regional air quality impacts (e.g., special event centers, landfills, goods movement); 3) that may have localized or toxic air quality impacts (e.g., warehouse and distribution centers); 4) where environmental justice concerns have been raised; and 5) which a lead or responsible agency has specifically requested South Coast AQMD review.

If staff provided written comments to a lead agency, a hyperlink to the “South Coast AQMD Letter” is included in the “Project Description” column which corresponds to a notation in the “Comment Status” column. In addition, if staff testified at a hearing for a proposed project, a notation is also included in the “Comment Status” column. Copies of all comment letters sent to lead agencies are available on South Coast AQMD’s website at: <http://www.aqmd.gov/home/regulations/ceqa/commenting-agency>. Interested parties seeking information regarding the comment periods and scheduled public hearings for projects listed in Attachments A and B should contact the lead agencies for further details as these dates are occasionally modified.

In January 2006, the Board approved the Clean Port Initiative Workplan (Workplan). One action item of the Workplan was to prepare a monthly report describing CEQA documents for projects related to goods movement and to make full use of the process to ensure the air quality impacts of such projects are thoroughly mitigated. In accordance with this action item, Attachments A and B organize the environmental documents received according to the following categories: 1) goods movement projects; 2) schools; 3) landfills and wastewater projects; 4) airports; and 5) general land use projects. In response to the action item relative to mitigation, staff maintains a compilation of mitigation measures presented as a series of tables relative to off-road engines; on-road engines; harbor craft; ocean-going vessels; locomotives; fugitive dust;

and greenhouse gases which are available on South Coast AQMD’s website at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies>. Staff will continue compiling tables of mitigation measures for other emission sources such as ground support equipment.

Attachment C – Proposed Air Permit Projects for Which South Coast AQMD is CEQA Lead Agency

The CEQA lead agency is responsible for determining the type of environmental document to be prepared if a proposal requiring discretionary action is considered to be a “project” as defined by CEQA. South Coast AQMD periodically acts as lead agency for its air permit projects and the type of environmental document prepared may vary depending on the potential impacts. For example, an Environmental Impact Report (EIR) is prepared when there is substantial evidence that the project may have significant adverse effects on the environment. Similarly, a Negative Declaration (ND) or Mitigated Negative Declaration (MND) may be prepared if a proposed project will not generate significant adverse environmental impacts, or the impacts can be mitigated to less than significance. The ND and MND are types of CEQA documents which analyze the potential environmental impacts and describe the reasons why a significant adverse effect on the environment will not occur such that the preparation of an EIR is not required.

Attachment C of this report summarizes the proposed air permit projects for which South Coast AQMD is lead agency and is currently preparing or has prepared environmental documentation pursuant to CEQA. As noted in Attachment C, South Coast AQMD is lead agency for three air permit projects during October 2023.

Attachments

- A. Environmental Documents Prepared by Other Public Agencies and Status of Review
- B. Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies
- C. Proposed Air Permit Projects for Which South Coast AQMD is CEQA Lead Agency

ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Warehouse & Distribution Centers</i> LAC231010-03 5910 Cherry Avenue Industrial Building Project	The project consists of demolishing eight buildings and constructing a 304,344 square foot warehouse on 14.16 acres. The project is located at 5910 Cherry Avenue and is north to the intersection of Cherry Avenue and East Hungerford Street. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/november-2023/LAC231010-03.pdf Comment Period: 10/9/2023 - 11/10/2023 Public Hearing: 11/1/2023	Notice of Preparation	City of Long Beach	Comment letter sent on 11/10/2023
<i>Warehouse & Distribution Centers</i> LAC231010-05 7400 Slauson Avenue Project	The project consists of demolishing 249,579 square feet of existing structures and constructing a 292,029 square foot warehouse on 13.94 acres. The project is located on the southwest corner of Slauson Avenue and Greenwood Avenue. Reference LAC230418-11 and LAC220412-11 Staff previously provided comments on the Draft Environmental Impact Report for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/may-2023/LAC230418-11.pdf . Comment Period: N/A Public Hearing: 10/30/2023	Other	City of Commerce	Document reviewed - No comments sent
<i>Warehouse & Distribution Centers</i> RVC231003-01 Motte Business Center; Tentative Parcel Map (TPM) No. 38432 (PLN22-0114), and Plot Plan No. PLN22-0115	The project consists of constructing a 1,138,638 square foot warehouse and combining eight parcels into one parcel for a total of 46.33 gross acres. The project is located near the southeast corner of Ethanac Road and Dawson Road. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/november-2023/RVC231003-01.pdf Comment Period: 9/29/2023 - 11/13/2023 Public Hearing: N/A	Draft Environmental Impact Report	City of Menifee	Comment letter sent on 11/9/2023
<i>Warehouse & Distribution Centers</i> RVC231003-02 79 North Logistics Center	The project consists of constructing a 404,200 square foot warehouse on 20.06 acres. The project is located at 853 East 3rd Street near the southeast corner of East 3rd Street and Maple Avenue. Reference RVC230721-01 Staff previously provided comments on the Site Plan for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/august-2023/RVC230721-01.pdf . Comment Period: 9/29/2023 - 10/19/2023 Public Hearing: 10/19/2023	Site Plan	City of Beaumont	Document reviewed - No comments sent

- Key:
 # = Project has potential environmental justice concerns due to the nature and/or location of the project.
 LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County
 Notes:
 1. Disposition may change prior to Governing Board Meeting
 2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Industrial and Commercial</i> RVC231018-01 Sunridge Self Storage#	The project consists of expanding existing recreational vehicle (RV) and self-storage facilities with 62,979 square feet of self-storage units, 60 uncovered RV storage spaces, 71 covered RV storage spaces, and 900 square feet of office uses. The project is located at the end of Tyler Lane, north of Avenue 54, east of Tyler Street, and west of Grapefruit Boulevard within the designated AB 617 Eastern Coachella Valley community. Comment Period: 10/15/2023- 11/14/2023 Public Hearing: N/A	Notice of Intent to Adopt a Mitigated Negative Declaration	City of Coachella	Document reviewed - No Comments sent
<i>Waste and Water-related</i> LAC231004-09 Trelleborg Sealing Solutions Site	The project consists of a soil vapor extraction activities on a 1.22-acre site to remove various volatile organic compounds including trichloroethene and tetrachloroethene. The project is located at 2051 East Maple Avenue in El Segundo. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/LAC231004-09.pdf Comment Period: 9/28/2023 - 10/27/2023 Public Hearing: N/A	Draft Interim Removal Action Workplan	Department of Toxic Substances Control	Comment letter sent on 10/13/2023
<i>Waste and Water-related</i> LAC231004-10 Draft Removal Action Workplan for the Proposed Warehouse Area and Draft Removal Action Workplan for the Building D Demolition and Site Improvement Area	The project consists of removing and disposing total petroleum hydrocarbons such as diesel, arsenic, and semi-volatile organic compounds from a 32.55-acre property. The project is located at 501 South Marengo Avenue in Alhambra. Comment Period: 10/2/2023 - 11/1/2023 Public Hearing: N/A	Draft Removal Action Workplan	Department of Toxic Substances Control	Document reviewed - No Comments sent
<i>Waste and Water-related</i> LAC231011-06 The Custom Hotel	The project consists of updating cleanup actions where volatile organic compounds were found in soil and conducting further testing which may include residential indoor air testing in the surrounding area. The project is located at 8639 Lincoln Boulevard in Los Angeles. Comment Period: N/A Public Hearing: N/A	Other	Department of Toxic Substances Control	Document reviewed - No Comments sent

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ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> LAC231011-07 Ecobat Resources California, Inc.	The project consists of a permit modification to install and operate a compression auger and centrifuge for improving removal of liquids from wrecker material. The project is located at 720 South Seventh Avenue near the northeast corner of South Seventh Avenue and Salt Lake Avenue in the City of Industry. Reference LAC230606-03, LAC230418-08, LAC220621-11, LAC220301-09, LAC211001-05, LAC210907-04, LAC210907-03, LAC210427-09, LAC210223-04, LAC210114-07, LAC191115-02, and LAC180726-06 Comment Period: N/A Public Hearing: 11/29/2023	Other	Department of Toxic Substances Control	Document reviewed - No Comments sent
<i>Waste and Water-related</i> LAC231018-06 Former Chevron Chemical Additives Site 3344 Medford Street#	The project consists of demolishing all on-site features, grading soil for geotechnical purposes, and creating a building pad for future construction. The Interim Remedial Action Plan is proposing procedures and protocols for the segregation, management, and disposal of soil containing elevated contaminants encountered during grading. The project is located at the southwest corner of Medford Street and North Ditman Avenue in Los Angeles within the designated AB 617 East Los Angeles, Boyle Heights, and West Commerce community. Comment Period: 10/13/2023 - 11/13/2023 Public Hearing: N/A	Interim Remedial Action Plan	California Water Boards	Document reviewed - No Comments sent
<i>Waste and Water-related</i> LAC231024-01 Taylor Yard Parcel G1	The project consists of four cleanup alternatives for evaluation in the Removal Action Workplan: 1) no action done, which leaves the Site's conditions unchanged and cleanup is needed before construction can begin; 2) the contaminated soil would be used to plant crops chosen to remove contaminants from shallow soil; 3) excavation and relocation of contaminated soil, which requires storage and maintenance for a prolonged period of time; and 4) excavation and off-site disposal of contaminated soil. The project is located near the northeast corner of State Route 2 and the Los Angeles River in Los Angeles. Reference LAC230405-12 Staff previously provided comments on the Draft Removal Action Workplan for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/may-2023/LAC230405-12.pdf . Comment Period: N/A Public Hearing: N/A	Response to Comments	The Department of Toxic Substances Control	Document reviewed - No Comments sent

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ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> SBC231004-02 Chino Basin Wastewater Optimum Basin Management Program Update	The proposed project consists of developing policies and programs to guide water management, monitoring, reporting, and treatment with a planning horizon of 2050. The project encompasses 235 square miles within the Upper Santa Ana River Watershed and is bounded by the San Gabriel Mountains to the north, Interstate 15 to the west, Santa Ana River to the south, and the areas of Puente Hills and City of Chino Hills to the east. Reference SBC200409-04 and SBC200213-02 Comment Period: 9/27/2023 - 11/13/2023 Public Hearing: N/A	Recirculated Draft Subsequent Environmental Impact Report	Inland Empire Utilities Agency	Document reviewed - No Comments sent
<i>Waste and Water-related</i> SBC231004-11 Eco Cleaners Cleanup Project	The project consists of a proposed cleanup plan at a 27.25-acre site to address areas of soil and soil vapor contaminated with volatile organic compounds. The project is bounded by Highway 71 to the north and east, Chino Hills Parkway to the south, and Pipeline Avenue to the west in San Bernardino. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/november-2023/SBC231004-11.pdf Comment Period: 10/9/2023 - 11/8/2023 Public Hearing: N/A	Draft Removal Action Workplan	Department of Toxic Substances Control	Comment letter sent on 11/7/2023
<i>Utilities</i> RVC231011-01 Chiquito Battery Energy Storage Facility Project (PA 22-0026)	The project consists of constructing an 80-megawatt Battery Energy Storage System project. The project is located north of the intersection of Clinton Keith Road and Grand Avenue. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/november-2023/RVC231011-01.pdf Comment Period: 10/4/2023 - 11/2/2023 Public Hearing: N/A	Initial Study/Mitigated Negative Declaration	City of Wildomar	Comment letter sent on 11/1/2023
<i>Institutional (schools, government, etc.)</i> LAC231004-08 Roosevelt Elementary School Campus Master Plan Project	The project consists of demolishing six buildings and 12 portables and constructing five new buildings totaling 33,700 square feet. The project also includes one building addition and renovating three buildings and outdoor areas. The project is located at 801 Montana Avenue, which is bordered by 9th Street to the north, Montana Avenue to the east, Lincoln Boulevard to the south, and Alta Avenue to the west in Santa Monica. Reference LAC230913-10 Comment Period: 9/11/2023 - 10/20/2023 Public Hearing: 9/27/2023	Notice of Preparation	Santa Monica-Malibu Unified School District	Document reviewed - No Comments sent

Key:

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ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Institutional (schools, government, etc.)</i> RVC231003-03 Calvary Chapel CUP2023-0074 PM2023-0016	The project consists of constructing three buildings totaling 23,700 square feet on 4.75 acres. The project is located at 1780 Orchard Heights Avenue near the southeast corner of Brookside Avenue and Orchard Heights Avenue. Reference RVC230712-01 Comment Period: 9/29/2023 - 10/12/2023 Public Hearing: 10/12/2023	Site Plan	City of Beaumont	Document reviewed - No Comments sent
<i>Institutional (schools, government, etc.)</i> RVC231011-08 Rancho Mirage High School Video Scoreboard Project	The project consists of improving field lighting around the perimeter of the baseball, softball, soccer, and practice fields. The project is located at 31001 Rattler Road near the northwest corner of Rattler Road and East Ramon Road in Rancho Mirage. Reference RVC151125-02 Comment Period: 10/4/2023 - 11/20/2023 Public Hearing: 12/12/2023	Revised Draft Supplemental Environmental Impact Report	Palm Springs Unified School District	Document reviewed - No Comments sent
<i>Retail</i> LAC231011-02 14624 Dalewood Street Hotel Renovation Project	The project consists of renovating and expanding a hotel from 33,768 square feet to 37,712 square feet on 1.23 acres. The project is located at 14624 Dalewood Street near the southwest corner of Dalewood Street and West Merced Avenue. Comment Period: 10/5/2023 - 10/24/2023 Public Hearing: 11/8/2023	Notice of Intent to Adopt a Mitigated Negative Declaration	City of Baldwin Park	Document reviewed - No Comments sent
<i>Retail</i> LAC231018-07 Nobu Ryokan Motel and Malibu Tidepool Health Club	The project consists of rezoning and changing the land use designation, converting the existing non-conforming use motel and adjacent private gym into a bed and breakfast inn, and converting the office space in an existing building into a new guest suite. The project is located at 22752 Pacific Coast Highway and 22762 Pacific Coast Highway. Comment Period: 10/18/2023 - 11/6/2023 Public Hearing: 11/6/2023	Other	City of Malibu	Document reviewed - No Comments sent

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

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Notes:

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ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> RVC231010-02 Emerald Acres Specific Plan	The project consists of constructing 391 residential units on 75.2 acres, a 199,874 square foot retail building, a 6.6-acre park, 230.3 acres of landscape conservation, 3.2 acres of recreation areas, and 2.2 acres of multi-use trail. The project boundaries include Florida Avenue to the north, unincorporated Riverside County to the east, Stowe Road to the south, and Calvert Avenue to the west in Hemet. Comment Period: 10/9/2023 - 11/8/2023 Public Hearing: 11/6/2023	Notice of Preparation	City of Jurupa Valley	Document reviewed - No Comments sent
<i>General Land Use (residential, etc.)</i> RVC231010-04 MA23276 PAR23013	The project consists of future development of mixed use commercial and residential units on 8.31 acres. The project is located at 8531 Mission Boulevard near the northeast corner of Agate Street and Mission Boulevard. Comment Period: 10/10/2023 - 10/23/2023 Public Hearing: N/A	Site Plan	City of Jurupa Valley	Document reviewed - No Comments sent
<i>General Land Use (residential, etc.)</i> RVC231024-02 PLN23-0185 PP, PLN23-186 CUP, PLN23-0187 PM	The project consists of constructing 326 residential units on 13.61 acres. The project is located on the southeast corner of Newport Road and Evans Road. Comment Period: 10/20/2023 - 11/14/2023 Public Hearing: 11/21/2023	Other	City of Menifee	Document reviewed - No Comments sent

Key:

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October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>General Land Use (residential, etc.)</i> RVC231025-01 Menifee Valley Specific Plan	The project consists of constructing 1,718 residential units, 275.5 acres of business park uses, 32.1 acres of commercial uses, 33.3 acres of public facilities, 19.6 acres of roadway improvements, and 44.5 acres of open space on 590.3 acres. The project is located on the northeast corner of Matthews Road and Menifee Road. Reference RVC220308-07, RVC211015-01, RVC190821-04, and RVC180823-02 Staff previously provided comments on the Notice of Preparation for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2022/march/RVC220308-07.pdf . Comment Period: 10/19/2023- 12/4/2023 Public Hearing: N/A	Draft Environmental Impact Report	City of Menifee	Under review, may submit comments
<i>General Land Use (residential, etc.)</i> SBC231004-06 TTM No. 20402 - Canyon Ranch	The project consists of subdividing 21.6 acres into 27 residential lots, 0.4 acre of detention basin, 1.6 acres of open space, and a total of 22,393 square feet of landscaping. The project is located near the northeast corner of San Timoteo Canyon Road/Nevada Street and San Timoteo Canyon Road. Comment Period: 9/27/2023- 10/26/2023 Public Hearing: N/A	Notice of Intent to Adopt a Mitigated Negative Declaration	City of Redlands	Document reviewed - No Comments sent
<i>General Land Use (residential, etc.)</i> SBC231011-03 TTM No. 20528 - Pioneer Tract	The project consists of requesting approval of Tentative Tract Map 20528 to allow for future development of 117 two-story motor court homes. The project is located at the northeast corner of West Pioneer Avenue and State Route 210. Comment Period: 10/4/2023- 11/2/2023 Public Hearing: N/A	Notice of Intent to Adopt a Mitigated Negative Declaration	City of Redlands	Document reviewed - No Comments sent

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County

Notes:

1. Disposition may change prior to Governing Board Meeting
2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<p><i>Plans and Regulations</i></p> <p>ORC231011-11 Local Coastal Program Amendment No. PA2022-0219</p>	<p>The project consists of amending Implementation Plan including deleting "Conversion or Demolition of Affordable Housing", creating a coastal development permit exemption for tentative parcel maps, clarifying references to State law, and clarifying the definition of "Code." The project is located in the City of Newport Beach.</p> <p style="text-align: center;">Comment Period: N/A Public Hearing: 10/19/2023</p>	Draft Local Coastal Program Amendment	City of Newport Beach	Document reviewed - No Comments sent
<p><i>Plans and Regulations</i></p> <p>ORC231025-04 Zoning Ordinance Amendment 23-1250, Local Coastal Program Amendment 23-1251, and General Plan Amendment 23-1350</p>	<p>The project consists of amending portions of the Laguna Beach Municipal Code, Local Coastal Program, and General Plan in accordance with State housing laws and the City's Housing Element. The project is located throughout the City of Laguna Beach.</p> <p style="text-align: center;">Comment Period: 10/25/2023- 11/1/2023 Public Hearing: 11/1/2023</p>	Other	City of Laguna Beach	Document reviewed - No Comments sent
<p><i>Plans and Regulations</i></p> <p>RVC231017-01 Vernola Ranch Specific Plan Project</p>	<p>The project consists of constructing 1,576 residential units on 153 acres. The project is located on the southwest corner of Bellegrave Avenue and Pats Ranch Road. Reference RVC221214-01 and RVC210630-01</p> <p>Staff previously provided comments on the Notice of Preparation for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/january-2023/RVC221214-01.pdf.</p> <p style="text-align: center;">Comment Period: 10/16/2023- 11/30/2023 Public Hearing: N/A</p>	Draft Environmental Impact Report	City of Jurupa Valley	Document reviewed - No Comments sent

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

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Notes:

1. Disposition may change prior to Governing Board Meeting
2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT B
ACTIVE PROJECTS WITH CONTINUED REVIEW OF ENVIRONMENTAL DOCUMENTS PREPARED BY
OTHER PUBLIC AGENCIES

SOUTH COAST AQMD LOG-IN NUMBER	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
PROJECT TITLE				
<i>Plans and Regulations</i>				
LAC230927-05 Harbor LA Community Plans Update#	The project consists of amending the General Plan Land Use Maps, adopting several zoning ordinances, and rezoning all parcels to apply development standards. The project encompasses the communities of Harbor Gateway and Wilmington-Harbor City that are bounded by Interstate 105 to the north, Interstate 710 to the east, State Route 47 to the south, and City of Torrance to the west within the designated AB 617 Wilmington, Carson, West Long Beach community. Reference LAC190814-03 Staff previously provided comments on the Notice of Preparation for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/september/LAC190814-03.pdf . Comment Period: 9/21/2023 - 11/20/2023 Public Hearing: 11/9/2023	Draft Environmental Impact Report	City of Los Angeles	Under review, may submit comments
<i>Warehouse & Distribution Centers</i>				
RVC230901-01 Rubidoux Commerce Park	The project consists of constructing five industrial buildings totaling 1,184,102 square feet on 80.8 acres. The project is located on the southeast corner of Montana Avenue and 25th Street. Reference RVC211021-01, RVC201201-05, and RVC190903-14 http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230901-01.pdf Comment Period: 8/22/2023 - 10/9/2023 Public Hearing: N/A	Recirculated Draft Environmental Impact Report	City of Jurupa Valley	Comment letter sent on 10/9/2023
<i>Warehouse & Distribution Centers</i>				
RVC230905-01 Majestic Freeway Business Center Phase II - Plot Plan 220003 (Building 18), Plot Plan 220008 (Building 13), Plot Plan 220009 (Building 17), and Plot Plan 220015 (Buildings 14A and 14B)	The project consists of constructing five warehouses totaling 1,280,183 square feet on 70.37 acres. The project is located on four separate plot plan applications within Mead Valley: the northwest corner of Martin Street and Harvill Avenue, the northwest corner of Perry Street and Harvill Avenue, the northeast corner of Harvill Avenue and America's Tire Drive, and the southwest corner of Peregrine Way and Harvill Avenue. Reference RVC220803-01 https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230905-01.pdf Comment Period: 8/31/2023 - 10/16/2023 Public Hearing: N/A	Draft Environmental Impact Report	County of Riverside	Comment letter sent on 10/13/2023

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County

Notes:

- Disposition may change prior to Governing Board Meeting
- Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

**ATTACHMENT C
PROPOSED AIR PERMIT PROJECTS FOR
WHICH SOUTH COAST AQMD IS CEQA LEAD
AGENCY THROUGH OCTOBER 31, 2023**

PROJECT DESCRIPTION	PROPONENT	TYPE OF DOCUMENT	STATUS	CONSULTANT
<p>Quemetco is proposing to modify existing South Coast AQMD permits to allow the facility to recycle more batteries and to eliminate the existing daily idle time of the furnaces. The proposed project will increase the rotary feed drying furnace feed rate limit from 600 to 750 tons per day and increase the amount of total coke material allowed to be processed. In addition, the project will allow the use of petroleum coke in lieu of or in addition to calcined coke, and remove one existing emergency diesel-fueled internal combustion engine (ICE) and install two new emergency natural gas-fueled ICEs.</p>	<p>Quemetco</p>	<p>Environmental Impact Report (EIR)</p>	<p>The Draft EIR was released for a 124-day public review and comment period from October 14, 2021 to February 15, 2022 and approximately 200 comment letters were received.</p> <p>Staff held two community meetings, on November 10, 2021 and February 9, 2022, which presented an overview of the proposed project, the CEQA process, detailed analysis of the potentially significant environmental topic areas, and the existing regulatory safeguards. Written comments submitted relative to the Draft EIR and oral comments made at the community meetings, along with responses will be included in the Final EIR which is currently being prepared by the consultant.</p> <p>After the Draft EIR public comment and review period closed, Quemetco submitted additional applications for other permit modifications which are also being evaluated by staff.</p>	<p>Trinity Consultants</p>
<p>Sunshine Canyon Landfill is proposing to modify its South Coast AQMD permits for its active landfill gas collection and control system to accommodate the increased collection of landfill gas. The proposed project will: 1) install two new low emission flares with two additional 300-horsepower electric blowers; and 2) increase the landfill gas flow limit of the existing flares.</p>	<p>Sunshine Canyon Landfill</p>	<p>Subsequent Environmental Impact Report (SEIR)</p>	<p>South Coast AQMD staff reviewed and provided comments on the preliminary air quality analysis, health risk assessment (HRA), and Preliminary Draft SEIR which are currently being addressed by the consultant.</p>	<p>SCS Engineers</p>
<p>Tesoro is proposing to modify its Title V permit to: 1) add gas oil as a commodity that can be stored in three of the six new crude oil storage tanks at the Carson Crude Terminal (previously assessed in the May 2017 Final EIR); and 2) drain, clean and decommission Reservoir 502, a 1.5 million barrel concrete lined, wooden-roof topped reservoir used to store gas oil.</p>	<p>Tesoro Refining & Marketing Company, LLC (Tesoro)</p>	<p>Addendum to the Final Environmental Impact Report (EIR) for the May 2017 Tesoro Los Angeles Refinery Integration and Compliance Project (LARIC)</p>	<p>The consultant provided a Preliminary Draft Addendum, which is undergoing South Coast AQMD staff review.</p>	<p>Environmental Audit, Inc.</p>

[↑ Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 14

REPORT: Rule and Control Measure Forecast

SYNOPSIS: This report highlights South Coast AQMD rulemaking activities and public hearings scheduled for 2024.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:
Receive and file.

Wayne Nastri
Executive Officer

SLR:MK:IM:JA:ZS

2024 MASTER CALENDAR

The 2024 Master Calendar provides a list of proposed or proposed amended rules for each month, with a brief description, and a notation in the third column indicating if the rulemaking is for an AQMP, either the 2016 AQMP or 2022 AQMP, when adopted, Toxics, AB 617 (for BARCT) or measures identified in an AB 617 Community Emission Reduction Plan (CERP), SIP to address comments or actions from U.S. EPA for a rule that is in an approved SIP, or Other. Rulemaking efforts that are noted for implementation of the 2016 AQMP or 2022 AQMP when adopted, Toxics, and AB 617 are either statutorily required and/or are needed to address a public health concern. Projected emission reductions will be determined during rulemaking.

The following symbols next to the rule number indicate if the rulemaking will be a potentially significant hearing, will reduce criteria pollutants, or is part of the RECLAIM transition. Symbols have been added to indicate the following:

- * *This rulemaking may have a substantial number of public comments.*
- + *This rulemaking will reduce criteria air contaminants and assist toward attainment of ambient air quality standards.*
- # *This rulemaking is part of the transition of RECLAIM to a command-and-control regulatory structure.*

2024 MASTER CALENDAR

Month	Title and Description	Type of Rulemaking
January		
1180	<p>Petroleum Refinery and Related Operations Fenceline and Community Air Monitoring</p> <p>Proposed Amended Rule 1180 will include refinery-related operations and expand the target list of compounds to include compounds identified in the OEHHA’s updated priority list published in 2019.</p> <p style="text-align: right;"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1180.1	<p>Other Refinery Fenceline and Community Monitoring</p> <p>Proposed Rule 1180.1 will establish fenceline and community monitoring requirements for asphalt refineries and biofuel facilities that are not currently included in Rule 1180 – Refinery Fenceline and Community Air Monitoring.</p> <p style="text-align: right;"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
February		
461.1	<p>Gasoline Transfer and Dispensing for Mobile Fueling Operations</p> <p>Amendments to Rule 461.1 are needed to clarify aviation gasoline is exempt from the rule aligning with the original intent and applicability of the rule.</p> <p style="text-align: right;"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
March		
1148.1*+	<p>Oil and Gas Production Wells</p> <p>Proposed Amendments to Rule 1148.1 may be needed to further reduce emissions from operations and implement early leak detection, odor minimization plans, and enhanced emissions and chemical reporting from oil and drilling sites.</p> <p style="text-align: right;"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB617 CERP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 MASTER CALENDAR (Continued)

Month	Title and Description	Type of Rulemaking
April		
1118* ⁺	<p>Control of Emissions from Refinery Flares Proposed Amended Rule 1118 will seek to incorporate provisions to further reduce flaring at refineries, for clean service flares, and facility thresholds. Other proposed amendments to the rule will improve clarity and remove obsolete provisions. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 CERP
1135 ⁺	<p>Emissions of Oxides of Nitrogen from Electricity Generating Facilities Proposed Amended Rule 1135 will modify provisions for electricity generating units at Santa Catalina Island to reflect a revised BARCT assessment. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 BARCT
1146.2 ^{# +}	<p>Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters Proposed Amended Rule 1146.2 will update the NOx emission limits to reflect BARCT. Other provisions may be added to facilitate the deployment of zero-emission units regulated under the proposed amended rule. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 BARCT
May		
Reg III	<p>Regulation III, which is comprised of Rules 301, 303, 304, 304.1, 306, 307.1, 308, 309, 311, 313, 314, 315, and 316, will be amended to increase most fees to be consistent with the California Consumer Price Index as established in Rule 320. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
2012 Annual PM2.5 AQMP	<p>The PM2.5 Plan will implement an emission reduction strategy with a specific plan in place to meet the 2012 annual PM2.5 standard in the Basin by December 31, 2030. <i>Sang-Mi Lee 909.396.3169; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 MASTER CALENDAR (Continued)

Month	Title and Description	Type of Rulemaking
June		
301	Proposed Amended Rule 301 will be amended to update the sections regarding Clean Air Act Nonattainment Fee collection, usage and reporting. <i>Kalam Cheung 909.396.328; CEQA and Socio: Barbara Radlein 909.396.2716</i>	Other
317.1	Proposed Rule 317.1 establishes the requirements and mechanism to collect penalties from major stationary sources of NOx and VOC for failure to meet the 1997 and 2008 8-hour ozone standard by the applicable attainment date in accordance with the Clean Air Act section 185. <i>Kalam Cheung 909.396.328; CEQA and Socio: Barbara Radlein 909.396.2716</i>	Other
463	Organic Liquid Storage Proposed Amended Rule 463 will address the current test method and improve the effectiveness, enforceability, and clarity of the rule. Proposed amendments may also be needed to ensure consistency with Rule 1178. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i>	AQMP / AB 617 CERP Other
Third Quarter	Title and Description	Type of Rulemaking
1159.1 [#]	Control of NOx Emissions from Nitric Acid Tanks Proposed Rule 1159.1 will establish requirements to reduce NOx emissions from nitric acid units that will apply to RECLAIM, former RECLAIM, and non-RECLAIM facilities. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i>	AQMP / AB 617 BARCT
1173 ⁺	Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants Proposed Amended Rule 1173 will further reduce emissions from petroleum and chemical plants by requiring early leak detection approaches. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i>	AQMP / AB 617 CERP
1445 [*]	Control of Toxic Emissions from Laser Arc Cutting Proposed Rule 1445 will establish requirements to reduce hexavalent chromium and other metal toxic air contaminant particulate emissions from laser arc cutting. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i>	Toxics / AB 617 CERP
2306 ^{*+}	Intermodal Railyard Indirect Source Rule Proposed Rule 2306 will establish requirements for new and existing intermodal railyards to minimize emissions from indirect sources associated with new railyards. <i>Elaine Shen 909.396.2715; CEQA and Socio: Barbara Radlein 909.396.2716</i>	AQMP / AB 617 CERP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 MASTER CALENDAR (Continued)

Fourth Quarter	Title and Description	Type of Rulemaking
1111	<p>Reduction of NO_x Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces Proposed Amended Rule 1111 will implement the 2022 AQMP control measure R-CMB-02 requiring zero emission residential space heating. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
1121*	<p>Control of Nitrogen Oxides from Residential Type, Natural-Gas-Fired Water Heaters Proposed amendments may be needed to further reduce NO_x emissions from water heaters. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
1165	<p>Control of Emissions from Incinerators Proposed Rule 1165 will establish emission standards, source testing, and monitoring, recordkeeping, and reporting requirements for incinerators. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / Other
Regulation XIII*#	<p>New Source Review Proposed Amended Regulation XIII will revise New Source Review provisions to address facilities that are transitioning from RECLAIM to a command-and-control regulatory structure and to address comments from U.S. EPA. Additional rules under Regulation XIII may be needed to address offsets and other provisions under Regulation XIII. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
1401	<p>New Source Review of Toxic Air Contaminants Proposed Amended Rule 1401 will remove the exemption for emergency generators and therefore require a demonstration that risk thresholds are not exceeded in order to obtain a permit. <i>Kalam Cheung 909.396. 328; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
Regulation XX*#	<p>RECLAIM Proposed Amended Regulation XX will address the transition of NO_x RECLAIM facilities to a command-and-control regulatory structure. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 MASTER CALENDAR (Continued)

Fourth Quarter	Title and Description	Type of Rulemaking
2304*+ 316.1	<p>Indirect Source Rule for Commercial Marine Ports – Container Terminals</p> <p>Fees for Rule 2304</p> <p>Proposed Rule 2304 will establish requirements to reduce emissions from indirect sources related to marine ports. Proposed Rule 316.1 will establish fees to recover the South Coast AQMD’s anticipated cost of implementing Proposed Rule 2304.</p> <p><i>Elaine Shen 909.396.2715; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 CERP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined

2024	Title and Description	Type of Rulemaking
102	<p>Definition of Terms Proposed amendments may be needed to update and add definitions, and potentially modify exemptions. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
103	<p>Definition of Geographical Areas Proposed amendments are needed to update geographic areas to be consistent with state and federal references to those geographic areas. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
209	<p>Transfer and Voiding of Permits Proposed amendments may be needed to clarify requirements for change of ownership and permits and the assessment of associated fees. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
223	<p>Emission Reduction Permits for Large Confined Animal Facilities Proposed Amended Rule 223 will seek additional ammonia emission reductions from large, confined animal facilities by lowering the applicability threshold. Proposed amendments will implement BCM-04 in the 2016 AQMP. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
403	<p>Fugitive Dust Proposed Amended Rule 403 will seek to remove outdated provisions and clarify existing provisions to enhance compliance. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
403.1	<p>Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources Proposed Amended Rule 403.1 will clarify existing requirements for dust control and remove outdated provisions contained in supporting documents for Rule 403.1. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
407 [#]	<p>Liquid and Gaseous Air Contaminants Proposed Amended Rule 407 will update SO_x emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
410	<p>Odors from Transfer Stations and Material Recovery Facilities Proposed Amended Rule 410 will clarify existing provisions. Additional provisions may be needed to address activities associated with diversion of food waste to transfer stations or material recovery facilities. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
425	<p>Odors from Cannabis Processing Proposed Rule 425 will establish requirements for control of odors from cannabis processing. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
430	<p>Breakdown Provisions Amendments to Rule 430 will be needed to remove exemptions for facilities that exit the RECLAIM program and update references to CEMS rules. Other amendments may be needed to address current policies from U.S. EPA regarding startup, shutdown, and malfunction requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	RECLAIM / Other
431.1 [#]	<p>Sulfur Content of Gaseous Fuels Proposed Amended Rule 431.1 will assess exemptions, including RECLAIM, and update other provisions, if needed. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT / AB 617 CERP
431.2 [#]	<p>Sulfur Content of Liquid Fuels Proposed Amended Rule 431.2 will assess exemptions, including RECLAIM, and update other provisions, if needed. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT / AB 617 CERP
431.3 [#]	<p>Sulfur Content of Fossil Fuels Proposed Amended Rule 431.3 will assess exemptions, including RECLAIM, and update other provisions, if needed. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT / AB 617 CERP
444	<p>Open Burning Amendments may be needed to clarify existing provisions. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
445 [*]	<p>Wood Burning Devices Proposed Amended Rule 445 will address additional U.S. EPA requirements for Best Available Control Measures and potentially address ozone contingency measure requirements for the Coachella Valley. Amendments may be needed to revise the penalty structure for violations on No Burn Days during the wood burning season. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
461	<p>Gasoline Transfer and Dispensing Amendments to Rule 461 may be needed to address potential regulatory gaps. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
462	<p>Organic Liquid Loading Proposed Amended Rule 462 will incorporate the use of advanced techniques to detect fugitive emissions and Facility Vapor Leak. Other amendments may be needed to streamline implementation and add clarity. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
468 [#]	<p>Sulfur Recovery Units Proposed Amended Rule 468 will update SO_x emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT
469 [#]	<p>Sulfuric Acid Units Proposed Amended Rule 469 will update SO_x emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT
1101 [#]	<p>Secondary Lead Smelters/Sulfur Oxides Proposed Amended Rule 1101 will update SO_x emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT
1102	<p>Dry Cleaners Using Solvent Other Than Perchloroethylene Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 CERP
1105 [#]	<p>Fluid Catalytic Cracking Units SO_x Proposed Amended Rule 1105 will update SO_x emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT / AB 617 CERP

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1107	<p>Coating of Metal Parts and Products Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1108	<p>Cutback Asphalt Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1108.1	<p>Emulsified Asphalt Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics/ Other
1110.2*+ #	<p>Emissions from Gaseous- and Liquid-Fueled Engines Proposed amendments will address use of emergency standby engines at essential public services for Public Safety Power Shutoff programs. Proposed amendments may also be needed to incorporate possible comments by U.S. EPA for approval into the SIP and address monitoring provisions for new engines. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 BARCT
1110.4	<p>Emissions from Emergency Generators Proposed Rule 1110.4 will establish and revise rule provisions to reduce NOx, CO, and PM emissions from emergency generators. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other / AQMP
1113	<p>Architectural Coatings Proposed amendments may be needed to address delisted compounds and other amendments to improve clarity and to remove obsolete provisions. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1114	<p>Petroleum Refinery Coking Operations Proposed Amended Rule 1114 will seek to add notification requirements when coke particles, liquid and/or gas is ejected from the coke drum during cutting. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other

* Potentially significant hearing

+ Reduce criteria air contaminants and assist toward attainment of ambient air quality standards

Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1119 [#]	<p>Petroleum Coke Calcining Operations – Oxides of Sulfur Proposed Amended Rule 1119 will update SOx emission limits to reflect Best Available Retrofit Control Technology, if needed, remove exemptions for RECLAIM facilities, and update monitoring, reporting, and recordkeeping requirements. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AB 617 BARCT / AB 617 CERP
1122	<p>Solvent Degreasers Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1124	<p>Aerospace Assembly and Component Manufacturing Operations Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1125	<p>Metal Container, Closure, and Coil Coating Operations Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1126	<p>Magnet Wire Coating Operations Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1128	<p>Paper, Fabric, and Film Coating Operations Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1130	<p>Graphic Arts Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1130.1	<p>Screen Printing Operations Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1133.3	<p>Emission Reductions from Greenwaste Composting Operations Proposed Amended Rule 1133.3 will seek additional VOCs and ammonia emission reductions from greenwaste and foodwaste composting. Proposed amendments will implement BCM-10 in the 2016 AQMP. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
1136	<p>Wood Products Coatings Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1138 ⁺	<p>Control of Emissions from Restaurant Operations Proposed Amended Rule 1138 will further reduce emissions from underfired charboilers. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP
1142	<p>Marine Tank Vessel Operations Proposed Amended Rule 1142 will address VOC and hydrogen sulfide emissions from marine tank vessel operations, applicability, noticing requirements, and provide clarifications. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1143	<p>Consumer Paint Thinners and Multi-Purpose Solvents Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1144	<p>Metalworking Fluids and Direct-Contact Lubricants Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1145	<p>Plastic, Rubber, Leather, and Glass Coatings Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1146	<p>Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters</p> <p>Proposed amendments to Rule 1146 may be needed to incorporate comments from U.S. EPA.</p> <p align="center"><i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1146.1 [#]	<p>Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters</p> <p>Proposed amendments to Rule 1146.1 may be needed to clarify provisions for industry-specific categories and to incorporate comments from U.S. EPA.</p> <p align="center"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1151	<p>Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations</p> <p>Proposed Amended Rule 1151 will provide clarifications of current requirements and amend provisions to address implementation issues.</p> <p align="center"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other / AB 617 CERP
1162	<p>Polyester Resin Operations</p> <p>Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity.</p> <p align="center"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1166	<p>Volatile Organic Compound Emissions from Decontamination of Soil</p> <p>Proposed Amended Rule 1166 will update requirements, specifically concerning notifications and usage of mitigation plans (site specific versus various locations).</p> <p align="center"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other
1171	<p>Solvent Cleaning Operations</p> <p>Proposed Amendments to Rule 1171 may be needed to address certain exempt chemicals and compliance issues.</p> <p align="center"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1174	<p>Control of Volatile Organic Compound Emissions from the Ignition of Barbecue Charcoal</p> <p>Proposed amendments may be needed to address certain exempt compounds, VOC limits for certain applications, and other amendments to improve clarity.</p> <p align="center"><i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / Other

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1176	<p>VOC Emissions from Wastewater Systems Proposed Amended Rule 1176 will clarify the applicability of the rule to include bulk terminals under definition of “Industrial Facilities,” and streamline and clarify provisions. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other / AB 617 CERP
1186.1, 1191, 1192, 1193, 1194, 1195, 1196* ⁺	<p>Fleet Rules Proposed amendments to Rules 1186.1, 1191, 1192, 1193, 1194, 1195, 1196 will seek to align South Coast AQMD fleet rules with CARB’s final Advanced Clean Fleets regulation should it be adopted. <i>Vicki White 909.396.3436; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / Other
1403*	<p>Asbestos Emissions from Demolition/Renovation Activities Proposed Amended Rule 1403 will enhance implementation, improve rule enforceability, update provisions, notifications, exemptions, and align provisions with the applicable U.S. EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) and other state and local requirements as necessary. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1404	<p>Hexavalent Chromium Emissions from Cooling Towers Amendments may be needed to provide additional clarifications regarding use of process water that is associated with sources that have the potential to contain chromium in cooling towers and address VOC emissions. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / AQMP
1411	<p>Recovery or Recycling of Refrigerants from Motor Vehicle Air Conditioners Proposed Amended Rule 1411 seeks amendments to coincide with Section 609 of the Clean Air Act. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1415 1415.1	<p>Reduction of Refrigerant Emissions from Stationary Air Conditioning Systems, and Reduction of Refrigerant Emissions from Stationary Refrigeration Systems Proposed Amended Rules 1415 and 1415.1 will align requirements with the proposed CARB Refrigerant Management Program and U.S. EPA’s Significant New Alternatives Policy Rule provisions relative to prohibitions on specific hydrofluorocarbons. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Other

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1420	<p>Emissions Standard for Lead Proposed Amended Rule 1420 will update requirements to address arsenic emissions to close a regulatory gap between Rule 1420 and Rule 1407 - Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations. Other provisions may be needed to address storage and handling requirements, and revise closure requirements. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1420.1	<p>Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities Proposed Amendments are needed to update applicable test methods and provide clarifications regarding submittal of a source-test protocol. Additional amendments may be needed to address monitoring and post closure requirements. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1420.2	<p>Emission Standards for Lead from Metal Melting Facilities Proposed Amended Rule 1420.2 will update requirements to address arsenic emissions to close a regulatory gap between Rule 1420 and Rule 1407 - Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations. Additional amendments may be needed to address monitoring and post closure requirements. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1420.3	<p>Emissions Standards for Lead from Firing Ranges Proposed Rule 1420.3 will establish requirements to address lead emissions from firing ranges. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / Other
1426.1	<p>Hexavalent Chromium Emissions from Metal Finishing Operations Proposed Rule 1426.1 will reduce hexavalent chromium emissions from heated chromium tanks used at facilities with metal finishing operations that are not subject to Rule 1469. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1435*	<p>Control of Toxic Air Contaminant Emissions from Metal Heating Operations Proposed Rule 1435 will establish requirements to reduce point source and fugitive toxic air contaminants including hexavalent chromium emissions from heat treating processes. Proposed Rule 1435 will also include monitoring, reporting, and recordkeeping requirements.</p> <p align="right"><i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 CERP
1450*	<p>Control of Methylene Chloride Emissions Proposed Rule 1450 will reduce methylene chloride emissions from furniture stripping and establish monitoring, reporting, and recordkeeping requirements.</p> <p align="right"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1455	<p>Control of Hexavalent Chromium Emissions from Torch Cutting and Welding Proposed Rule 1455 will establish requirements to reduce hexavalent chromium emissions from torch cutting and welding of chromium alloys.</p> <p align="right"><i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics / AB 617 CERP
1466	<p>Control of Particulate Emissions from Soils with Toxic Air Contaminants Amendments may be needed for residential cleanup projects.</p> <p align="right"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1466.1	<p>Control of Particulate Emissions from Demolition of Buildings Proposed Rule 1466.1 will establish requirements to minimize PM emissions during the demolition of buildings that housed equipment and processes with metal toxic air contaminants and pollution control equipment.</p> <p align="right"><i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
1469	<p>Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations Amendments to Rule 1469 may be needed to address potential changes with the CARB’s Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations. <i>Kalam Cheung 909.396.3281; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1470	<p>Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines Proposed Amended Rule 1470 seeks to reduce NOx emissions from stationary internal combustion engines (ICEs) by replacing older ICEs with alternative cleaner technology. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / Toxics
1470.1	<p>Emissions from Emergency Standby Diesel-Fueled Engines Proposed Rule 1470.1 seeks to reduce NOx emissions from emergency standby internal combustion engines (ICEs) by replacing older ICEs and requiring the use of commercially available lower emission fuels, such as renewable diesel. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / Toxics
1472	<p>Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines Proposed Amended Rule 1472 will remove provisions that are no longer applicable, update and streamline provisions to reflect the latest OEHHA Health Risk Assessment Guidelines and assess the need for Compliance Plans. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1480.1	<p>Ambient Monitoring and Sampling of Gaseous Toxic Air Contaminants Proposed Rule 1480.1 will establish requirements to conduct monitoring and sampling for those facilities identified as significant high-risk level. <i>Heather Farr 909.396.3672; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	Toxics
1901	<p>General Conformity Proposed Amended Rule 1901 will establish a new General Conformity determination process for applicable projects receiving federal funding or approval. <i>TBD; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP

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Part of the transition of RECLAIM to a command-and-control regulatory structure

2024 To-Be-Determined (Continued)

2024	Title and Description	Type of Rulemaking
Regulation XX	<p>RECLAIM - Requirements for Oxides of Sulfur (SO_x) Emissions Amendments to Regulation XX rules to address SO_x requirements at RECLAIM facilities if there is consideration to transition SO_x RECLAIM to command-and-control regulatory structure. <i>Michael Morris 909.396.3282; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	RECLAIM / Other
Regulation XXIII* ⁺	<p>Facility-Based Mobile Sources Proposed rules within Regulation XXIII would reduce emissions from indirect sources (e.g., facilities that attract mobile sources). <i>Elaine Shen 909.396.2715; CEQA and Socio: Barbara Radlein 909.396.2716</i></p>	AQMP / AB 617 CERP
Regulation II, III, IV, V, VIII, XI, XIV, XIX, XXIII, XXIV, XXX and XXXV	<p>Various rule amendments may be needed to meet the requirements of state and federal laws; implement OEHHA’s latest risk assessment guidance; incorporate changes from OEHHA to new or revised toxic air contaminants or their risk values; address variance issues, emission limits, technology-forcing emission limits, and conflicts with other agency requirements; abate substantial endangerment to public health; apply additional reductions to meet SIP short-term measure commitments; address issues raised by U.S. EPA or CARB for the SIP or for a rule that was submitted into the SIP; and address compliance issues raised by the Hearing Board. In addition, administrative changes could be necessary for Hearing Board procedures, filings, petitions, noticing, etc. Amendments to existing rules may be needed to address use of materials that contain chemicals of concern. The associated rule development or amendments include, but are not limited to, South Coast AQMD existing, or new rules to implement measures in the 2012, 2016 or 2022 AQMP. This includes measures in the 2016 AQMP to reduce toxic air contaminants or reduce exposure to air toxics from stationary, mobile, and area sources. Rule adoption or amendments may include updates to provide consistency with CARB Statewide Air Toxic Control Measures, U.S. EPA’s National Emission Standards for Hazardous Air Pollutants, or to address the lead National Ambient Air Quality Standard. Rule adoption or amendments may be needed to implement AB 617 including but not limited to BARCT rules, Community Emission Reduction Plans prepared pursuant to AB 617, or new or amended rules to abate a public health issue identified through emissions testing or ambient monitoring.</p>	Other / AQMP/ Toxics / AB 617 BARCT / AB 617 CERP

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BOARD MEETING DATE: December 1, 2023

AGENDA NO. 15

PROPOSAL: 2023 Annual Progress Report for Assembly Bill 617 Community Emission Reductions Plans

SYNOPSIS: This annual report summarizes the progress of Community Emission Reductions Plans objectives implemented from September 2019 to June 2023 in the six South Coast AQMD Assembly Bill 617-(AB 617) designated communities.

COMMITTEE: Stationary Source, November 17, 2023, Reviewed

RECOMMENDED ACTIONS:
Receive and File.

Wayne Natri
Executive Officer

AHJ:KH:UV:DT:RD:CF:BH

Background

Assembly Bill 617 was signed into law in July 2017 and focuses on improving air quality and reducing exposure to criteria air pollutants and toxic air contaminants in communities most impacted by air pollution. Assembly Bill 617 recognizes the disproportionate impacts environmental justice (EJ) communities experience from sources of air pollution and seeks to address these impacts through community-driven actions focused on implementing Community Emission Reductions Plans (CERPs) and Community Air Monitoring Plans (CAMPs). Assembly Bill 617 communities throughout the state are selected by CARB based on recommendations from individual air districts. Since 2018, CARB has selected six South Coast AQMD communities:

2018-Designated Communities

- East Los Angeles, Boyle Heights, West Commerce (ELABHWC)
- San Bernardino, Muscoy (SBM)
- Wilmington, Carson, West Long Beach (WCWLB)

2019-Designated Communities

- Eastern Coachella Valley (ECV)
- Southeast Los Angeles (SELA)

2020-Designated Community

- South Los Angeles (SLA)

Each community established a Community Steering Committee (CSC) to develop a CERP and CAMP to address the community's top air quality priorities. Each CERP includes a series of actions to achieve emissions and exposure reductions and each CAMP provides air monitoring objectives to support the implementation of its respective CERP.

The Board adopted a CERP for each 2018-designated community, ELABHWC, SBM, and WCWLB, on September 6, 2019; for each 2019-designated community, ECV and SELA, on December 4, 2020; and for the 2020-designated community, SLA, on June 3, 2022. The ECV CERP was adopted with a Board resolution to work with the CSC to provide additional details in the ECV CERP, and these details were adopted on June 4, 2021. CARB approved the CERPs for the 2018-designated communities on September 10, 2020, the SELA community on May 20, 2021, the ECV community on September 9, 2021, and the SLA community on August 25, 2022.

AB 617 and CARB's Community Air Protection Blueprint¹ requires air districts to prepare annual progress reports summarizing the results of CERP implementation.² The *South Coast AQMD 2023 Annual Progress Report for Assembly Bill 617 Community Emission Reductions Plans* (Annual Progress Report) is based on the Community Air Protection Blueprint³ guidelines and includes: 1) Community Profiles, 2) Overview of the CERP Framework, including each community's air quality priorities, 3) Status of CERP Objectives, 4) Metrics for Tracking Progress, 5) CERP Strategies, including a qualitative assessment of each strategy, and 6) Summary of Key Plan Adjustments.

Summary of Annual Progress Report

The Annual Progress Report summarizes the progress of CERP implementation for all six South Coast AQMD AB 617 communities from September 6, 2019 to June 30, 2023, capturing a total of approximately 300 CERP objectives.⁴ As of June 30, 2023, approximately 18 percent of all CERP objectives are completed, 68 percent are in

¹ CARB, "Community Air Protection Blueprint", 2018, https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_acc.pdf.

² California Health and Safety Code, Section 44391.2(c)(7)

³ The CARB Blueprint 2.0 will govern future Annual Progress Reports but was approved by the CARB Board after the reporting period, on October 26, 2023. CARB Blueprint 2.0 can be found at: https://ww2.arb.ca.gov/sites/default/files/2023-09/BP2.0_Final_Draft_9.24.2023_FD.pdf.

⁴ South Coast AQMD Annual Progress Report Detailed Spreadsheet can be found at: <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/apr-spreadsheet.xlsx?sfvrsn=22>.

progress, and 14 percent have not started and implementation will begin in future reporting periods. Additionally, the Annual Progress Report includes information on incentive funds distributed in the six communities from January 1, 2019 to June 30, 2023. The emission reductions presented in the Annual Progress Report reflect reductions from the approximately \$130 million that have been distributed towards mobile source incentive projects. The Annual Progress Report also highlights air monitoring activities initiated since June 2019.

To date, five communities, ECV, ELABHWC, SBM, SELA and WCWLB, have exceeded their respective CERP emission reductions targets for their NO_x five-year milestone; and four communities, ECV, SBM, SLA and WCWLB, have met or exceed their CERP emission reductions targets for their diesel particulate matter (DPM) five-year milestone.

Achievements for this reporting period, July 1, 2022 to June 30, 2023, in the six communities include:

- Inspections of over 575 heavy-duty trucks;
- Adoption of Rule 1148.2⁵;
- Proposed Rule 2306⁶ was initiated, but a Memorandum of Understanding (MOU) has been proposed for both new and existing railyards in lieu of Proposed Rules 2306 and 2306.1⁷;
- Established one new air monitoring station; continued monitoring at 16 air monitoring stations; conducted extensive mobile monitoring surveys; and
- More than 50 community outreach and engagement activities.

One of the strategies used in the CERPs to achieve emission reductions is incentives funding. Incentives funding reduces emissions by providing funds to mobile source and community-identified projects. South Coast AQMD was designated \$98.8 million dollars from Year 5 Community Air Protection Program (CAPP) incentive funds, and \$91.2 million dollars from Year 6 CAPP incentive funds. South Coast AQMD is currently determining allocation amounts from Years 5 and 6 CAPP incentive funds to mobile source and community-identified projects.

⁵ Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers

⁶ Proposed Rule 2306 – Indirect Source Rule for New Intermodal Facilities

⁷ Proposed Rule 2306.1 – Indirect Source Rule for Existing Intermodal Facilities

Public Process

South Coast AQMD conducted community outreach during development of the Annual Progress Report by hosting quarterly update CSC meetings and held All CSCs Annual Progress Report meetings on October 11, 2023 and October 12, 2023. The Draft Annual Progress Report was released for a two-week public comment period from October 6, 2023 to October 20, 2023.

The Annual Progress Report will be updated annually for status of CERP objectives, metrics for tracking progress, qualitative assessments for CERP implementation, and key plan adjustments.

The Annual Progress Report will be submitted to CARB in December 2023 and CARB staff will present to the CARB Board to review and assess statewide implementation of the AB 617 program in mid-2024.

Key Comments

Comments were received during the All CSCs Annual Progress Report meetings held on October 11, 2023 and October 12, 2023 and during the two-week public comment period from October 6, 2023 to October 20, 2023, which are summarized below:

Public Comments

Public Comment #1

The commenter expressed the following:

- a) A Health Effects section should be added to the Annual Progress Report.

Staff Response to Public Comment #1:

- a) Staff is continuing discussions with CARB to expand the Annual Progress Report by capturing quantitative health impacts of air pollution.
- b) CERP emission reductions will have health impacts, but are difficult to quantify.

Public Comment #2

The commenter expressed the following:

- a) Refinery notifications via text messages should be included as an option to community members.

Staff Response to Public Comment #2:

- a) Staff provided recommendations to applicable ongoing Rule Development teams where text messaging notifications may be incorporated into Proposed Amended Rules 1118 and 1180; and Proposed Rule 1180.1.

Public Comment #3

The commenter expressed the following:

- a) South Coast AQMD should continue pursuing a Rail Indirect Source Rule instead of a MOU.

Staff Response to Public Comment #3:

- a) An MOU is expected to achieve greater emission reductions than an Indirect Source Rule and is consistent with CERP objectives.

Public Comment #4

The commenter expressed the following:

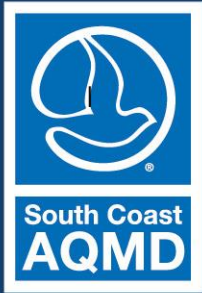
- a) Allow the CSCs to set the agenda for CSC Meetings.

Staff Response to Public Comment #4:

- a) Currently, ELABHWC, ECV, and SLA are given the opportunity to provide CSC Meeting agenda topics. Staff will work with WCWLB, SBM, and SELA to ensure CSC members have the opportunity to provide CSC Meeting agenda topics.

Attachments

- A. 2023 Annual Progress Report for AB 617 Community Emission Reductions Plans
- B. Board Presentation



DECEMBER 2023

FINAL ANNUAL PROGRESS REPORT

**FOR ASSEMBLY BILL 617
COMMUNITY EMISSION REDUCTIONS PLANS**

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

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Councilmember, Lynwood
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Table of Contents

INTRODUCTION.....	1
BACKGROUND AND PURPOSE.....	3
COMMUNITY PROFILES	3
OVERVIEW OF CERP FRAMEWORK	4
STATUS OF CERP OBJECTIVES	6
METRICS FOR TRACKING PROGRESS	10
<i>Baseline Emissions and Milestone Years</i>	10
<i>Emission Reduction Targets</i>	10
<i>Emission Reductions Achieved</i>	12
CERP STRATEGIES	14
<i>Rules and Regulations</i>	14
<i>Enforcement</i>	22
<i>Air Monitoring</i>	24
<i>Collaboration</i>	26
<i>Incentives Funding</i>	31
<i>Public Information and Outreach</i>	37
SUMMARY OF KEY PLAN ADJUSTMENTS.....	39

INTRODUCTION

Signed into law in July 2017, Assembly Bill 617 (AB 617) is a California law that addresses the disproportionate impacts of air pollution in environmental justice communities. It requires community-driven actions to reduce air pollution and improve public health in communities experiencing disproportionate burdens from exposure to air pollutants. The South Coast Air Quality Management District (South Coast AQMD) Governing Board recommends communities for the AB 617 program to the California Air Resources Board (CARB), and CARB is responsible for selecting communities across the state. Currently, there are nineteen communities statewide as shown in Figure 1. Within the jurisdiction of South Coast AQMD, there are a total of six designated communities: three designated in 2018, two designated in 2019, and one designated in 2020 (Table 1).

Figure 1: AB 617 Designated Communities



Each community established a Community Steering Committee (CSC) to guide the development and implementation of a Community Emission Reductions Plan (CERP) and Community Air Monitoring Plan (CAMP) to address the community's top air quality priorities. Each CERP includes objectives, which are actions and goals to achieve emission and exposure reductions from the community identified air quality priorities and each CAMP¹ includes air monitoring objectives to

¹ South Coast AQMD, AB 617 Community Air Monitoring: <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/ab-617-community-air-monitoring>.

support the implementation of its respective CERP. Each CERP was adopted by the South Coast AQMD Governing Board and approved by the CARB Board, as detailed in Table 1.

Table 1: CERP South Coast AQMD Adoption and CARB Approval Dates

Designated Year	Community	South Coast AQMD Adoption Date	CARB Approval Date
2018	East Los Angeles, Boyle Heights, West Commerce (ELABHWC) ²	September 6, 2019 ³	September 10, 2020
	San Bernardino, Muscoy (SBM) ⁴	September 6, 2019 ⁵	September 10, 2020
	Wilmington, Carson, West Long Beach (WCWLB) ⁶	September 6, 2019 ⁷	September 10, 2020
2019	Eastern Coachella Valley (ECV) ⁸	June 4, 2021 ⁹	September 9, 2021
	Southeast Los Angeles (SELA) ¹⁰	December 4, 2020 ¹¹	May 20, 2021
2020	South Los Angeles (SLA) ¹²	June 3, 2022 ¹³	August 25, 2022

² South Coast AQMD, ELABHWC Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/east-la>

³ South Coast AQMD, ELABHWC CERP, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/east-la/ceip/cerb-submittal/final-cerp.pdf?sfvrsn=8>.

⁴ South Coast AQMD, SBM Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/san-b>.

⁵ South Coast AQMD, SBM CERP, <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/san-bernardino/ceip/cerb-submittal/final-cerp.pdf?sfvrsn=9>.

⁶ South Coast AQMD, WCWLB Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/wilm>.

⁷ South Coast AQMD, WCWLB CERP, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/ceip/final-cerp-wcwlb.pdf?sfvrsn=8>.

⁸ South Coast AQMD, ECV Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/eastern-coachella-valley>.

⁹ South Coast AQMD, ECV CERP, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/final-cerp/final-cerp-july-2021.pdf?sfvrsn=9>.

¹⁰ South Coast AQMD, SELA Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/southeast-los-angeles>.

¹¹ South Coast AQMD, SELA CERP, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/southeast-los-angeles/final-cerp/final-cerp.pdf?sfvrsn=9>.

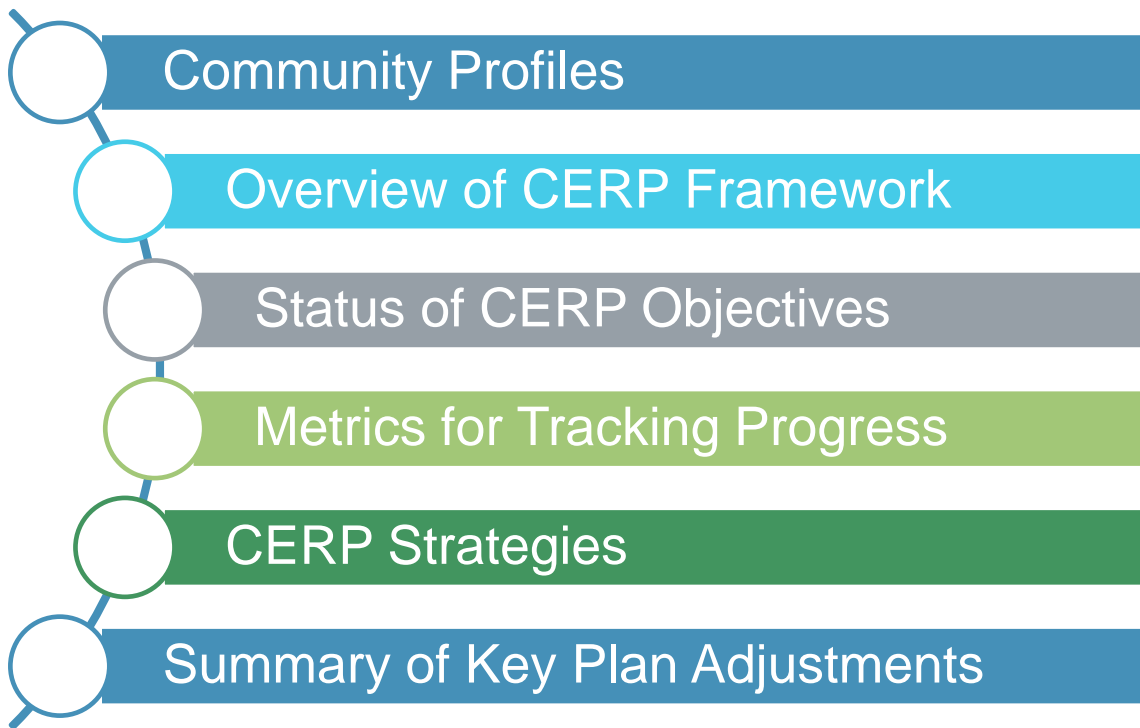
¹² South Coast AQMD, SLA Community Webpage, <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/south-la>.

¹³ South Coast AQMD, SLA CERP, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/south-la/final-cerp.pdf?sfvrsn=18>.

BACKGROUND AND PURPOSE

AB 617 and the CARB Community Air Protection (CAP) Blueprint¹⁴ require air districts to prepare annual progress reports summarizing the results of CERP implementation.¹⁵ The 2023 Annual Progress Report for AB 617 Community Emission Reductions Plans (2023 Annual Progress Report) is cumulative and summarizes the progress of CERP implementation for South Coast AQMD AB 617 communities from September 6, 2019, to June 30, 2023. Additionally, the report covers information on incentive funds distributed in the communities from January 1, 2019, to June 30, 2023, and air monitoring activities initiated from June 2019 to June 30, 2023. The CARB CAP Blueprint sets forth requirements for the Annual Progress Report; Figure 2 summarizes these main requirements.

Figure 2: Overview of CERP Annual Progress Report Requirements



COMMUNITY PROFILES

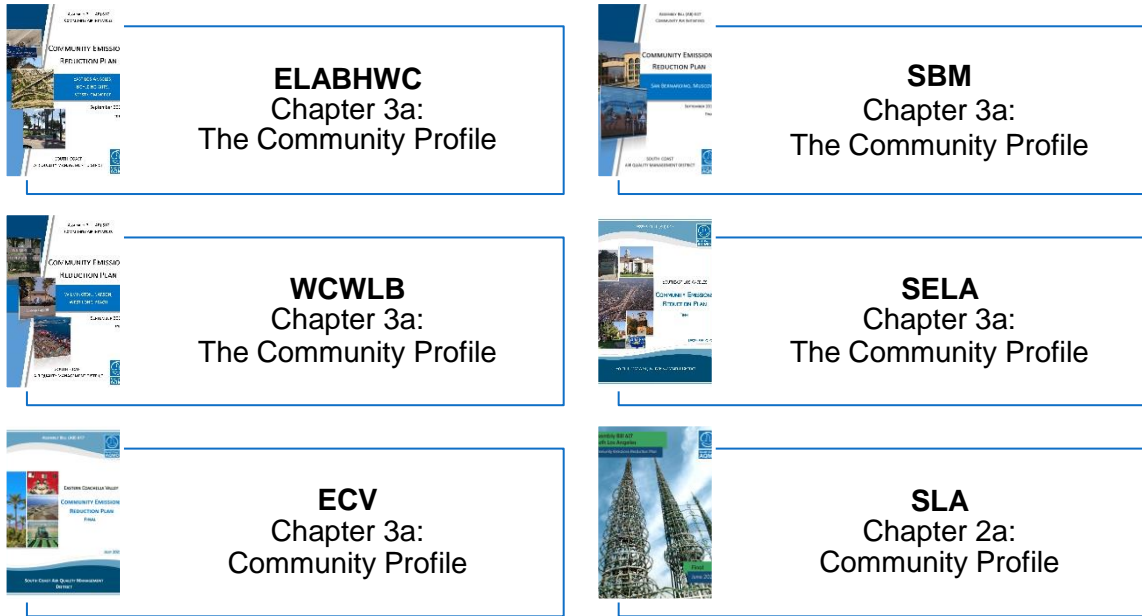
Each CERP includes a Community Profile which provides context in understanding the attributes of the respective community. The Community Profiles include a general overview of the community, a discussion of community issues, and a characterization of pollution sources and other factors, including public health data, socioeconomic factors, and public health challenges.

¹⁴ California Air Resources Board, “Community Air Protection Blueprint”, October 2018, <https://ww2.arb.ca.gov/capp-blueprint>.

¹⁵ Health and Safety Code, Section 44391.2 (C)(7).

Data from CalEnviroScreen¹⁶, Multiple Air Toxics Exposure Study (MATES)¹⁷, and Southern California Association of Governments (SCAG) is used to inform the development of the community profiles. The location of the Community Profile for each CERP is identified below in Figure 3. There have been no updates to any of the Community Profiles during this reporting period.

Figure 3: Community Profile Chapters by CERP



OVERVIEW OF CERP FRAMEWORK

For each CERP, the air quality priorities identified were determined by the CSC. The air quality priorities for each community are listed in Figure 4. To address these air quality priorities, each CSC developed a set of actions and goals to achieve emission and exposure reductions during CERP implementation. To simplify terminology, this Annual Progress Report will refer to actions and goals as “objectives”. These objectives are implemented through six strategies: 1) rules and regulations, 2) enforcement, 3) air monitoring, 4) collaboration, 5) incentives funding, and 6) public information and outreach. Figure 5 demonstrates the relationship between air quality priorities, objectives, strategies, and emission and exposure reductions.

¹⁶ Office of Environmental Health Hazard Assessment, CalEnviroScreen, <https://oehha.ca.gov/calenviroscreen>.

¹⁷ South Coast AQMD, Multiple Air Toxics Exposure Study (MATES), <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>.

Figure 4: Air Quality Priorities by Community

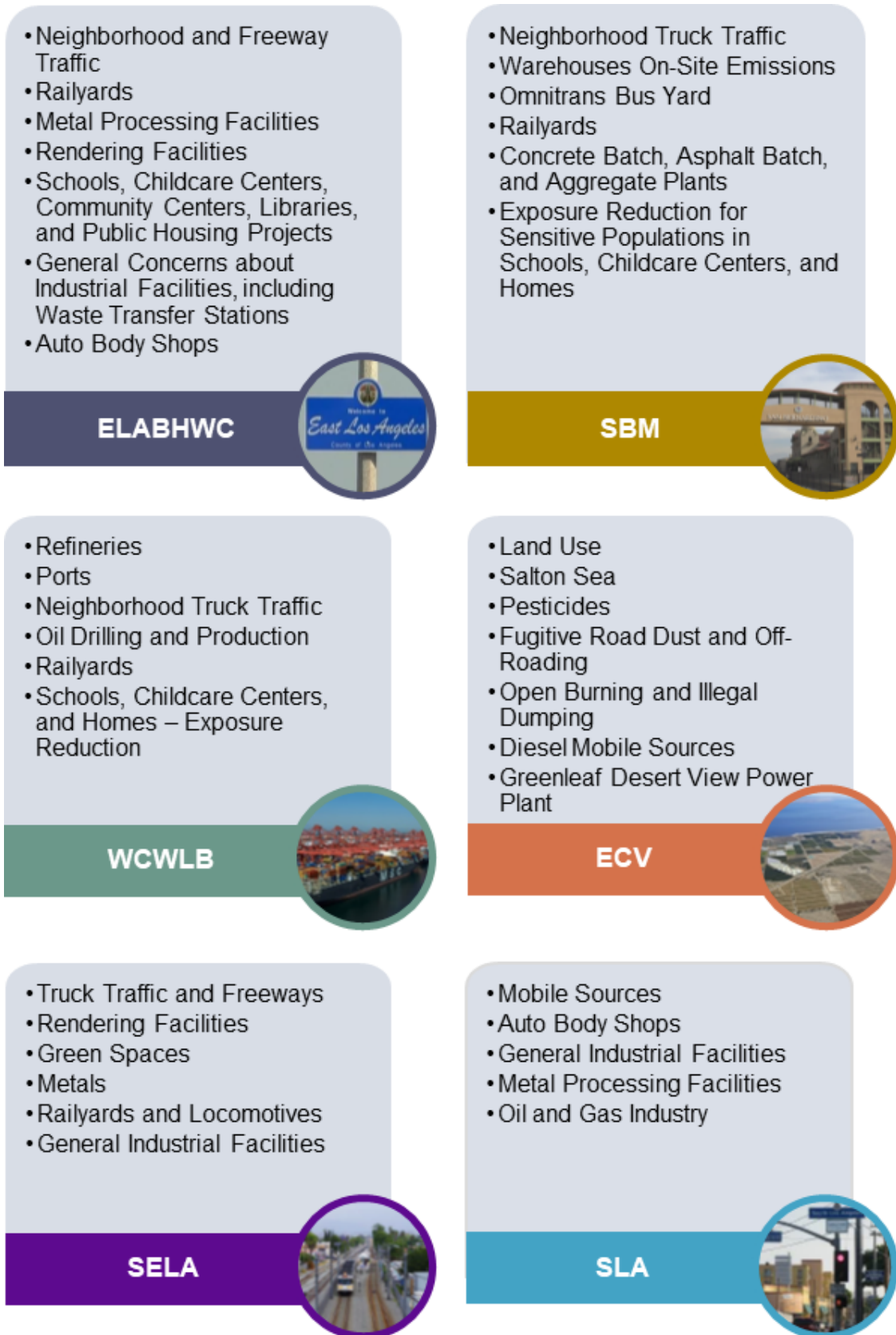
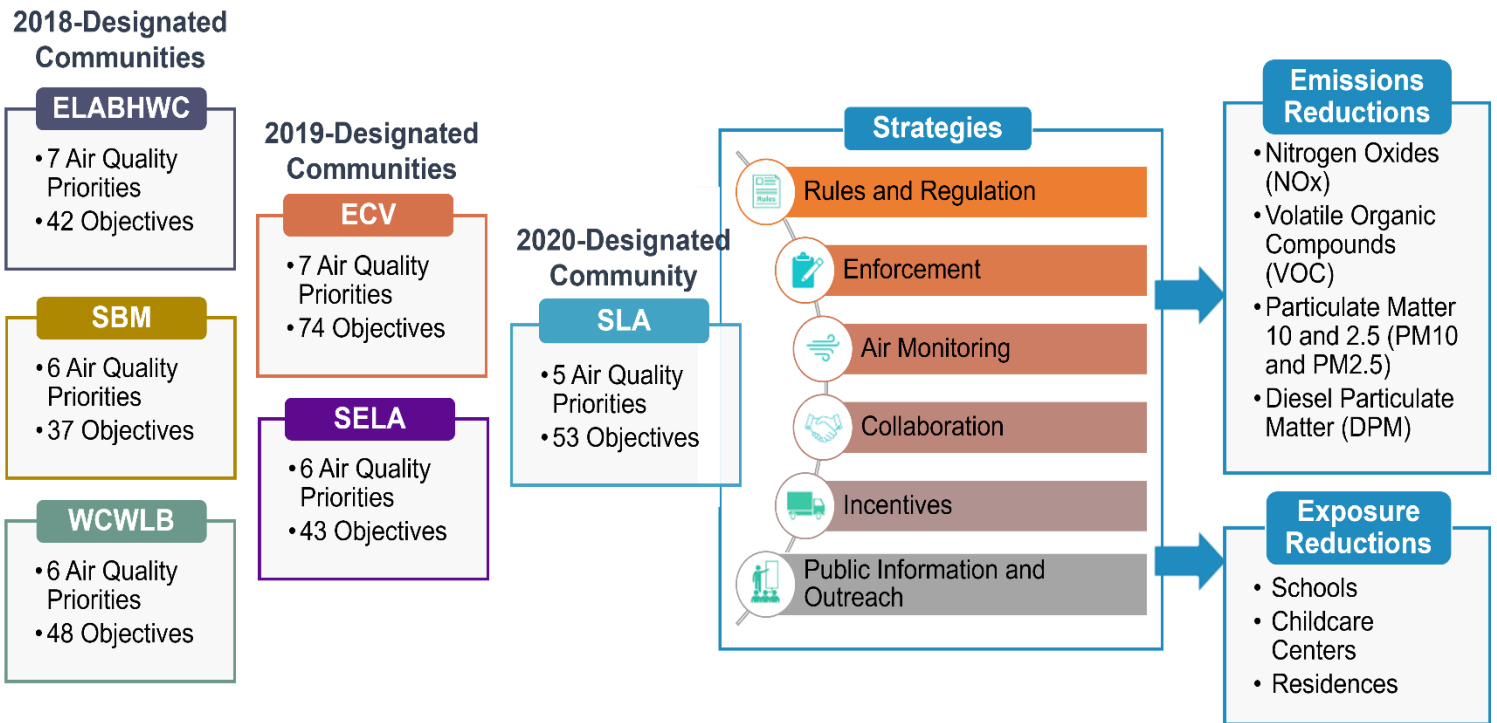


Figure 5: Overview of CERP Air Quality Priorities, Objectives, and Strategies



STATUS OF CERP OBJECTIVES

As required by the CARB CAP Blueprint, for each reporting period, air districts provide CARB a status update of each community’s CERP objectives and strategies requiring implementation. CERP implementation is an ongoing process with an initial implementation timeframe of five (5) years. Regardless of the implementation timeline, South Coast AQMD is committed to completing the implementation of all CERP objectives. Many objectives in each CERP are ongoing (i.e., enforcement, incentives, outreach) and other objectives have a projected start timeline (e.g., SLA objectives).

For tracking purposes, South Coast AQMD uses three different categories to identify the status of each CERP objective: Completed, Ongoing, and Not Started. An objective categorized as “Completed” is considered fully implemented. South Coast AQMD may provide additional information or opportunities for these objectives if they become available. An objective categorized as “Ongoing” means implementation of the action is in progress. Lastly, if an objective is categorized as “Not Started”, the implementation of the action has not begun. Compared to the 2022 Annual Progress Report for Assembly Bill 617 Community Emission Reductions Plans, South Coast AQMD also refined the way in which percentage of completion is calculated for each individual CERP objective, providing greater resolution and transparency of CERP implementation progress.

To provide a visual representation of CERP implementation progress, South Coast AQMD is developing a CERP Implementation Dashboard to include a qualitative status update and the percentage completed for each CERP objective, anticipated to be featured on each community's webpage by Spring 2024. In the interim, a CERP implementation Tracking Sheet with this information will be available. As CERP implementation continues, updates on these objectives will be provided during CSC meetings, on each community's CERP Implementation Dashboard, and in future Annual Progress Reports. Figure 6 provides CERP implementation highlights, focused on fiscal year 2022-23, for each community.

Figure 6: CERP Implementation Highlights from July 2022 – June 2023

Multi-Community Highlights

- (WCWLB and SLA) Initiated rule development for Proposed Amended Rule 1148.1 - Oil and Gas Production Wells
- (WCWLB and SLA) Adopted amendments to Rule 1148.2 - Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers (February 2023)
- (SELA and SLA) Adopted Rule 1460 - Control of Particulate Emissions From Metal Recycling and Shredding Operations (November 2022)
- (ELABHWC and ECV) Issued the AB 617 Residential Air Filtration Program Request for Proposals (November 2022), in which 14 vendor applications offering over 20 air filtration units were received and being evaluated
- (ELABHWC, SBM, WCWLB, ECV, SELA, and SLA) CARB established a Supplemental Environmental Project (SEP) fund for private schools and daycare centers within AB 617 communities to receive air filtration units in spring 2022. South Coast AQMD executed two contracts for the 184 eligible private schools and day cares to receive air filtration units
- (WCWLB and SLA) City and County of Los Angeles adopted Oil and Gas Drilling Ordinances to ban new oil and gas drilling activities in December 2022 and January 2023, respectively, and Los Angeles City Planning presented at the March 2023 SLA and May 2023 WCWLB Quarter 2 CSC Meetings

ELABHWC

- CARB and South Coast AQMD conducted 96 truck idling inspections and issued 3 violations
- CARB completed the Automated License Plate Reader/Portable Emissions Acquisition System Pilot Study in March 2023, in which data was used to conduct targeted outreach to truck owners and operators on available incentive programs for heavy-duty trucks
- Submitted a comment letter on April 18, 2023 to Los Angeles City Planning on their Boyle Heights Community Plan to help reduce emissions and odors from industrial facilities

SBM

- CARB completed the Automated License Plate Reader Pilot Study and used the data to conduct targeted outreach to truck owners and operators on available incentive programs for heavy-duty trucks in June 2023
- Installation of “No-Idling” truck signs began in spring of 2023

WCWLB

- Initiated, continued, or completed rule development for:
 - Rule 1118 - Control of Emissions from Refinery Flares,
 - Rule 1173 - Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants,
 - Rule 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities,
 - Rule 1180 - Petroleum Refinery and Related Operations Fenceline and Community Air Monitoring and Proposed Rule 1180.1 - Other Refinery Fenceline and Community Monitoring
- Los Angeles County presented information on the Community Improvement Fund of available funding for community improvement projects at the August 2023 Quarter 3 CSC Meeting

ECV

- Developed Paving Project Plan (2022-19CIP-SC-1) with CSC collaboration. Paving Project Plan Program Announcement was approved by Stationary Source Committee on June 16, 2023 and will be presented to the Governing Board August 4, 2023
- South Coast AQMD and CARB developed the Pesticide Monitoring Protocol in October 2022
- South Coast AQMD continues to enforce Rule 444 - Open Burning
 - From July 1, 2022 through June 30, 2023, South Coast AQMD received six open burning complaints and conducted pre-permit and permit inspections of 72 open burn activities, including burn observations and surveillance
 - South Coast AQMD issued 1 Notice of Violation (NOV) in 2023 and provided referrals to CALFIRE's Combustible Materials Taskforce

SELA

- South Coast AQMD and CARB conducted 65 truck idling inspections and issued 3 violations
- Initiated Green Space objectives, including soliciting CSC feedback using multiple polls and workshops and developing the Green Space Project Plan
- Conducted the "South Coast AQMD Metals Rules Workshop" in June 2023

SLA

- Continued rule development for Proposed Rule 1435 - Control of Toxic Air Contaminants from Metal Heating Operations and initiated rule development for Proposed Rule 1445 - Control of Toxic Emissions from Laser and Plasma Arc Cutting
- Mobile air monitoring was initiated in April 2022 near and around facilities of concern to identify and characterize potential emissions of metal toxic air contaminants
- South Coast AQMD and Redeemer Community Partnership launched the Community Oil Wells Pilot Project to monitor Volatile Organic Compound (VOC) emissions from oil wells in November 2022

METRICS FOR TRACKING PROGRESS

During CERP development for each community, emission inventories were developed to identify sources of air pollution (i.e., facilities, area-wide sources, on-road and off-road sources), the emissions from each source, and cumulative exposure burden from these sources. These emission inventories were developed by using source attribution analysis.¹⁸ The results of these analyses establish baseline levels to inform each CERP and help track the progress of CERP implementation.

Baseline Emissions and Milestone Years

The baseline emissions in each community vary based on multiple factors, including the sources of air pollution (e.g., goods movement near the ports, number and types of facilities within the community's boundary) and geographic extent. Each CERP therefore includes CSC-identified objectives that address local sources of air pollution (i.e., air quality priorities). Baseline and milestone years differ in each community based on the year of designation. Each community's baseline emissions are calculated for the year prior to when the community received AB 617 designation and the two milestone years are those which occur 5 and 10 years after the anticipated start of CERP implementation as specified in Table 2. Baseline emissions during milestone years are the result of rules and regulations in place prior to CERP adoption and do not include emission reductions from the CERP.

Table 2: Baseline and Milestone Years by Community

Community	Baseline Year	1 st Milestone Year (5-year milestone)	2 nd Milestone Year (10-year milestone)
2018-Designated Communities	2017	2024	2029*
2019-Designated Communities	2018	2025	2030
2020-Designated Community	2019	2026	2031

*The 2018-Designated Community of WCWLB uses 2030 for the 10-year milestone to account for complexities in completing refinery related CERP objectives.

Emission Reductions Targets

The objectives and strategies in the CERPs define a path to reduce air pollution in the community and reduce exposure focused on where sensitive populations spend extended time (e.g., schools, childcare centers, and residences). The CERPs prioritize different emission reductions, such as Nitrogen Oxides (NOx), Sulfur Oxides (SOx), Volatile Organic Compounds (VOC), Diesel Particulate Matter (DPM), and/or Particulate Matter 10 (PM10). Each CERP establishes emission reductions targets for the milestone years. Emission reductions targets, in tons per year (tpy), for each community are summarized in Table 3, Table 4, and Table 5.

¹⁸ More information on the Methodology for Source Attribution Analyses for the 2018 designated AB 617 Communities in the South Coast Air Basin (Technical Report), November 2019: <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/technical-advisory-group/source-attribution-methodology.pdf>.

Table 3: Overview of 2018-Designated Communities Emission Reductions Targets

Community	NOx	SOx	VOC	DPM
	2024/2029* (tpy)			
ELABHWC ¹⁹	143/377	NA	NA	1.2/1.4
SBM ²⁰	75.1/127.9	NA	NA	0.86/0.91
WCWLB ²¹	606/3,207 ²²	NA/11	21/64	9/20

*Estimated emission reductions from regulations are subject to future assessments and regulatory analyses.

Table 4: Overview of 2019-Designated Communities Emission Reductions Targets

Community	NOx	DPM	PM10
	2025/2030* (tpy)		
ECV ²³	54/115	1/2	NA/2.4
SELA ²⁴	155/297	1/3.5	NA

*Estimated emission reductions from regulations are subject to future assessments and regulatory analyses.

¹⁹ ELABHWC Baseline Emissions and Emission Reductions Targets: <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/east-la/cerp/carb-submittal/final-cerp.pdf?sfvrsn=8#page=118>.

²⁰ SBM Baseline Emissions and Emission Reductions Targets: <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/san-bernardino/cerp/carb-submittal/final-cerp.pdf?sfvrsn=9#page=112>.

²¹ Per CARB guidance, the WCWLB emissions baseline was estimated for 2017, and milestone years 2024 and 2029. However, the emission reductions for WCWLB in this table target a 2030 completion date, due to Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations (Rule 1109.1) implementation timelines. While the baseline emissions were not calculated for 2030, South Coast AQMD expects the emissions to be similar to the 2029 estimates.

²² The emissions for the WCWLB milestone year 2029 reflects the estimated emission reductions by 2031 under Rule 1109.1, due to the complexity of the facilities’ schedule for implementation plans and turnaround events. Estimated emission reductions for WCWLB at full implementation of Rule 1109.1 (2037) is 1,624 tpy.

²³ ECV Baseline Emissions and Emission Reductions Targets: <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/final-cerp/final-cerp-july-2021.pdf?sfvrsn=9#page=104>.

²⁴ SELA Baseline Emissions and Emission Reductions Targets: <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/southeast-los-angeles/final-cerp/final-cerp.pdf?sfvrsn=9#page=101>.

Table 5: Overview of 2020-Designated Community Emission Reductions Targets

Community	NOx	DPM
	2026/2031* (tpy)	
SLA ²⁵	193/300	2.32/3.82

*Estimated emission reductions from regulations are subject to future assessments and regulatory analyses.

Emission Reductions Achieved

Emission reductions achieved through the respective CERP are additional emission reductions from the baseline emissions for milestone years. Although, the objectives and/or strategies in the CERPs aim to reduce emissions and/or exposure; emission reductions for certain CERP strategies are more easily quantified. For example, emission reductions from incentives funding provided for the replacement of older, higher-polluting vehicles with cleaner vehicles are easier to quantify because data on vehicle emissions are available. Therefore, to determine emission reductions from this program, emissions of the older, higher polluting vehicle are subtracted from the emissions of the newer cleaner vehicles. In other instances, emission reductions provided for zero emission infrastructure are more difficult to quantify. Electric charging infrastructure projects will reduce emissions by providing opportunities for zero emission vehicles to charge, thus, traditional fossil fuels are not used; however, emission reductions are indirect and difficult to quantify because vehicle data and usage is not easily tracked in association with infrastructure usage.

Emission reductions from certain rules and regulations can be quantified. For example, a newly adopted rule or regulation may require facilities to install air pollution control equipment that was not previously required. The emission reductions can be quantified by determining the emissions before the air pollution control equipment is installed and the estimated reductions from the installation of the air pollution control device. In other cases, emission reductions can only be quantified after the rule is implemented. For example, emission reductions per AB 617 community for Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program (Rule 2305) will not be available until full implementation of the rule in the first quarter of 2025 and the data has been analyzed. Rule 2305 reduces NOx and DPM emissions associated with warehouses and mobile sources associated with warehouse activities. Rule 2305 requires warehouses to submit plans to the South Coast AQMD and complete actions or investments to reduce emissions at warehouses (e.g., install zero emission

²⁵ SLA Baseline Emissions and Emission Reductions Targets: <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/south-la/final-cerp.pdf?sfvrsn=18#page=155>.

infrastructure, acquire zero emission trucks). The estimated emission reductions from Rule 2305 from the first year of implementation (Phase 1) are 0.64 tons per day of NOx and 0.014 tons per day of DPM. As rule implementation continues, South Coast AQMD will continue to quantify, monitor, and track objectives to quantify emission reductions, where feasible.

Strategies such as enforcement and public information and outreach strategies can result in emission reductions but are difficult to quantify. For example, when focused inspection efforts are conducted and non-compliance is determined (e.g., truck idling), emission reductions will occur when the operator comes into compliance (i.e., truck idling). As another example, public information and outreach can inform community members how to report complaints, which may lead to enforcement actions that result in emission reductions. Each of these situations vary based on the type of source, nature of the compliance issue, pollutants, duration of the air quality issue, amounts of pollutants released, etc., making quantification of emission reductions difficult and in some cases not possible. Although quantifying emission reductions may be difficult or not possible, public information and outreach actions can lead to air quality improvements and exposure reduction as South Coast AQMD works to identify and abate the air quality issue.

Emission reductions were quantified from mobile source incentive projects (Table 11) and statewide mobile source measures. Many of the CERP emission reductions targets (see Table 3, Table 4, and Table 5) for the five-year milestone have been met, as shown in Table 6.

Table 6: Percentage of Emission Reduction Targets Achieved as of 2023

Community	NOx	DPM
	Percentage of Target Achieved (%)	
ELABHWC	117%	95%
SBM	158%	178%
WCWLB	142%	170%
ECV	428%	1011%
SELA	124%	88%
SLA	75%	100%

South Coast AQMD will continue to pursue additional emission reductions during CERP implementation. Additionally, co-benefits can occur from the CERP objectives that are not quantified, including emission reductions from toxic air pollutants and/or greenhouse gases. Any emission reductions achieved will also result in exposure reductions, which leads to increased health benefits. Many CERP objectives help achieve these health benefits by reducing emissions and/or exposure to pollutants such as NO_x and DPM, which are known to cause negative health impacts. Exposure to NO_x can increase susceptibility to respiratory infections and diseases, including asthma.²⁶ Exposure to DPM is linked to lung cancer, and non-cancerous health impacts including respiratory illnesses, such as asthma, heart disease, and premature death.²⁷ Diesel particulate matter is the largest contributor to overall air toxics cancer risk in the South Coast Air Basin.²⁸ The exact health impacts cannot be calculated, but continued air quality control measures and CERP implementation are critical to minimizing health risks associated with these pollutants.

CERP STRATEGIES

This section provides information on the CERP strategies implemented and on emission reductions achieved. The estimated emission reductions and emission reductions achieved to date, which can be quantified, are reported in Table 8 in the Rules and Regulations and Incentives Funding sections, respectively. It is important to note in Table 8 the estimated emission reductions are for all the affected facilities in the South Coast AQMD Basin, not only in the AB 617-designated communities.

Rules and Regulations

Many of the CERPs include a regulatory strategy to achieve emission reductions for mobile and stationary sources. Table 7 lists regulations approved by CARB and shows the status of South Coast AQMD adopted rules and rules under development.

²⁶ U.S. EPA. Basic Information about NO₂. Available at: <https://www.epa.gov/no2-pollution/basic-information-about-no2>. Accessed June 2023.

²⁷ CARB. Overview: Diesel Exhaust & Health. Available at: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed June 2023.

²⁸ South Coast AQMD. Multiple Air Toxics Exposure Study (MATES) 5. Available at: <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6>. Accessed June 2023.

Table 7: Rule Development Efforts in CERPs

Rule/Regulation	Purpose	Community	Status of Development
CARB Regulations			
Advanced Clean Cars II	Requires an increasing number of zero-emission vehicles to be sold in California such that by 2035 100% of vehicles sold will be zero-emission. Also requires increasingly stringent standards for gasoline cars and heavier passenger trucks to reduce smog-forming emissions	ELABHWC, SELA, SLA	Regulation was approved by CARB in August 2022, which took effect in November 2022.*
Advanced Clean Trucks Regulation	Requires truck manufacturers to sell zero-emission vehicles in California and a one-time requirement for large entities to report about their facilities, types of truck services used, and truck fleet.	All 6	Regulation was approved by CARB in June 2020 and will take effect in 2024.*
Advanced Clean Fleets Regulation	Works in conjunction with the Advanced Clean Truck Regulation to accelerate large scale transition to Zero-emission medium- and heavy-duty vehicles.	All 6	CARB Board approved in April 2023. The Office of Administrative Law has not yet approved the regulation.
Transport Refrigeration Units Airborne Toxic Control Measure (TRU ATCM)	Further reduces emissions from diesel-powered TRUs and increase the adoption of zero-emissions technology in the off-road sector.	ELABHWC, SBM, WCWLB, SELA, SLA	Amendments were approved by CARB in February 2022, which took effect in October 2022.*
Heavy-Duty Vehicle Inspection and Maintenance Regulation	Achieves criteria pollutant emission reductions by ensuring that malfunctioning emissions control systems are timely repaired. This regulation replaces CARB’s existing heavy-duty vehicle inspection programs.	All 6	Regulation was approved by CARB in December 2021, which took effect in January 2023.*
Heavy-Duty Low NOx Omnibus Regulation	Requires truck manufacturers to comply with more stringent emissions standards, overhaul engine testing procedures, and extend engine warranties to reduce NOx emissions.	All 6	Regulation was approved by CARB in August 2020, which took effect in December 2021.*

Rule/Regulation	Purpose	Community	Status of Development
In-Use Locomotive Regulation	Reduces emissions from locomotives by creating a fund to which rail operators must make contributions and use to purchase cleaner locomotives. Also establishes idling limit and zero-emission locomotive requirements.	All 6	Regulation was approved by CARB in April 2023, submitted to the Office of Administrative Law in June 2023, and withdrawn in July 2023. CARB will resubmit at a subsequent date.
Ocean-Going Vessels At-Berth Regulation	Further reduce emissions from vessels at-berth to reduce adverse health impacts to communities surrounding ports and terminals throughout California.	WCWLB	Regulation was approved by CARB in August 2020 and some requirements took effect in January 2021. The remaining requirements took effect in January 2023.*
Small Off-Road Engines (SORE) Regulations Amendments	Further reduce smog-forming emissions from small off-road equipment and transition this equipment to zero-emissions. Also, ensure that engines sold and used in California will comply with exhaust and evaporative emission standards throughout their lifetime.	SELA, SLA	Amendments were approved by CARB in December 2021, which took effect January 2023.*
Adopted South Coast AQMD Rules			
Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations	Reduce emissions of NOx from units at petroleum refineries and facilities with related operations to petroleum refineries.	WCWLB	Adopted by South Coast AQMD Governing Board November 2021.
Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers	Gather air-quality related information and provide notification to the surrounding communities on oil and gas, and injection wells for drilling, well completion, rework, and acidizing.	WCWLB, SLA	Adopted by South Coast AQMD Governing Board February 2023.

Rule/Regulation	Purpose	Community	Status of Development
Rule 1460 – Control of Particulate Emissions from Metal Recycling and Shredding Operations	Minimize fugitive dust from metal recycling facilities and metal shredding facilities.	ELABHWC, SELA, SLA	Adopted by South Coast AQMD Governing Board November 2022.
Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program	Requires warehouses greater than 100,000 square feet to reduce emissions associated with warehousing activity by providing a menu of compliance options for industry.	ELABHWC, SBM, WCWLB, SELA	Adopted by South Coast AQMD Governing Board May 2021.
South Coast AQMD Rules Under Development²⁹			
Proposed Amended Rule 403 – Fugitive Dust	Remove outdated provisions and add clarification of existing provisions to enhance compliance.	ECV	Amendment of the rule has not begun. No scheduled Public Hearing Date.**
Proposed Amended Rule 403.1 – Supplemental Fugitive Dust Control Requirements for Coachella Valley	Clarify existing requirements for dust control and remove outdated provisions contained in supporting documents for Rule 403.1.	ECV	Amendment of the rule has not begun. No scheduled Public Hearing Date.**
Proposed Amended Rule 1118 – Control of Emissions from Refinery Flares	Further reduce flaring at refineries, including provisions for clean service flares and facility thresholds. Other amendments aim to improve clarity and remove obsolete provisions. Amendments designed to meet the CERP goal of 50 percent reduction in SOx emissions.	WCWLB	Currently under development. Expected Public Hearing Date: 1 st Quarter 2024.

²⁹ South Coast AQMD, Proposed Rules and Proposed Rule Amendments, <http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules>.

Rule/Regulation	Purpose	Community	Status of Development
Proposed Amended Rule 1148.1 – Oil and Gas Production Wells	Further reduce emissions from operations, implement early leak detection, odor minimization plans, and enhanced emissions and chemical reporting from oil and drilling sites.	SLA, WCWLB	Currently under development. Expected Public Hearing Date: 1 st Quarter 2024.
Proposed Amended Rule 1151 – Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations	Provide clarifications of current requirements and amend provisions to address implementation issues.	SELA, SLA	Currently under development. Expected Public Hearing Date: 3 rd Quarter 2024.
Proposed Amended Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants	Further reduce VOC emissions from petroleum and chemical plants by requiring early leak detection approaches.	WCWLB, SLA	Currently under development. Expected Public Hearing Date: 2 nd Quarter 2024.
Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities	Incorporate the use of more advanced early leak detection methods and improve leak detection and repair programs for storage tanks along with potential control technologies to further reduce VOC emissions.	WCWLB	Currently under development. Expected Public Hearing Date: September 2023.
Proposed Amended Rule 1180 – Petroleum Refinery and Related Operations Fenceline and Community Air Monitoring	Consider expanding the target list of compounds to include compounds identified in the Office of Environmental Health Hazard Assessment’s (OEHHA’s) updated priority list published in 2019.	WCWLB	Currently under development. Expected Public Hearing Date: January 2024.

Rule/Regulation	Purpose	Community	Status of Development
Proposed Rule 1180.1 – Other Refinery Fenceline and Community Monitoring	Establish fenceline and community monitoring requirements for non-petroleum refineries and facilities that are not currently included in Rule 1180 – Refinery Fenceline and Community Air Monitoring.	WCWLB	Currently under development. Expected Public Hearing Date: January 2024.
Proposed Rule 1426.1 – Hexavalent Chromium Emissions from Metal Finishing Operations	Reduce hexavalent chromium emissions from heated chromium tanks used at facilities with metal finishing operations that are not subject to Rule 1469.	ELABHWC, SLA	Currently under development. Expected Public Hearing Date to be determined.**
Proposed Rule 1435 – Control of Toxic Air Contaminant Emissions from Metal Heat Treating Operations	Establish requirements to reduce point source and fugitive toxic air contaminants, including hexavalent chromium emissions from heat treating processes. Requirements will also include monitoring, reporting, and recordkeeping.	ELABHWC, SLA	Currently under development. Expected Public Hearing Date: 3rd Quarter 2024.
Proposed Rule 1445 – Control of Toxic Emissions from Laser Arc Cutting	Establish requirements to reduce hexavalent chromium and other metal toxic air contaminant particulate emissions from laser arc cutting.	ELABHWC, SLA	Currently under development. Expected Public Hearing Date: 2 nd Quarter 2024.
Proposed Rule 1455 – Control of Hexavalent Chromium Emissions from Torch Cutting and Welding	Establish requirements to reduce hexavalent chromium emissions from torch cutting and welding of chromium alloys.	ELABHWC, SLA	Currently under development. Expected Public Hearing Date to be determined.**
Proposed Rule 2304 – Marine Port Indirect Source Rule	Establish requirements to reduce emissions from indirect sources related to marine ports.	WCWLB	Currently under development. Expected Public Hearing Date: December 2023.

Rule/Regulation	Purpose	Community	Status of Development
Proposed Rule 2306 – New Intermodal Railyard Indirect Source Rule	Establish requirements for new intermodal railyards to minimize emissions from indirect sources associated with new railyards.	ELABHWC, SBM, WCWLB, SELA	South Coast AQMD initiated a Memorandum of Understanding (MOU) with the railyards to reduce emissions from new and existing railyards. Rule development has been postponed while MOU efforts are being explored. Rule development will continue if MOU is not approved.
Proposed Rule 2306.1 – Existing Intermodal Railyard Indirect Source Rule	Establish requirements for existing intermodal railyards to minimize emissions from indirect sources associated with these facilities.	ELABHWC, SBM, WCWLB, SELA	South Coast AQMD initiated a MOU with the railyards to reduce emissions from new and existing railyards. Rule development will continue if MOU is not approved.

*CARB Regulations that “took effect” in the “Status of Development” column may be waiting on U.S. EPA waivers under Clean Air Section 209 to become enforceable.

**Some South Coast AQMD Rules have been delayed due to limited resources, are in the information gathering stage of development, or are allowing additional time for stakeholder discussion and input.

Table 8: Adopted Rules and Expected Emission Reductions³⁰

Rule Number	Rule Name	Expected Emission Reductions
Rule 1109.1	Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations	7.7 – 7.9 tons per day of NOx.
Rule 1148.2	Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers	Designed as a notification and reporting tool for oil- and gas-related activities. As such, no emission reductions are expected.
Rule 1460	Control of Particulate Emissions from Metal Recycling and Shredding Operations	Designed to minimize metal fugitive dust emissions.
Rule 2305	Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program	1.5 – 3.0 tons per day of NOx.

³⁰ South Coast AQMD, South Coast AQMD Rule Book, <http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book>.

Enforcement

The primary goal of South Coast AQMD enforcement is to ensure that regulated entities comply with South Coast AQMD permit conditions and air quality rules and regulations. Enforcement activities can include community specific CERP objectives, such as truck idling sweeps, complaint responses, facility inspections, evaluating and addressing notifications from regulated facilities (e.g., equipment breakdowns, source testing, flaring events, etc.), surveillance operations, and investigations based on community air monitoring efforts that show elevated levels of a pollutant. Inspections can be prioritized based on a variety of factors, such as proximity to schools and other sensitive receptors, pollutants generated, facility size, and/or complaints received. In addition to these regular inspections, South Coast AQMD continues to make progress toward implementing CERP objectives related to focused inspections, including referrals to appropriate agencies³¹ and collaborating with agency partners on joint inspections (e.g., with CARB for truck idling sweeps).

Table 9 summarizes the results of commercial diesel truck idling sweeps, including responses to idling truck complaints, in applicable communities (ELABHWC, SBM, WCWLB, SELA, and SLA). During these truck idling sweeps, inspectors identify the number of trucks in the area, evaluate whether they are idling, and determine if they are equipped with the Certified Clean Idle Sticker. Trucks bearing the Certified Clean Idle Sticker are prohibited from idling for more than five minutes within 100 feet of a school, residence, or similar sensitive area; trucks without the sticker may not idle for more than five minutes at any location. Notices of Violation are issued to truck drivers who fail to follow these restrictions. The enforcement statistics indicated in Table 9 are consistent with those published for CARB's idling truck program.

Table 9: Truck Idling Sweeps³²

Date of Truck Idling Sweep	Number of Trucks Inspected	Number of Certified Clean Idle Stickers	Number of Notice of Violations Issued
ELABHWC			
10/17/2019	24	0	0
10/18/2019	11	0	0
2/25/2020	17	10	1
5/19/2020	62	36	0
8/5/2020	39	16	0
11/3/2020	21	16	0
2/9/2021	17	4	0
5/4/2021	27	13	0

³¹ Interagency Complaint and Referral List: <http://www.aqmd.gov/docs/default-source/default-document-library/interagency-referrals.pdf>.

³² Truck idling inspection locations were selected based on complaints received, CARB data sources, or locations prioritized by each respective CSC during the truck idling location prioritization activities conducted in October 2019 except for the SLA CSC. South Coast AQMD will conduct a truck idling location prioritization activity with the SLA CSC and share findings in future reporting period.

Date of Truck Idling Sweep	Number of Trucks Inspected	Number of Certified Clean Idle Stickers	Number of Notice of Violations Issued
8/10/21	26	26	0
12/21/21	36	28	0
2/1/22	55	27	0
5/3/22	18	11	0
8/2/22	43	35	0
11/23/22	42	29	0
1/24/23	6	6	0
4/14/23	5	5	3
ELABHWC Totals:	449	262	4
SBM			
9/26/2019	24	0	2
11/10/2019	11	7	0
3/31/2020	8	2	0
6/4/2020	18	16	0
12/3/2021	11	10	0
12/4/2021	5	4	0
3/24/2021	6	5	0
6/16/2021	11	10	0
10/14/21	8	7	0
3/1/22	8	7	0
4/14/22	10	10	0
6/30/22	13	10	0
11/16/22	10	9	0
3/2/23	5	4	0
6/27/23	3	3	0
SBM Totals:	151	104	2
WCWLB			
9/26/2019	75	2	0
1/28/2020	59	40	0
2/4/2020	0	0	0
4/29/2020	85	65	4
7/16/2020	43	21	0
9/2/2020	0	0	0
10/20/2020	65	32	0
2/3/2021	104	78	0
4/30/2021	74	45	3
7/28/21	62	62	0
12/28/21	40	18	0
1/26/22	42	37	0

Date of Truck Idling Sweep	Number of Trucks Inspected	Number of Certified Clean Idle Stickers	Number of Notice of Violations Issued
4/20/22	37	29	0
5/18/22	62	45	0
8/17/22	150	90	1
12/1/22	85	60	0
1/19/23	50	35	1
4/19/23	75	62	0
WCWLB Totals:	1108	721	9
SELA			
6/16/2021	6	5	0
8/6/2021	15	13	0
12/16/2021	15	14	0
3/16/2022	8	7	0
8/2/22	11	6	3
9/21/22	6	5	0
12/9/22	8	2	0
1/18/23	26	17	0
4/6/23	14	9	0
SELA Totals:	109	78	3
SLA			
1/20/2023	7	6	0
4/26/2023	19	12	0
SLA Totals:	26	18	0
Community Totals:	1843	1183	20

Air Monitoring

Air monitoring is being conducted as outlined in each community's Community Air Monitoring Plan (CAMP). Air monitoring strategies and types of pollutants monitored are unique to each community and determined through South Coast AQMD's ongoing collaboration with the CSCs and guided by the CAMPs. Data collected from air monitoring provides valuable information about air pollution sources, types of pollutants, and air quality impacts in the communities. As such, monitoring data resulting from CAMP implementation supports CERP implementation, as demonstrated with compliance and enforcement activities (e.g., focused inspections). For example, South Coast AQMD's Monitoring and Analysis Division can assist in investigations by conducting air monitoring in areas of suspected noncompliance. If elevated levels of air contaminants are measured, the monitoring results are provided to Compliance and Enforcement for further investigation. The information may help enforcement to: 1) identify one or more sources of the elevated air contaminants, 2) evaluate compliance with air quality rules and regulations,

and 3) take appropriate enforcement action. Different types of air monitoring are shown in Figure 7 below and include:

- Time-integrated samples, where samples are collected over a specified time period (typically 24 hours) and are analyzed in the lab using U.S. EPA certified methods
- Continuous monitors, that are deployed in air monitoring stations to measure a variety of air pollutants and provide the air monitoring data publicly in near real-time (e.g., hourly or faster)
- Mobile monitoring, which allows surveys of a large area in a short period and is used to identify areas with elevated levels of air pollutants and to inform follow up actions

Figure 7: Air Monitoring Types



Summa Cannister for Time Integrated Samples



Fixed Station for Continuous Monitoring



Mobile Monitoring Unit

To keep CSCs informed, each community has a dedicated air monitoring webpage that provides access to real-time data dashboards, interactive data access and summary dashboards, and CAMP implementation progress reports that track monitoring activities conducted for the implementation of CAMPs and CERPs. Each community webpage can be accessed through the following link:

<http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/ab-617-community-air-monitoring/communities>




In addition to air monitoring conducted by South Coast AQMD, multiple contractors conducted specialized monitoring in some of the AB 617 communities to evaluate the performance of new advanced air monitoring methods and techniques and assess their potential application. South

Coast AQMD purchased and/or retained some of these services that were able to supplement the existing monitoring tools already utilized in this program.

Collaboration





Collaboration with the CSCs, other regulatory agencies, community-based organizations, and affected sources is an important aspect of implementing the CERPs. Table 10 below highlights South Coast AQMD’s ongoing collaborations:

Table 10: Ongoing Collaborations

Collaborators	CERP Objective Implemented
	<ul style="list-style-type: none"> • South Coast AQMD and CARB conducted an Automated License Plate Reader / Portable Emissions Acquisition System Pilot Study in ELABHWC in March 2023 • South Coast AQMD and CARB conducted an Automated License Plate Reader Pilot Study in SBM in October 2021 <ul style="list-style-type: none"> ○ Subsequent data from both studies was used to conduct targeted outreach to truck owners and operators on available incentive programs for heavy-duty trucks
	<ul style="list-style-type: none"> • Los Angeles County Board of Supervisors adopted the Green Zones Ordinance³³ in June 2022, which incorporated feedback provided by South Coast AQMD³⁴
	<ul style="list-style-type: none"> • South Coast AQMD worked with the ELABHWC and WCWLB CSCs to identify truck idling locations. CARB and the Los Angeles Department of Transportation worked to install “No Idling” signs

³³ Los Angeles County Department of Regional Planning, Green Zones Program, <https://planning.lacounty.gov/greenzones>.

³⁴ South Coast AQMD Feedback Letter, <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2020/August/LAC200616-01.pdf?sfvrsn=8>

Collaborators	CERP Objective Implemented
	<ul style="list-style-type: none"> • South Coast AQMD collaborated with CARB and the United States Coast Guard to prevent fugitive emission leaks from ships at the ports in WCWLB. Specifically, South Coast AQMD inspectors boarded petroleum tankers at berth and took enforcement action based on leaking pressure relief valves.
	<ul style="list-style-type: none"> • For the WCWLB CERP, South Coast AQMD initiated discussions with the Chinese Consulate and the City of Shenzhen, China representatives on a concept for a Pacific Rim clean vessel incentive program; however, due to the current geopolitical climate, this objective will be adjusted
	<ul style="list-style-type: none"> • For the WCWLB and SLA CERPs, South Coast AQMD is tracking the Los Angeles Department of Public Health's (LADPH) Community Health Improvement Plan (CHIP) to collaborate on reducing emissions from oil and gas drilling
	<ul style="list-style-type: none"> • South Coast AQMD worked with the SBM CSC to identify locations for "No Idling" signs in SBM. South Coast AQMD is working with the City of San Bernardino to install the signs at the identified locations • South Coast AQMD discussed potential truck routes for SBM with the City and County of San Bernardino; City of San Bernardino City Council approved a truck route study for their General Plan³⁵


³⁵ City of San Bernardino, General Plan, <https://futuresb2050.com/>.

Collaborators	CERP Objective Implemented
	<ul style="list-style-type: none"> • South Coast AQMD, in partnership with Desert Healthcare District and Foundation (DHCD&F) and Health Assessment and Research for Communities, continued implementation of the United States Environmental Protection Agency (U.S. EPA) State Environmental Justice Cooperative Agreement Grant Program by establishing an Air Quality Academy to improve environmental literacy and air quality data in ECV • DHCD&F is in the process of developing an Air Quality Emergency Communication Plan to minimize exposure to smoke in schools and communities in ECV. South Coast AQMD reviewed the first draft of the plan and provided comments to DHCD&F
	<ul style="list-style-type: none"> • South Coast AQMD partnered with CARB, the Department of Pesticide Regulation (DPR), the Office of Environmental Health Hazard Assessment (OEHHA), and the Riverside County Agricultural Commissioner to develop a pesticide sampling protocol and prioritized three pesticides for sampling. These include metam sodium (through methyl isothiocyanate), 1,3-dichloropropene (1,3-d), and chloropicrin.
	<ul style="list-style-type: none"> • Partnered with the California Natural Resources Agency (CNRA) and the Imperial Irrigation District (IID) and provided comments on the Salton Sea Management Plan Draft Dust Suppression Action Plan to address concerns around the Salton Sea in ECV
	<ul style="list-style-type: none"> • South Coast AQMD and Gateway Cities Council of Governments are identifying opportunities and strategies to increase green space in SELA

Collaborators	CERP Objective Implemented
	<ul style="list-style-type: none"> • South Coast AQMD coordinated with the Riverside Housing and Workforce Solutions and the ECV Budget Working Team (BWT) to develop a “Prioritized List of Properties to be Paved” to implement paving projects
	<ul style="list-style-type: none"> • South Coast AQMD is collaborating with Redeemer Community Partnership and launched the Community Oil Wells Pilot Project to monitor emissions from oil wells using handheld VOC detectors in SLA
	<ul style="list-style-type: none"> • South Coast AQMD has collaborated with Los Angeles City Planning and submitted comments on their Boyle Heights Community Plan³⁶ to help reduce emissions from industrial facilities as well as begin discussions to understand their permitting process to ensure all industrial facilities in ELABHWC have the necessary South Coast AQMD permits • Los Angeles City Planning provided an overview on implementation of the newly adopted Oil and Gas Drilling Ordinance³⁷ to ban new oil and gas drilling activities to SLA and WCWLBCSCs
	<ul style="list-style-type: none"> • South Coast AQMD participates in the monthly Countywide Industrial-Use Task Force meetings with other public agencies in LA County to identify any facilities of concern and share air quality concerns raised by community members

³⁶ Boyle Heights Community Plan with South Coast AQMD Comments, <https://planning.lacity.org/dcpapi/meetings/document/addtldoc/65217>.

³⁷ Hearing on the Oil Well Ordinance project number PRJ2020-000246-(1-5), <http://file.lacounty.gov/SDSInter/bos/supdocs/172735.pdf>.

Collaborators	CERP Objective Implemented
	<ul style="list-style-type: none"> Physicians for Social Responsibility – Los Angeles (PSR-LA), Strategic Concepts in Organizing and Policy Education (SCOPE), and Watts Clean Air and Energy Committee (Watts Clean Air) are Community Co-Leads that helped with CERP development prior to its adoption and are currently working with South Coast AQMD to implement the SLA CERP

CSC Subcommittees

The ECV and SLA CSCs requested smaller CSC group meetings to provide a focused space to discuss details and strategies on how to address specific CERP objectives. These smaller CSC groups (also known as working groups, working teams, or subcommittees) consist of a subset of CSC members that collaborate with South Coast AQMD and are typically focused on a particular topic (e.g., monitoring, budget, outreach). In addition to quarterly CSC Meetings, ECV incorporated Working Team Meetings and SLA is in the process of incorporating Working Group Meetings. The frequency of these meetings is on an as-needed basis, determined by the topic of discussion and group focus, and are subject to change with advanced notice to the respective CSC. In ECV, Working Teams have also been successful in promoting meaningful conversations and furthering CERP objectives.

California Environmental Quality Act (CEQA)

South Coast AQMD collaborates with other local and state public agencies on projects that are subject to the requirements of CEQA. CEQA informs governmental decision-makers and the public about the potential environmental effects of a proposed project and requires an analysis of a project’s effects to identify feasible mitigation measures when environmental impacts are found to be significant. For any CEQA document that a lead agency sends to South Coast AQMD for review and comment on a proposed project, either as a responsible³⁸ or commenting agency³⁹, South Coast AQMD will review the air quality analysis and provide comments as needed, which may include but are not limited to, recommending mitigation measures, if applicable. For proposed projects located in AB 617 communities, South Coast AQMD may also include a comment recommending that the Lead Agency review the air quality priorities in Chapter 5 of the applicable

³⁸ South Coast AQMD, South Coast AQMD Projects, <http://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects>.

³⁹ South Coast AQMD, Commenting Agency, <http://www.aqmd.gov/home/rules-compliance/ceqa/commenting-agency>.

adopted CERP to identify whether additional measures can be identified and implemented for consistency with each CERP's objectives to lessen or eliminate adverse air quality impacts.

Incentives Funding

One of the strategies used in the CERPs to achieve emission reductions is incentives funding. Incentives funding reduces emissions by providing funds to replace older equipment with cleaner versions. CARB allocates Community Air Protection Program (CAPP) incentive funds statewide,⁴⁰ and designates funding amounts to each air district. Requests are then made by air districts to distribute the incentive funds in accordance with the CAPP Incentives 2019 Guidelines.⁴¹

Mobile Source Projects

Years 1 and 2 CAPP incentive funds were solely allocated to mobile source projects by utilizing existing incentive program solicitations (i.e., Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program), Proposition 1B: Goods Movement Emission Reduction Program (Prop 1B)). Year 3 CAPP incentive funds were primarily allocated to mobile sources projects, but portions of the Year 3 CAPP incentive funds were allocated towards community-identified projects (see *Community-Identified Projects* section). South Coast AQMD was not allocated any Year 4 CAPP incentive funds. For Year 5 CAPP incentive funds, South Coast AQMD was allocated \$98.8 million. For Year 6 CAPP incentive funds, South Coast AQMD was allocated \$91.2 million. South Coast AQMD is currently determining Years 5 and 6 CAPP fund amounts to allocate to mobile source and community-identified projects.

The total investments in mobile source incentives funding from January 1, 2019, to June 30, 2023 and resulting emission reductions are provided in Table 11. For AB 617 project evaluations, South Coast AQMD adheres to the Carl Moyer Program⁴² and Prop 1B⁴³ guidelines, including the methodology used to calculate emission reductions. The emission reductions presented reflect the total anticipated emission reductions from the allocated mobile source incentive funds.

⁴⁰ South Coast AQMD, CAPP Incentives, <http://www.aqmd.gov/home/programs/business/community-air-protection-incentives>.

⁴¹ CARB, CAP Incentives 2019 Guidelines, https://ww2.arb.ca.gov/sites/default/files/2020-10/cap_incentives_2019_guidelines_final_rev_10_14_2020_0.pdf.

⁴² South Coast AQMD, Carl Moyer Program (Heavy-Duty Engines), <http://www.aqmd.gov/home/programs/business/business-detail?title=heavy-duty-engines&parent=vehicle-engine-upgrades>.

⁴³ South Coast AQMD, Goods Movement Emission Reductions Projects (Proposition 1B Program), [http://www.aqmd.gov/home/programs/business/business-detail?title=goods-movement-emission-reduction-projects-\(prop-1b\)&parent=vehicle-engine-upgrades](http://www.aqmd.gov/home/programs/business/business-detail?title=goods-movement-emission-reduction-projects-(prop-1b)&parent=vehicle-engine-upgrades).

Table 11: Emission Reductions from Mobile Source Incentive Funds*

Community	Total Incentives Distributed (millions of dollars)	NOx	PM	VOC
		tpy		
ELABHWC	20	44.4	0.6	1.8
SBM	10	80	1.3	2.3
WCWLB	74.9	264.49	6.67	9.98
ECV	27.5	116.2	9.4	13.6
SELA	0.6	0.2	0.01	0.01
SLA	0.3	1.55	0.03	0.07

*This table includes Years 1 to 3 CAPP incentive funds distributed for mobile source, infrastructure, and community-identified projects. South Coast AQMD did not receive Year 4 CAPP incentive funds. Years 5 and 6 CAPP incentive funds are yet to be determined for allocation.

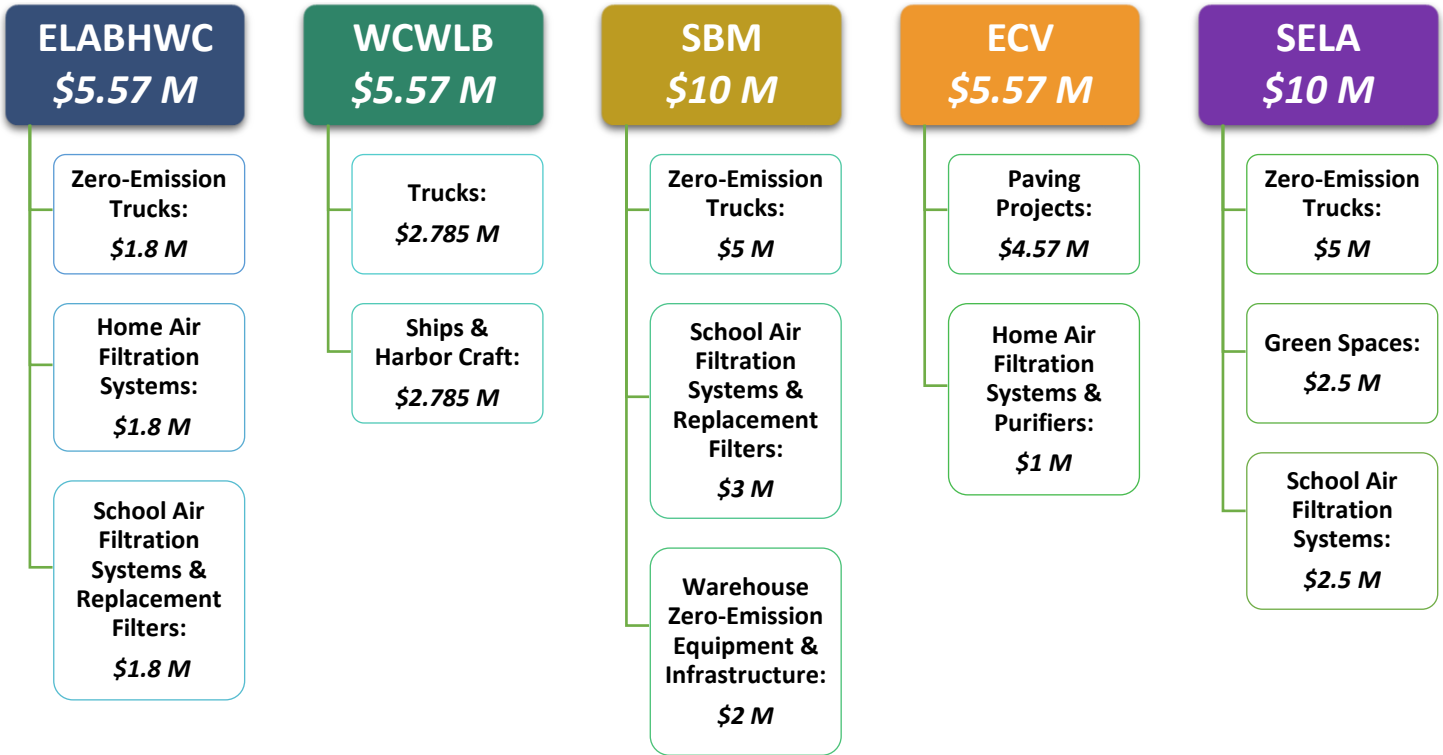
Community-Identified Projects

In October 2020, CARB revised the CAP Incentives 2019 Guidelines to include community-identified projects as an option to distribute CAPP incentive funds. Community-identified projects are projects supported by an adopted CERP (e.g., paving projects, harbor craft vessels) for which the CSC prioritized and allocated CAPP incentive funds through a participatory budgeting process.

In response to the 2020 revised CAP Incentives 2019 Guidelines, South Coast AQMD held a CAPP Incentives Strategy Meeting on October 15, 2020; South Coast AQMD presented an overview of CAPP incentive funds, existing guidelines used to allocate those funds, and solicited input from the CSCs on allocating future CAPP incentive funding. As a result, the available Year 3 CAPP incentive funds (approximately \$37 million) were distributed among the communities based on CSC input and past investments.

Further, South Coast AQMD conducted Participatory Budgeting Workshops in each of the 2018- and 2019-designated communities with an adopted CERP (ELABHWC, SBM, WCWLB, ECV, and SELA), where CSC input was gathered for community-identified projects. Multiple workshops were conducted in each of these communities between December 2020 and April 2021 to prioritize community-identified projects and the funding amounts for each project type. At these workshops, based on objectives in their respective CERPs, South Coast AQMD presented information on eligible projects, including average costs based on past projects, projected emission reductions, and project difficulty. South Coast AQMD conducted one survey in each of these communities to identify the top priorities for community-identified projects and another survey to determine the allocation of the available CAPP incentive funds. Figure 8 shows the funds allocated to each community and their respective community-identified projects and

Figure 8: Year 3 CAPP Incentive Funds for Community-Identified Projects



allocations as determined by the CSCs. Participatory budgeting for SLA is expected to be conducted in the fourth quarter of 2023.

On April 29, 2021, CARB approved South Coast AQMD’s disbursement request for Year 3 CAPP incentive funds for the community-identified project categories in each of the 2018- and 2019-designated communities. South Coast AQMD has been working with the CSCs and community to develop project plans consistent with the CAP Incentives 2019 Guidelines and implement the community-identified projects. Figure 9 shows South Coast AQMD efforts to develop project plans to distribute the CARB-approved Year 3 CAPP incentive funds for community-identified projects. As the remaining Year 3 CAPP incentive funds are distributed for community-identified projects in each community, South Coast AQMD will quantify the emission reductions achieved and progress made towards exposure reductions (e.g., number of air filtration systems installed) in future Annual Progress Reports.

Figure 9: Community-Identified Project Plan Development Efforts



AB 617 Clean Technology Truck Loaner Program (ELABHWC, SBM, WCWLB, SELA)

- Three workshops were held between December 2021 and April 2022 and two additional workshops were held between February and June 2023 to gather CSC and community input
- The AB 617 Clean Technology Truck Loaner Program Project Plan (Truck Loaner Program Project Plan) (2022-21CIP-SC) was submitted for CARB approval in April 2022
- The Amended Truck Loaner Program Project Plan was submitted for CARB approval in March 2023, which CARB approved in March 2023
- Seeking South Coast AQMD Governing Board approval to issue a Request for Proposals (RFP) for the Truck Loaner Project Plan at the September 2023 South Coast AQMD Governing Board Meeting



Residential Air Filtration (ELABHWC, ECV)

- ELABHWC and ECV joint workshops were held on May 26 and August 9, 2022 to develop details for the Residential Air Filtration Project Plan
- CARB approved Residential Air Filtration Project Plan (2022-15CIP-SC) in July 2022
- South Coast AQMD Board approved and issued an RFP to identify vendors for program implementation in November 2022, in which 14 vendor applications were received offering more than 20 different air filtration units
- South Coast AQMD anticipates program implementation will begin in Fall 2023



School Air Filtration (ELABHWC, SBM, WCWLB, SELA)

- CARB approved the Reducing Air Pollution Exposure in Schools and Other Facilities (2022-14CIP-SC) Project Plan in March 2022
- CARB clarified that CAPP funds could not be used for air filtration at private and parochial schools



Paving (ECV)

- Worked with ECV CSC between February 2022 and June 2022 to develop Paving Project Plan (2022-19CIP-SC) and submitted to CARB for review in June 2022, which was approved in October 2022
- Worked with ECV CSC between April 2023 and May 2023 to develop amendments to the Paving Project Plan and submitted to CARB for review in June 2023, which was approved in August 2023
- Program Announcement will be issued in fall 2023



Green Spaces (SELA)

- Conducted polls and held discussions to solicit CSC feedback at an August 2022 workshop and the March 2023 Quarter 1 CSC meeting
- Began development of the Green Space Project Plan and will submit to CARB for review in the fall

Additional CAPP Funded Projects

In addition to community-identified projects, CAPP funding was allocated to certain CERP objectives. These projects were green spaces, public health outreach, and chrome plating facilities. Figure 10 outlines South Coast AQMD's efforts on and the status of these projects.

Figure 10: Additional CAPP Funded Projects

Green Space RFPs for SBM and ECV

- An RFP was issued on August 5, 2022 to solicit proposals to prepare and submit workplan(s) that seek funding to plant trees or increase green space in SBM and ECV
- No proposals were received by the closing date (September 7, 2022)

Public Health Outreach Request for Proposals

- An RFP was issued on December 4, 2020 to solicit proposals to implement CERP objectives for public health outreach on air quality notifications and advisories, asthma-related programs, and exposure reduction measures
- No proposals were received by the closing date (January 15, 2021)

Chrome Plating Facilities

- South Coast AQMD submitted the CAP incentives Project Plan Hexavalent Chromium Plating Facilities that Qualify as Small Businesses (2021-01SSP-SC) to CARB to provide chrome plating facilities with financial support to switch to non-hexavalent chromium metal finishing alternatives, which was approved on June 14, 2021
- A Program Announcement for \$5,040,000 was issued in August 5, 2022 to reduce emissions from hexavalent chromium facilities
- Program implementation resulted in three awarded grants for approximately \$520,000, with one facility being located in SLA and another within 5 miles of ELABHWC and SELA

CARB Funded Programs and Projects

CARB Community Air Grants Program⁴⁴ and CARB Supplemental Environmental Project (SEP) Policy⁴⁵ can provide additional funding to support CERP implementation. The CARB Community Air Grants Program supports community-based organizations and builds their capacity to become active partners in the AB 617 process. Some community-based organizations in South Coast AQMD AB 617 communities are Community Air Grants Program awardees (e.g., Physicians for Social Responsibility - Los Angeles; Comite Civico Del Valle, Inc). CARB's SEP Policy allows a portion of the penalties received during the settlement of enforcement actions to fund community-based projects.

- Community Air Grant Program awardees and summary of projects can be found here: <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/community-air-grants/proposed-awardees>.

⁴⁴ CARB, Proposed Awardees. <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/community-air-grants/proposed-awardees>.

⁴⁵ CARB Supplemental Environmental Project (SEP), <https://ww2.arb.ca.gov/our-work/programs/supplemental-environmental-projects-sep>.

- SEPs that are approved for funding, selected for funding, and fully implemented (completed projects) can be found here:
<https://ww2.arb.ca.gov/our-work/programs/supplemental-environmental-projects-seps/supplemental-environmental-project-sep-1>.

Under the CARB SEP Policy, South Coast AQMD is implementing a SEP for the installation of air filtration systems in private kindergarten through twelfth grade schools and daycare facilities located within the AB 617 communities. South Coast AQMD received 184 eligible private school and day care applications and has already executed 2 contracts to install air filtration units.

Public Information and Outreach

Public information and outreach is a fundamental strategy utilized in the AB 617 program, during CERP development, and throughout implementation. During CERP development for each community, South Coast AQMD provided an emissions inventory, sources of air pollution, and other relevant community information. These efforts were conducted through in-person or virtual community outreach events, community meetings with small groups and organizations, informational materials distributed in the community, and other platforms (e.g., phone, email, social media). South Coast AQMD continues to conduct community outreach during CERP implementation by hosting quarterly update CSC meetings, maintaining a social media presence, sending emails, making phone calls, participating in community events, conducting educational workshops, and distributing informational materials such as flyers, handouts, and door hangers. Since March 2020, South Coast AQMD outreach efforts have mostly transitioned to a virtual format in response to the COVID-19 pandemic. For example, in May of 2020, South Coast AQMD conducted outreach for Carl Moyer funding opportunities via virtual meetings in place of public workshops in the community. Another example is Why Healthy Air Matters (WHAM⁴⁶) program presentations, which provide middle and high school students information on air quality issues, that continued virtually for each of the 2018-designated communities. As the COVID-19 pandemic recedes, South Coast AQMD is in the process of transitioning some outreach efforts to in-person public engagement. For example, Critical Community Conversations for Purposeful Outreach (C3PO) events which are community tours with community members. At C3PO events, South Coast AQMD is present to listen to community members voice their concerns and lived experiences. These events give South Coast AQMD crucial insights on the air quality burdens that these communities face every day. Despite the challenges of navigating a virtual and hybrid environment, South Coast AQMD will continue to conduct public outreach, provide information as part of CERP implementation, and work with the CSCs to expand and strengthen the AB 617 program outreach efforts.

While most outreach efforts are ongoing, a list of key public outreach efforts conducted from September 6, 2019, to June 30, 2023, for CERP implementation is shown in Figure 11.

⁴⁶ South Coast AQMD, Why Healthy Air Matters, <http://www.aqmd.gov/home/programs/education/wham>.

Figure 11: Key Public Outreach Efforts



SUMMARY OF KEY PLAN ADJUSTMENTS

During the development of the CERPs, South Coast AQMD worked with each CSC to develop objectives, strategies, and corresponding metrics and timelines (e.g., expected start and completion). In some instances, adjustments to plan implementation are necessary to address unforeseen circumstances. For example, outreach events were adjusted from in-person to a virtual platform in response to the COVID-19 pandemic. The following is a summary of key implementation adjustments to the CERPs:

- The ELABHWC, SBM, WCWLB, and SELA CERPs include a regulatory strategy to develop an Indirect Source Rule (ISR) to reduce air pollution from railyards. Proposed Rule 2306 – Indirect Source Rule for New Intermodal Facilities (PR 2306) was scheduled to be considered by South Coast AQMD Governing Board by December 2020. The Public Hearing date was delayed to allow more time to work with stakeholders and to incorporate stakeholder input into the rule concepts. Proposed Rule 2306 was scheduled for consideration by the Governing Board in December 2023. Additionally Proposed Rule 2306.1 – Indirect Source Rule for Existing Intermodal Facilities (PR 2306.1) was scheduled to be developed after the adoption of PR 2306. Working Group Meetings and the Public Hearing date for PRs 2306 and 2306.1 have been postponed while South Coast AQMD continues to work with stakeholders (i.e., rail yard operators, communities, etc.).
- Efforts on the Pacific Rim clean vessel incentive program (PRIMER) for the WCWLB CERP were delayed due to COVID-19 and have been further complicated by the geopolitics between United States and China. South Coast AQMD will continue engagement with China, where feasible. Other efforts have been made for “Green Shipping” corridors, which focus on greenhouse gases and alternative fuels for maritime shipping. South Coast AQMD will continue to seek other reductions from marine vessels to reduce localized emissions.
- The WCWLB CERP includes reviewing the Los Angeles Department of Public Health’s (LADPH) Community Health Improvement Plan (CHIP) to collaborate on reducing emissions from oil and gas drilling. Due to the COVID-19 pandemic, development of the CHIP was delayed. Additionally, LADPH has prioritized violence prevention in the CHIP. South Coast AQMD will continue to collaborate with LADPH and continue to stay updated on the progress of the CHIP to incorporate air quality related information to address or mitigate emissions from oil drilling and production sites.
- The WCWLB CERP includes conducting outreach to school districts to provide information on programs such as Safe Routes to School or ridesharing. This outreach effort was delayed due to the COVID-19 pandemic. Efforts on this objective will be prioritized to share this information since students have returned to in-person sessions.
- An RFP was issued on August 5, 2022 to solicit proposals to prepare and submit workplan(s) that seek funding to plant trees or increase greenspace in SBM and ECV. No proposals were received by the closing date (September 7, 2022), which delayed the

implementation of the green spaces objectives in SBM and ECV. South Coast AQMD is exploring alternative options to implement green spaces and tree planting objectives in these communities.

- South Coast AQMD is working with Desert Healthcare District and Foundation (DHCD&F) to develop an Air Quality Emergency Communication Plan to address one of the Open Burning and Illegal Dumping objectives in the ECV CERP. This action was set to be completed by late 2022, but additional time was necessary to incorporate feedback from all agencies involved in the plan. DHCD&F submitted the first draft to South Coast AQMD for review in February 2023, which South Coast AQMD reviewed, and provided a comment letter in May 2023.
- South Coast AQMD anticipated submitting the SELA Green Space Project Plan to CARB by mid-2023 which was delayed to late 2023 to incorporate CSC feedback and include projects which increase recreational opportunities and tree canopy coverage.
- South Coast AQMD held discussions with Los Angeles Metro regarding the installation of vegetative buffers and including zero-emission lanes or projects as part of the Interstate 710 (I-710) expansion project as described in the SELA CERP; however, the expansion project was subsequently discontinued. Further discussions to install vegetative buffers and zero-emission lanes along the I-710 Freeway were thus delayed until new plans for the expansion project are better understood. South Coast AQMD will reinstate discussions with Los Angeles Metro as they have restarted the planning phase of a new I-710 expansion project.
- The SBM CERP includes working with the Arrowhead Regional Medical Center to share information at schools for asthma related programs; however, this objective was delayed as the San Bernardino Department of Public Health focused its resources on COVID-19 impacts. South Coast AQMD will continue to collaborate with San Bernardino Department of Public Health to pursue this objective.
- Participatory budgeting for SLA community-identified projects was anticipated to be conducted during this reporting period. However, unexpected changes in CSC leadership and deferred contract establishment delayed this effort to fall 2023.

South Coast AQMD is committed to completing the objectives as outlined in the CERPs and providing updates to the CSC throughout implementation of the CERPs. Future Annual Progress Reports will continue to summarize the key implementation adjustments, if needed. Additionally, South Coast AQMD is committed to working with the CSCs to identify and evaluate metrics for tracking the progress of CERP implementation in future Annual Progress Reports. South Coast AQMD will share these metrics with the CSC in advance of the development of future Annual Progress Reports.



Board Meeting
Reunión de la Junta Directiva
December 1, 2023
1 de diciembre del 2023

**2023 All Community Steering Committees
Annual Progress Report for Assembly Bill 617
Community Emission Reductions Plans**
*Informe de Progreso Anual para todos
los Comités Directivos Comunitarios del 2023 de
los Planes Comunitarios de Reducción de Emisiones
del Proyecto de Ley 617*

Assembly Bill 617 (AB 617) Designated Communities

Proyecto de la Ley Estatal 617 (AB 617*) Comunidades Designadas



Of the 19 communities designated statewide,
6 are within the South Coast AQMD jurisdiction

De las 19 comunidades designadas en todo el estado,

6 de ellas están dentro de la jurisdicción de South Coast AQMD

South Coast AQMD AB 617 Communities

Comunidades AB 617 de South Coast AQMD

2018-Designated Communities

Comunidades Designadas en 2018

- East Los Angeles, Boyle Heights, West Commerce (**ELABHWC**)
- San Bernardino, Muscoy (**SBM**)
- Wilmington, Carson, West Long Beach (**WCWLB**)

2019-Designated Communities

Comunidades Designadas en 2019

- Southeast Los Angeles (**SELA**)
- Eastern Coachella Valley (**ECV**)

2020-Designated Community

Comunidad Designada en 2020

- South Los Angeles (**SLA**)

AB 617, por sus siglas en ingles* **2

Overview of Community Emission Reductions Plans (CERPs)

Descripción General de los Planes Comunitarios de Reducción de Emisiones (CERP, por sus siglas en inglés)

- Each South Coast AQMD AB 617-designated community developed a CERP with five-year implementation targets
- Each CERP includes objectives to address Community Steering Committee (CSC) identified air quality priorities utilizing six strategies:
 - 1) Rules and Regulations
 - 2) Enforcement
 - 3) Air Monitoring
 - 4) Collaboration
 - 5) Incentive Funding
 - 6) Public Information and Outreach
- CARB and South Coast AQMD recognize that CERP implementation will take longer than five years
- *Cada comunidad designada AB 617 de South Coast AQMD desarrolló un CERP con objetivos de implementación de cinco años*
- *Cada CERP incluye objetivos para abordar las prioridades de calidad del aire identificadas por Comités Directivos Comunitarios (CSC, por sus siglas en inglés) utilizando seis estrategias:*
 - 1) Reglas y regulaciones
 - 2) Aplicación
 - 3) Monitoreo del aire
 - 4) Colaboración
 - 5) Financiación de incentivos
 - 6) Información pública y divulgación
- *CARB y South Coast AQMD reconoce que la implementación de los CERP tomará más de cinco años*



Background of Annual Progress Report

Antecedentes del Informe de Progreso Anual



- AB 617 requires an annual report on the implementation of CERPs
- *AB 617 requiere un informe anual sobre la implementación de los CERPs*



- CSCs and public review and comment on the Draft Annual Progress Report Package
- *Revisión y comentarios de los CSCs y el público sobre el Borrador del Paquete del Informe de Progreso Anual*



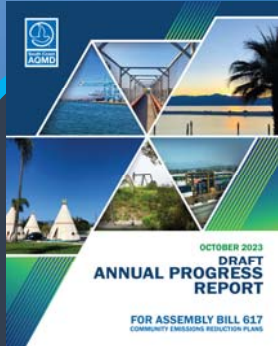
- Final Annual Progress Report Package incorporates comments, is brought to South Coast AQMD Board, and submitted to CARB
- *El Paquete Final del Informe de Progreso Anual incorpora comentarios, se lleva a la Junta Directiva de South Coast AQMD y se presenta a CARB*



- CARB staff may suggest revisions and provides information to CARB Board
- *El personal de CARB puede sugerir revisiones y proporcionar información a la Junta Directiva de CARB*

Annual Progress Report Package

Paquete del Informe de Progreso Anual



Overview Report

Descripción General del Informe

- A report-style document that provides an overview of each community's CERP objectives
- Presents a summary of CERP implementation by strategy and community
- *Un documento estilo informe que proporciona una descripción general de los objetivos del CERP de cada comunidad*
- *Presenta un resumen de la implementación del CERP por estrategia y comunidad*



Spreadsheet

Hoja del Informe

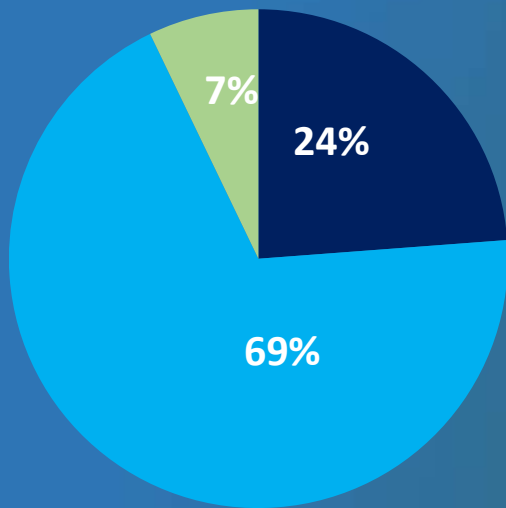
- A spreadsheet that documents all CERP objectives in detail
- Provides details on the qualitative status, percent completion, and emission reductions
- *Una hoja que documenta todos los objetivos de los CERP en detalle*
- *Proporciona detalles sobre el estado cualitativo, porcentaje de finalización y reducciones de emisiones*

Status of CERP Implementation – Year 1 Communities

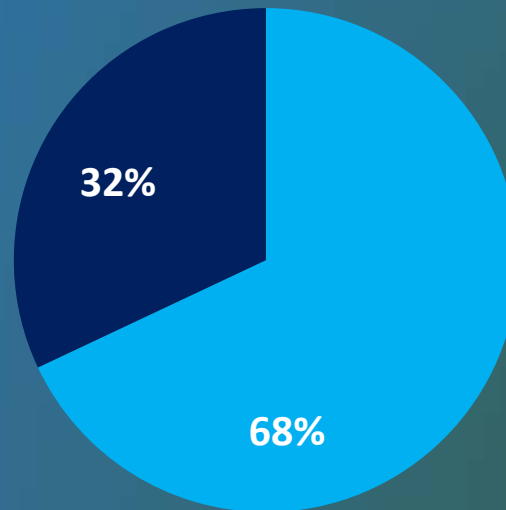
Estado de la Implementación del CERP – Comunidades del Año 1

Fourth Year of Implementation / *Cuarto Año de Implementación*

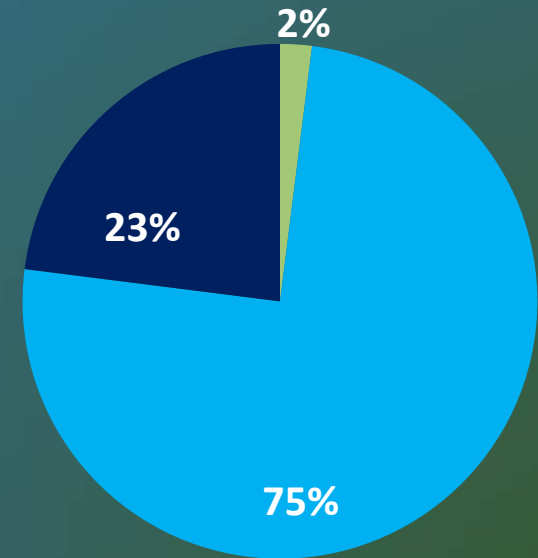
East Los Angeles,
Boyle Heights, West
Commerce



San Bernardino, Muscoy



Wilmington, Carson,
West Long Beach



Completed *Completado* Ongoing *En curso* Not Started *No iniciado*

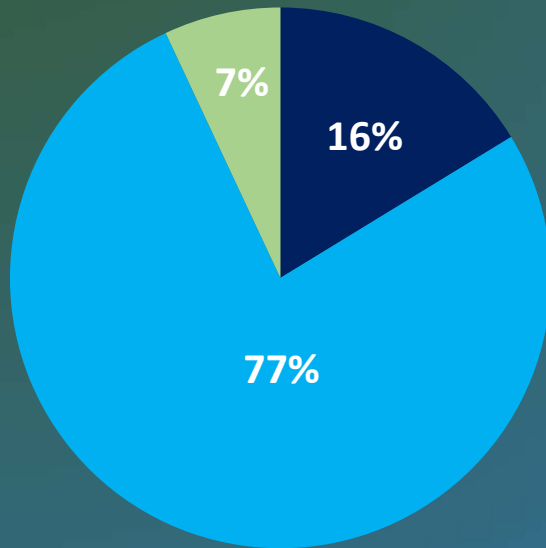
Status of CERP Implementation (continued) – Year 2 and 3 Communities

Estado de la Implementación del CERP (continuado) – Comunidades de Año 2 y 3

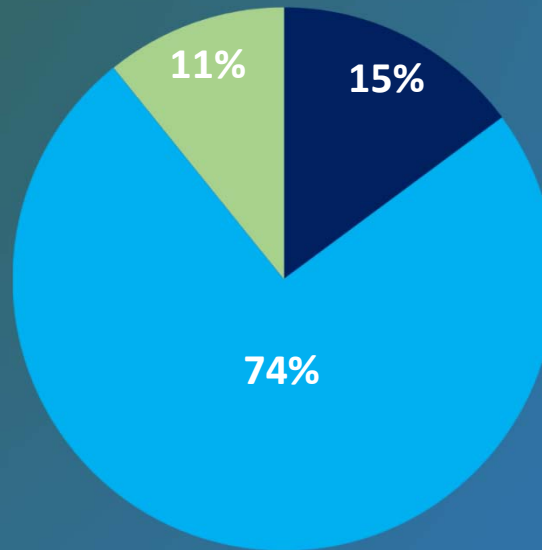
Third Year of Implementation

Tercer Año De Implementación

Southeast Los Angeles



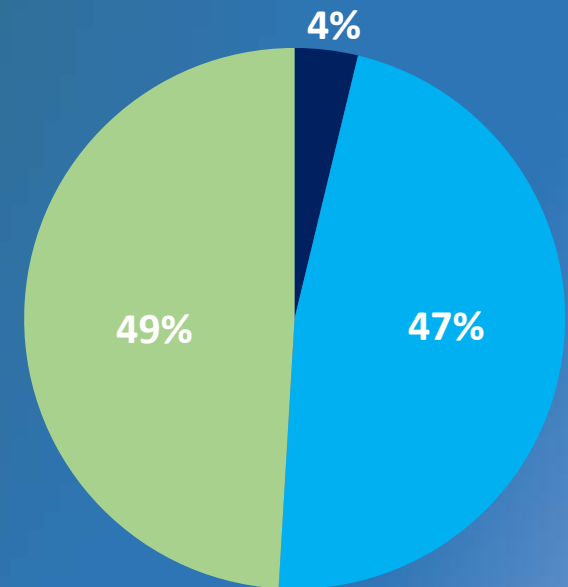
Eastern Coachella Valley



Second Year of Implementation

Segundo Año De Implementación

South Los Angeles



Completed *Completado* Ongoing *En curso* Not Started *No iniciado*

**CERP
Implementation
Highlights
Fiscal Year (FY)
2022-2023:
2018-Designated
Communities**

***Aspectos
Destacados de la
Implementación
del CERP del
Año Fiscal (FY)
2022-2023:
Comunidades
Designadas en
2018***



East Los Angeles, Boyle Heights, West Commerce

Truck Idling Inspections by CARB and South Coast AQMD

- 96 inspections conducted
- 3 violations issued

Residential Air Filtration Program

- Issued Request for Proposals
- 14 vendor applications received
- 20 types of air filtration units offered

Inspecciones de camiones en ralentí realizadas por CARB y South Coast AQMD

- *96 inspecciones realizadas*
- *3 infracciones emitidas*

Programa de Filtración de Aire Residencial

- *Solicitud de Propuestas emitidas*
- *14 solicitudes de vendedores recibidas*
- *Se ofrecieron 20 tipos de unidades de filtración de aire*

**CERP
Implementation
Highlights
FY 2022-2023:
2018-Designated
Communities
(continued)**

***Aspectos
Destacados de la
Implementación
del CERP
del FY 2022-2023:
Comunidades
Designadas en
2018 (continuado)***



San Bernardino, Muscoy

- CARB completed the Automated License Plate Reader Pilot Study and used the data to conduct targeted outreach to heavy-duty truck owners and operators on available incentive programs
- “No-Idling” truck sign installation began
- *CARB completó el Estudio Piloto del Lector Automatizado de Matrículas y utilizó los datos para realizar actividades de divulgación dirigidas a propietarios y operadores de camiones pesados sobre los programas de incentivos disponibles*
- *Se comenzó la instalación de letreros para camiones de “Prohibido el Ralentí”*

**CERP
Implementation
Highlights
FY 2022-2023:
2018-Designated
Communities
(continued)**

***Aspectos
Destacados de la
Implementación
del CERP
del FY 2022-2023:
Comunidades
Designadas en
2018 (continuado)***



Wilmington, Carson, West Long Beach

- Completed rule development for Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers
- Los Angeles County presented information on available funding via the Community Improvement Fund
- *Se completó el desarrollo de reglas para la Regla 1148.2 – Requisitos de Notificación e Informes para Pozos de Petróleo y Gas y Proveedores de Productos Químicos*
- *El Condado de Los Ángeles presentó información sobre fondos disponibles a través del Fondo de Mejoramiento Comunitario*

**CERP
Implementation
Highlights
FY 2022-2023:
2019-Designated
Communities**

***Aspectos
Destacados de la
Implementación
del CERP
del FY 2022-2023:
Comunidades
Designadas en
2019***



Southeast Los Angeles

- Initiated Green Space objectives, including soliciting CSC feedback using multiple polls and workshops and developing the Green Space Project Plan
- Conducted the “South Coast AQMD Metals Rules Workshop”
- *Se iniciaron los objetivos de los Espacios Verdes, incluyendo la solicitud de comentarios del CSC mediante múltiples encuestas y talleres y el desarrollo del Plan del Proyecto de Espacios Verdes*
- *Se realizó el “Taller Sobre Reglas de Metales de South Coast AQMD”*

**CERP
Implementation
Highlights
FY 2022-2023:
2019-Designated
Communities
(continued)**

***Aspectos
Destacados de la
Implementación
del CERP
del FY 2022-2023:
Comunidades
Designadas en
2019 (continuado)***



Eastern Coachella Valley

- Continued Paving Project objective
 - Resubmitted Project Plan to CARB
 - Paving Project Program Announcement was approved by the Stationary Source Committee
- Focused enforcement of Rule 444 - Open Burning
 - Responded to six complaints, conducted 72 inspections, and issued one notice of violation
- *Se continuó el objetivo del Proyecto de Pavimentación*
 - *Plan de Proyecto reenviado a CARB*
 - *Anuncio del Programa del Proyecto de Pavimentación fue Aprobado por el Comité de Fuentes Estacionarias*
- *Aplicación enfocada de la Regla 444 - Quema al Aire Libre*
 - *Se respondió a seis quejas, realizó 72 inspecciones, y emitió un aviso de infracción*

**CERP
Implementation
Highlights
FY 2022-2023:
2020-Designated
Community**

***Aspectos
Destacados de la
Implementación
del CERP
del FY 2022-2023:
Comunidad
Designada en
2020***



South Los Angeles

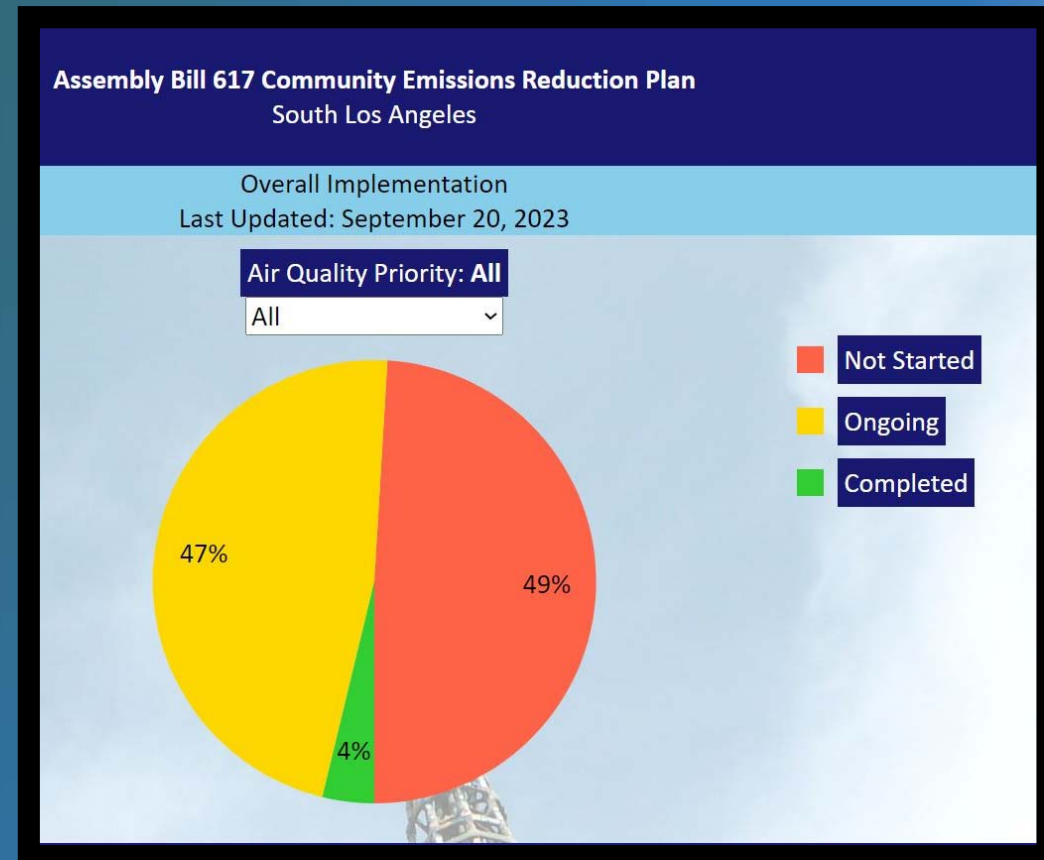
- Mobile air monitoring was initiated near and around facilities of concern to identify and characterize potential emissions of metal toxic air contaminants
- South Coast AQMD and Redeemer Community Partnership launched the Community Oil Wells Pilot Project to monitor Volatile Organic Compound (VOC) emissions from oil wells
- *El monitoreo móvil del aire se inició cerca y alrededor de las instalaciones de interés para identificar y caracterizar posibles emisiones de contaminantes metálicos tóxicos del aire*
- *South Coast AQMD y Redeemer Community Partnership lanzaron el Proyecto Piloto de Pozos Petroleros Comunitarios para monitorear las emisiones de Compuestos Orgánicos Volátiles (COV) de los pozos petroleros*

Coming Soon – AB 617 Dashboard

Próximamente – Tablero de AB 617

- AB 617 Dashboard in development
 - Interactive online tool to display the status of CERP implementation by community
- For each CERP objective, includes detailed information on progress towards completion
- Expected release: Early 2024

- *Tablero de AB 617 en desarrollo*
 - *Herramienta interactiva en línea para mostrar el estado de la implementación del CERP por comunidad*
- *Para cada objetivo del CERP, incluye información detallada de su progreso hacia su finalización*
- *Lanzamiento previsto: Principios del 2024*



**Percentage of
Five-Year
Milestone
Emission
Reductions
Targets Achieved**

***Porcentaje de
Metas
Quinquenales de
Reducción de
Emisiones
Alcanzados***

Community (Milestone Year) <i>Comunidad (Año Hito)</i>	Percentage of Target Achieved <i>Porcentaje de Meta Alcanzado</i>	
	Nitrogen Oxides (NOx) Reductions <i>Reducciones de Óxidos de Nitrógeno (NOx, por sus siglas en inglés)</i>	Diesel Particulate Matter (DPM) Reductions <i>Reducciones de Material Particulado de Diésel (DPM, por sus siglas en inglés)</i>
ELABHWC (2024)	117%	95%
SBM (2024)	158%	178%
WCWLB (2024)	142%	170%
ECV (2025)	428%	1011%
SELA (2025)	124%	88%
SLA (2026)	75%	100%

Key Comments

Comentarios Clave

Comment <i>Comentario</i>	Response <i>Respuesta</i>
<p>Health effects section should be added to the Annual Progress Report Overview Report</p> <p><i>La sección sobre los efectos en la salud debe agregarse a la Descripción General del Informe de Progreso Anual</i></p>	<ul style="list-style-type: none"> • South Coast AQMD continues discussions with CARB on capturing quantitative health impacts of air pollution • CERP emission reductions will have positive health impacts, but are difficult to quantify • <i>South Coast AQMD continúa las conversaciones con CARB sobre la captura de los impactos cuantitativos de la contaminación del aire en la salud</i> • <i>Las reducciones de emisiones del CERP tendrán impactos positivos a la salud, pero son difíciles de cuantificar</i>

Key Comments (continued)

Comentarios Clave (continuado)

Comment <i>Comentario</i>	Response <i>Respuesta</i>
<p>Allow the Community Steering Committees (CSC) to set the agenda for CSC Meetings <i>Permitir que los Comités Directivos Comunitarios (CSC) establezcan la agenda para las Reuniones del CSC</i></p>	<ul style="list-style-type: none"> • Staff will work more closely with CSC members to gather additional feedback and direction for future CSC Meetings and workshops • <i>El personal trabajará en colaboración con los miembros del CSC para recopilar comentarios e indicaciones adicionales para futuras reuniones y talleres del CSC</i>
<p>Notifications via text messages for refineries should be sent out to community members <i>Las notificaciones a través de mensajes de texto para las refinerías deben enviarse a los miembros de la comunidad</i></p>	<ul style="list-style-type: none"> • Recommendation may be incorporated into Proposed Amended Rules 1118¹ and 1180² and Proposed Rule 1180.1³ • <i>La recomendación puede incorporarse a las Reglas Enmendada Propuesta 1118¹ y 1180² y a la Regla Propuesta 1180.1³</i>

¹ Rule 1118 – Control of Emissions from Refinery Flares / *Regla 1118 – Control de Emisiones de Antorchas de Refinería*

² Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities / *Regla 1180 – Monitoreo del aire comunitario y de cercas para refinerías de petróleo e instalaciones relacionadas*

³ Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries / *Regla 1180.1 – Monitoreo del aire comunitario y de cercas para otras refinerías*

Next Steps for Annual Progress Report

Próximos Pasos para el Informe de Progreso Anual

**Annual Progress Report Package
submittal to CARB**
December 2023

*Presentación del Paquete del
Informe de Progreso Anual a
CARB*
Diciembre del 2023

**CARB staff presents
Annual Progress Report Package
to CARB Board**
Summer 2024

*El personal de CARB presenta el
Paquete del Informe de
Progreso Anual
a la Junta de CARB*
Verano del 2024

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 16

REPORT : Status Report on Major Ongoing and Upcoming Projects for Information Management

SYNOPSIS : Information Management is responsible for data systems management services in support of all South Coast AQMD operations. This action is to provide the monthly status report on major automation contracts and planned projects.

COMMITTEE: Administrative, November 9, 2023, Reviewed

RECOMMENDED ACTION :
Receive and file.

Wayne Natri
Executive Officer

RMM:XC:DD:HL:dc

Background

Information Management (IM) provides a wide range of information systems and services in support of all South Coast AQMD operations. IM's primary goal is to provide automated tools and systems to implement rules and regulations, and to improve internal efficiencies. The annual Budget and Board-approved amendments to the Budget specify projects planned during the fiscal year to develop, acquire, enhance, or maintain mission-critical information systems.

Summary of Report

The attached report identifies the major projects/contracts or purchases that are ongoing or expected to be initiated within the next six months. Information provided for each project includes a brief project description and the schedule associated with known major milestones (issue RFP/RFQ, execute contract, etc.).

Attachment

Information Management Status Report on Major Ongoing and Upcoming Projects During the Next Six Months

ATTACHMENT
 December 1, 2023 Board Meeting
 Status Report on Ongoing and Upcoming Projects for
 Information Management

AQ-SPEC Cloud Platform Phase 2	
Brief description	Integrate separate data systems into the AQ-SPEC cloud-based platform to manage data and build interactive data visualizations and data dashboards for web-based viewing
Estimated project cost	\$313,350
Overall project status	In Progress
Est. date of completion	4/25/24
Percentage complete	39%
LAST 30 days	<ul style="list-style-type: none"> • System development in progress
NEXT 30 days	<ul style="list-style-type: none"> • System development in progress

PeopleSoft Electronic Requisition	
Brief description :	This will allow submittal of requisitions online, tracking multiple levels of approval, electronic archival, pre-encumbrance of budget, and streamlined workflow
Estimated project cost	\$75,800
Overall project status	In Progress
Est. date of completion	1/15/24
Percentage complete	90%
LAST 30 days	<ul style="list-style-type: none"> • Deployed to Production for Administrative and Human Resources
NEXT 30 days	<ul style="list-style-type: none"> • Training and Integrated User Testing for other divisions

Warehouse Indirect Source Rule Online Reporting Portal Phase 4	
Brief description:	Development of online reporting portal for Rule 2305 -Warehouse Indirect Source
Estimated project cost	\$250,000
Overall project status	In Progress
Est. date of completion	12/29/23
Percentage complete	25%
LAST 30 days	<ul style="list-style-type: none"> • Phase 4 System Development in Progress
NEXT 30 days	<ul style="list-style-type: none"> • Phase 4 System Development in Progress

Online Application Filing	
Brief description	Enhanced Web application to automate filing of permit applications, Rule 222 equipment and registration for IC engines; implement electronic permit folder and workflow for staff
Estimated project cost	\$525,000
Overall project status	In Progress
Est. date of completion	12/01/23
Percentage complete	90%
LAST 30 days	<ul style="list-style-type: none"> User Acceptance Testing of Phase 1 of the project (first ten 400-E-XX forms). User Acceptance Testing of next set of Rule 222 forms .
NEXT 30 days	<ul style="list-style-type: none"> User Acceptance Testing of Phase 1 of the project (first ten 400-E-XX forms User Acceptance Testing of next set of Rule 222 forms

Agenda Tracking System	
Brief description	Develop new Agenda Tracking System for submittal, review and approval of Governing Board meeting agenda items
Estimated project cost	\$250,000
Overall project status	In Progress
Est. date of completion	12/28/23
Percentage complete	66%
LAST 30 days	<ul style="list-style-type: none"> System Development in progress
NEXT 30 days	<ul style="list-style-type: none"> System Development in progress

Source Test Tracking System (STTS)	
Brief description	Online STTS will keep track of timelines and quantify the number of test protocols and reports received. System will provide an external online portal to submit source testing protocols and reports, track the review process, and provide integration to all other business units. It will also provide an external dashboard to review the status of a submittal
Estimated project cost	\$250,000
Overall project status	In Progress
Est. date of completion	12/01/23
Percentage complete	95%
LAST 30 days	<ul style="list-style-type: none"> Complete d initial Source Test Submittals with regulated community volunteers
NEXT 30 days	<ul style="list-style-type: none"> Working on going live

Compliance System	
Brief description	Develop new Compliance System to help streamline the compliance business process. The new system will provide full integration of incident management, inspection process, field operations and operations dashboard.
Estimated project cost	\$450,000
Overall project status	In Progress
Est. date of completion	8/21/24
Percentage complete	14%
LAST 30 days	<ul style="list-style-type: none"> • Planning phase completed
NEXT 30 days	<ul style="list-style-type: none"> • System development in progress

Website Upgrade	
Brief description	Upgrade the Website Content Management System to latest version
Estimated project cost	\$100,000
Overall project status	In Progress
Est. date of completion	1/12/24
Percentage complete	85%
LAST 30 days	<ul style="list-style-type: none"> • Integration testing of enhancements
NEXT 30 days	<ul style="list-style-type: none"> • Streamline publishing process

Prequalify Vendor List for PCs, Network Hardware, etc.	
Brief description	Establish list of prequalified vendors to provide computer, network, and printer hardware and software, and to purchase desktop computer hardware upgrades
Estimated project cost	\$300,000
Overall project status	In Progress
Est. date of completion	2/2/2024
Percentage complete	20%
LAST 30 days	<ul style="list-style-type: none"> • Developed RFQQ • Released RFQQ on November 3, 2023
NEXT 30 days	<ul style="list-style-type: none"> • Approve Vendors List February 2, 2024

Renewal of HP Server Maintenance & Support	
Brief description	Purchase of maintenance and support services for servers and storage device
Estimated project cost	\$175,000
Overall project status	In Progress
Est. date of completion	4/30/2024
Percentage complete	0%
LAST 30 days	
NEXT 30 days	<ul style="list-style-type: none"> Request Board approval for HP server maintenance and support April 5, 2024 Execute purchases April 30, 2024

Renewal of OnBase Software Support	
Brief description	Authorize the sole source purchase of OnBase software subscription and support for one year
Estimated project cost	\$175,000
Overall project status	In Progress
Est. date of completion	7/30/2024
Percentage complete	0%
LAST 30 days	
NEXT 30 days	<ul style="list-style-type: none"> Request Board Approval June 7, 2024 Execute purchase July 30, 2024

Projects that have been completed within the last 12 months are shown below

COMPLETED PROJECTS	
PROJECT	DATE COMPLETED
PeopleSoft HCM (Human Capital Management) upgrade	October 24, 2023
Carl Moyer Program GMS	October 4, 2023
Legal Office System - Phase 2	August 31, 2023
Oracle PeopleSoft Software Support	August 31, 2023
PeopleSoft E-Requisition deployment for IM division	August 22, 2023
Renewal of OnBase Software Support	July 31, 2023
Air Quality Advisory Enhancement	June 30, 2023
WAIRE Program Online Portal - Initial Site Information Report Enhancement	May 26, 2023
Renewal of HP Server Maintenance & Support	April 30, 2023
Purchase of Server and Storage Upgrades	April 30, 2023
Rule 1180 Monitoring Site and Notification Updates	March 30, 2023
WAIRE Program Online Portal - Owner AWR Enhancement	February 22, 2023
Phone System Upgrade	January 28, 2023

BOARD MEETING DATE: November 3, 2023

AGENDA NO. 17

REPORT: Administrative Committee

SYNOPSIS: The Administrative Committee held a hybrid meeting on Thursday, November 9, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Vanessa Delgado, Chair
Administrative Committee

SN:cb

Committee Members

Present: Chair Vanessa Delgado, Committee Chair
Vice Chair Michael Cacciotti
Board Member Gideon Kracov
Supervisor V. Manuel Perez

Call to Order

Chair Delgado called the meeting to order at 10:03 a.m.

For additional details of the Administrative Committee Meeting, please refer to the [Webcast](#).

DISCUSSION ITEMS:

1. **Board Members' Concerns:** There were no concerns to report.
2. **Chair's Report of Approved Travel:** There was travel reported for Board Member Kracov to Sacramento as the CARB representative.
3. **Report of Approved Out-of-Country Travel:** There was out-of-country travel reported for Dr. Wilton Mui to Ghana. He was invited to participate in the West Africa Air Quality Management Certificate Program in January 2024 and all travel will be paid by the US Department of State. For additional information please refer to the [Webcast at 5:42](#).

4. **Review November 3, 2023 Governing Board Agenda :** Wayne Nastri, Executive Officer, noted for Board Member awareness that there will be a Public Hearing for Proposed Rule 1405 which relates to the control of ethylene oxide emissions. There will also be a Set Hearing for Proposed Amended Rule 1180, which relates to the fenceline community air monitoring. As well as a presentation on the Annual Progress Report for AB 617 communities emission reduction plans. For additional information please refer to the [Webcast at 6:31.](#)

Board Member Kracov asked staff if Proposed Rule 1405 related to ethylene oxide was going back to Stationary Source Committee this month. Mr. Nastri replied that it was not returning to the Stationary Source Committee.

5. **Approval of Compensation for Board Member Assistant(s)/Consultant(s):** There were three proposals for modifying compensation for Board Member Assistants/Consultants. This item was moved to Action Items as approval from the Administrative Committee is needed. For additional information please refer to the [Webcast at 7:42.](#)
6. **Update on South Coast AQMD Diversity , Equity, Inclusion Efforts:** Dr. Cessa Heard-Johnson, Diversity, Equity & Inclusion (DEI) Officer/DEI with Community Air Programs, provided an update on agency efforts, seasonal events, cultural displays, Statewide DEI Working Group, and discussed Catalina Devandas Aguilar for Fabulous Female Friday. For additional information please refer to the [Webcast at 8:20.](#)
7. **Review Recommended Appointments of New Members to South Coast AQMD's Young Leader's Advisory Council (YLAC) :** Dr. Heard-Johnson reported that this item was submitted to the Administrative Committee and staff is leaving two spots available for Orange County representatives. Chair Delgado commented that she will pass the information on to contacts in Orange County. For additional information please refer to the [Webcast at 15:45.](#)
8. **South Coast AQMD's FY 2023-24 First Quarter Ended September 30, 2023 Budget vs. Actual (Unaudited) :** Sujata Jain, Chief Financial Officer/Finance, presented on the first quarter budget versus actual results that ended on September 30, 2023. She provided a summary with revenue and expenditures, comparison with last year's first quarter, our use of fund balance and an updated general fund five-year projection. For additional information please refer to the [Webcast at 16:44.](#)

Board Member Kracov inquired about the vacancy rate affecting the fund balance. Ms. Jain responded that excess funds are tracked in Full Time Employees and dollars and stated that if there is a vacancy rate higher than the budgeted amount , then the salary savings go into the reserves.

Harvey Eder, Public Solar Power Coalition, provided public comment on finances and a recession.

9. **Status Report on Major Ongoing and Upcoming Projects for Information Management:** Ron Moskowitz, Chief Information Officer, Information Management, reported on the status of various projects and projects that have been completed. For additional information please refer to the [Webcast at 26:11](#).
10. **Review Recommended Appointments of New Members to South Coast AQMD's Environmental Justice Advisory Group :** Derrick Alatorre, Deputy Executive Officer, Legislative, Public Affairs & Media, reported that this item is to appoint five new members to the Environmental Justice Advisory Group (EJAG). Mr. Alatorre pointed out that earlier this year members of the environmental justice community partnership were asked if they wanted to join EJAG, and the five members recommended for appointment said yes. For additional information please refer to the [Webcast at 28:10](#).

It was identified for the record that Board Member Kracov does not have a financial interest, but out of an abundance of caution will abstain from participation due to a potential interest with Unite Here 11, which is involved in this item.

Mr. Eder provided public comment on an attempt to join a meeting.

ACTION ITEM S:

5. **Approval of Compensation for Board Member Assistant(s)/Consultant(s):** There was one new proposal for Board Member Padilla-Campos' Board Consultant, Fred Minassian, and one proposal to modify the compensation for Board Member Padilla Campos' Board Consultant, Amy Wong. The contract and modification will be effective from November 6, 2023 to June 30, 2024. For additional information please refer to the [Webcast at 7:42](#).

Moved by Cacciotti; seconded by Kracov, unanimously approved.

Ayes: Cacciotti, Delgado, Kracov, Perez

Noes: None

11. **Appoint Medical Member to Hearing Board:** Faye Thomas, Clerk of the Board, reported that this item is to fill the vacancy of medical member Dr. Alan Bernstein who passed away a few months ago. The item is to fill his vacancy for the term that ends June 30, 2025. The Advisory Committee appointed by five members of the Governing Board reviewed the resumes of two candidates and recommended both candidates be interviewed by the Administrative Committee.

The Committee interviewed the two medical member candidates in the following order: 1. Dr. Jerry Abraham; and 2. Dr. Sharon Williams. For additional information please refer to the [Webcast at 30:27](#).

The Committee considered their respective professional backgrounds and experience.

After interviewing the candidates and discussion amongst Committee members, Vice Chair Cacciotti moved to appoint Dr. Abraham as the medical member of the Hearing Board; seconded by Delgado, unanimously approved.

Vice Chair Cacciotti recommended that the full Board appoint Dr. Williams as the alternate member of the Hearing Board.

Mr. Eder provided public comment on deaths related to air pollution.

Moved by Cacciotti; seconded by Delgado, unanimously approved.

Ayes: Cacciotti, Delgado, Kracov Perez
Noes: None

12. **Appropriate Funds, Issue Solicitation and Purchase Orders to Meet Operational Needs for Rule 1180 Community Air Monitoring Program :** Dr. Jason Low, Deputy Executive Officer, Monitoring & Analysis, reported that this item is to support the community air monitoring network implemented under Rule 1180. This item is to appropriate up to \$610,000 to the Monitoring & Analysis budget, issue solicitations, purchase orders and to purchase air monitoring equipment and for operational needs of the program. For additional information please refer to the [Webcast at 1:10:30](#).

Moved by Kracov; seconded by Cacciotti, unanimously approved.

Ayes: Cacciotti, Delgado, Kracov, Perez
Noes: None

13. **Transfer and Appropriate Funds, Issue Solicitations and Purchase Orders for MATES VI :** Dr. Low reported that this item is to transfer approximately \$5,000,000 from the Clean Fuels Fund to the General Fund, appropriate those funds to Monitoring & Analysis and Planning, Rule Development & Area Sources budgets to do solicitations, purchase orders for air monitoring equipment and for a specialized contract for brake and tire wear and equipment for MATES VI . For additional information please refer to the [Webcast at 1:11:23](#).

Moved by Kracov; seconded by Cacciotti, unanimously approved.

Ayes: Cacciotti, Delgado, Kracov, Perez
Noes: None

14. **Transfer and Appropriate Funds and Execute Sole Source Contract to Upgrade the Fire Life Safety System at Headquarters Building :** John Olvera, Deputy Executive Officer, Administrative & Human Resources, reported that this item is to transfer \$720,000 from the infrastructure improvement fund to pay for a sole source contract to upgrade the building's fire safety system. For additional information please refer to the [Webcast at 1:13:04](#).

Moved by Kracov; seconded by Cacciotti, unanimously approved.

Ayes: Cacciotti, Delgado, Kracov, Perez
Noes: None

WRITTEN REPORT :

There were no reports.

OTHER MATTERS:

15. **Other Business:** There was no other business to report.
16. **Public Comment:** Mr. Eder provided public comment regarding a 2022 CEQA document.
17. **Next Meeting Date:** The next regular Administrative Committee meeting is scheduled for Friday, December 8, 2023 at 10:00 a.m.

Adjournment

The meeting was adjourned at 11:16 a.m.

[↑ Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 18

REPORT: Legislative Committee

SYNOPSIS: The Legislative Committee held a hybrid meeting on Thursday, November 9, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:

Receive and file this report and approve agenda items as specified in this letter.

Michael A. Cacciotti, Chair
Legislative Committee

DJA:LTO:PFC:DPG

Committee Members

Present: Councilmember Michael A. Cacciotti, Chair
Supervisor Curt Hagman
Supervisor V. Manuel Perez
Councilmember José Luis Solache

Absent: Mayor Patricia Lock Dawson
Councilmember Nithya Raman

Call to Order

Chair Michael Cacciotti called the meeting to order at 9:00 a.m.

Discussion Item No. 2 was called out of order and heard as the first item.

Action/Discussion Item No. 1 was called out of order and heard as the second item.

ACTION/DISCUSSION ITEM:

1. Recommend 2024 State and Federal Legislative Guiding Principles

Philip Crabbe, Senior Public Affairs Manager/Legislative, Public Affairs & Media, presented the proposed State Legislative Guiding Principles for 2024. The state principles provide a broad set of policy and funding priorities that will help guide staff and allow them to adjust in a constantly changing political environment in Sacramento, in line with Board guidance. The principles focus on protecting public

health, facilitating attainment of clean air standards, and addressing South Coast AQMD's policy priorities including increasing clean air funding, protecting air district authority, promoting clean technology, and supporting environmental justice.

Denise Peralta Gailey, Public Affairs Manager/Legislative, Public Affairs & Media, presented the proposed Federal Legislative Guiding Principles for 2024. The federal principles guide strategic representation of South Coast AQMD before Congress, the Administration, and agencies. The principles are drafted to cover a wide range of issues from regulations to funding of zero-emission technologies and infrastructure to environmental justice and other South Coast AQMD's policy priorities. For additional information, please refer to the [Webcast](#) at 25:47.

There was no public comment.

Staff Recommended Approval of State and Federal Legislative Guiding Principles

Moved by: Hagman; Seconded by: Cacciotti, unanimously approved.

Ayes: Cacciotti, Hagman, Perez

Absent: Dawson, Raman, Solache

DISCUSSION ITEMS:

2. Update and Discussion on Federal Legislative Issues

South Coast AQMD's federal legislative consultants (Kadesh & Associates, Carmen Group, and Cassidy & Associates) provided written reports on key federal issues.

Mark Kadesh, Kadesh & Associates, reported on the status of appropriations to fund the federal government before the continuing resolution expires on November 17.

Gary Hoitsma, Carmen Group, provided an update on the U.S. EPA Clean Ports program. The program's Notice of Funding Opportunity is expected in Winter 2024. The program allocates \$2.25 billion, including an additional \$750 million for nonattainment areas, to support the transition to zero-emissions at ports.

Jed Dearborn, Cassidy & Associates, provided an update on the BioWatch program which provides funding to South Coast AQMD to conduct air monitoring for biological threats. South Coast AQMD is working to reauthorize BioWatch by working with the Senate and House Homeland Security Committees and the House Appropriations Committee.

Supervisor Perez inquired about engaging the Southern California delegation on South Coast AQMD's priorities. Mr. Kadesh and staff responded that advocacy efforts are bipartisan. For additional information, please refer to the [Webcast](#) at 7:30.

There was no public comment.

3. Update and Discussion on State Legislative Issues

South Coast AQMD's state legislative consultants (Joe A. Gonsalves & Son, Resolute, and California Advisors, LLC) provided written reports on key issues in Sacramento.

Paul Gonsalves, Joe A. Gonsalves & Son, reported that Caltrans approved \$192 million in California Climate Investment funds for 136 public transportation projects that will cut pollution and create more affordable transportation options, especially for disadvantaged communities.

David Quintana, Resolute, informed the Committee that state income will likely be \$5-\$20 billion lower than the earlier \$230 billion estimate, due to patterns in the labor market that will decrease tax revenues.

Ross Buckley, California Advisors, LLC, provided a summary of the Governor's actions on bills following the end of the 2023 legislative session. The Governor signed 890 bills into law and vetoed 156 bills, many due to budget concerns.

For additional information, please refer to the [Webcast](#) at 29:50.

Harvey Eder, Public Solar Power Coalition, provided public comment regarding accessing the meeting agenda.

OTHER MATTERS:

4. Other Business

There was no other business to report.

5. Public Comment Period

There was no public comment to report.

6. Next Meeting Date

The next regular Legislative Committee meeting is scheduled for Friday, December 8, 2023, at 9:00 a.m.

Adjournment

The meeting adjourned at 9:36 a.m.

Attachments

1. Attendance Record
2. State and Federal Legislative Guiding Principles
3. Update on Federal Legislative Issues – Written Reports
4. Update on State Legislative Issues – Written Reports

ATTACHMENT 1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT LEGISLATIVE COMMITTEE MEETING ATTENDANCE RECORD – November 9, 2023

Councilmember Michael Cacciotti.....	South Coast AQMD Board Member
Supervisor Curt Hagman.....	South Coast AQMD Board Member
Supervisor V. Manuel Perez.....	South Coast AQMD Board Member
Councilmember José Luis Solache.....	South Coast AQMD Board Member
Ken Chawkins.....	Board Consultant (Cacciotti)
Guillermo Gonzalez.....	Board Consultant (Perez)
Debra Mendelsohn.....	Board Consultant (McCallon)
Fred Minassian.....	Board Consultant (Padilla-Campos)
Uduak-Joe Ntuk.....	Board Consultant (Solache)
Marisela Santana.....	Board Consultant (Solache)
Mark Taylor.....	Board Consultant (Rodriguez)
Ben Wong.....	Board Consultant (Cacciotti)
Ross Buckley.....	California Advisors, LLC
Jed Dearborn.....	Cassidy & Associates
Paul Gonsalves.....	Joe A. Gonsalves & Son
Gary Hoitsma.....	Carmen Group, Inc.
Mark Kadesh.....	Kadesh & Associates
David Quintana.....	Resolute
Mark Abramowitz.....	Public Member
Harvey Eder.....	Public Solar Power Coalition
Sam Emmersen.....	Public Member
Derrick Alatorre.....	South Coast AQMD Staff
Debra Ashby.....	South Coast AQMD Staff
Barbara Baird.....	South Coast AQMD Staff
Cindy Bustillos.....	South Coast AQMD Staff
Lara Brown.....	South Coast AQMD Staff
Maria Corralejo.....	South Coast AQMD Staff
Philip Crabbe.....	South Coast AQMD Staff
Edward Demovsky.....	South Coast AQMD Staff
Javier Enriquez.....	South Coast AQMD Staff
Joshua Ewell.....	South Coast AQMD Staff
Denise Gailey.....	South Coast AQMD Staff
Scott Gallegos.....	South Coast AQMD Staff
Bayron Gilchrist.....	South Coast AQMD Staff
De Groeneveld.....	South Coast AQMD Staff
Sheri Hanizavareh.....	South Coast AQMD Staff
Anissa (Cessa) Heard-Johnson.....	South Coast AQMD Staff
Maria Corralejo.....	South Coast AQMD Staff
Kathryn Higgins.....	South Coast AQMD Staff
Sujata Jain.....	South Coast AQMD Staff
Aaron Katzenstein.....	South Coast AQMD Staff

Angela Kim..... South Coast AQMD Staff
Howard Lee..... South Coast AQMD Staff
Brisa Lopez..... South Coast AQMD Staff
Cristina Lopez..... South Coast AQMD Staff
Karin Manwaring..... South Coast AQMD Staff
Connie Mejia..... South Coast AQMD Staff
Ron Moskowitz..... South Coast AQMD Staff
Susan Nakamura..... South Coast AQMD Staff
Wayne Nastri..... South Coast AQMD Staff
Robert Paud..... South Coast AQMD Staff
Sarah Rees..... South Coast AQMD Staff
Mary Reichert..... South Coast AQMD Staff
Aisha Reyes..... South Coast AQMD Staff
MaFe Ruivivar..... South Coast AQMD Staff
Lisa Tanaka O'Malley..... South Coast AQMD Staff
Victor Yip..... South Coast AQMD Staff
Mei Wang..... South Coast AQMD Staff
Jillian Wong..... South Coast AQMD Staff
Paul Wright..... South Coast AQMD Staff

ATTACHMENT 2A



South Coast Air Quality Management District

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

South Coast AQMD's State Legislative Guiding Principles for 2024

The following guiding principles are identified to protect public health, facilitate attainment of state and federal clean air standards within the South Coast region by statutory deadlines and address other South Coast AQMD needs and policy priorities, while working with and serving as a resource to state legislators and the Governor; state and local agencies; and business, environmental, health, community, and other stakeholders.

Air Quality Funding

Protect and increase existing and identify new funding sources that provide a sustainable revenue stream for South Coast AQMD programs and priorities that support attainment of state and federal ambient air quality standards and reduce toxic air contaminants to protect public health, especially to achieve equitable clean air for disproportionately impacted communities.

South Coast AQMD Authority / Policy Implementation

Defend and ensure adequate South Coast AQMD authority to raise revenue and impose fees as needed and implement the Board's clean air policies and programs, including those required by state and federal laws, to support Air Quality Management Plans (AQMPs) and State Implementation Plans.

State Support

Work to ensure that the State does not impose unfunded mandates on South Coast AQMD and does its fair share to reduce air pollution within the South Coast region. State actions needed in support of air quality include, but are not limited to, funding, legislation, regulatory actions, and support by the Administration. In particular, South Coast AQMD requires State action to: 1) Facilitate implementation of applicable South Coast AQMD AQMPs to attain federal ozone and particulate matter air quality standards in accordance with deadlines; 2) Ensure there are sufficient resources to fully implement air district responsibilities and programs created through AB 617 [Health & Safety Code Sections 39607.1; 40920.6; 40920.8; 42705.5; 44391.2]; and 3) Maximize funding opportunities from the federal government to the State through public laws, such as the Bipartisan Infrastructure Law and Inflation Reduction Act.

Surface Transportation & Goods Movement

Support and expand policy and funding that promotes air quality priorities related to the implementation of state and federal surface transportation, infrastructure and goods movement policies and programs, especially related to the development and deployment of the cleanest technologies for medium- and heavy-duty trucks, locomotives, oceangoing vessels, aircraft, and off-road equipment with a priority for zero-emission where commercially viable at scale.

South Coast AQMD's State Legislative Guiding Principles for 2024

Development and Deployment of Clean Technology

Support and advocate for legislative and administrative policies, programs, and funding, that promote the development and deployment of the cleanest commercially available technologies with prioritization for zero-emission infrastructure, equipment, and vehicles to: 1) protect public health; 2) facilitate attainment of clean air standards; and/or 3) support a healthy economy and promote job retention/creation within the South Coast region.

Environmental Justice

Support and advocate for legislative and administrative policies and funding that: 1) promote and sustain environmental justice initiatives which reduce localized health risks resulting from criteria pollutant and toxic air contaminant emissions; 2) prioritize equitable access to zero-emission or the cleanest technologies available for over-burdened communities; 3) enhance community participation in decision-making; and 4) provide the resources necessary to fully implement local air districts' responsibilities and programs created through AB 617, including adding new communities to the program only if sufficient funding is provided.

Climate Change

Support efforts directing that the Greenhouse Gas Reduction Fund provide funding to maximize criteria pollutant and toxic emission reduction co-benefits that facilitate attainment of clean air standards and reduce public health impacts in the South Coast region, such as through the development and deployment of zero-emission or cleanest commercially available vehicles, equipment, and fueling/charging infrastructure, especially as it relates to mobile sources such as medium- and heavy-duty trucks, locomotives, oceangoing vessels, aircraft, and off-road equipment.

Clean Energy

Support legislative and administrative efforts to promote energy efficiency, demand reduction, and reliable, cost effective and the cleanest energy in the South Coast region, especially in disproportionately impacted environmental justice communities. Also, support production and development of renewable and alternative energy, energy storage, and microgrids, as well as charging and fueling infrastructure, to reduce emissions from transportation and other sources, such as back-up generators.

Business, Job Creation, Workforce Training & Economy

Support legislative policies and administrative actions that promote job retention and creation, workforce training for zero-emission technologies, as well as economic growth, while working toward attainment of clean air standards; and that support and assist the regulated community in complying with rules and regulations in the most efficient and cost-effective manner. Work to ensure job and economic benefits are equitably accessible for environmental justice communities.

Addressing Impacts of Natural and Manmade Events

Support and advocate for legislative and administrative policies, programs, and funding that reduce and/or mitigate air quality-related public health impacts within the South Coast region caused by wildfires, dust/sandstorms, odors, or other events.

Administrative Operations

Support and seek legislative and administrative policies, programs, funding and/or actions

South Coast AQMD's State Legislative Guiding Principles for 2024

that ensure that South Coast AQMD can meet its administrative and operational needs, including, but not limited to, those related to human resources, pensions, and COVID-19.

ATTACHMENT 2B



South Coast Air Quality Management District

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

South Coast AQMD's Federal Legislative Guiding Principles for 2023

The following guiding principles are identified to enable South Coast AQMD to seek rules, legislative policies, and funding from the federal government that will help facilitate attainment of National Ambient Air Quality Standards (NAAQS) and the protection of public health in the South Coast region, through practical and innovative strategies. As part of these efforts, it is critical that South Coast AQMD work with and serve as a resource to the federal Administration and agencies, Congress, business, environmental, health, and community groups, and other stakeholders.

Air Quality Funding (Authorization of Program/Policies and Appropriations of Funds)

Increase and protect existing and seek new funding sources that support South Coast AQMD programs and priorities to reach attainment of state and federal ambient air quality standards and reduce hazardous air pollutants to protect public health. Examples of programs are, but not limited to, Targeted Airshed Grants, Diesel Emissions Reduction Act, Clean Ports, Port Infrastructure Development Program, National Electric Vehicle Infrastructure, Charging and Fueling Infrastructure Grants for Corridors and Communities, Clean Heavy-Duty Trucks, Reduction of Emissions at Port, Section 103/105, and annual Appropriations.

South Coast AQMD Authority / Policy Implementation

Defend and ensure adequate South Coast AQMD authority for implementation of the Board's clean air policies and programs, including those required by the federal Clean Air Act and other federal and state laws to support Air Quality Management Plans (AQMP) and State Implementation Plans.

Federal Support -- Clean Air Act, NAAQS, and State Implementation Plan (SIP)

Work to ensure the federal government (Administration, Agencies and Congress) do their fair share to reduce air pollution with a focus on mobile sources, within the South Coast region through funding, regulations, and administration actions. In particular, South Coast AQMD requires federal action to: 1) Maximize funding opportunities under the Bipartisan Infrastructure Law, Inflation Reduction Act, and other public laws 2) Provide incentive funding, policies, and require regulatory actions sufficient to, in combination with state and local actions, attain NAAQS for ozone by 2023, 2031 and 2037 in the South Coast Air Basin, and if standards are not attained due to lack of federal actions, ensure that the Basin is not punished by sanctions, fees or any other penalty for failure to timely attain; 3) Provide support for and protect state and local regulatory authority for nonattainment areas to meet NAAQS for upcoming federal deadlines, and the South Coast AQMD to implement AQMPs and attain federal ozone and particulate matter standards; and, 4) Protect science-driven and health-based determinations of NAAQS, and efforts to streamline and provide flexible implementation of SIP requirements, as needed, to reach attainment.

Surface Transportation & Goods Movement

South Coast AQMD's Federal Legislative Guiding Principles for 2023

Pursue the adoption of legislation and/or policies which will reduce or eliminate air quality impacts from mobile sources with an emphasis on the goods movement sector (for both medium- and heavy-duty vehicles and trucks), as well as off-road vehicles (such as ocean-going vessels, locomotives, aircraft, agricultural vehicles, cargo handling equipment, freight handling equipment, and construction equipment).

Technology Advancement

Expand and secure funding, policies, and tax incentives for advanced clean technology research, development, demonstration, and deployment programs, including those related to:

- Zero and near-zero emission technologies for the cleanest vehicles (such as heavy- and medium-duty trucks, locomotives, marine vessels, aircraft, and off-road technologies) and the cleanest stationary sources (heaters, boilers, furnaces, engines, etc.), with prioritization of zero-emission technologies.
- Infrastructure to support zero-emission and near-zero emission technologies, prioritizing zero-emission technologies where available.
- Renewable energy and alternative energy, energy storage, microgrids and other programs, especially as related to electric and hydrogen infrastructure for transportation and emissions reductions from sources such as back-up generators.
- Technologies, systems and/or processes which reduce ambient concentrations of air pollutants and/or toxic air emissions.
- Establishing programs or policies that incentivize the federal government to purchase and use advanced clean technologies with prioritization for zero-emissions.
- Incentivizing individuals, businesses, states, and local governments to purchase and use advanced clean, zero and near-zero emission technologies.

Environmental Justice

Support legislation and regulatory action that promotes environmental justice initiatives to reduce localized health risks, develop clean air technologies that directly benefit disproportionately impacted communities, and enhance community participation in decision-making.

Reduction of Toxic Emissions

Pursue efforts through legislative and administrative programs, to reduce toxic emissions, and the public's exposure to toxic emissions, within the South Coast region.

Climate Change

Seek to influence climate change initiatives and facilitate their implementation at local levels, including funding, to promote co-benefits with pollutants needed to achieve NAAQS and to reduce air toxic emissions, consistent with the Board's policy.

Business, Jobs Creation & Economy

Support legislation, policies or administrative actions that support and assist the regulated community in complying with rules and regulations in the most efficient and cost-effective manner that protects and encourages job retention and creation, and promotes economic growth, while working toward attainment of clean air standards.

South Coast AQMD's Federal Legislative Guiding Principles for 2023

Addressing Impacts of Natural and Manmade Events

Support and advocate for legislative and administrative policies, programs, and funding that reduce and/or mitigate air quality-related public health impacts within the South Coast region caused by wildfires, dust/sandstorms, odors, or other events.

Administrative Operations

Support and seek legislative and administrative policies, programs, funding and/or actions that ensure that South Coast AQMD can meet its administrative and operational needs related to human resources, health and safety, COVID-19 or other.

ATTACHMENT 3A

KADESH & ASSOCIATES

South Coast AQMD Report for the November 2023
Legislative Meeting covering October 2023
Kadesh & Associates

Despite little legislative progress, this was a very consequential period in Washington. Senator Dianne Feinstein, who represented California in the Senate since 1992, passed away on September 29 at the age of 90. Her passing marks the end of an era in California, and her funeral service in San Francisco was attended by Vice President Harris, Senate Majority Leader Schumer, Speaker Emerita Pelosi, and many others. After a brief period of speculation, Governor Newsom appointed EMILY's List president Laphonza Butler to serve out the remainder of the Senate term.

Back in Washington, in a burst of unexpected eleventh-hour productivity, the House and Senate voted September 30 on a continuing resolution (CR) to extend FY23 funding levels through Nov. 17, provide \$16 billion in emergency disaster aid, and extend expiring authorities including the FAA.

However, this bipartisan vote on the CR led directly to the end of Kevin McCarthy's term as Speaker and ushered in a historic level of chaos in the chamber. At the beginning of the year, McCarthy had agreed to allow any member of the House to offer a resolution to remove him from office. Following the CR vote, Representative Matt Gaetz forced the vote on the "motion to vacate," and eight House Republicans joined all House Democrats in removing McCarthy.

The rudderless House was plunged into three weeks of chaos, with a series of Speaker candidates who could not secure the necessary 217 votes. Majority Leader Scalise gained a narrow majority vote of the GOP caucus but faced holdouts. Judiciary Chair Jordan was strongly supported by the right wing of the party but faced a rebellion of moderates. Majority Whip Emmer withdrew from the process just hours after winning a caucus vote.

With no Speaker, the House could not debate legislation, nor even refer bills to committees. Some members of Congress who wanted to get the House back on task suggested a bipartisan coalition could elect a Speaker, while others wanted the Speaker Pro Tempore Patrick McHenry (R-NC) to take on additional substantive powers.

Republicans finally agreed on a Speaker candidate the week of October 23: conference vice chair Mike Johnson (R-LA). The new Speaker was first elected to the House in 2017, and is relatively unknown in Washington beyond his role in supporting Trump's challenge to the 2020 election. In his first days in this new role, Speaker Johnson has outlined an active schedule for the House to vote on the remaining FY24 appropriations bills, a list that includes the Interior-EPA bill the week of October 30. He has also offered initial support for a CR that runs through either Jan 15 or April 15.

Meanwhile, the Senate has reached agreement to work through 40 amendments to an appropriations "minibus" comprising the MilCon-VA, Agriculture-FDA, and Transportation-

KADESH & ASSOCIATES

HUD bills; the final vote on that package is likely the week of October 30. In addition, the White House has requested a supplemental appropriation of \$106 billion for Ukraine, Israel, and border security, and \$56 billion for disaster relief and other domestic needs. Speaker Johnson seems likely to maintain House Republican support for a CR, but working with the Democratic Senate and Biden White House on a supplemental and on year-long appropriations are likely to be far more challenging.

Kadesh & Associates Activity Summary-

-Worked with South Coast AQMD and the congressional delegation on whole-of-government efforts to address air quality through BIL and IRA funding programs.

Contacts:

Contacts included staff and Members throughout the CA delegation, especially new members of the delegation, authors of priority legislation, Senate offices, and members of key committees. We have also been in touch with administration staff.

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ATTACHMENT 3B



Carmen Group
I N C O R P O R A T E D

To: South Coast AQMD Legislative Committee

From: Carmen Group

Date: October 26, 2023

Re: Federal Update -- Executive Branch

Congress Avoids Shutdown -- New House Speaker Elected: On September 30, then-House Speaker Kevin McCarthy orchestrated the passage of a continuing resolution (CR) to keep government funded through November 17. Three days later, eight members of his party, representing just 4 percent of the GOP caucus, forced a successful vote -- joined by all Democrats -- to “vacate the chair,” thus removing McCarthy as Speaker and setting up a wild scramble to find and elect a replacement. After three weeks of chaos that essentially shut down the House and exposed deep rifts in the GOP ranks, the Republicans unanimously rallied behind little-known Rep. Mike Johnson of Louisiana and elected him as the new Speaker of the House. Johnson immediately sent calming signals that he would work to avoid a future shutdown and would push for passage of a new CR into early next year to allow more time for the bicameral negotiation and passage of individual appropriations bills, thus avoiding the usual Christmas eve omnibus.

Environmental Protection Agency

EPA Proposes Approval of South Coast AQMD’s Warehouse Rule: In October, the Environmental Protection Agency (EPA) proposed the approval of South Coast AQMD’s Warehouse Indirect Source Rule, which is part of a larger strategy to reduce emissions from mobile sources (ships, trucks, trains) and to protect public health in the Southern California region. If finalized, the EPA rule will provide federal enforcement for efforts to control air pollution from large warehouse operations and the truck traffic they attract.

EPA Announces Funds Available for Clean School Bus Rebates: In late September, the EPA announced the availability of \$500 million in the latest competitive round of rebates for the purchase of cleaner school buses, including electric, propane, and compressed natural gas buses. The program will provide a combined funding amount to cover bus, workforce development, and infrastructure costs for awardees selecting electric buses. Applicants can request up to \$345,000 per bus. Selectees may also be eligible for Inflation Reduction Act tax credits worth up to \$40,000. EPA will prioritize applicants in low-income, rural and Tribal communities. Large school districts with areas of concentrated poverty will also be prioritized. Rebate applications will be accepted through January 28, 2024.

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Department of Transportation

FAA Initiates Rulemaking to Reduce Aviation Emissions: In October, the Federal Aviation Administration (FAA) decided to initiate a rulemaking aimed at controlling or eliminating aviation lead emissions from aircraft engines. In the interim, the FAA encourages the early adoption of alternate unleaded fuels. Meanwhile in October, the Senate confirmed the new FAA administrator, Michael Whitaker, to a full five-year term.

FRA Announces National Rail Research Center: In late September, the Federal Railroad Administration (FRA) announced the award of \$5 million to the University of Illinois Urbana-Champaign to establish the National University Rail Center of Excellence in consort with eight other US universities dedicated to advancing research that promotes the safety, efficiency and reliability of passenger and freight rail transportation. Research topics will expressly include “energy efficiency measures” among others.

Department of Energy

DOE Announces \$7 Billion for “Clean Hydrogen Hubs”: In October, the Department of Energy announced an enormous investment of \$7 billion from the Bipartisan Infrastructure Law to launch seven Regional Clean Hydrogen Hubs (H2Hubs) across the nation designed to accelerate the commercial-scale deployment of clean hydrogen for the purpose of reducing (primarily GHG) emissions. One of the seven selected projects is the California Clean Hydrogen Hub (Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES); California). It will focus on producing hydrogen exclusively from renewable sources and biomass, and provide a blueprint for decarbonizing public transportation, heavy duty trucking, and port operations. The Hubs initiative envisions that the federal investment will eventually be matched by recipients to leverage nearly \$50 billion in the overall national effort.

DOE Grid Investment Includes Wildfire Mitigation Project: In October, the Department of Energy announced a \$3.5 billion investment in the nation’s electric grid under the Grid Resilience and Innovation Partnerships (GRIP) Program. This amount represents the first round of project selections under the broader \$10.5 billion program. One of the selected projects here is the Wildfire Assessment and Resilience for Networks (WARN) project, covering California and 15 other states. It will enable deploying fire-resistant grid infrastructure, undergrounding lines, or upgrading overhead lines, to reduce the risk of catastrophic wildfires and to increase wildfire resilience.

Outreach: In October, Carmen Group coordinated -- and participated in meetings -- with staff and officials at the Federal Railroad Administration, the Maritime Administration and the Departments of Energy & Transportation Joint Office during the trip to Washington, DC by South Coast AQMD staff. We also coordinated with staff and officials at the Department of Energy’s Office of Energy Efficiency & Renewable Energy (EERE) in preparation for a future virtual meeting with South Coast AQMD staff, likely in November.

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ATTACHMENT 3C



To: South Coast Air Quality Management District
From: Cassidy & Associates
Date: October 26, 2023
Re: October Report

HOUSE/SENATE

Congress

On October 25th the House elected Rep. Mike Johnson (R-LA) as Speaker. His election comes after a 22-day period where the GOP conference put up several candidates that could not secure the votes needed to ascend to the Speakership. Speaker Johnson has been a member of the House since 2016. Prior to the House he spent over two decades practicing constitutional law and served in the Louisiana Legislature from 2015-2017. He is widely viewed as a social conservative and close ally of former President Trump. Soon after his election he sent a letter to all House members indicating that the House will quickly get to work on passing appropriations and other must-pass bills before the end of the year.

In the Senate, members have started to move a minibus bill comprised of appropriations for Military Construction and Veterans Affairs; Transportation, Housing, and Urban Development; and Agriculture, Rural Development, and Food and Drug Administration. The Senate is also focused on foreign policy issues, with a group of members led by Majority Leader Chuck Schumer (D-NY) recently visiting Israel and China. Also, Minority Leader Mitch McConnell (R-KY) has publicly supported President Biden's \$100 billion emergency funding request for Israel, Ukraine, and the Indo-Pacific, as well as the President's decision to send humanitarian aid to Gaza. However, some Republicans continue to argue that the portions of the legislation should be voted on separately and have criticized the President for his response to the Gaza crisis.

EPA

At the end of September, the Environmental Protection Agency (EPA) announced \$500 million in funding through the Clean School Bus Program, building on the \$1 billion in funding awarded in 2022. This round of funding can be used to cover buses, workforce development costs, and infrastructure costs for awardees requesting electric school buses. Established by the Infrastructure Investment and Jobs Act, the program aims to improve air quality in and around schools, reduce greenhouse gas pollution, and accelerate U.S. leadership in developing clean vehicles. Learn more about the program [here](#).

On October 5, the EPA released data from 2022 collected under the Greenhouse Gas Reporting Program. According to the data, reported emissions from large industrial sources were about 1% lower than in 2021. The largest stationary source of greenhouse gas emissions was power plants, followed by petroleum and natural gas systems. The data is available [here](#).

On October 6, the EPA announced a final Technology Transitions rule which will guide the transition away from hydrofluorocarbons (HFCs), restricting the use of certain HFCs in over 40 types of products and banning HFCs in certain equipment. The EPA additionally proposed a rule which aims to manage emissions reduction and reclamation of HFCs while maximizing the reuse of existing HFCs. Both actions are under the American Innovation and Manufacturing Act and come a year after President Biden signed the Kigali Amendment, an international agreement to phase down HFCs to combat global warming. Read more about the rule [here](#).

On October 12, the EPA proposed to approve South Coast AQMD's rule serving to protect communities from air pollution caused by warehouse operations. The Warehouse Indirect Source Rule, adopted by South Coast AQMD in 2021, will become federally enforceable if finalized as proposed. Read more [here](#).

Also on October 12, the EPA announced the 24 recipients who will receive about \$16 million in pollution prevention grants funded by the Infrastructure Investment and Jobs Act. The funding will support programs for states and state colleges to provide businesses with technical assistance to adopt practices which prevent pollution in local communities. See the list of grantees [here](#).

On October 18, the EPA announced its final determination that lead from aircraft which operate on leaded fuel cause or contribute to air pollution and may endanger public health and welfare under the Clean Air Act. The EPA is now obligated to propose regulatory standards for lead emission from certain aircraft engines, and the Federal Aviation Administration must develop standards to address the composition and properties of aircraft fuel or fuel additives to control or eliminate lead emissions. Read more about the final finding [here](#).

On October 20, the EPA finalized a rule eliminating exemptions which allowed facilities to avoid reporting PFAS information to the Toxics Release Inventory if used in small concentrations. This

rule will require covered industry sectors and federal facilities to disclose the quantities of PFAS they manage or release into the environment. Learn more about the rule [here](#).

Cassidy and Associates support in October:

- Worked with South Coast AQMD staff to strategize on DC outreach
- Planned and executed schedule for South Coast AQMD staff October fly-in
- Advised staff on House and Senate Appropriations markups, focusing on South Coast AQMD priorities
- Continued to monitor and report on activities in Congress and the Administration that impact the District

IMPORTANT LEGISLATIVE DATES

September 30, 2023:

The Farm Bill, an omnibus package of legislation that supports US agriculture and food industries expires; the bill is reauthorized on a five-year cycle.

November 17, 2023:

FY 2023 appropriations expire.

November 17, 2023:

National Flood Insurance Program reauthorization deadline.

December 31, 2023:

Deadline for the Federal Aviation Administration reauthorization.

AGENCY RESOURCES

USA.gov is cataloging all U.S. government activities related to coronavirus. From actions on health and safety to travel, immigration, and transportation to education, find pertinent actions [here](#). Each Federal Agency has also established a dedicated coronavirus website, where you can

find important information and guidance. They include: Health and Human Services ([HHS](#)), Centers of Medicare and Medicaid ([CMS](#)), Food and Drug Administration ([FDA](#)), Department of Education ([DoED](#)), Department of Agriculture ([USDA](#)), Small Business Administration ([SBA](#)), Department of Labor ([DOL](#)), Department of Homeland Security ([DHS](#)), Department of State ([DOS](#)), Department of Veterans Affairs ([VA](#)), Environmental Protection Agency ([EPA](#)), Department of the Interior ([DOI](#)), Department of Energy ([DOE](#)), Department of Commerce ([DOC](#)), Department of Justice ([DOJ](#)), Department of Housing and Urban Development ([HUD](#)), Department of the Treasury ([USDIT](#)), Office of the Director of National Intelligence ([ODNI](#)), and U.S. Election Assistance Commission ([EAC](#)).

Helpful Agency Contact Information:

U.S. Department of Health and Human Services – Darcie Johnston (Office – 202-853-0582 / Cell – 202-690-1058 / Email – darcie.johnston@hhs.gov)

U.S. Department of Homeland Security – Cherie Short (Office – 202-441-3103 / Cell – 202-893-2941 / Email – Cherie.short@hq.dhs.gov)

U.S. Department of State – Bill Killion (Office – 202-647-7595 / Cell – 202-294-2605 / Email – killionw@state.gov)

U.S. Department of Transportation – Sean Poole (Office – 202-597-5109 / Cell – 202-366-3132 / Email – sean.poole@dot.gov)

ATTACHMENT 4A



Joe A. Gonsalves & Son

Anthony D. Gonsalves

Jason A. Gonsalves

Paul A. Gonsalves

PROFESSIONAL LEGISLATIVE REPRESENTATION

925 L ST. · SUITE 250 · SACRAMENTO, CA 95814-3766

916 441-0597 · FAX 916 441-5061

Email: gonsalves@gonsalvi.com

TO: South Coast Air Quality Management District
FROM: Anthony, Jason & Paul Gonsalves
SUBJECT: Legislative Update – October 2023
DATE: Thursday, October 26, 2023

The Legislature adjourned for interim recess on September 14, 2023 and will return on January 3, 2024 for the second half of the 2023-24 legislative session. This year, the Legislature introduced 2,690 bills. Of those, 1,046 were sent to the Governor for his consideration. The Governor had until October 14, 2023 to take action on all bills before him. This year, Governor Newsom signed 890 bills into law and vetoed 156.

The following will provide you with an end of session recap on legislative issues of interest to the District:

- AB 1216 (Muratsuchi): Our office worked with the Author and the sponsors of the bill on amendments that would ensure the District is reimbursed for all costs associated with the bill. AB 1216 was passed by the Legislature on September 7, 2023 and was signed by the Governor on October 10, 2023.
- AB 1465 (Wicks): Our office has been supporting this measure on behalf of the District throughout the legislative process. The bill is currently on the Senate Floor and was moved to the inactive file on September 6, 2023. This is now a 2-year bill.
- AB 1638 (Fong): Our office worked with the Author's office on amendments to exclude the District from the requirements in the bill. The Author agreed to our amendments and amended the bill on September 1, 2023 in the Senate Appropriations Committee. The Legislature passed this bill on September 6, 2023 and the Governor signed the bill on October 8, 2023.
- SB 410 (Becker): Our office has been supporting this measure on behalf of the District throughout the legislative process. The bill was passed by the Legislature on September 14, 2023 and was signed by the Governor on October 7, 2023.
- SB 842 (Bradford): Our office worked with the author's office to submit a Letter to the Journal that ensured air districts' autonomy in relation to the California Energy Commissions refinery turnarounds and maintenance process. The Legislature passed the bill, however, Governor Newsom vetoed the bill.

The following will provide you with updates of interest to the District:

GOVERNOR NEWSOM APPOINTS LAPHONZA BUTLER TO THE U.S. SENATE

On October 1, 2023, Governor Newsom announced the selection of Laphonza Butler, the President of EMILY's List, the nation's largest organization dedicated to electing women, to complete the United States Senate term of the late Senator Dianne Feinstein, which runs through 2024.

Butler, a longtime senior adviser to Vice President Kamala Harris, labor leader, and advocate for women and working people, will be the first openly LGBTQ person to represent California in the Senate. She will also be the first Black lesbian to openly serve in Congress in American history and the second Black woman to represent California in the Senate following Vice President Kamala Harris.

With her selection to the Senate, Butler will step down from her role as president of EMILY's List, where she was the first woman of color and mother to lead the organization. Prior to joining EMILY's List, Butler ran political campaigns and led strategy efforts for numerous companies, organizations, and elected leaders, including for Vice President Kamala Harris and Secretary of State Hillary Clinton. Butler was a key leader of Vice President Harris's presidential campaign. For more than a decade, she served as the president of the largest labor union in California, SEIU Local 2015, a union representing more than 325,000 nursing home and home-care workers throughout the state.

Previously, Butler served as President of SEIU United Long Term Care Workers (ULTCW) and also as SEIU's Property Services Division Director, in which she was responsible for the strategic direction of organizing on behalf of more than 250,000 janitors, security officers, window cleaners, and food service workers across the country. Butler also served as an SEIU International Vice President and president of the SEIU California State Council.

Butler was the former director of the Board of Governors of the Los Angeles branch of the Federal Reserve System. In 2018, she was appointed to the University of California Board of Regents by Governor Jerry Brown, where she served until 2021. She served in various other roles, including as a board member for the National Children's Defense Fund, BLACK PAC, and the Bay Area Economic Council Institute, and as a fellow for the MIT Community Innovators Lab.

On October 19, 2023, Butler announced she will not be seeking reelection to the US Senate seat.

CALIFORNIA - A NATIONAL HYDROGEN HUB

On October 13, 2023, Governor Newsom announced that California will receive up to \$1.2 billion from the U.S. Department of Energy to accelerate the development and deployment of

clean renewable hydrogen, critical to cutting pollution and expanding the clean energy economy statewide.

This means California will receive up to \$1.2 billion to build or expand hydrogen projects that will power public transportation, heavy-duty trucks, port operations, and more. Additionally, it will leverage the state's leadership in clean energy technology to produce hydrogen exclusively from renewable energy and biomass.

This is a significant investment, as it is projected to cut up to 2 million metric tons of carbon emissions every year, which is equivalent to the pollution of 445,000 gasoline-powered cars annually. It will create an estimated 220,000 new jobs, including 130,000 in construction and 90,000 permanent jobs, along with an estimated \$2.95 billion per year in economic value from better health and health cost savings. 40% of the benefits from projects will flow to disadvantaged communities.

AT-BERTH REGULATIONS

On October 18, 2023, CARB received authorization from the U.S. EPA under the Clean Air Act for its 2020 At-Berth Regulation, which further reduces pollution from ocean-going vessels while docked at California's busiest ports.

The new regulation was passed by the CARB Board in 2020 and adds new vessel categories and additional ports and marine terminals. Under the new regulation, vessels are required to control pollution when they run auxiliary engines while docked. The two vessel categories added to the new regulation, auto carriers and tankers, produce 56% of all PM 2.5 from ocean-going vessels at berth.

Vessels covered under the original regulation include container ships, refrigerated cargo ships, and cruise ships. Once the new regulation is fully implemented, it will deliver a 90% reduction in pollution from vessels at berth. This includes an expected additional 2,300 vessel visits per year and will result in a 55% reduction in potential cancer risk for communities near the Ports of Los Angeles, Long Beach, and Richmond.

The regulation requires that vessels coming into a regulated California port either use shore power or a CARB-approved control technology to reduce harmful emissions like a capture-and-control technology.

CARB WORKSHOP: POTENTIAL AMENDMENTS TO CAP-AND-TRADE

On October 24, 2023, CARB invited interested parties to participate in a public workshop on potential updates to the linked California Cap-and-Trade Program and Québec Cap-and-Trade System. Two modeling teams, one contracted by CARB and the other an internal team from the government of Québec, will present initial results from independent modeling efforts for

allowance prices under different allowance budget scenarios. Staff may also present information and concepts related to joint-market rules and cost-containment.

The workshop will be held remotely on November 16, 2023, from 9:30 a.m. – 12:30 p.m. Staff will request written feedback following the workshop through 11:59 p.m. Pacific Time on December 1, 2023. A link to submit written feedback will be posted to the Cap-and-Trade Meetings & Workshops webpage.

2023 LEGISLATIVE DEADLINES

October 14 – Last day for Governor to take action on bills.

January 3, 2024 – Legislature reconvenes.

South Coast Air Quality Management District Legislative and Regulatory Update –October 2023

❖ Important Upcoming Dates

Jan 3, 2024 –Legislature Reconvenes

❖ RESOLUTE Actions on Behalf of South Coast AQMD. RESOLUTE partners David Quintana and Alfredo Arredondo continued their representation of South Coast AQMD before the State’s Legislative and Executive branches. Selected highlights of our recent advocacy include:

- Provided ongoing updates as the Legislature stayed in interim recess and the Governor finalized decisions on bills at this desk.
- Set and attended meetings with legislative offices regarding bill proposals for the 2024 legislative session.

❖ Bill Proposal Meetings: Resolute set the following meetings with legislative staff for the following members regarding bill proposals for the 2024 legislative session:

- Asm. McKinnor
- Asm. Chen
- Senator Min
- Asm. Calderon
- Senator Blakespear
- Asm. Carrillo
- Asm. Ramos
- Asm. Petrie-Norris
- Asm. Santiago
- Asm. Quirk-Silva
- Asm. Friedman
- Asm. Luz Rivas

❖ Tax Deadline Extended: This year, the deadline for filing 2022 taxes with the state and federal government had been set for October 16th due to the large storms and extreme weather events that impacted most of California in the beginning of 2023. This deadline was subsequently extended by one more month to November 16th.

Tax receipts that the State was expecting in November may now impact the ability to develop more accurate budget projections by the Department of Finance as they work to finalize their estimates that will inform the Governor’s proposed budget in January 2024.

The Franchise Tax Board released data on tax receipts for October showing that collections are \$28 billion below the projections for the month of October in the 2023 Budget. It is difficult to estimate whether this gap will remain, expand, or contract when the November 16 deadline brings in the last remaining tax receipts.

Ultimately, the tax collection outcomes in November (and likely December) will have a big impact on how the Governor structures his January Budget Proposal. However, the delayed deadline provides nothing but uncertainty until then.



CALIFORNIA ADVISORS, LLC

South Coast AQMD Report
California Advisors, LLC
November 9, 2023, Legislative Committee Hearing

Legislative Update

The 2023 legislative session ended in the early hours of September 15. Governor Gavin Newsom took his final actions on bills on October 13, a day ahead of the deadline.

In total, Governor Newsom acted on 1,046 measures. Of those bills, he signed 890 and vetoed 156 – which amounts to a veto rate of 14.9%. For comparison, in 2022, the Legislature sent 1,166 bills to Newsom for consideration, he signed 997 into law and vetoed 169 bills. This was a veto rate of 14.49%.

As with previous years, Newsom was again cautious regarding new spending amid an uncertain revenue outlook. The Governor signaled in several veto messages that his aim is fiscal responsibility. Specifically, he vetoed many bills because lawmakers sought funding that was not included in the adopted budget. According to POLITICO, the Governor cited budget concerns in 64 of his 156 veto messages and cost was the most common rationale offered.

With the California Legislature adjourned and the Governor’s period to act on bills behind us, the focus on 2024 has begun. The 2024 Legislative Deadline Calendar is now available on both the Senate and Assembly websites. Among the key dates, the Legislature will reconvene on Wednesday, January 3. Also, the Governor must submit his budget proposal to the Legislature by Wednesday, January 10. Finally, the last day to submit bill requests to the Office of Legislative Counsel is Friday, January 19.

Further, it should be noted that the Legislature convenes in a two-year cycle and this year was the first year of the 2023-2024 Legislative session. Under the state Constitution, bills introduced in the first year of the Session can be carried over to the following year and are referred to as “two-year” bills. Therefore, several of the January dates noted in the 2024 Legislative Deadline Calendar relate specifically to these two-year bills. This includes:

- Friday, January 12 is the last day for policy committees to hear and report to fiscal committees fiscal bills introduced in their house in the odd-numbered year.
- Friday, January 19 is the last day for any committee to hear and report to the floor bills introduced in that house in the odd-numbered year.
- Wednesday, January 31 is the last day for each house to pass bills introduced in that house in the odd-numbered year.

Budget Update

According to the October 2023 Department of Finance's monthly bulletin, the state collected \$796 million, or 5.7 percent, above the forecast of \$13.974 billion in September largely due to Pass-Through Entity Elective Tax (PTET) payments exceeding the forecast by \$918 million for the month. Receipts for the first three months of the 2023-24 fiscal year were \$879 million, or 2.4 percent, above the forecast of \$35.881 billion. General Fund agency cash receipts for the entire 2022-23 fiscal year were \$980 million above the 2023-24 Budget Act forecast of \$167.627 billion.

According to the bulletin, the Budget Act monthly cashflow assumes an extended payment and filing deadline for Californians in most counties to October 16. The delay affects personal and corporate income tax categories other than withholding, however, the extent to which variance relative to the forecast is caused by taxpayers' behavior differing from assumptions is unknown. On October 16, the delayed filing and payment deadline was further extended to November 16.

It has been noted by Assembly budget staff that if significant segments of high-income Californians delay submitting 2022 returns or 2022 and 2023 payments to November, this likely will significantly limit the information available for the next round of the Legislative Analyst's Office (LAO) and Department of Finance state revenue forecasts. Accordingly, the Governor's January 10 budget proposal may have to be based on significantly limited revenue data.

Governor Update

On Monday, October 23, Governor Newsom embarked on a weeklong international trip to China. According to the Governor's Office press release, the trip was focused on advancing concrete climate collaborations with key national and subnational partners, promoting economic development and tourism, and encouraging a cultural exchange between countries. Further, it was noted that Newsom met with leaders who share California's commitment to addressing the global climate crisis while fostering a low-carbon, green growth agenda.

More specifically, on Tuesday, October 24, Newsom spent the day in a region known as China's Greater Bay Area – a megalopolis of millions of people consisting of Hong Kong, Macao and nine major cities. There he visited the world's first zero-emission city bus fleet. He also signed a new climate partnership with the Guangdong Province focused on carbon markets, industrial and power sector decarbonization, and climate adaptation. Included in the Governor's Office press release was a mention that California leads the nation in electric vehicle adoption and is set to phase out the sale of new gas-powered vehicles by 2035. Further, it was noted that earlier this year, California became the first jurisdiction in the world to set a date to end the sales of traditional combustion trucks, creating a path to 100% zero emission medium- and heavy-duty trucks on the roads in California by 2045. The Governor also announced that California surpassed its ZEV truck sales goal two years ahead of schedule.

 [Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 19

REPORT: Mobile Source Committee

SYNOPSIS: The Mobile Source Committee meeting was held on Friday, November 17, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Gideon Kracov, Chair
Mobile Source Committee

SLR:ja

Committee Members

Present: Board Member Gideon Kracov, Committee Chair
Mayor Larry McCallon
Supervisor Holly J. Mitchell

Absent: Supervisor V. Manuel Perez
Councilmember Nithya Raman
Councilmember Carlos Rodriguez

Call to Order

Committee Chair Kracov called the meeting to order at 8:08 a.m.

For additional details, please refer to the [Webcast](#).

ROLL CALL

INFORMATIONAL ITEM (Item 1):

1. Update on Draft Proposed Rail MOU

Executive Officer Wayne Nastri provided an update on the Draft Proposed Rail MOU. Mr. Nastri announced an impasse in negotiations, that an agreement had not been reached and staff will pivot back to the Indirect Source Rule (ISR) development process for rail yards. For additional details, please refer to the [Webcast](#) at 17:33.

Chair Kracov and Supervisor Mitchell asked for clarification on a timeline and next steps. Mr. Nastri explained South Coast AQMD staff will be working with CARB staff to develop the most effective ISR. Staff will report back to the Board and Committee in the January to February timeframe with further rule concepts with the goal to work in collaboration with CARB to support and deliver accelerated emission reductions in the South Coast Air Basin. Supervisor Mitchell and Mayor McCallon both expressed disappointment with the outcome of the MOU process. For additional details, please refer to the [Webcast](#) at 21:40.

Chair Kracov expressed the need for rail yard ISR development to support and strengthen CARB's current regulations addressing trucks and locomotives as well as to maximize emission reductions from cargo handling equipment. For additional details, please refer to the [Webcast](#) at 27:24.

Yassi Kavezade and Al Sattler, Sierra Club; Fernando Gaytan and Yasmine Agelidis, Earthjustice; Dori Chandler, Coalition for Clean Air; Ma Carmen; Kathleen Woodfield, San Pedro Peninsula Homeowners Coalition; Sylvia Betancourt, Long Beach Alliance for Children with Asthma, stated their appreciation for staff's decision to pivot back to an ISR. Several urged for a strong and comprehensive ISR that addresses both new and existing rail yards, builds upon CARB's recent regulations, includes reporting and transparency measures, enhances zero emission transition and infrastructure buildout, and focuses on public health. For additional details, please refer to the [Webcast](#) at 30:58.

Mark Abramowitz, Community Environmental Services and Mike McCarthy, Riverside Neighbors Opposing Warehouses urged for prioritization of establishing pathways toward zero emission technology implementation in the ISR, especially given the expected growth in cargo activity. For additional details, please refer to the [Webcast](#) at 40:20.

Chair Kracov asked for further clarification on next steps. Mr. Nastri responded that staff will engage in discussions with CARB with the intent to strengthen the work done by staff and maximize the benefits. For additional details, please refer to the [Webcast](#) at 54:55.

Supervisor Mitchell asked if there is opportunity for shared financial responsibility with the Railroads as asked by the Railroads during the MOU process. Chair Kracov expressed uncertainty in the Railroads' participation with funding. Mr. Nastri emphasized South Coast AQMD's continuous efforts in applying for state and federal grants with technology demonstrations and deployments, highlighting recent receipt of the CalSTA grant to develop a fuel cell locomotive, and commitment to maximizing all future funding opportunities with all parties, including the Ports, to deploy the cleanest technology. For additional details, please refer to the [Webcast](#) at 01:00:25

WRITTEN REPORTS (Items 2-4):

2. Update on the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

This item was received and filed.

3. Rule 2202 Activity Report: Rule 2202 Summary Status Report

This item was received and filed.

4. Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects

This item was received and filed.

OTHER MATTERS:

5. Other Business

There was no other business to report.

6. Public Comment Period

Theral Golden, West Long Beach Association, commended the Mobile Source Committee for their work towards the elimination of negative health impacts for future generations. He encouraged the committee to keep public health concerns ahead of profits from industries and more outreach to communities. For additional details, please refer to the [Webcast](#) at 1:05:30.

7. Next Meeting Date

The next regular Mobile Source Committee meeting is scheduled for Friday, January 19, 2023 at 9:00 a.m.

Adjournment

The meeting adjourned at 9:08 a.m.

Attachments

1. Attendance Record
2. Update on the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program – Written Report
3. Rule 2202 Activity Report – Written Report
4. Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects – Written Report

ATTACHMENT 1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT MOBILE SOURCE COMMITTEE MEETING

Attendance – November 17, 2023

Board Member Gideon Kracov	South Coast AQMD Board Member
Mayor Larry McCallon	South Coast AQMD Board Member
Supervisor Holly Mitchell.....	South Coast AQMD Board Member
Guillermo Gonzales	Board Consultant (Perez)
Jackson Guze	Board Consultant (Raman)
Lorraine Lundquist	Board Consultant (Mitchell)
Debra Mendelsohn.....	Board Consultant (McCallon)
Fred Minassian	Board Consultant (Padilla-Campos)
Uduak-Joe Ntuk.....	Board Consultant (Solache)
Andrew Silva	Board Consultant (Lock Dawson)
Mark Taylor.....	Board Consultant (Rodriguez)
Mark Abramowitz.....	Community Environmental Services
Yasmine Agelidis	Earthjustice
Lucia Aguilar.....	People’s Collective for Env. Justice
D Arellano	Public Member
Lupe Baldez.....	Public Member
Jasmine Beltran Elisa.....	Public Member
Sylvia Betancourt	LBACA
Edie Chang	CARB
Dori Chandler	Coalition for Clean Air
Chris Chavez	Coalition for Clean Air
Trish Clary.....	Union Pacific Railroad
Curtis Coleman.....	Southern CA Air Quality Alliance
Ramine Cromartie.....	Western States Petroleum Association
Ariel Fidely.....	CARB
Cecilia Garibay	Moving Forward Network
Fernando Gaytan.....	Earthjustice
Theral Golden.....	West Long Beach Association
Layla Gonzalez	CARB
Molly Greenberg	Moving Forward Network
Alison Hahm.....	National Resources Defense Council
Gillian Kass	Ramboll
Jas Kaur	CARB
Yassi Kavezade	Sierra Club
Priscilla Khuu	CARB
Bill La Marr.....	California Small Business Alliance
Najah Louis	NRDC
Mark Lutz.....	Public Member
Ajay Mangat	CARB
Mike McCarthy	CARB
Emily Murray	Public Member
Allen Matkins	Public Member
Alex Nieves	Public Member
Peter Okurowski	CEA Consulting

Darby OsnayaSierra Club
 David Pettit.....Natural Resources Defense Council
 Bethmarie QuiambaoSouthern California Edison
 Elisabeth Rosenson.....Arellano Associates
 Al SattlerSierra Club
 Melissa Schop.....Union Pacific Railroad
 Ivette TorresPeople’s Collective for Env. Justice
 Sylvia Vanderspek.....CARB
 Paola Vargas.....East Yard Communities for Environmental Justice
 Anthony Victoria.....KVCR
 Kathleen Woodfield.....Harbor Community Benefit Foundation

Derrick Alatorre.....South Coast AQMD Staff
 Jacob Allen.....South Coast AQMD Staff
 Debra Ashby.....South Coast AQMD Staff
 Jason Aspell.....South Coast AQMD Staff
 Barbara BairdSouth Coast AQMD Staff
 Cindy BustillosSouth Coast AQMD Staff
 Kalam Cheung.....South Coast AQMD Staff
 Philip Crabbe III.....South Coast AQMD Staff
 Scott Gallegos.....South Coast AQMD Staff
 Bayron GilchristSouth Coast AQMD Staff
 Alex HanSouth Coast AQMD Staff
 Sheri Hanizavareh.....South Coast AQMD Staff
 Anissa Heard-JohnsonSouth Coast AQMD Staff
 Aaron KatzensteinSouth Coast AQMD Staff
 Brandee Keith.....South Coast AQMD Staff
 Angela KimSouth Coast AQMD Staff
 Michael Krause.....South Coast AQMD Staff
 Ricky Lai.....South Coast AQMD Staff
 Howard LeeSouth Coast AQMD Staff
 Cristina LopezSouth Coast AQMD Staff
 Ron MoskowitzSouth Coast AQMD Staff
 Susan Nakamura.....South Coast AQMD Staff
 Wayne Nastri.....South Coast AQMD Staff
 Robert Paud.....South Coast AQMD Staff
 Dan PenoyerSouth Coast AQMD Staff
 Sarah Rees.....South Coast AQMD Staff
 Valerie Rivera.....South Coast AQMD Staff
 Zafiro Sanchez.....South Coast AQMD Staff
 Penny Shaw Cedillo.....South Coast AQMD Staff
 Sina TaghvaeiSouth Coast AQMD Staff
 Lisa Tanaka O’MalleySouth Coast AQMD Staff
 Brian Tomasovic.....South Coast AQMD Staff
 Crystal VillanuevaSouth Coast AQMD Staff
 Mei Wang.....South Coast AQMD Staff
 Shawn Wang.....South Coast AQMD Staff
 Vicki WhiteSouth Coast AQMD Staff
 Paul WrightSouth Coast AQMD Staff
 Chris YuSouth Coast AQMD Staff
 Victor Yip.....South Coast AQMD Staff



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

Rule 2305 Implementation Status Report:
Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

October 1, 2023 to October 31, 2023

1. Implementation and Outreach Activities:

Activity	Since Last Report	Since Rule Adoption
Calls and Emails to WAIRE Program Hotline (909-396-3140) and Helpdesk (waire-program@aqmd.gov)	356	5,520
Views of Compliance Training Videos (outside of webinars)	205	5,976
Emails Sent with Information About WAIRE Program Resources	62	~ 63,295
Visits to www.aqmd.gov/waire	1,537	~ 47,082
Warehouse Locations Visited In-Person	84	182
Presentations to Stakeholders	0	143

2. Highlights of Recent Implementation Activities

Phase 1 warehouse operators (including those with greater than or equal to 250,000 square feet) were required to submit their first Annual WAIRE Report (AWR) by March 2, 2023, which includes the actions and/or investments they completed in the 2022 compliance period. As of October 31st, 490 warehouse operators filed an AWR.¹ This represents about 48% of the anticipated Phase 1 group. Of the submitted reports, 41 warehouse operators still need to submit the required fees (including mitigation fees, as applicable). The 490 operators who submitted an AWR earned a total of about 239,346 WAIRE Points, which far exceeds the total WAIRE Points Compliance Obligation. The number of WAIRE Points earned by an operator that are in excess of their compliance obligation may be banked for future compliance. The operators also reported that they will pay a total of approximately \$9.8 million in mitigation fees, of which about \$8 million were paid by October 31, 2023.

Rule 2305 allows warehouse operators the option of earning WAIRE Points for "early" actions completed prior to their first compliance period. In addition, warehouse facility owners may voluntarily earn WAIRE Points from early actions that can be transferred to operators at the same site. As of October 31st, 191 warehouse operators and facility owners filed Early Action AWRs.¹ These early action reports include a total earning of about 68,654 WAIRE Points.

¹ Staff has begun auditing these reports. Some of these reports may have been filed to bank points for future compliance periods. Information on these audits will be provided in future monthly reports and/or the annual report.

Staff continued targeted outreach to Phase 1 and Phase 2 operators who have not yet submitted the required reports or have upcoming compliance reports that are due. Staff continued to respond to WAIRE Program emails and hotline calls that have significantly increased in volume since issuance of the Compliance Advisory and Press Release in September 2023. These efforts included providing assistance with WAIRE Program requirements through virtual consultation sessions with stakeholders and other outreach and support efforts to stakeholders in preparation of their first AWR submittal. Ongoing implementation activities included reviewing and verifying information in the submitted reports, including the Warehouse Operations Notifications (WONs) submitted by warehouse facility owners.

Throughout October, staff conducted in-person site visits to warehouses as part of the outreach activities, targeting locations in San Bernardino, Riverside and Orange Counties this month. Staff visited 84 warehouse buildings and disseminated Rule 2305 program information, collected contact information for warehouse owners/operators, advised onsite personnel of Rule 2305 requirements, and provided technical assistance as needed.

Staff worked on the responses to five Public Records Act Requests based on Rule 2305 reported data. Staff continued to work on developing a standard process for making WAIRE Program data available on the F.I.N.D. tool.

Staff continued to work on 4 Custom WAIRE Plan applications evaluating their potential to earn WAIRE Points. One Custom WAIRE Plan was disapproved due to insufficient information to verify the emission reduction benefits for the proposed technology. Staff completed evaluating the three remaining Custom WAIRE Plans that were revised and resubmitted for evaluation. The applicant for these three Custom WAIRE Plans submitted a request for business confidentiality. Due to this request, staff coordinated with legal to review the declaration that was prepared and submitted by the applicant.

Anticipated Activities in November

- Continue the in-person site visits targeting Phase 1 and Phase 2 warehouse operators to ensure receipt of the compliance advisory, collect warehouse contact information, share information on rule requirements, and provide technical assistance, as needed.
- Make referrals to the Office of Compliance & Enforcement to evaluate potential enforcement action, if applicable.
- Continue to review and verify submitted information and analyze data submitted through R2305 reports (e.g., WONs, ISIRs, AWRs, early action AWRs).
- Continue to audit reports submitted by warehouse owners and operators in response to the Public Records Act Requests.
- Complete final review of Custom WAIRE Plan applications submitted in the 2023 compliance period.
- Continue to develop an approach for addressing business confidentiality concerns and making WAIRE Program data publicly accessible via the online F.I.N.D. tool on the South Coast AQMD website.
- Continue to enhance the WAIRE POP software to support improved functionality (e.g., program administration, and an amendment process for submitted reports).



South Coast Air Quality Management District

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Rule 2202 Summary Status Report Activity for January 1, 2023 – October 31, 2023

Employee Commute Reduction Program (ECRP)	
# of Submittals:	306

Emission Reduction Strategies (ERS)	
# of Submittals:	223

Air Quality Investment Program (AQIP) Exclusively		
County	# of Facilities	\$ Amount
Los Angeles	37	\$ 212,730
Orange	3	\$ 42,664
Riverside	2	\$ 9,720
San Bernardino	1	\$ 4,766
TOTAL:	43	\$ 269,880

ECRP w/AQIP Combination		
County	# of Facilities	\$ Amount
Los Angeles	0	\$ 0
Orange	0	\$ 0
Riverside	0	\$ 0
San Bernardino	0	\$ 0
TOTAL:	0	\$ 0

Total Active Sites as of October 31, 2023

ECRP (AVR Surveys)			TOTAL Submittals w/Surveys	AQIP	ERS	TOTAL
ECRP ¹	AQIP ²	ERS ³				
515	8	68	591	100	645	1,336
38.6%	0.6%	5.1%	44.2%	7.5%	48.3%	100% ⁴

Total Peak Window Employees as of October 31, 2023

ECRP (AVR Surveys)			TOTAL Submittals w/Surveys	AQIP	ERS	TOTAL
ECRP ¹	AQIP ²	ERS ³				
372,165	2,760	9,828	384,753	13,381	268,130	666,264
55.9%	0.4%	1.5%	57.8%	2.0%	40.2%	100% ⁴

- Notes:**
1. ECRP Compliance Option.
 2. ECRP Offset (combines ECRP w/AQIP). AQIP funds are used to supplement the ECRP AVR survey shortfall.
 3. ERS with Employee Survey to get Trip Reduction credits. Emission/Trip Reduction Strategies are used to supplement the ECRP AVR survey shortfall.
 4. Totals may vary slightly due to rounding.

DRAFT

BOARD MEETING DATE: December 1, 2023

AGENDA NO.

REPORT: Intergovernmental Review of Environmental Documents and CEQA Lead Agency Projects

SYNOPSIS: This report provides a listing of environmental documents prepared by other public agencies seeking review by South Coast AQMD between October 1, 2023 and October 31, 2023, and proposed projects for which South Coast AQMD is acting as lead agency pursuant to CEQA.

COMMITTEE: Mobile Source, November 17, 2023, Reviewed

RECOMMENDED ACTION:
Receive and file.

Wayne Nastri
Executive Officer

SR:MK:MM:BR:SW:ET

Background

The California Environmental Quality Act (CEQA) Statute and Guidelines require public agencies, when acting in their lead agency role, to provide an opportunity for other public agencies and members of the public to review and comment on the analysis in environmental documents prepared for proposed projects. A lead agency is when a public agency has the greatest responsibility for supervising or approving a proposed project and is responsible for the preparation of the appropriate CEQA document.

Each month, South Coast AQMD receives environmental documents, which include CEQA documents, for proposed projects that could adversely affect air quality. South Coast AQMD fulfills its intergovernmental review responsibilities, in a manner that is consistent with the Board's 1997 Environmental Justice Guiding Principles and Environmental Justice Initiative #4, by reviewing and commenting on the adequacy of the air quality analysis in the environmental documents prepared by other lead agencies.

The status of these intergovernmental review activities is provided in this report in two sections: 1) Attachment A lists all of the environmental documents prepared by other public agencies seeking review by South Coast AQMD that were received during the reporting period; and 2) Attachment B lists the active projects for which South Coast AQMD has reviewed or is continuing to conduct a review of the environmental documents prepared by other public agencies. Further, as required by the Board's October 2002 Environmental Justice Program Enhancements for fiscal year (FY) 2002-03, each attachment includes notes for proposed projects which indicate when South Coast AQMD has been contacted regarding potential air quality-related environmental justice concerns. The attachments also identify for each proposed project, as applicable: 1) the dates of the public comment period and the public hearing date; 2) whether staff provided written comments to a lead agency and the location where the comment letter may be accessed on South Coast AQMD's website; and 3) whether staff testified at a hearing.

In addition, the South Coast AQMD will act as lead agency for a proposed project and prepare a CEQA document when: 1) air permits are needed; 2) potentially significant adverse impacts have been identified; and 3) the South Coast AQMD has primary discretionary authority over the approvals. Attachment C lists the proposed air permit projects for which South Coast AQMD is lead agency under CEQA.

Attachment A – Log of Environmental Documents Prepared by Other Public Agencies and Status of Review, and Attachment B – Log of Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies

Attachment A contains a list of all environmental documents prepared by other public agencies seeking review by South Coast AQMD that were received pursuant to CEQA or other regulatory requirements. Attachment B provides a list of active projects, which were identified in previous months' reports, and which South Coast AQMD staff is continuing to evaluate or prepare comments relative to the environmental documents prepared by other public agencies. The following table provides statistics on the status of review¹ of environmental documents for the current reporting period for Attachments A and B combined²:

¹ The status of review reflects the date when this Board Letter was prepared. Therefore, Attachments A and B may not reflect the most recent updates.

² Copies of all comment letters sent to the lead agencies are available on South Coast AQMD's website at: <http://www.aqmd.gov/home/regulations/ceqa/commenting-agency>.

Statistics for Reporting Period from October 1, 2023 to October 31, 2023	
Attachment A: Environmental Documents Prepared by Other Public Agencies and Status of Review	57
Attachment B: Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies (which were previously identified in the August 2023, and September 2023 reports)	16
Total Environmental Documents Listed in Attachments A & B	73
<i>Comment letters sent</i>	15
<i>Environmental documents reviewed, but no comments were made</i>	34
<i>Environmental documents currently undergoing review</i>	24

Staff focuses on reviewing and preparing comments on environmental documents prepared by other public agencies for proposed projects: 1) where South Coast AQMD is a responsible agency under CEQA (e.g., when air permits are required but another public agency is lead agency); 2) that may have significant adverse regional air quality impacts (e.g., special event centers, landfills, goods movement); 3) that may have localized or toxic air quality impacts (e.g., warehouse and distribution centers); 4) where environmental justice concerns have been raised; and 5) which a lead or responsible agency has specifically requested South Coast AQMD review.

If staff provided written comments to a lead agency, a hyperlink to the “South Coast AQMD Letter” is included in the “Project Description” column which corresponds to a notation in the “Comment Status” column. In addition, if staff testified at a hearing for a proposed project, a notation is also included in the “Comment Status” column. Copies of all comment letters sent to lead agencies are available on South Coast AQMD’s website at: <http://www.aqmd.gov/home/regulations/ceqa/commenting-agency>. Interested parties seeking information regarding the comment periods and scheduled public hearings for projects listed in Attachments A and B should contact the lead agencies for further details as these dates are occasionally modified.

In January 2006, the Board approved the Clean Port Initiative Workplan (Workplan). One action item of the Workplan was to prepare a monthly report describing CEQA documents for projects related to goods movement and to make full use of the process to ensure the air quality impacts of such projects are thoroughly mitigated. In accordance with this action item, Attachments A and B organize the environmental documents received according to the following categories: 1) goods movement projects; 2) schools; 3) landfills and wastewater projects; 4) airports; and 5) general land use projects. In response to the action item relative to mitigation, staff maintains a compilation of mitigation measures presented as a series of tables relative to off-road engines; on-road engines; harbor craft; ocean-going vessels; locomotives; fugitive dust;

and greenhouse gases which are available on South Coast AQMD’s website at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies>. Staff will continue compiling tables of mitigation measures for other emission sources such as ground support equipment.

Attachment C – Proposed Air Permit Projects for Which South Coast AQMD is CEQA Lead Agency

The CEQA lead agency is responsible for determining the type of environmental document to be prepared if a proposal requiring discretionary action is considered to be a “project” as defined by CEQA. South Coast AQMD periodically acts as lead agency for its air permit projects and the type of environmental document prepared may vary depending on the potential impacts. For example, an Environmental Impact Report (EIR) is prepared when there is substantial evidence that the project may have significant adverse effects on the environment. Similarly, a Negative Declaration (ND) or Mitigated Negative Declaration (MND) may be prepared if a proposed project will not generate significant adverse environmental impacts, or the impacts can be mitigated to less than significance. The ND and MND are types of CEQA documents which analyze the potential environmental impacts and describe the reasons why a significant adverse effect on the environment will not occur such that the preparation of an EIR is not required.

Attachment C of this report summarizes the proposed air permit projects for which South Coast AQMD is lead agency and is currently preparing or has prepared environmental documentation pursuant to CEQA. As noted in Attachment C, South Coast AQMD is lead agency for three air permit projects during October 2023.

Attachments

- A. Environmental Documents Prepared by Other Public Agencies and Status of Review
- B. Active Projects with Continued Review of Environmental Documents Prepared by Other Public Agencies
- C. Proposed Air Permit Projects for Which South Coast AQMD is CEQA Lead Agency

DRAFT

**ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023**

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
Warehouse & Distribution Centers LAC231010-03 5910 Cherry Avenue Industrial Building Project	The project consists of demolishing eight buildings and constructing a 304,344 square foot warehouse on 14.16 acres. The project is located at 5910 Cherry Avenue and is north to the intersection of Cherry Avenue and East Hungerford Street. Comment Period: 10/9/2023 - 11/10/2023 Public Hearing: 11/1/2023	Notice of Preparation	City of Long Beach	** Under review, may submit comments
Warehouse & Distribution Centers LAC231010-05 7400 Slauson Avenue Project	The project consists of demolishing 249,579 square feet of existing structures and constructing a 292,029 square foot warehouse on 13.94 acres. The project is located on the southwest corner of Slauson Avenue and Greenwood Avenue. Reference LAC230418-11 and LAC220412-11 Staff previously provided comments on the Draft Environmental Impact Report for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/may-2023/LAC230418-11.pdf . Comment Period: N/A Public Hearing: 10/30/2023	Other	City of Commerce	Document reviewed - No comments sent
Warehouse & Distribution Centers RVC231003-01 Motte Business Center; Tentative Parcel Map (TPM) No. 38432 (PLN22-0114), and Plot Plan No. PLN22-0115	The project consists of constructing a 1,138,638 square foot warehouse and combining eight parcels into one parcel for a total of 46.33 gross acres. The project is located near the southeast corner of Ethanac Road and Dawson Road. Comment Period: 9/29/2023 - 11/13/2023 Public Hearing: N/A	Draft Environmental Impact Report	City of Menifee	** Under review, may submit comments
Warehouse & Distribution Centers RVC231003-02 79 North Logistics Center	The project consists of constructing a 404,200 square foot warehouse on 20.06 acres. The project is located at 853 East 3rd Street near the southeast corner of East 3rd Street and Maple Avenue. Reference RVC230721-01 Staff previously provided comments on the Site Plan for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/august-2023/RVC230721-01.pdf . Comment Period: 9/29/2023 - 10/19/2023 Public Hearing: 10/19/2023	Site Plan	City of Beaumont	Document reviewed - No comments sent

Key:

LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County

- Project has potential environmental justice concerns due to the nature and/or location of the project.

Notes:

- Disposition may change prior to Governing Board Meeting
- Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
Warehouse & Distribution Centers SBC231011-13 MCN No. 22-143; Tentative Parcel Map No. 20710 (TPM No. 23-012); Design Review (DRP) No. 22-064	The project consists of constructing a 747,000 square foot warehouse on 40.01 acres. The project is located near the southeast corner of Hemlock Avenue and Santa Ana Avenue. Reference SBC231011-05 and SBC230301-09 Staff previously provided comments on the Notice of Preparation for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/march-2023/SBC230301-09.pdf . Comment Period: 10/10/2023- 11/27/2023 Public Hearing: 11/7/2023	Draft Subsequent Environmental Impact Report	City of Fontana	** Under review, may submit comments
Warehouse & Distribution Centers SBC231019-01 Poplar South Distribution Center	The project consists of demolishing 41 residential units and constructing a 490,565 square foot warehouse on 19.08 acres. The project is located north of Jurupa Avenue, east of Poplar Avenue, south of Santa Ana Avenue, and west of Catawba Avenue. Reference SBC230817-03 Comment Period: N/A Public Hearing: N/A	Final Environmental Impact Report	City of Fontana	** Under review, may submit comments
Industrial and Commercial LAC231012-01 Berth 191-194 (ECOCEM) Low-Carbon Cement Processing Facility Project#	The project consists of constructing a new processing facility that would import raw materials by ship and truck, temporarily store and process them to produce a low-carbon binder, and load third-party trucks that would transport the product to local consumers. The project is located at 100 Yacht Street in Wilmington within the designated AB 617 Wilmington, Carson, West Long Beach community. Comment Period: 10/12/2023- 11/27/2023 Public Hearing: 11/1/2023	Draft Environmental Impact Report	City of Los Angeles Harbor Department	** Under review, may submit comments
Industrial and Commercial LAC231025-10 World Oil Tank Installation Project#	The project consists of constructing two 25,000-barrel crude oil storage tanks on six acres. The project is located at 1405 Pier C Street near the northwest corner of Pico Avenue and Pier C Street within Port of Long Beach in the designated AB 617 Wilmington, Carson, West Long Beach community. Reference LAC230131-01, LAC211014-02 and LAC201007-01 Comment Period: 10/25/2023- 12/11/2023 Public Hearing: 11/8/2023	Draft Environmental Impact Report	Port of Long Beach	** Under review, may submit comments

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County

Notes:

1. Disposition may change prior to Governing Board Meeting
2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT A
ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES AND STATUS OF REVIEW
October 1, 2023 to October 31, 2023

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> LAC231018-06 Former Chevron Chemical Additives Site 3344 Medford Street#	The project consists of demolishing all on-site features, grading soil for geotechnical purposes, and creating a building pad for future construction. The Interim Remedial Action Plan is proposing procedures and protocols for the segregation, management, and disposal of soil containing elevated contaminants encountered during grading. The project is located at the southwest corner of Medford Street and North Ditman Avenue in Los Angeles within the designated AB 617 East Los Angeles, Boyle Heights, and West Commerce community. Comment Period: 10/13/2023- 11/13/2023 Public Hearing: N/A	Interim Remedial Action Plan	California Water Boards	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC231024-01 Taylor Yard Parcel G1	The project consists of four cleanup alternatives for evaluation in the Removal Action Workplan: 1) no action done, which leaves the Site's conditions unchanged and cleanup is needed before construction can begin; 2) the contaminated soil would be used to plant crops chosen to remove contaminants from shallow soil; 3) excavation and relocation of contaminated soil, which requires storage and maintenance for a prolonged period of time; and 4) excavation and off-site disposal of contaminated soil. The project is located near the northeast corner of State Route 2 and the Los Angeles River in Los Angeles. Reference LAC230405-12 Staff previously provided comments on the Draft Removal Action Workplan for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/may-2023/LAC230405-12.pdf . Comment Period: N/A Public Hearing: N/A	Response to Comments	The Department of Toxic Substances Control	Document reviewed - No comments sent
<i>Waste and Water-related</i> LAC231025-13 Integral Partners Funding Site (Former Hellman Property)#	The project consists of removing residual petroleum hydrocarbons and volatile organic compounds to protect occupants and nearby residents. The project is located at the northeast corner of Victoria Avenue and Central Avenue in Carson within the designated AB 617 Wilmington, Carson, West Long Beach community. Comment Period: 10/20/2023- 11/20/2023 Public Hearing: N/A	Draft Removal Action Workplan	Department of Toxic Substances Control	** Under review, may submit comments

Key:

= Project has potential environmental justice concerns due to the nature and/or location of the project.

LAC = Los Angeles County, ORC = Orange County, RVC = Riverside County, and SBC = San Bernardino County

Notes:

1. Disposition may change prior to Governing Board Meeting

2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

DRAFT

ATTACHMENT B

ACTIVE PROJECTS WITH CONTINUED REVIEW OF ENVIRONMENTAL DOCUMENTS PREPARED BY OTHER PUBLIC AGENCIES

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
Industrial and Commercial ORC230914-01 The DisneylandForward Project	The project consists of modifying the limits of the existing Theme Park and Hotel District boundaries within the existing Disneyland Resort Specific Plan (DRSP) perimeter, renaming Districts within the DRSP, and establishing Overlays for Disney’s Anaheim Resort Specific Plan No. 92-2 (ARSP) Properties. The project is bordered generally by East Ball Road to the north, State Route 57 to the east, State Route 22 to the south, and South West Street to the west. Comment Period: 9/14/2023 - 10/30/2023 Public Hearing: 10/9/2023	Draft Subsequent Environmental Impact Report	City of Anaheim	**Under review, may submit comments
Plans and Regulations LAC230816-01 Boyle Heights Community Plan Update#	The project consists of updating the Community's General Plan to develop policies, goals, and guidelines for housing, land use, rezoning, transportation, open space, circulation, mobility, and economic development elements with a planning horizon of 2040 encompassing 6.67 square miles. The project boundaries are the unincorporated areas of Los Angeles County to the north and west, City of Los Angeles to the east, and City of Vernon to the south within the designated AB 617 East Los Angeles, Boyle Heights, and West Commerce community. Reference LAC220802-02 and LAC160906-08 Staff previously provided comments on the Draft Environmental Impact Report for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2022/october/LAC220802-02w.pdf . Comment Period: N/A Public Hearing: N/A	Final Environmental Impact Report	City of Los Angeles	**Under review, may submit comments
Plans and Regulations LAC230927-05 Harbor LA Community Plans Update#	The project consists of amending the General Plan Land Use Maps, adopting several zoning ordinances, and rezoning all parcels to apply development standards. The project encompasses the communities of Harbor Gateway and Wilmington-Harbor City that are bounded by Interstate 105 to the north, Interstate 710 to the east, State Route 47 to the south, and City of Torrance to the west within the designated AB 617 Wilmington, Carson, West Long Beach community. Reference LAC190814-03 Staff previously provided comments on the Notice of Preparation for the project, which can be accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/september/LAC190814-03.pdf . Comment Period: 9/21/2023 - 11/20/2023 Public Hearing: 11/9/2023	Draft Environmental Impact Report	City of Los Angeles	**Under review, may submit comments

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ATTACHMENT B
ACTIVE PROJECTS WITH CONTINUED REVIEW OF ENVIRONMENTAL DOCUMENTS PREPARED BY
OTHER PUBLIC AGENCIES

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
Warehouse & Distribution Centers RVC230927-09 Legacy Highlands	The project consists of subdividing 1,414.66 acres, amending the General Plan land use designation, annexing 1,431.66 acres into the City limits, and pre-zoning for 1,431.66 acres. The project also consists of a Specific Plan to allow for 10,023,800 to 20,228,000 square feet of industrial use, 143,000 square feet of commercial use, and 602.26 acres of open space on 1,431.66 acres. The project is located near the southeast corner of State Route 60 and Potrero Boulevard. Reference RVC221115-09, RVC220913-04, RVC220809-07 and RVC220601-06 https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230927-09.pdf Comment Period: 9/27/2023 - 10/19/2023 Public Hearing: N/A	Site Plan	City of Beaumont	Comment letter sent on 10/14/2023
Warehouse & Distribution Centers RVC230927-10 Ethanac Logistics Center Project	The project consists of constructing a 412,348 square foot warehouse on 20 acres and improving offsite storm drain facilities and roadways. The project is located on the northeast corner of Trumble Road and Ethanac Road. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230927-10.pdf Comment Period: 9/22/2023 - 10/23/2023 Public Hearing: 10/18/2023	Notice of Preparation	City of Perris	Comment letter sent on 10/23/2023
Warehouse & Distribution Centers RVC230927-12 Pre-Application Review No. 230068 (PAR230068)	The project consists of constructing a 176,200 square foot warehouse on 9.46 acres. The project is located on the southeast of Placentia Avenue and Tobacco Road in Perris. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230927-12.pdf Comment Period: 9/27/2023 - 10/4/2023 Public Hearing: 10/5/2023	Preliminary Review	Riverside County	Comment letter sent on 10/4/2023
Industrial and Commercial SBC230920-09 El Camino Project (Primary Case File No. DRC2023-00067)	The project consists of the following two options on a 30.11 acre-site: 1) demolishing 175,685 square feet of existing structures and constructing 992,331 square feet of buildings; or 2) demolishing 237,895 square feet of existing structures, redeveloping 32,890 square feet of remaining structures, and constructing a 40,085 square foot beverage distribution facility. The project is located near the northeast corner of Haven Avenue and 6th Street. Reference SBC230823-07 https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/SBC230920-09.pdf Comment Period: 9/14/2023 - 10/14/2023 Public Hearing: 9/28/2023	Revised Notice of Preparation	City of Rancho Cucamonga	Comment letter sent on 10/14/2023

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2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

ATTACHMENT B
ACTIVE PROJECTS WITH CONTINUED REVIEW OF ENVIRONMENTAL DOCUMENTS PREPARED BY
OTHER PUBLIC AGENCIES

SOUTH COAST AQMD LOG-IN NUMBER PROJECT TITLE	PROJECT DESCRIPTION	TYPE OF DOC.	LEAD AGENCY	COMMENT STATUS
<i>Waste and Water-related</i> ORC230927-11 Increase in Maximum Daily Operations at Prima Deshecha Landfill	The project consists of increasing the permitted daily maximum tonnage of waste received at the Landfill from 4,000 tons per day (TPD) to 8,000 TPD and allowing 36 operational emergency days on which the 8,000 TPD limit could be exceeded on 1,530 acres. The project is located at 32250 La Pata Avenue near the southeast corner of La Pata Avenue and Stallion Ridge in San Juan Capistrano. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/ORC230927-11.pdf Comment Period: 9/27/2023 - 10/27/2023 Public Hearing: N/A	Notice of Preparation	County of Orange Waste & Recycling	Comment letter sent on 10/27/2023
<i>Waste and Water-related</i> RVC230920-11 Canyon Lake Water Treatment Plant Phase I Improvements Project	The project consists of demolishing an existing intake pump station, static mixers, a clarifier, and a chemical feed area. The project also consists of constructing an intake pump station, static mixers and sedimentation/flocculation basins, associated equipment, pump stations, and chemical and maintenance buildings. The project borders the City of Lake Elsinore on the southern end of Canyon Lake and is located in Canyon Lake. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230920-11.pdf Comment Period: 9/13/2023 - 10/12/2023 Public Hearing: N/A	Notice of Intent to Adopt a Mitigated Negative Declaration	Elsinore Valley Municipal Water District	Comment letter sent on 10/12/2023
<i>Utilities</i> RVC230927-01 Easley Renewable Energy Project	The project consists of constructing a utility-scale solar photovoltaic electrical generating and storage facility. The project is located in Riverside County, near the northeast corner of Kaiser Road and Oasis Road in Desert Center. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/RVC230927-01.pdf Comment Period: 9/27/2023 - 10/15/2023 Public Hearing: 10/4/2023	Preliminary Review	United States Bureau of Land Management	Comment letter sent on 10/13/2023
<i>Institutional (schools, government, etc.)</i> SBC230920-10 Ontario Regional Sports Complex Subsequent Environmental Impact Report	The project consists of constructing 540,750 square feet of commercial building space, 450,000 square feet of stadium space, and 272,000 square feet of parking structures. The project is located near the northeast corner of Vineyard Avenue and Chino Avenue. https://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/SBC230920-10.pdf Comment Period: 9/15/2023 - 10/16/2023 Public Hearing: 9/27/2023	Notice of Preparation	City of Ontario	Comment letter sent on 10/14/2023
<i>General Land Use (residential, etc.)</i> LAC230906-16 Maribel Transit Priority Project	The project consists of demolishing an existing 38,545 square foot commercial building and constructing 348 residential units and 476,777 square feet of commercial uses on approximately 22.48 acres. The project boundaries are multi-family residences to the north, Cloverdale Avenue to the east, Wilshire Boulevard to the south, and Cochran Avenue to west. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2023/october-2023/LAC230906-16.pdf Comment Period: 8/31/2023 - 10/2/2023 Public Hearing: N/A	Notice of Preparation	City of Anaheim	Comment letter on 10/1/2023

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Notes:

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2. Documents received by the CEQA Intergovernmental Review program but not requiring review are not included in this report.

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**ATTACHMENT C
PROPOSED AIR PERMIT PROJECTS FOR
WHICH SOUTH COAST AQMD IS CEQA LEAD
AGENCY THROUGH OCTOBER 31, 2023**

PROJECT DESCRIPTION	PROPONENT	TYPE OF DOCUMENT	STATUS	CONSULTANT
<p>Quemetco is proposing to modify existing South Coast AQMD permits to allow the facility to recycle more batteries and to eliminate the existing daily idle time of the furnaces. The proposed project will increase the rotary feed drying furnace feed rate limit from 600 to 750 tons per day and increase the amount of total coke material allowed to be processed. In addition, the project will allow the use of petroleum coke in lieu of or in addition to calcined coke, and remove one existing emergency diesel-fueled internal combustion engine (ICE) and install two new emergency natural gas-fueled ICEs.</p>	<p>Quemetco</p>	<p>Environmental Impact Report (EIR)</p>	<p>The Draft EIR was released for a 124-day public review and comment period from October 14, 2021 to February 15, 2022 and approximately 200 comment letters were received.</p> <p>Staff held two community meetings, on November 10, 2021 and February 9, 2022, which presented an overview of the proposed project, the CEQA process, detailed analysis of the potentially significant environmental topic areas, and the existing regulatory safeguards. Written comments submitted relative to the Draft EIR and oral comments made at the community meetings, along with responses will be included in the Final EIR which is currently being prepared by the consultant.</p> <p>After the Draft EIR public comment and review period closed, Quemetco submitted additional applications for other permit modifications which are also being evaluated by staff.</p>	<p>Trinity Consultants</p>
<p>Sunshine Canyon Landfill is proposing to modify its South Coast AQMD permits for its active landfill gas collection and control system to accommodate the increased collection of landfill gas. The proposed project will: 1) install two new low emission flares with two additional 300-horsepower electric blowers; and 2) increase the landfill gas flow limit of the existing flares.</p>	<p>Sunshine Canyon Landfill</p>	<p>Subsequent Environmental Impact Report (SEIR)</p>	<p>South Coast AQMD staff reviewed and provided comments on the preliminary air quality analysis, health risk assessment (HRA), and Preliminary Draft SEIR which are currently being addressed by the consultant.</p>	<p>SCS Engineers</p>
<p>Tesoro is proposing to modify its Title V permit to: 1) add gas oil as a commodity that can be stored in three of the six new crude oil storage tanks at the Carson Crude Terminal (previously assessed in the May 2017 Final EIR); and 2) drain, clean and decommission Reservoir 502, a 1.5 million barrel concrete lined, wooden-roof topped reservoir used to store gas oil.</p>	<p>Tesoro Refining & Marketing Company, LLC (Tesoro)</p>	<p>Addendum to the Final Environmental Impact Report (EIR) for the May 2017 Tesoro Los Angeles Refinery Integration and Compliance Project (LARIC)</p>	<p>The consultant provided a Preliminary Draft Addendum, which is undergoing South Coast AQMD staff review.</p>	<p>Environmental Audit, Inc.</p>

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 20

REPORT: Stationary Source Committee

SYNOPSIS: The Stationary Source Committee held a hybrid meeting on Friday, November 17, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Mayor Larry McCallon, Chair
Stationary Source Committee

JA:cr

Committee Members

Present: Mayor Larry McCallon, Committee Chair
Supervisor Holly J. Mitchell, Committee Vice Chair
Chair Vanessa Delgado
Vice Chair Michael A. Cacciotti
Councilmember José Luis Solache
Board Member Veronica Padilla-Campos

Call to Order

Chair McCallon called the meeting to order at 10:30 a.m.

For additional information of the Stationary Source Committee Meeting, please refer to the [Webcast](#).

Roll Call

INFORMATIONAL ITEM S:

- 1. Update on Proposed Amended Rule 1180 – Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities and Proposed Rule 1180.1 – Fenceline and Community Air Monitoring for Other Refineries**
Heather Farr, Planning & Rules Manager/Planning, Rule Development and Implementation, provided a summary of the latest changes to Rule 1180 and proposed Rule 1180.1 regarding applicability and air monitoring requirements since presenting at the Stationary Source Committee on September 15, 2023. For additional details please refer to the [Webcast](#) beginning at 8:00.

Board Member Padilla-Campos asked and received confirmation that the root cause analysis requirement is currently required by the rule, inquired how related facilities is determined, requested staff to consider shorter timelines for plan submittals and fenceline air monitoring system installations, and urged staff to consider more community requests. For additional details please refer to the [Webcast](#) beginning at 15:50.

Vice Chair Cacciotti asked for clarification on the 310,000-barrel capacity exemption. Councilmember Solache asked for clarification on the inclusion of hydrogen plants and whether the requirements are enforced. For additional details please refer to the [Webcast](#) beginning at 17:32.

Cindy, Paola, and Cristal, East Yard Communities for Environmental Justice, opposed extending timelines for fenceline air monitoring plan submittals and fenceline air monitoring system installation as well as providing an exemption for low emission tank terminals. For additional details please refer to the [Webcast](#) beginning at 18:55.

Byron Chan, Earthjustice, raised a concern about the applicability criteria of 50 percent product related to non-local refineries and the low emission tank exemption. For additional details please refer to the [Webcast](#) beginning at 21:41.

Harvey Eder, Public Solar Power Coalition, also opposed applicability criteria of 50 percent. For additional details please refer to the [Webcast](#) beginning at 24:49.

Chair Delgado and Committee Vice Chair Mitchell sought clarification on the rule schedule and if the public has been provided enough time to review recent updates. For additional details please refer to the [Webcast](#) beginning at 34:12.

Staff responded to comments regarding timelines, exemptions, and scheduled hearing dates. For additional details please refer to the [Webcast](#) beginning at 39:56.

2. Proposed Amended Rule 461.1 – Gasoline Transfer and Dispensing for Mobile Fueling Operations

Michael Krause, Assistant Deputy Executive Officer/Planning, Rule Development and Implementation, provided a summary of proposed amended Rule 461.1 to clarify that mobile fuelers dispensing aviation gasoline are exempt from the rule to align with the original intent and applicability of the rule. For additional details please refer to the [Webcast](#) beginning at 42:02.

Vice Chair Cacciotti asked for clarification regarding the responsible agency that monitors and permits the dispensing of aviation gasoline at small and large airports. Board Member Padilla-Campos sought further clarification on how aviation gasoline

dispensing is regulated as well as those filling containers with gasoline. For additional details please refer to the [Webcast](#) beginning at 45:32.

Staff clarified aviation gasoline is used only for small aircraft, whereas commercial aircraft located at large airports use jet fuel which is not subject to proposed amended Rule 461.1. In addition, Jason Aspell, Deputy Executive Officer/Engineering and Permitting, clarified that emissions from mobile fuelers dispensing aviation gasoline are evaluated by South Coast AQMD during the permitting process. For additional details please refer to the [Webcast](#) beginning at 46:14.

There were no public comments.

3. Quarterly Permitting Update for Implementation of Rule 1109.1 - Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations

Bhaskar Chandan, Senior Engineering Manager/Engineering and Permitting, presented the quarterly Rule 1109.1 permitting updates. For additional details please refer to the [Webcast](#) beginning at 52:09.

Staff recommended providing quarterly written reports to the Committee starting next year and one annual presentation. Mayor McCallon approved the staff recommendation. For additional details please refer to the [Webcast](#) beginning at 1:01:41.

Vice Chair Cacciotti inquired if the Marathon permitting Boiler project was related to the project discussed a few months back at the Stationary Source Committee meeting. Mr. Chandan clarified that the current Boiler permitting project was at the Wilmington Refinery and was separate from the project that was previously discussed that involved shutting down a rotary kiln at a different location. For additional details please refer to the [Webcast](#) beginning at 1:01:53.

Mr. Eder commented about the February 8, 2019, Administrative Committee and claimed testimony was purged from the record. For additional details please refer to the [Webcast](#) beginning at 1:02:35.

4. Annual Progress Report for Assembly Bill 617 (AB 617) Community Emission Reductions Plans (CERPs)

Uyen-Uyen Vo, Planning and Rules Manager/Diversity, Equity & Inclusion with Community Air Programs, provided an overview of the 2023 AB 617 Annual Progress Report For additional details please refer to the [Webcast](#) beginning at 1:05:03.

Board Member Padilla-Campos thanked staff for collaborating with the community and noted that the Spanish translation on the presentation was appreciated. Board Member Padilla-Campos also highlighted the reoccurring comment regarding text

message notifications for the community and supported staff in incorporating text message notifications in rules. Additionally, Board Member Padilla-Campos commended the efforts in highlighting each community's priorities. For additional details please refer to the [Webcast](#) beginning at 1:14:54.

Committee Vice Chair Mitchell supported Board Member Padilla-Campos' comments and asked if the percentage of work completed was sufficient or if there were improvements to be made. Executive Officer Wayne Nastri replied that the results should be better, and staff are trying to accelerate and prioritize actions in collaboration with the communities. Mr. Nastri emphasized the importance of providing results as the legislature is looking at the program to ensure funding is spent expediently and effectively, and staff will continue to work towards these goals. For additional details please refer to the [Webcast](#) beginning at 1:16:08.

Krystal Otworth, Leadership Counsel for Justice and Accountability and Eastern Coachella Valley CSC member, thanked staff for facilitating the All-CSC Annual Progress Report meetings. Ms. Otworth provided four comments regarding the 2023 AB 617 Annual Progress Report, Community Air Monitoring Plans, and calculation of emission reductions. Ms. Otworth appreciated staff increasing the comment period to two weeks but recommended a minimum 30-day public comment period to allow sufficient time for the public to review and comment. For additional details please refer to the [Webcast](#) beginning at 1:17:45.

WRITTEN REPORTS :

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

The report was acknowledged by the committee.

6. Notice of Violation Penalty Summary

The report was acknowledged by the committee.

OTHER MATTERS :

7. Other Business

There was no other business to report.

8. Public Comment Period

Darby Gottlieb, AdvaMed, commented that proposed amended Rule 1405 should be changed to prevent disruptions to patient access to medical technology and stakeholders have urged the Board and Committee to be cautious when adopting these regulations. She stated that The Hospital Association of Southern California, San Antonio Regional Hospital in Upland, several Chambers of Commerce, Veterinary Hospitals, the Healthcare Distribution Alliance and Healthcare Industry Distributors Association are concerned about the impact of this rule. For additional details please refer to the [Webcast](#) beginning at 1:22:23.

Mr. Eder expressed concerns about the 2016 AQMP plan and the recently released Federal Government Climate plan. For additional details please refer to the [Webcast](#) beginning at 1:25:02.

9. Next Meeting Date

The next Stationary Source Committee meeting is scheduled for Friday, January 19, 2024 at 10:30 a.m.

Adjournment

The meeting was adjourned at 11:56 a.m.

Attachments

1. Attendance Record
2. 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
3. Notice of Violation Penalty Summary

ATTACHMENT 1

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
STATIONARY SOURCE COMMITTEE**

Attendance –November 17, 2023

Councilmember Michael A. Cacciotti	South Coast AQMD Board Member
Senator Vanessa Delgado (Ret).....	South Coast AQMD Board Member
Mayor Larry McCallon	South Coast AQMD Board Member
Supervisor Holly J. Mitchell	South Coast AQMD Board Member
Board Member Veronica Padilla-Campos.....	South Coast AQMD Board Member
Councilmember José Luis Solache.....	South Coast AQMD Board Member
Uduak-Joe Ntuk.....	Board Consultant (Solache)
Andrew Silva.....	Board Consultant (Dawson)
Mark Taylor	Board Consultant (Rodriguez)
Mark Abramowitz.....	Community Environmental Services
Byron Chan.....	Earthjustice
Chris Chavez.....	Coalition for Clean Air
Curtis Coleman.....	Southern California Air Quality Alliance
Ramine Cromartie.....	WSPA
Harvey Eder.....	Public Solar Power Coalition
Darbi Gottlieb.....	AdvaMed
Bill LaMarr.....	California Alliance of Small Business Associations
Krystal Otworth.....	Leadership Counsel for Justice and Accountability
Peter Whittingham.....	Whittingham Public Affairs Advisors
Derrick Alatorre	South Coast AQMD staff
Jason Aspell	South Coast AQMD staff
Barbara Baird.....	South Coast AQMD staff
Bhaskar Chandan.....	South Coast AQMD staff
Heather Farr.....	South Coast AQMD staff
Bayron Gilchrist.....	South Coast AQMD staff
Sheri Hanizavareh.....	South Coast AQMD staff
Anissa Heard-Johnson.....	South Coast AQMD staff
Michael Krause.....	South Coast AQMD staff
Howard Lee.....	South Coast AQMD staff
Terrance Mann.....	South Coast AQMD staff
Ron Moskowitz.....	South Coast AQMD staff
Susan Nakamura.....	South Coast AQMD staff
Wayne Nastri.....	South Coast AQMD staff
Sarah Rees.....	South Coast AQMD staff
Catherine Rodriguez.....	South Coast AQMD staff
Lisa Tanaka O’Malley.....	South Coast AQMD staff
Uyen-Uyen Vo.....	South Coast AQMD staff
Paul Wright.....	South Coast AQMD staff

November 2023 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. Key activities with U.S. EPA and CARB since the last report are summarized below.

- RECLAIM/NSR Working Group meeting was not held in November
- RECLAIM/NSR Quarterly Report was presented to Stationary Source Committee on October 20, 2023
- Next meeting scheduled for December 14, 2023 to discuss the latest considerations for proposed amendments to Regulation XIII and XX

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

Settlement Penalty Report (10/01/2023 - 10/31/2023)

Total Penalties

Civil Settlement: \$418,385.50
MSPAP Settlement: \$119,777.28

Total Cash Settlements: \$538,162.78

Fiscal Year through 10/31/2023 Cash Total: \$1,654,477.28

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
Civil						
45489	ABBOTT CARDIOVASCULAR SYSTEMS, INC.	3002	10/11/2023	KCM	P75409	\$2,850.00
188973	AID BUILDERS, INC.	1403, 40 CFR 61.145	10/03/2023	EC	P65049	\$32,000.00
101656	AIR PRODUCTS AND CHEMICALS, INC.	1118, 1173	10/03/2023	RM	P63394, P63395, P65096	\$7,020.00
800196	AMERICAN AIRLINES, INC.	2004	10/04/2023	DH	P66135, P66147, P76070	\$11,700.00
199754	BLACKGEM PROPERTIES. LLC	1403, 40 CFR 61.145	10/23/2023	EC	P78603	\$900.00
22911	CARLTON FORGE WORKS	2004, 3002	10/19/2023	DH	P68316, P69535, P69799, P74265	\$40,521.00
196236	CET CONSTRUCTION CO, INC.	1403	10/04/2023	ND	P76102, P76103, P76104	\$25,000.00
127800	COLLISION EXPERTS	203	10/13/2023	SH	P69915, P76254	\$500.00
182561	COLTON POWER, LP	218, 218.1, 2004, 2012, 3002	10/19/2023	DH	P66085, P66096, P66098, P68680	\$14,638.00
19823	CREE OIL LTD (RIEDEL LEASE)	203, 1148.1, 1173	10/18/2023	JL	P69293, P73268	\$9,953.00
10983	EASTERN MUNICIPAL WATER DISTRICT	1403	10/05/2023	ND	P76101	\$3,500.00
190276	IRVINE RANCH MARKET	1415.1	10/26/2023	BT	P67022	\$32,000.00
77084	KAISER PERMANENTE HOSPITAL	203	10/25/2023	KCM	P66803, P66836	\$1,000.00
68968	LA CO., ISD/NETWORK SERVICES DIVISION	H&S 42402	10/18/2023	JL	P73039	\$500.00
200614	LA STRADA PIPELINE, INC.	403	10/04/2023	JL	P79302	\$3,513.00
197900	LB3	403	10/18/2023	MR	P75413, P75416	\$3,500.00
190670	NORMA OVIEDO	1403	10/19/2023	NS	P69208, P69209, P69210, P69211	\$10,000.00
113091	P&M OIL COMPANY	203, 463, 1148.1	10/04/2023	RM	P69260, P73301, P73304, P75663	\$9,150.00
173488	PG&J ENVIRONMENTAL	221, 1403, 40 CFR 61.145	10/13/2023	RM	P67499, P69831, P69843, P70529, P74583, P78958	\$27,752.00
17953	PACIFIC CLAY PRODUCTS, INC.	2004, 2012, 3002	10/24/2023	JL	P73510, P79204	\$9,350.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
140552	PERFORMANCE COMPOSITES, INC.	3002	10/03/2023	KCM	P69547, P75313	\$4,900.00
123391	PLASKOLITE, INC.	203, 402, H&S 41700	10/04/2023	JL	P73696, P76356	\$7,026.00
167402	REPUBLIC SERVICES, INC.	403	10/10/2023	JL	P76401	\$2,342.00
147968	S&K STATE STREET SERVICE, INC.	461	10/04/2023	JL	P70182	\$935.00
192073	S&S COASTAL FOODS, LLC	1403, 40 CFR 61.145	10/03/2023	NAS	P70411	\$6,282.50
4242	SAN DIEGO GAS & ELECTRIC	1110.2, 2004, 2012, 2012 Appendix A, 3002	10/03/2023	SH	P66073, P66080, P73206, P73322, P73336	\$37,500.00
184301	SENTINEL PEAK RESOURCES CALIFORNIA, LLC	1148.2, 2004	10/03/2023	RM	P69299, P74257, P74266	\$11,335.00
117851	SHORE TERMINALS, LLC	203, 1173	10/04/2023	MR	P74067, P74077, P74078	\$18,000.00
159612	SIGNATURE FLIGHT SUPPORT	203, 461	10/10/2023	JL	P62787, P67743	\$2,341.00
36644	SO ORANGE CO. WASTEWATER AUTHORITY	H&S 42402	10/03/2023	DH	P74713	\$351.00
137508	TONOGA INC, DBA TACONIC	2004, 2012, 2012 Appendix A	10/24/2023	SP	P70020, P78701	\$75,000.00
800265	UNIV OF SO CAL (EIS & NSR USE ONLY)	3002	10/19/2023	EC	P73564	\$1,171.00
193323	ZENITH ENERGY WEST COAST TERMINALS, LLC	463, 2004	10/04/2023	JL	P68678, P75505	\$5,855.00
Total Civil Settlements : \$418,385.50						

MSPAP						
187567	ARCO AM/PM TESORO REFINING & MKTG CO.	203, 461	10/13/2023	VA	P70195	\$3,786.00
194399	ATC SEQUOIA, LLC	203	10/13/2023	CL	P63990	\$971.00
161900	BEVERLY HILLS OIL, INC.	461, H&S 41960.2	10/06/2023	CL	P77703	\$1,456.00
154539	BLVD 5, INC.	461	10/13/2023	CL	P72981	\$459.00
43214	CAL HWY PATROL	461	10/06/2023	CL	P78552	\$1,381.00
194295	CALIFORNIA TOWER, INC.	203	10/13/2023	CL	P63989	\$921.00
51886	CHEVRON DLR	461, H&S 41960.2	10/20/2023	CL	P69898	\$1,531.00
174026	COACHELLA OIL CORP. - BAHMAN NATANZI	461	10/06/2023	CL	P73124	\$1,742.00
184343	DREAM HOLLYWOOD - 6417 SELMA HOTEL	203	10/06/2023	CL	P76514	\$971.00
170654	FOUNTAIN SHELL, INC.	203, 461	10/06/2023	CL	P74848	\$1,380.00
198172	HOTEL DIEU	203	10/27/2023	CL	P76520	\$3,472.78
183247	IMAGE FUEL, INC.	203, 461	10/06/2023	CL	P74850	\$921.00
192127	JD FUEL, INC.	461	10/13/2023	CL	P78652	\$1,927.00
198028	KOIA ANAHEIM FACILITY, LLC	1146	10/06/2023	CL	P75611	\$3,845.00
186084	LA PALMA 76	461	10/06/2023	VA	P78660	\$878.00
194733	LGM PHARMA	3002	10/06/2023	CL	P76403	\$460.00
98247	MAIN ST SERVICE STATION, INC.	203	10/06/2023	CL	P69896	\$671.00
104004	MICROMETALS, INC	3002	10/06/2023	CL	P65658, P69934, P70330	\$8,779.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbrs	Total Settlement
166385	MINA FANAR, INC.	203, 461	10/06/2023	VA	P76165	\$2,108.00
58302	MOBIL DLR, VICHAI SANGNGEONON	203, 461	10/06/2023	VA	P75709	\$5,855.00
183855	MOLLER RETAIL #6120	461	10/06/2023	CL	P69892	\$1,071.00
197311	MRJV	403	10/06/2023	CL	P75411	\$3,684.00
144090	NEW CINGULAR WIRELESS-AT&T MOBILITY	203	10/20/2023	VA	P78306	\$937.00
188581	NOIL USA INC., COWLES	203, 461	10/06/2023	CL	P78668	\$2,052.00
117723	OIL OPERATORS, INC.	203	10/06/2023	CL	P73338	\$971.00
197718	OLTMANS CONSTRUCTION CO	403	10/06/2023	CL	P73819, P76253	\$10,815.00
164999	PILOT TRAVEL CENTERS LLC	461	10/13/2023	VA	P75722	\$2,108.00
153952	PRENA LUCKY 777 MARKET, INC.	461	10/06/2023	CL	P75714	\$6,126.00
111238	RIBOST TERMINAL, LLC.	203	10/06/2023	CL	P74076	\$2,042.00
191206	RIVERSIDE CENTER FOR SPIRITUAL LIVING	1403, 40 CFR 61.145	10/06/2023	CL	P72910	\$7,272.00
155670	SAM'S UNIVERSAL AM/PM	461	10/06/2023	CL	P74840	\$1,531.00
46484	SAROYAN LUMBER, CO.	402, 1137, H&S 41700	10/06/2023	CL	P73884	\$6,126.00
169990	SPS TECHNOLOGIES, LLC	3002	10/06/2023	CL	P75803	\$1,155.00
137899	STUDIO CITY 76	461, H&S 41960.2	10/06/2023	CL	P77709	\$1,531.00
183653	UNITED ROCK PRODUCTS CORP.	403	10/20/2023	CL	P74468, P74469	\$13,594.00
194208	USC VERDUGO HILLS HOSPITAL	1146, 1470	10/06/2023	CL	P76508	\$10,681.00
167466	WOANNA, INC.	203, 461	10/06/2023	VA	P78656	\$2,195.00
11369	WORTMANN OIL ,CO.	461	10/06/2023	CL	P72979	\$766.00
140890	Y.S.T., INC.	203, 461	10/20/2023	CL	P77718	\$1,606.00
Total MSPAP Settlements: \$119,777.28						

**SOUTH COAST AQMD'S RULES AND REGULATIONS INDEX
FOR OCTOBER 2023 PENALTY REPORT**

REGULATION II - PERMITS

- Rule 203 Permit to Operate
- Rule 218 Continuous Emission Monitoring
- Rule 218.1 Continuous Emission Monitoring Performance Specifications
- Rule 221 Plans

REGULATION IV - PROHIBITIONS

- Rule 402 Nuisance
- Rule 403 Fugitive Dust - *Pertains to solid particulate matter emitted from man-made activities.*
- Rule 461 Gasoline Transfer and Dispensing
- Rule 463 Storage of Organic Liquids

REGULATION XI - SOURCE SPECIFIC STANDARDS

- Rule 1110.2 Emissions from Gaseous- and Liquid-Fueled Internal Combustion Engines
- Rule 1118 Emissions from Refinery Flares
- Rule 1137 PM10 Emission Reductions from Woodworking Operations
- Rule 1146 Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters
- Rule 1148.1 Oil and Gas Production Wells
- Rule 1148.2 Hydraulic Fracturing of Oil and Gas Wells
- Rule 1173 Fugitive Emissions of Volatile Organic Compounds

REGULATION XIV - TOXICS

- Rule 1403 Asbestos Emissions from Demolition/Renovation Activities
- 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
- Rule 2012 Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions
- Rule 2012
- Appendix A Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions

**SOUTH COAST AQMD'S RULES AND REGULATIONS INDEX
FOR OCTOBER 2023 PENALTY REPORT**

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

41700 Prohibited Discharges

41960.2 Gasoline Vapor Recovery

42402 Violation of Emission Limitations – Civil Penalty

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 21

REPORT: Technology Committee

SYNOPSIS: The Technology Committee held a hybrid meeting on Friday, November 17, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Carlos Rodriguez, Chair
Technology Committee

AK:psc

Committee Members

Present: Councilmember Carlos Rodriguez, Committee Chair
Supervisor Curt Hagman
Mayor Patricia Lock Dawson
Mayor Larry McCallon
Board Member Veronica Padilla-Campos

Absent: Supervisor Andrew Do

Call to Order

Committee Chair Carlos Rodriguez called the meeting to order at 12:00 p.m.

For additional details of the Technology Committee Meeting, please refer to the [Webcast](#)

ACTION ITEMS:

1. Establish Special Revenue Fund, Recognize Revenue, Execute Contracts and Reimburse General Fund to Demonstrate Fuel Cell Locomotive and Deploy Heavy-Duty Truck Charging and Fueling Infrastructure

South Coast AQMD has been awarded up to \$76,250,003 from California State Transportation Agency's (CalSTA) Port and Freight Infrastructure Program to demonstrate a short line hydrogen fuel cell locomotive and deploy direct current fast

chargers and hydrogen refueling dispensers. South Coast AQMD has also been allocated \$500,000 through the DOE through a FY 23 Congressional Direct Spending Request for the project. These actions are to: 1) establish the CalSTA Special Revenue Fund (89) and recognize, upon receipt, revenue up to \$76,250,003 from CalSTA and up to \$500,000 from DOE into Fund (89); 2) execute contracts with Wabtec Corporation for up to \$34,188,480 from CalSTA Special Revenue Fund (89) and Prologis Mobility LLC for up to \$38,930,570 from CalSTA Special Revenue Fund (89) and up to \$11,679,171 from MSRC Fund (23); and 3) reimburse the General Fund up to \$3,630,953 from CalSTA Special Revenue Fund (89) to administer these projects.

Mayor McCallon and Supervisor Hagman commented that they do not have a financial interest but are required to identify for the record that Mayor McCallon is the Chair and Supervisor Hagman is a member of the Mobile Source Air Pollution Reduction Committee, which is involved in this item.

Mayor McCallon inquired if staff plans to coordinate with the Federal Railroad Administration (FRA) to deploy the Fuel Cell Locomotive on regular rail lines. Mei Wang, Assistant Deputy Executive Officer/Technology Advancement, responded that Wabtec had initiated the discussions with FRA and that South Coast AQMD, Wabtec and the Ports regularly meet to discuss approval plans and permitting. Aaron Katzenstein, Deputy Executive Officer/Technology Advancement, also noted that in a recent visit to Washington D.C., staff met with FRA about this project. For additional details please refer to the [Webcast](#) beginning at 11:25.

Mayor Lock Dawson inquired about the timeline for the completion of the fueling stations. Ms. Wang responded that all the charging and refueling stations will be commissioned and operated in 2025.

Harvey Eder, Public Solar Power Coalition, commented that hydrogen has been against the law in the State of CA for over 40 years. He mentioned that the energy sources need to be 100 percent renewable and solar. For additional details, please refer to the [Webcast](#) beginning at 13:55.

Committee Chair Rodriguez inquired whether modeling has been performed to show the emissions reduction achieved through hydrogen fuel cell locomotive and Prologis charging and fueling infrastructure projects. Dr. Katzenstein stated that emission reductions have been estimated for the project, but he did not have the information readily available. He noted he could provide the information later and added that the Prologis Project could serve up to 2,000 zero-emission trucks initially and up to 16,000 trucks over time. Committee Chair Rodriguez asked that staff have the emission reductions for the project at the Board meeting. For additional details please refer to the [Webcast](#) beginning at 14:60.

Mayor McCallon inquired about the number of sites that will be using linear generators. Dr. Katzenstein stated that all the sites will be using linear generators for backup power to provide resiliency when the grid goes down.

Committee Chair Rodriguez inquired about the implications of these projects for the Warehouse Indirect Source Rule (ISR). Dr. Katzenstein mentioned that part of the Warehouse ISR compliance option is receiving points for zero-emissions truck miles traveled to warehouses. Currently, there is a limitation for zero-emission trucks due to the lack of charging and refueling infrastructure, and this project should facilitate use of more zero-emission trucks to warehouses.

Committee Chair Rodriguez stated it would be good to look for additional Federal and State funds to incentivize zero-emission trucks. Dr. Katzenstein agreed and noted that staff will continue to seek more funding opportunities.

Moved by Lock Dawson; seconded by Rodriguez; unanimously approved.

Ayes: Hagman, Lock Dawson, McCallon, Padilla-Campos, Rodriguez
Noes: None
Absent: Do

2. Issue Program Announcement and Execute Agreements for Zero Emission Infrastructure Projects

Zero-emission infrastructure for medium- and heavy-duty trucks is critical to support the transition to zero emission technologies. These actions are to: (1) Issue a Program Announcement to solicit applications for eligible infrastructure projects to support zero-emission medium and heavy-duty vehicles and equipment in the South Coast Air Basin, and (2) execute agreements for eligible projects based on the results of the Program Announcement. Funding will be provided by the Carl Moyer Program Fund (32), AB 617 Community Air Protection Program Fund (77) and other funding sources as they become available.

Board Member Padilla-Campos inquired about the division of funds between Carl Moyer and AB 617 and when the projects must be completed. Dr. Katzenstein explained that the division of funds is not known, but there will be AB 617 funds available for projects located in those communities. The Carl Moyer funds mentioned in the action are from a prior year allocation (Year 22) with a tight liquidation deadline. For additional details, please refer to the [Webcast](#) beginning at 25:37.

Committee Chair Rodriguez asked about the outreach plan for this solicitation, clarification on the \$100 million in the presentation, and whether these funds will be applicable for vehicle grants. Dr. Katzenstein, explained that in addition to the normal postings, staff are aware of the interested parties and will reach out to these parties directly.

Mr. Eder commented on equity policies and a funding set aside for AB 617 communities. For additional details, please refer to the [Webcast](#) beginning at 28.33.

Moved by Padilla-Campos; seconded by Hagman; unanimously approved.

Ayes: Hagman, Lock Dawson, McCallon, Padilla-Campos, Rodriguez
Noes: None
Absent: Do

OTHER MATTERS:

3. Other Business

There was no other business to report.

4. Public Comment Period

Mr. Eder expressed concerns regarding equity for infrastructure. For additional details, please refer to the [Webcast](#) beginning at 39:45.

5. Next Meeting Date

The next regular Technology Committee meeting is scheduled for Friday, December 15, 2023, at noon.

Adjournment

The meeting adjourned at 12:45 p.m.

Attachment

Attendance Record

ATTACHMENT

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
TECHNOLOGY COMMITTEE MEETING
Attendance Record – November 17, 2023**

Mayor Patricia Lock Dawson.....	South Coast AQMD Board Member
Supervisor Curt Hagman.....	South Coast AQMD Board Member
Mayor Larry McCallon.....	South Coast AQMD Board Member
Board Member Veronica Padilla-Campos	South Coast AQMD Board Member
Councilmember Carlos Rodriguez.....	South Coast AQMD Board Member
Tom Gross.....	Board Consultant (Lock Dawson)
Ron Ketcham.....	Board Consultant (Lock Dawson)
Fred Minassian.....	Board Consultant (Padilla-Campos)
Mark Taylor.....	Board Consultant (Rodriguez)
Mark Abramowitz.....	Public Member
Sarai Arellano.....	Public Member
Nikki Bassi.....	Public Member
William Carnegie.....	Public Member
Harvey Eder.....	Public Solar Power Coalition
Jasmine Beltran Elisa.....	Public Member
Molly HanFland.....	Public Member
Philip Moslener.....	Public Member
Christopher Murphy.....	Public Member
Pinakin Patel.....	T2M
Catherine Smith.....	Public Member
Xian-Liang Tian.....	Public Member
Greg Wright.....	WabTec
Debra Ashby.....	South Coast AQMD Staff
Lara Brown.....	South Coast AQMD Staff
Laurence Brown.....	South Coast AQMD Staff
Penny Shaw Cedillo.....	South Coast AQMD Staff
Phillip Crabbe III.....	South Coast AQMD Staff
Scott Gallegos.....	South Coast AQMD Staff
Bayron Gilchrist.....	South Coast AQMD Staff
De Groeneveld.....	South Coast AQMD Staff
Alex Han.....	South Coast AQMD Staff
Sheri Hanizavareh.....	South Coast AQMD Staff
Lauren Henninger.....	South Coast AQMD Staff
Gillian Kass.....	South Coast AQMD Staff
Aaron Katzenstein.....	South Coast AQMD Staff

Angela Kim.....	South Coast AQMD Staff
Tom Lee	South Coast AQMD Staff
Ron Moskowitz.....	South Coast AQMD Staff
Susan Nakamura.....	South Coast AQMD Staff
Wayne Natri.....	South Coast AQMD Staff
Vasileios Papapostolou	South Coast AQMD Staff
Kristin Remy.....	South Coast AQMD Staff
Walter Shen.....	South Coast AQMD Staff
Lisa Tanaka O'Malley.....	South Coast AQMD Staff
Mei Wang.....	South Coast AQMD Staff
Paul Wright.....	South Coast AQMD Staff

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 22

REPORT: Mobile Source Air Pollution Reduction Review Committee

SYNOPSIS: The Mobile Source Air Pollution Reduction Review Committee held a hybrid format joint meeting with its Technical Advisory Committee on Thursday, November 16, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Curt Hagman
South Coast AQMD Representative
to MSRC

AK:CR:me

2023 Clean Transportation Achievements in California and Look Ahead to 2024

The MSRC's Programmatic Outreach Coordinator, the Better World Group, presented an overview of this year's state regulatory and legislative clean transportation highlights. Near-term developments, such as the implementation of the Advanced Clean Fleet Rule and amendments to off-road diesel engine standards, were noted which could impact the MSRC's ability to leverage its funding.

MSRC Policies

The MSRC continued discussions of its "Operational Policies and Procedures", including identification of policies that are no longer relevant or applicable. The MSRC's consensus was for staff to bring back a comprehensive list of suggested changes to this policy document.

MSRC Evolution

The MSRC reviewed historical and recent projects with an emphasis on air pollution reductions and cost effectiveness. Potential partnerships with other organizations such as Los Angeles County Metropolitan Transportation Authority were discussed to leverage the MSRC's funding. Specific agreements are expected to be brought forward for MSRC approval within the near term.

[↑ Back to Agenda](#)

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 23

REPORT: California Air Resources Board Monthly Meeting

SYNOPSIS: The California Air Resources Board held a public Board meeting on November 16, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Gideon Kracov, Member
South Coast AQMD Governing Board

ft

The November Board meeting of the California Air Resources Board (CARB or Board) was held on November 16, 2023 in Sacramento, California at the California Environmental Protection Agency Headquarters Building. The key item presented is summarized below.

DISCUSSION ITEM

23-10-1: Public Meeting to Consider the Proposed Fiscal Year 2023-24 Funding Plan for Clean Transportation Incentives

The Board approved the Fiscal Year 2023-24 Funding Plan for Clean Transportation Incentives (Funding Plan). The Funding Plan covers nearly \$624 million in clean transportation investments from related funding sources appropriated to the California Air Resources Board in budget bills passed by the Legislature and signed by the Governor. The approved Funding Plan builds on investments from previous budget cycles that were envisioned as multi-year investments, and includes \$140 million for clean transportation equity investments benefiting low income and disadvantaged communities, \$484 million for heavy-duty and off road equipment investments with a set-aside of funds for drayage trucks and school buses. The Funding Plan also continues the funding of the Clean Off-Road Equipment Voucher Incentive Project and the Innovative Small e-Fleets Project, expands the vehicle eligibility list to support electric motorcycles and adaptive equipment for light-duty vehicles, and adjusts the voucher amounts and delaying fleet size limits for heavy-duty vehicle incentives.

Attachment

CARB November 16, 2023 Meeting Agenda

Public Meeting Agenda

Thursday, November 16, 2023 @ 9:00 a.m.

Zoom Webinar: [Register](#)
Phone Number: (669) 900-6833
Webinar ID: 842 1877 8048



arb.ca.gov/ma111623

California Environmental Protection Agency

1001 I Street, Sacramento, California 95814

Byron Sher Auditorium, 2nd Floor

[Webcast](#) (Livestream/Watch Only)

The November 16, 2023, meeting of the California Air Resources Board (CARB or Board) will be held at 1001 I Street in Sacramento, with remote participation also available. This facility is accessible to persons with disabilities and by public transit. For transit information, call (916) 321-BUSS (2877) or visit <http://sacrt.com/>.

To only watch the Board Meeting and not provide verbal comments, please view the [webcast](#). If you do not wish to provide verbal comments, we strongly recommend watching the webcast as this will free up space on the webinar for those who are providing verbal comments. Please do not view the webcast and then switch over to the webinar to comment as the webcast will have a time delay; instead, register to participate via the Zoom webinar.

Public Comment Guidelines and Information

- [In-Person Public Testimony](#)
- [Remote Public Participation](#)

The Board will set a two-minute time limit on verbal comments; however, the amount of time could change at the Chair's discretion.

In-person speakers signed up to comment will be called upon first, followed by public Zoom and phone participants wishing to comment.

The Chair may close speaker sign-ups 30 minutes after the public comment portion of an item has begun.

Spanish interpretation will be available for the November 16, Board Meeting.

- [Agenda de la Reunión Pública](#)
- [Spanish Webcast](#)

Thursday, November 16, 2023 @ 9:00 a.m.

Discussion Item:

Hardcopies of the Public Agenda and Proposed Resolutions (when applicable) will be provided at the meeting; all other documents linked below will only be available upon request.

23-10-1: Public Meeting to Consider the Proposed Fiscal Year 2023-24 Funding Plan for Clean Transportation Incentives

The Board will consider for approval staff's proposed Fiscal Year 2023-24 Funding Plan for Clean Transportation Incentives. This item is exempt from the California Environmental Quality Act.

- [More Information](#)
- [Public Meeting Notice](#)
- [Item Summary](#)
- [Meeting Presentation](#)
- [Proposed Resolution](#)
- [Submit Written Comments](#)
- [View Public Comments](#)

Closed Session

The Board may hold a closed session, as authorized by Government Code section 11126(e), to confer with, and receive advice from, its legal counsel regarding the following pending or potential litigation:

Association of American Railroads et al. v. Randolph et al. United States District Court, Eastern District of California, Sacramento, Case No. 2:23-cv-01154-JAM-JDP.

Bobby Harris v. Nissan North America, Inc. (U.S. District Court, Central District of California, Case No. 2:20 cv 06021 CJC GJS.)

California Air Resources Board v. Best Energy Solutions & Technology Corp. Los Angeles Superior Court, Case No. 22STCV32487.

California Air Resources Board v. Daimler AG and Mercedes-Benz USA, LLC. (United States District Court, District of Columbia, Civil Action No. 1:20 cv 2565.)

California Air Resources Board v. Key Disposal, Inc. and John Katangian Los Angeles Superior Court, Case No. BC650014.

California Natural Gas Vehicle Coalition v. California Air Resources Board, et al., Fresno County Superior Court, Case No. 20CECG02250; industry appeal California Court of Appeal, Fifth District, Case No. F084229.

California Trucking Association v. California Air Resources Board, et al. Fresno County Superior Court, Case No. 22CECG00919.

California Trucking Association v. California Air Resources Board et al., United States District Court for the Eastern District of California, Case No. 2:23-at-01044.

California Trucking Association v. South Coast Air Quality Mgmt. District United States District Court, Central District of California, Case No. 2:21 cv 6341.

Central California Environmental Justice Network, et al. v. Randolph, et al., United States District Court, Eastern District of California, Case No. 2:22 cv 01714 TLN CKD.

Competitive Enterprise Inst. v. NHTSA, United States Court of Appeals, District of Columbia Circuit, Case No. 20-1145, and consolidated cases *State of California v. Wheeler, et al.*, No. 20-1167, and Nos. 20 1168, 20-1169, 20-1173, 20-1174, 20-1176, and 20-1177.

East Yard Communities for Environmental Justice, et al. v. South Coast Air Quality Management District, et al. U.S. District Court, Central District of California, Los Angeles, Case 2:23-cv-06682.

Environmental Defense Fund, et al., v. Andrew Wheeler, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 20 1360.

Federal Energy Regulatory Commission Order 719, Docket No. RM21-14-000.

Friends of Oceano Dunes, Inc. v. California Air Resources Board, et al. (San Luis Obispo County Superior Court, Case No. 17CV-0576) and *Friends of Oceano Dunes, Inc. v. California Air Resources Board, et al.*, U.S. District Court for the Central District of California, Case No. 2:17-cv-0-8733.

GreenPower Motor Company, Inc. v. California Air Resources Board, Sacramento County Superior Court, Case No. 23WM000083

Natural Resources Defense Council v. National Highway Traffic Safety Admin., et al., United States Court of Appeal, District of Columbia Circuit, Case No. 22 1080, consolidated with Nos. 22 1144, 22 1145.

People ex rel. California Air Resources Board v. Noil Energy Group, Inc. & Speedy Fuel, Inc. Los Angeles Superior Court Case Nos. 20STCV30142/20STCV30292.

People ex rel. California Air Resources Board v. Wholesale Harvest Supply, Inc. Mendocino County Superior Court, Case No. 22CV00491.

People v. Southern California Gas Company. (Los Angeles Superior Court, Case No. BC602973.)

South Coast Air Quality Management District v. City of Los Angeles, et al., Los Angeles County Superior Court, Case No. 20STCP02985; transferred to San Diego County Superior Court, Case No. 37-2021-00023385-CU-TT-CTL.

Possible litigation challenging U.S. Environmental Protection Agency's grant of waivers of preemption under the Clean Air Act to the California Air Resources Board.

State of California v. Andrew Wheeler et. al., District of Columbia Circuit, Case No. 19 1239, consolidated under No. 19 1230 along with other cases.

State of California v. Andrew Wheeler, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 20-1167.

State of California, et al. v. David Bernhardt, et al., United States District Court, Northern District of California, Case No. 3:18 cv 5712 DMR; United States Court of Appeals, Ninth Circuit, Case No. 20 16793.

State of California, et al. v. United States Environmental Protection Agency, United States Court of Appeals for the District of Columbia Circuit - Case No. 21-1034, consolidated with *California Communities Against Toxics et al. v. EPA*, Case No. 21-1024.

State of California, et al. v. United States Environmental Protection Agency, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 21-1014.

State of California, et al. v. United States Environmental Protection Agency, United States Court of Appeals, District of Columbia Circuit, Case No. 21-1018.

State of California, et al. v. United States Environmental Protection Agency, United States Court of Appeals, District of Columbia Circuit, Case No. 23-1020.

State of Massachusetts v. EPA, United States Court of Appeals, District of Columbia Circuit, Case No. 20-1265.

State of New York, et al. v. United States Environmental Protection Agency, United States Court of Appeals, District of Columbia Circuit, Case No. 21-1026.

State of New York, et al. v. United States Environmental Protection Agency, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 21 1028.

State of New York, et al. v. Andrew Wheeler and the United States Environmental Protection Agency, U.S. District Court, District of Columbia, Case No. 1:18 cv 00773-RBW.

State of North Dakota v. United States Environmental Protection Agency, U.S. Court of Appeals, District of Columbia Circuit, Case No. 15 1381.

State of North Dakota, et al. v. United States Environmental Protection Agency, U.S. Court of Appeals, District of Columbia Circuit, Case No. 16 1242.

State of Ohio, et al., v. Environmental Protection Agency, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 22 1081, consolidated with Case Nos. 22 1083, 22 1084, and 22 1085.

State of Texas, et al., v. Environmental Protection Agency, et al. United States Court of Appeals, District of Columbia Circuit, Case No. 22 1031.

State of Wyoming, et al. v. United States Department of the Interior, et al., U.S. District Court, District of Wyoming, Case No. 16-CV-285-SWS; United States Court of Appeals, Tenth Circuit, Case No. 2:16-cv-00285-SWS.

The Two Hundred for Homeownership, et al. v. California Air Resources Board, et al. United States District Court, Eastern District of California, Fresno, Case No. 1:22 cv 01474-ADA-BAM.

The Two Hundred, et al. v. California Air Resources Board, et al., Fresno County Superior Court, Case No. 18CECG1494.

Western States Petroleum Association v. California Air Resources Board, et al., Superior Court of the State of California for the County of Fresno, Case No. 22CECG03603.

Western States Petroleum Association v. California Air Resources Board, Los Angeles County Superior Court, Case No. 20STCP03138x.

Western States Petroleum Association v. California Air Resources Board, Fresno County Superior Court, Case No. 23CECG02976.

Western States Trucking Association, Inc. v. California Air Resources Board, Fresno County Superior Court, Case No. 23CECG02964.

Western States Trucking Association, Inc., et al. v. United States Environmental Protection Agency, et al., United States Court of Appeals, District of Columbia Circuit, Case No. 23-1148.

W.O. Stinson & Son LTD. v. Western Climate Initiative, Inc., Ontario Canada Superior Court, Case No. CV 20-00083726-0000.

Opportunity for Members of the Board to Comment on Matters of Interest

Board members may identify matters they would like to have noticed for consideration at future meetings and comment on topics of interest; no formal action on these topics will be taken without further notice.

Open Session to Provide an Opportunity for Members of the Public to Address the Board on Subject Matters within the Jurisdiction of the Board

Although no formal Board action may be taken, the Board is allowing an opportunity to interested members of the public to address the Board on items of interest that are within the Board's jurisdiction, but that do not specifically appear on the agenda. Each person will be allowed a maximum of two minutes to ensure that everyone has a chance to speak. The public will also have an opportunity to *submit written comments* for open session the morning of the Board Meeting.

Other Information

[Submit Comments Electronically the Day of the Board Meeting](#)

[View Submitted Comments](#)

Please Note: PowerPoint presentations to be displayed during public comment at the Board meeting must be electronically submitted via email to the Clerks' Office at cotb@arb.ca.gov no later than noon on the business day prior to the scheduled Board Meeting.

If you have any questions, please contact the Clerks' Office:

1001 I Street, 23rd Floor, Sacramento, California 95814
cotb@arb.ca.gov or (916) 322-5594
CARB Homepage: www.arb.ca.gov

Special Accommodation Request

Consistent with California Government Code section 7296.2, special accommodation or language needs may be provided for any of the following:

- An interpreter to be available at the hearing;
- Documents made available in an alternate format or another language;
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerks' Office at cotb@arb.ca.gov or at (916) 322-5594 as soon as possible, but no later than 7 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Acomodación Especial

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia;
- Documentos disponibles en un formato alternativo u otro idioma;
- Una acomodación razonable relacionados con una incapacidad.

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor contacte la oficina del Consejo al (916) 322-5594 o por correo electrónico al cotb@arb.ca.gov lo más pronto posible, pero no menos de 7 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

BOARD MEETING DATE: December 1, 2023

AGENDA NO. 25

PROPOSAL: Determine That Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations, Is Exempt from CEQA; and Amend Rule 1405

SYNOPSIS: Proposed Amended Rule 1405 establishes new and enhanced control and monitoring requirements to further reduce stack and fugitive ethylene oxide emissions from sterilization operations. Proposed Amended Rule 1405 includes reporting, recordkeeping, and curtailment provisions. Proposed Amended Rule 1405 also includes inventory tracking, monitoring, and reporting provisions for certain large warehouses receiving materials sterilized by ethylene oxide.

COMMITTEE: Stationary Source, April 21, June 16, August 18, September 15, and October 20, 2023, Reviewed

RECOMMENDED ACTION S:

Adopt the attached Resolution:

1. Determining that Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations is exempt from the requirements of the California Environmental Quality Act; and
2. Amending Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations.

Wayne Nasti
Executive Officer

SR:MK:KC:NF:AS

Background

Ethylene oxide (EtO) is a flammable, colorless gas used in many industries to make products including antifreeze, textiles, solvents, detergents, and adhesives. EtO is also used to sterilize medical devices, the primary use within South Coast AQMD. EtO is a known carcinogen identified by CARB as a Toxic Air Contaminant and by the U.S. EPA as a Hazardous Air Pollutant.

Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes was adopted in 1990 to control EtO and was last amended in 1991. In March 2022, following U.S. EPA ’s reconsideration of the potential toxicity of EtO, South Coast AQMD began investigating facilities that emit EtO. During South Coast AQMD's monitoring efforts at several commercial EtO sterilization facilities, the agency became aware of emissions from fugitive sources that were not previously known. South Coast AQMD’s investigation identified that existing pollution controls would need to be upgraded and measures would need to be implemented to reduce stack and fugitive emissions, necessitating Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations (PAR 1405). In addition, due to concerns of EtO off-gassing from sterilized materials, PAR 1405 added requirements for warehouses that receive and store parts that have been sterilized with EtO to assess the potential of EtO emissions from these sources.

Proposal

PAR 1405 includes new and enhanced control and monitoring requirements to further reduce both stack and fugitive EtO emissions from sterilization operations. PAR 1405 will lower the minimum throughput for classification as a large sterilization facility, from 4,000 to 2,000 pounds per year of EtO, that is subject to the most stringent requirements of the proposed amended rule. PAR 1405 requires operators of large and medium facilities to operate a Permanent Total Enclosure (PTE) vented to pollution controls, and includes interim air monitoring requirements for large sterilization facilities until CEMS or SCEMS (Continuous or Semi-Continuous Monitoring Systems, respectively) are in place. PAR 1405 establishes interim fence line air monitoring for large facilities. It also requires operators to curtail operations if concentration exceeds specific thresholds with exceptions for critical medical devices potentially in shortage.

PAR 1405 also applies to certain large warehouses that receive EtO-sterilized products. Under PAR 1405, operators of large warehouses would be required to provide records and emissions data to help assess EtO emissions from warehouses. The emission data collected through fence line monitoring or emissions studies would assist in determining if additional rulemaking is required for warehouses as emission sources.

Public Process

PAR 1405 was developed through an extensive public process. A Working Group was formed, which included representatives from industry, consultants, and community and environmental groups. Eight working group meetings were held on August 17, 2022, September 28, 2022, October 26, 2022, January 17, 2023, February 16, 2023, June 8, 2023, July 6, 2023, and October 4, 2023. Staff also met individually with industry and community stakeholders. In addition, a Public Workshop was held on March 23, 2023 and a Public Consultation Meeting was held on July 26, 2023 to present the proposed amended rule and receive public comment.

Key Issues

Throughout the rulemaking process, staff has worked with stakeholders to resolve key issues while ensuring that PAR 1405 includes provisions to further reduce EtO emissions and monitor EtO emissions from the facility. Stakeholders have continued to raise concerns regarding four (4) areas of concern regarding PAR 1405:

Fenceline Air Monitoring

Some stakeholders expressed concern regarding the reliability of fenceline air monitoring and believe it should not be used for enforcement purposes.

Monitoring of toxic emissions has been performed by South Coast AQMD for decades, relying on established methodologies and technologies such as canister sampling using U.S. EPA Compendium Method TO-15. In the South Coast AQMD, canister sampling has been used to successfully quantify levels of EtO near sterilization facilities. PAR 1405 allows the use of canister sampling that uses Method TO-15 as well as a newer method with a lower method detection limit, U.S. EPA Method TO-15A. It also allows the use of real-time technologies if they meet certain performance standards for EtO monitoring and are approved by South Coast AQMD. In addition, fenceline air monitoring is not proposed to be permanent but rather a temporary, interim measure to monitor fenceline EtO levels near the sterilization facility until the permanent CEMS or SCEMS is in place. Finally, if an exceedance of the threshold does occur, the data will be evaluated to ensure the EtO emission level is coming from that facility and not other sources prior to curtailment provisions being triggered.

Background EtO Ambient Levels

Some stakeholders have expressed concern regarding the contribution of background EtO to fenceline levels, which may result in a facility curtailing operations.

Background EtO concentrations have been detected at levels at or below 0.17 ppb at ambient air monitoring locations as part of the National Air Toxics Trends Station s (NATTS) Network designed to monitor regional air quality within South Coast AQMD in 2021 and preliminary data indicates peak background EtO levels at or below 0.29 ppb in 2022. The proposed final trigger level for curtailment is more than one order of magnitude greater than the highest background EtO concentration detected in 2021 or 2022. Fenceline EtO levels of a fully controlled sterilization facility, after adjusting for background levels, are expected to be well under the final curtailment threshold. With proper operation of the stack and fugitive emission control systems, exceedance of the curtailment threshold is not anticipated.

Impacts to the Medical Device Supply Chain

PAR 1405 requires curtailment when fenceline levels exceed certain trigger thresholds, and curtailment ends when the fenceline levels are below these thresholds. Stakeholders from the healthcare logistics sector have concerns that curtailment could lead to shortages of medical devices critical to patient care, such as surgical kits.

PAR 1405 initial trigger thresholds are based off curtailment thresholds already in practice in approved Early Action Reduction Plans, which were mutually agreed upon between South Coast AQMD and local sterilization facilities, with a final curtailment threshold set at 3.0 ppb after the installation of all stack and fugitive emission control systems. A sterilization facility in Carson has already implemented control strategies consistent with PAR 1405 and has not recorded a single fence-line air monitoring reading greater than 1.0 ppb over calendar year 2023, which is well below the proposed threshold of 3.0 ppb that could potentially trigger curtailment provisions.

In response to concerns with the curtailment provisions impacting the supply of sterilized medical devices, PAR 1405 includes an exemption from the curtailment provision allowing medical devices to continue to be sterilized if declared reasonably likely to be in shortage by U.S. FDA or other federal, state, or local health authorities or hospitals or medical centers located in California. By including these exemptions from curtailment provisions, PAR 1405 ensures prevention of any potential shortages of critical medical devices during curtailment events.

Maintaining Negative Pressure for a PTE

The October 2023 version of PAR 1405 would have required a PTE to be maintained under negative pressure on a 15-minute averaging time to prevent fugitive emissions from leaving the facility. Some stakeholders expressed that the 15-minute averaging time period is too short, especially during high wind events.

The requirement to maintain negative pressure is not novel to PAR 1405 and is required in many other toxic rules. However, in response to concerns from stakeholders, PAR 1405 has been updated to reflect a longer averaging period based on rolling 1-hour averaging. Additionally, a provision has been added to account for periods when wind speed is too high to maintain a negative pressure. By including the modification to the averaging period and exemption, PAR 1405 ensures that there is sufficient compliance margin for facilities without compromising the requirement to have a PTE operating under negative pressure to capture and control fugitive EtO emissions, and accounts for potential feasibility concerns during extreme weather events.

California Environmental Quality Act (CEQA)

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 1405) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 and is included as Attachment I to this Board letter. If PAR 1405 is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Planning and Research.

Socioeconomic Impact Assessment

PAR 1405 would affect 16 facilities operating within South Coast AQMD's jurisdiction. Of the 16 facilities, 13 facilities belong to the following sectors: 1) medical product manufacturers; 2) surgical or veterinary facilities; 3) surgical and medical instrument manufacturing; 4) contract sterilizers; 5), electromedical and electrotherapeutic apparatus manufacturing; and 6) all other miscellaneous manufacturing. The remaining three facilities, which use less than four pounds per year of EtO, belong to the following sectors: 1) college and universities; and 2) zoos and botanical gardens. Due to the low annual usage of EtO, these three facilities are exempt from PAR 1405's provisions that would require physical modifications. For this reason, the cost analysis is based on 13 facilities making physical modifications to comply with PAR 1405. In addition, PAR 1405 is expected to potentially affect 28 large warehouses which mainly belong to the wholesale trade, and transportation and warehousing sectors. A range from 8% to 70% of the affected businesses may qualify as small businesses based on various small business definitions.

The total present value of the compliance cost of PAR 1405 is estimated at \$88.96 million and \$65.45 million with a 1% and 4% discount rate, respectively, from 2023 to 2043. Correspondingly, the average annual compliance cost of PAR 1405 is estimated to range from \$4.56 million to \$4.73 million, depending on the real interest rate assumed (1% to 4%). Sectors of Professional, Scientific, and Technical Services, Miscellaneous Manufacturing, and Electromedical and Electrotherapeutic Apparatus Manufacturing where most sterilizing facilities belong, will bear most of the annual compliance cost (92%).

When the compliance cost is annualized using a 4% real interest rate, an annual average of 54 net jobs foregone is projected from 2023 to 2043 which represent less than 0.0005% of total annual jobs in the four-county area. The jobs foregone are a combination of jobs losses and future jobs not created. PAR 1405 will result in increased costs to the affected facilities, yet such costs are considered to be reasonable, with a total annualized cost as specified in the Socioeconomic Impact Assessment (see Attachment H of this Board Letter).

AQMP and Legal Mandates

Under Health and Safety Code Section 40460(a), the South Coast AQMD is required to adopt an AQMP demonstrating compliance with all federal regulations and standards. The South Coast AQMD is required to adopt rules and regulations that carry out the objectives of the AQMP. While PAR 1405 does not implement an AQMP control measure, it is necessary to further reduce EtO emissions from sterilization and related operations.

Implementation and Resource Impact

Due to implementation of PAR 1405, staff expects new and ongoing permitting and compliance activities. Staff projects new and additional applications for permits to operate, Title V permits, Control System Implementation Plans, and Facility

Implementation Plans to be submitted. Permit applications to meet stack and fugitive emission requirements are due in mid-2024 and applications to meet continuous monitoring requirements are due in mid-2025. Assuming the new workload will be evenly distributed over those timeframes, and the current workloads and production are maintained, implementation of PAR 1405 could require at least two (2) full time Air Quality Engineers and one (1) full time Senior Air Quality Engineer.

Staff anticipates ongoing compliance and enforcement of PAR 1405 would consist of onsite inspections and other field operations, taking enforcement action for air quality violations, participating in meetings, conducting training, and completing investigation reports. This workload could require at least two (2) full time Air Quality Inspectors II and one (1) full time Air Quality Inspector III.

The full-time positions described above may be considered in the next budget.

Attachments

- A. Summary of Proposal
- B. Key Issues and Responses
- C. Rule Development Process
- D. Key Contacts List
- E. Resolution
- F. Proposed Amended Rule 1405 Rule Language
- G. Proposed Amended Rule 1405 Staff Report
- H. Socioeconomic Impact Assessment
- I. Notice of Exemption from CEQA
- J. Board Meeting Presentation

ATTACHMENT A
SUMMARY OF PROPOSAL

Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization
and Related Operations

Applicability

- Expands applicability to include owners or operators of certain large warehouses

Large Facility Requirements

- Control efficiency of 99.99% for all control systems, or 0.01 ppm for each outlet stack
- Permanent total enclosure (PTE) with continuous monitoring of negative pressure and periodic velocity testing, required for all sterilization equipment, gas and waste storage areas, and sterilized materials
 - Alternative for sterilant gas storage with enhanced real-time monitoring
 - Alternative for sterilized materials with a minimum of 7-day holding time under PTE
- Leak Detection and Repair (LDAR) program or PTE for control systems.
- Semi-continuous or continuous emission monitoring system (SCEMS or CEMS) on each outlet stack
 - Demonstrate facility-wide mass emission rate of 0.015 lb/hr or facility-specific emission rate based on compliant 99.99% control efficiency of permitted usage
- Interim mobile monitoring then interim fence-line air monitoring until SCEMS or CEMS certified
- Annual source testing of control systems and relative accuracy test audits of SCEMS or CEMS
- Labeling of sterilized pallets and identification of EtO-related equipment
- Information-gathering and reporting of EtO-sterilized pallets for one (1) year

Medium Facility Requirements

- Control efficiency of 99.9% for all control systems, or 0.01 ppm for each outlet stack
- PTE with continuous monitoring for non-combined sterilization equipment, gas storage area, and first storage area of sterilized materials after completing aeration
- LDAR or PTE for combined sterilization equipment, control systems, and waste storage area
- Annual source testing of control systems
- Labeling of sterilized pallets and identification of EtO-related equipment

Small Facility Requirements

- Control efficiency of 99.9% for all control systems, or 0.01 ppm for each outlet stack.
- PTE with continuous monitoring for non-combined sterilization equipment
- LDAR or PTE for combined sterilization equipment, control systems, and gas and waste storage areas
- Annual source testing of control systems
- Identification of EtO-related equipment

Post-Aeration Storage Facility Requirements

- LDAR or PTE for control systems
- Annual source testing of control systems
- Identification of EtO-related equipment

Warehouse Requirements

- Tier I warehouses: One (1) year of information gathering regarding EtO emissions through fenceline monitoring or emissions study
- Tier I and Tier II warehouses: Information-gathering and reporting of EtO-sterilized pallets for one (1) year

Interim Requirements

- Large, medium, small, and post-aeration storage facilities must continue to comply with existing requirements that mirror Rule 1405 prior to amendment.

Curtailment

- Large, medium, and small facilities are required to limit their EtO usage on a sliding scale, of between 80%, 50%, or 0% of baseline EtO usage over the past seven (7) day, if elevated, repeated ambient air concentrations of EtO are detected from 24-hour samples collected near fenceline
- Medical devices identified as critical to public health and reasonably likely to experience shortage are exempt from curtailment.

ATTACHMENT B KEY ISSUES AND RESPONSES

Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Throughout the rulemaking process, staff has worked with stakeholders to resolve key issues while ensuring that PAR 1405 includes provisions to further reduce EtO emissions and monitor EtO emissions from the facility. Stakeholders have continued to raise concerns regarding four (4) areas of concern regarding PAR 1405:

Item 1 - Fenceline Air Monitoring

Some stakeholders expressed concern regarding the reliability of fenceline air monitoring and believe it should not be used for enforcement purposes.

Staff Response

Monitoring of toxic emissions has been performed by South Coast AQMD for decades, relying on established methodologies and technologies such as canister sampling using U.S. EPA Compendium Method TO-15. In the South Coast AQMD, canister sampling has been used to successfully quantify levels of EtO near sterilization facilities. PAR 1405 allows the use of canister sampling that uses Method TO-15 as well as a newer method with a lower method detection limit, U.S. EPA Method TO-15A. It also allows the use of real-time technologies if they meet certain performance standards for EtO monitoring and are approved by South Coast AQMD. In addition, fenceline air monitoring is not proposed to be permanent but rather a temporary, interim measure to monitor fenceline EtO levels near the sterilization facility until the permanent CEMS or SCEMS is in place. Finally, if an exceedance of the threshold does occur, the data will be evaluated to ensure the EtO emission level is coming from that facility and not other sources prior to curtailment provisions being triggered.

Item 2 - Background EtO Ambient Levels

Some stakeholders have expressed concern regarding the contribution of background EtO to fenceline levels, which may result in a facility curtailing operations.

Staff Response

Background EtO concentrations have been detected at levels at or below 0.17 ppb at ambient air monitoring locations as part of the National Air Toxics Trends Stations (NATTS) Network designed to monitor regional air quality within South Coast AQMD in 2021 and preliminary data indicates peak background EtO levels at or below 0.29 ppb in 2022. The proposed final trigger level for curtailment is more than one order of magnitude greater than the highest background EtO concentration detected in 2021 or 2022. Fenceline EtO levels of a fully controlled sterilization facility, after adjusting for background, are expected to be well under the final curtailment threshold. With proper operation of the stack and fugitive emission control systems, exceedance of the curtailment threshold is not anticipated.

Item 3 - Impacts to the Medical Device Supply Chain

PAR 1405 requires curtailment when fenceline levels exceed certain trigger thresholds, and curtailment ends when the fenceline levels are below these thresholds. Stakeholders from the healthcare logistics sector have concerns that curtailment could lead to shortages of medical devices critical to patient care, such as surgical kits.

Staff Response

PAR 1405 initial trigger thresholds are based off curtailment thresholds already in practice in approved Early Action Reduction Plans, which were mutually agreed upon between South Coast AQMD and local sterilization facilities, with a final curtailment threshold set at 3.0 ppb after the installation of all stack and fugitive emission control systems. A sterilization facility in Carson has already implemented control strategies consistent with PAR 1405 and has not recorded a single fenceline air monitoring reading greater than 1.0 ppb over calendar year 2023, which is well below the proposed threshold of 3.0 ppb that could potentially trigger curtailment provisions.

In response to concerns with the curtailment provisions impacting the supply of sterilized medical devices, PAR 1405 includes an exemption from the curtailment provision allowing medical devices to continue to be sterilized if declared reasonably likely to be in shortage by U.S. FDA or other federal, state, or local health authorities or hospitals or medical centers located in California. By including these exemptions from curtailment provisions, PAR 1405 ensures prevention of any potential shortages of critical medical devices during curtailment events.

Item 4 - Maintaining Negative Pressure for a PTE

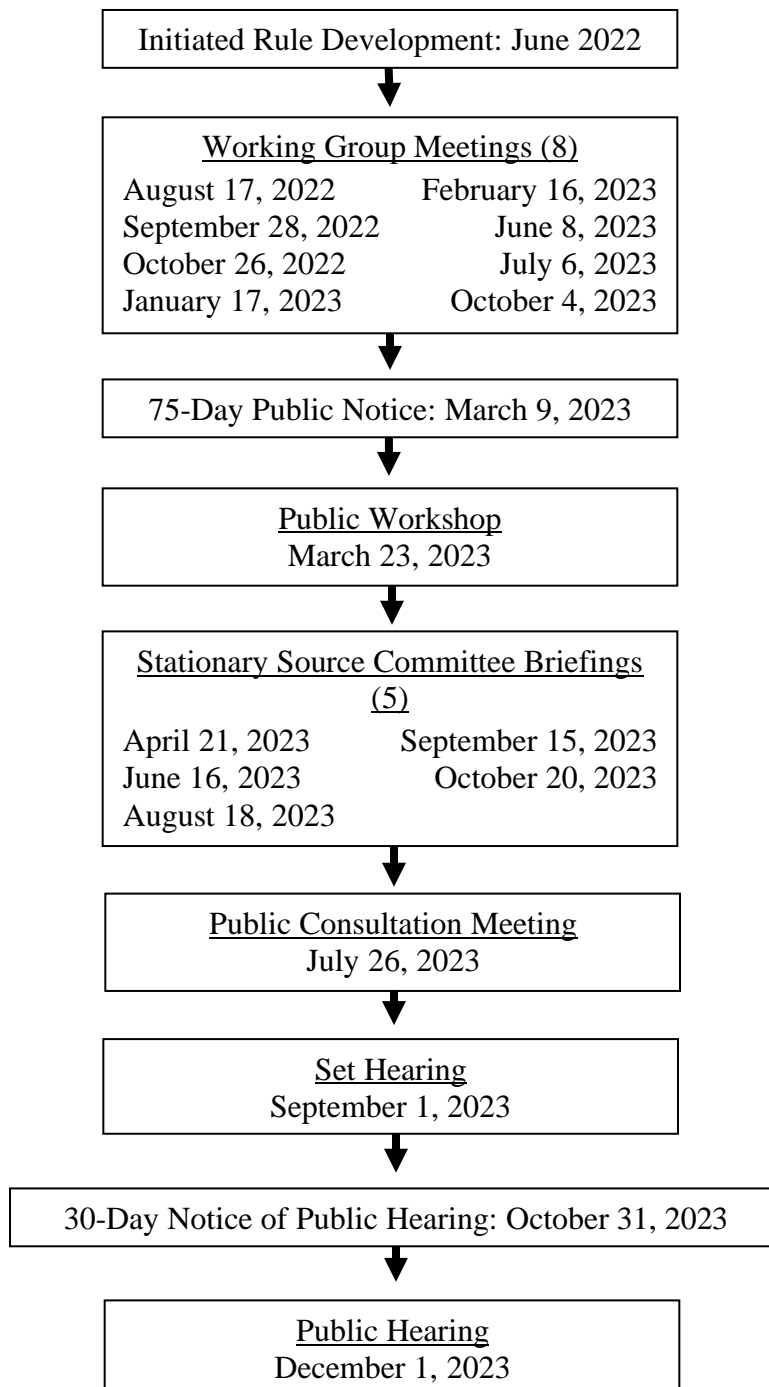
The October 2023 version of PAR 1405 would have required a PTE to be maintained under negative pressure on a 15-minute averaging time to prevent fugitive emissions from leaving the facility. Some stakeholders expressed that the 15-minute averaging time period is too short, especially during high wind events.

Staff Response

The requirement to maintain negative pressure is not novel to PAR 1405 and is required in many other toxic rules. However, in response to concerns from stakeholders, PAR 1405 has been updated to reflect a longer averaging period based on rolling 1-hour averaging. Additionally, a provision has been added to account for periods when wind speed is too high to maintain a negative pressure. By including the modification to the averaging period and exemption, PAR 1405 ensures that there is sufficient compliance margin for facilities without comprising the requirement to have a PTE operating under negative pressure, and accounts for potential feasibility concerns during extreme weather events.

**ATTACHMENT C
RULE DEVELOPMENT PROCESS**

**Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization
and Related Operations**



Seventeen (17) months spent in rule development
One (1) Public Workshop
One (1) Public Consultation Meeting
Five (5) Stationary Source Committee Meetings
Eight (8) Working Group Meetings

ATTACHMENT D
KEY CONTACTS LIST

ADVANCED AIR TECHNOLOGIES INC
ADVANCED BIONICS, LLC
ADVANCED MEDICAL TECHNOLOGY ASSOCIATION (ADVAMED)
AMERICAN CONTRACT SYSTEMS INC
ANIMAL EYE VET INC.
APPLIED MEDICAL RESOURCES
ATMOSFIR OPTICS
B. BRAUN MEDICAL INC.
BECTON, DICKINSON AND COMPANY (BD)
BIOCOM CALIFORNIA
CALIFORNIA COMMUNITIES AGAINST TOXICS
CALIFORNIA AIR RESOURCES BOARD
CALIFORNIA LIFE SCIENCES
CALIFORNIA SAFE SCHOOLS
CARDINAL HEALTH
CITIZENS COALITION FOR A SAFE ENVIRONMENT
CLEAN AIR ENGINEERING, INC
COALITION FOR A SAFE ENVIRONMENT
COMITÉ PRO UNO
COMMUNITIES FOR A BETTER ENVIRONMENT
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
ECSI, INC.
ETHYLENE OXIDE STERILIZATION ASSOCIATION, INC
GREATER COACHELLA VALLEY CHAMBER OF COMMERCE
HEALTH INDUSTRY DISTRIBUTORS ASSOCIATION (HIDA)

HEALTHCARE STERILE PROCESSING ASSOCIATION
HOSPITAL ASSOCIATION OF SOUTHERN CALIFORNIA (HASC)
LA CITY, GREATER LA ZOO
LIFE SCIENCE OUTSOURCING, INC
LIFE SCIENCES COALITION
LOS CERRITOS NEIGHBORHOOD ASSOCIATION
MCKESSON MEDICAL SURGICAL
MEDLINE INDUSTRIES, LP
MICROVENTION, INC
MONTROSE AIR QUALITY SERVICES, LLC
MT. SAN ANTONIO COMMUNITY COLLEGE
PARTER MEDICAL PRODUCTS INC
PHOENIX ASSURANCE, LLC
REDLANDS CHAMBER OF COMMERCE
SLOAT HIGGINS JENSEN & ASSOCIATES
ST. JUDE MEDICAL CRMD/ABBOTT
STERIGENICS US, LLC
STERIS, INC.
U.S. EPA
U.S. FDA
UNIVERSITY OF CALIFORNIA, LOS ANGELES
UPS SUPPLY CHAIN SOLUTIONS, INC.
VCA W COAST SPEC & EMERGENCY ANIMAL HOSP

ATTACHMENT E

RESOLUTION NO. 2 3-____

A Resolution of the Governing Board of the South Coast Air Quality Management District (South Coast AQMD) determining that Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations, is exempt from the requirements of the California Environmental Quality Act (CEQA).

A Resolution of the South Coast AQMD Governing Board amending Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations.

WHEREAS, the South Coast AQMD Governing Board finds and determines that Proposed Amended Rule 1405 is considered a “project” as defined by CEQA; and

WHEREAS, the South Coast AQMD has had its regulatory program certified pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(l) and has conducted a CEQA review and analysis of the proposed project pursuant to such program (South Coast AQMD Rule 110); and

WHEREAS, the South Coast AQMD Governing Board finds and determines after conducting a review of the proposed project in accordance with CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA, and CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA, that the proposed project is exempt from CEQA; and

WHEREAS, the South Coast AQMD Governing Board finds and determines that, because the potential installation of monitoring equipment and modification of facility buildings into permanent total enclosures may be achieved via minimal construction equipment, it can be seen with certainty that implementing the proposed project would not cause a significant adverse effect on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption; and

WHEREAS, the South Coast AQMD staff has prepared a Notice of Exemption for the proposed project that is completed in compliance with CEQA Guidelines Section 15062 – Notice of Exemption; and

WHEREAS, Proposed Amended Rule 1405 and supporting documentation, including but not limited to, the Notice of Exemption, the Socioeconomic Impact Assessment, and the Final Staff Report were presented to the South Coast AQMD

ATTACHMENT E

Governing Board and the South Coast AQMD Governing Board has reviewed and considered this information, as well as has taken and considered staff testimony and public comment prior to approving the project; and

WHEREAS, the South Coast AQMD Governing Board finds and determines, taking into consideration the factors in section (d)(4)(D) of the Governing Board Procedures (codified as section 30.5(4)(D)(i) of the Administrative Code), that the modifications to Proposed Amended Rule 1405, since the Notice of Public Hearing was published include the following: correcting the rule title by displaying as deleted “AND CHLOROFLUOROCARBONS ” and “PROCESSES ”; correcting the phrase “the Executive Officer” for uniformity throughout; correcting punctuation, spelling, and conjunctions for clarity throughout; adding table titles after table references, adding or correcting appendix titles after appendix references, correcting rule references, correcting rule reference labels, correcting rule titles after rule references, and correcting appendix references for consistency throughout; replacing “means” with “is”, replacing “any” with “a”, and deleting “that is” for consistency in subdivision (c) Definitions; adding “rate” for clarification in subparagraph (d)(1)(D); removing duplicate language displayed in underline and strikethrough formats in clause (d)(7)(C)(ii); correcting “owner of operator” to “owner or operator” in paragraphs (i)(1), (i)(2), and (i)(3); adding “rolling” as a clarification in paragraph (k)(1); changing “15-minute” to “one (1) hour period” in paragraph (k)(1) to provide more compliance margin; adding subparagraph (k)(1)(H) to clarify the frequency of recording; adding “by electronic mail to Rule1405notifications@aqmd.gov” and “by telephone to 1-800-CUT-SMOG” for clarification in paragraph (l)(4); adding “either” for clarification in paragraph (q)(3); adding “over” for clarification in subparagraph (u)(8)(A); adding paragraph (u)(14) to clarify limited potential exclusion of differential pressure measurements taken during high wind events due to feasibility and adding “if prohibited by law” for clarification in clause (u)(12)(B)(ii). These revisions meet the same air quality objective and are not so substantial as to significantly affect the meaning of Proposed Amended Rule 1405 within the meaning of Health and Safety Code Section 40726 because: (a) the changes do not impact emission reductions, (b) the changes do not affect the number or type of sources regulated by the rule, (c) the changes are consistent with the information contained in the Notice of Public Hearing, and (d) the consideration of the range of CEQA alternatives is not applicable because the proposed project is exempt from CEQA; and

WHEREAS, Health and Safety Code Section 40727 requires that prior to adopting, amending, or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the Public Hearing and in the Final Staff Report; and

ATTACHMENT E

WHEREAS, the South Coast AQMD Governing Board has determined that a need exists to amend Rule 1405 to extend the health protection features of existing Rule 1405 by reducing ethylene oxide emissions from sterilization and related operations and to assess potential ethylene oxide emissions from warehouses receiving products sterilized by ethylene oxide; and

WHEREAS, the South Coast AQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, 40702, 41508, and 41700; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1405 is written and displayed so that its meaning can be easily understood by the persons directly affected by it; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1405 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1405 does not impose the same requirements as any existing state or federal regulations, and the proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, South Coast AQMD; and

WHEREAS, the South Coast AQMD Governing Board, in amending Rule 1405, references the following statutes which the South Coast AQMD hereby implements, interprets, or makes specific: the provisions of California Health and Safety Code Section 39002 (local and state agency responsibilities), Section 39656 (regulation of toxic air contaminants), Section 41700 (prohibited discharge), and Sections 40506 and 42300 (rules to establish permit system); and

WHEREAS, Health and Safety Code Section 40727.2 requires the South Coast AQMD to prepare a written analysis of existing federal air pollution control requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and the South Coast AQMD's comparative analysis of Proposed Amended Rule 1405 is included in the Final Staff Report; and

WHEREAS, the South Coast AQMD Governing Board has determined that the Socioeconomic Impact Assessment for Proposed Amended Rule 1405, is consistent with the March 17, 1989, Governing Board Socioeconomic Resolution for rule adoption; and

ATTACHMENT E

WHEREAS, the South Coast AQMD Governing Board has determined that the Socioeconomic Impact Assessment is consistent with the provisions of Health and Safety Code Sections 40440.8 and 40728.5; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1405 does not include new Best Available Retrofit Control Technology (BARCT) requirements nor a feasible measure pursuant to Health and Safety Code Section 40914, therefore analyses for cost-effectiveness and incremental cost-effectiveness consistent with the Health and Safety Code Section 40920.6, are not applicable; and

WHEREAS, the South Coast AQMD Governing Board has determined Proposed Amended Rule 1405 will result in increased costs to the affected industries, yet such costs are considered to be reasonable, with a total annualized cost as specified in the Socioeconomic Impact Assessment of PAR 1405; and

WHEREAS, the South Coast AQMD Governing Board has actively considered the Socioeconomic Impact Assessment and has made a good faith effort to minimize such impacts; and

WHEREAS, the South Coast AQMD staff conducted a public workshop meeting on March 23, 2023 regarding Proposed Amended Rule 1405; and

WHEREAS, the public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Sections 40725 and 40440.5; and

WHEREAS, the South Coast AQMD Governing Board has held a public hearing in accordance with all applicable provisions of law; and

WHEREAS, the South Coast AQMD specifies the Planning, Rule Development and Implementation Manager overseeing the rule development of Proposed Amended Rule 1405 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of the proposed amended rule is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

WHEREAS, Proposed Amended Rule 1405 will not be submitted for inclusion into the State Implementation Plan; and

NOW, THEREFORE BE IT RESOLVED, that the South Coast AQMD Governing Board does hereby determine, pursuant to the authority granted by law, that

ATTACHMENT E

the proposed project (Proposed Amended Rule 1405) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. This information was presented to the South Coast AQMD Governing Board, whose members exercised their independent judgment and reviewed, considered, and approved the information therein prior to acting on the proposed project; and

BE IT FURTHER RESOLVED , that the South Coast AQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Amended Rule 1405 as set forth in the attached, and incorporated herein by reference.

DATE: _____

CLERK OF THE BOARDS

**PROPOSED CONTROL OF ETHYLENE OXIDE ~~AND CHLOROFLUOROCARBON~~
AMENDED EMISSIONS FROM STERILIZATION ~~OR FUMIGATION~~
RULE 1405. PROCESSES AND RELATED OPERATIONS**

[Rule index to be added after Amendment]

(a) Purpose

The purpose of this rule is to protect public health by reducing ~~e~~Ethylene ~~o~~Oxide emissions from ~~s~~Sterilization ~~and related operations~~~~or fumigation operations in the South Coast Air Basin~~ and to collect information from warehouses receiving materials Sterilized with ~~Ethylene Oxide~~ and to fulfill state requirements. Pursuant to the requirements of Health and Safety Code Section 39650 (AB 1807 Tanner), the Air Resources Board (ARB) adopted an Air Toxic Control Measure for Ethylene Oxide Emissions from Sterilizers and Aerators in May, 1990. The District is required to enact equivalent or more stringent requirements than this measure. This rule requires recovery or reclamation of chlorofluorocarbons at certain commercial facilities and eliminates the use of certain chlorofluorocarbons as diluents in sterilization processes by 1997.

(b) Applicability

This rule ~~shall apply to the owner or operator of any Facility performing~~ is applicable to ~~persons that use e~~Ethylene ~~o~~Oxide for ~~s~~Sterilization ~~or fumigation~~, any Post-Aeration Storage Facility, any Tier I Warehouse, and any Tier II Warehouse. ~~or aerate products sterilized with ethylene oxide at another facility.~~

(c) Definitions

For purposes of this rule the following definitions shall apply:

- (1) AERATION is the process during which residual ~~Ethylene Oxide~~ ethylene oxide dissipates by forced air flow, or through natural or mechanically assisted convection, or other means, from ~~Sterilized~~ previously sterilized materials in an Aerator or a Combined Sterilizer/Aerator after the ~~Sterilization Cycle~~ sterilization ~~eye~~ is completed. Aeration is completed when Products have been aerated for the minimum time specified in protocols, work orders, validation documents, or manufacturer's instructions, and have been removed from the Aerator or the Combined Sterilizer/Aerator. ~~Aeration is completed when materials that have previously undergone ethylene oxide sterilization can be handled, stored, and transported in the same manner as similar materials that have not been sterilized with ethylene oxide.~~

- (2) ~~AERATION ONLY FACILITY~~ is any facility which performs aeration on materials which have been sterilized with ethylene oxide at another facility.
- (2)(3) ~~AERATOR~~ is any equipment (excluding a Sterilizer or a Combined Sterilizer/Aerator), areospace, or room in which air is used to perform Aeration.~~remove residual ethylene oxide from sterilized materials.~~
- (3)(4) ~~BACK-DRAFT VALVE~~ is a valve, hood, or rear chamber exhaust system for removal of ~~ethylene oxide~~ Ethylene Oxide during unloading of ~~sterilized~~ Sterilized materials.
- (4) BASELINE OPERATION is the daily average pounds (lbs) of Ethylene Oxide used by Sterilizers or Combined Sterilizer/Aerators in the seven (7) operating days including and prior to the date of the real-time monitoring result or sampling day completion.
- (5) CHLOROFLUOROCARBON (CFC) DILUENT is any of the five chlorinated fluorinated carbon compounds (CFC-11, CFC-12, CFC-113, CFC-114, or CFC-115), or combinations of these compounds, used in ~~sterilant gas~~ Sterilant Gas mixtures.
- (6) COMPONENT is any seal, gasket, or connection in Ethylene Oxide service at a Sterilizer, Sterilizer Exhaust Vacuum Pump, Combined Sterilizer/Aerator, Aerator, or Control System.
- (7) CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) is the total combined equipment and systems required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate of a source effluent (as applicable). The CEMS consists of three (3) major subsystems: sampling interface, analyzer, and data acquisition system. The CEMS is able to take and record a minimum of one (1) measurement (e.g., concentration, mass emission, flow rate) every one (1) minute.
- (8) COMBINED STERILIZER/AERATOR is any chamber or related piece of equipment that performs the functions of a Sterilizer and an Aerator and where Aeration is completed within the chamber.
- (9) CONTROL SYSTEM is equipment and ducting installed for the purposes of collecting Exhaust Streams and reducing Ethylene Oxide emissions consisting of one (1) or more air pollution control devices in series or parallel and exhausts to one (1) or more stacks as identified by the Facility in a permit to operate, a Title V permit, a Control System Implementation Plan, or a Facility Implementation Plan.

- (10) ELEMENT is any bulk cylinder, ampule, cartridge, drum, container, bin, or other vessel used to store Sterilant Gas or any Ethylene Oxide-contaminated liquids or solids. Elements exclude Sterilized materials and shipping containers.
- (11)(6) ETHYLENE OXIDE (C₂H₄O) is a colorless, flammable gas that has been identified as a suspected human carcinogen and a toxic air contaminant by the California Air Resources Board (CARB).
- (12)(7) EXHAUST STREAM is ~~the ethylene oxide~~ Ethylene Oxide-contaminated effluent, ~~emitted from a sterilizer or aerator.~~
- (13) FACILITY is any source or group of sources or other air contaminant-emitting activities which are located on one (1) or more contiguous properties within South Coast AQMD, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one (1) Facility.
- (14) FIRST DESTINATION is a location that receives Sterilized Palletized Units shipped from a Facility performing Sterilization.
- (15) LARGE FACILITY is a Facility performing Sterilization permitted to use more than or equal to 2,000 lbs of Ethylene Oxide per calendar year, either expressed as a facility-wide permit limit or calculated as the sum of permit limits for equipment that perform Sterilization at the Facility.
- (16) LEAK is the detection of a concentration of Total Organic Compounds (TOC) above background, determined according to CARB Test Method 21.
- (17) LEEWARD WALL is ~~means~~ the furthest exterior wall of a Permanent Total Enclosure that is opposite the Windward Wall.
- (18) MEDIUM FACILITY is a ~~any~~ Facility performing Sterilization ~~that is permitted~~ to use more than 400 lbs and less than 2,000 lbs of Ethylene Oxide per calendar year, either expressed as a facility-wide permit limit or calculated as the sum of permit limits for equipment that performs Sterilization at the Facility.
- (19) PALLETIZED UNIT is any pallet, skid, or other container with a collection of Products packaged in paper cartons, corrugated cardboard, or other packaging, often secured with strapping, stretch wrap, shrink wrap, or other binding.
- (20) PERMANENT TOTAL ENCLOSURE (PTE) is ~~means~~ any permanent building or containment structure, enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-off) that has limited

- openings to allow access for people and vehicles, that is free of breaks or deterioration that could cause or result in fugitive emissions, and has been evaluated to meet the design requirements set forth in U.S. Environmental Protection Agency (EPA) Method 204 except the term "Administrator" in provision 5.1 is revised to mean Executive Officer, as defined in Rule 102 – Definitions of Terms.
- (8) ~~PERSON is any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee or other capacity, including any governmental entity or charitable organization.~~
- (21) POST-AERATOR is any equipment, area, or room where Sterilized materials are stored, transferred, loaded, or unloaded after completing Aeration. Post-Aerator excludes:
- (A) Motor vehicles used during loading, unloading, and transport;
- (B) Equipment, area, or room that is an Aerator or a Combined Sterilizer/Aerator.
- (22) POST-AERATION STORAGE FACILITY is any Facility not performing Sterilization that stores Sterilized materials and has installed a Control System.
- (23) PRECONDITIONER is any equipment, area, or room used to treat Products prior to a Sterilization Cycle to attain a specific temperature and relative humidity.
- (24) PRODUCT is any material intended to be Sterilized by Ethylene Oxide and may include primary packaging.
- (9) ~~RECOVER is to remove refrigerant in any condition from a system and store it in an external container, without necessarily testing or processing it in any way.~~
- (10) ~~RECLAIM is to process refrigerant to new product specifications.~~
- (25) SEMI-CONTINUOUS EMISSION MONITORING SYSTEM (SCEMS) is the total combined equipment and systems to semi-continuously determine air contaminant and diluent gas concentrations and/or the mass emission rate in a source effluent (as applicable). The SCEMS consists of three (3) major subsystems: sampling interface, analyzer, and data acquisition system. This class of monitoring includes but is not limited to gas chromatography, integrated sensitized tape analyzer, other sample integration based technologies, and time-shared CEMS. The SCEMS is able to take and record a minimum of one (1) measurement (e.g., concentration, mass emission, flow rate) every fifteen (15) minutes.
- (26) SMALL FACILITY is a ~~any~~ Facility performing Sterilization ~~that is permitted to~~ use more than four (4) lbs and less than or equal to 400 lbs of Ethylene Oxide per

- calendar year, either expressed as a facility-wide permit limit or calculated as the sum of permit limits for equipment that perform Sterilization at the Facility.
- (27) STERILANT GAS is Ethylene Oxide, or any combination of Ethylene Oxide and other gases, used to perform Sterilization.
- (28) STERILANT GAS DISPENSING AREA is any area used to dispense Sterilant Gas used by a Sterilizer or a Combined Sterilizer/Aerator.
- (29) STERILANT GAS STORAGE AREA is any area used to store Sterilant Gas not in use by a Sterilizer or a Combined Sterilizer/Aerator.
- (30) ~~(1)~~ STERILIZATION/FUMIGATION is the process where Sterilant Gas ethylene oxide or any combination of ethylene oxide and other gases are is used to destroy bacteria, viruses, fungi, and other unwanted organisms on materials. This includes fumigation processes using Sterilant Gas. These materials include, by way of illustration and not limitation, medical products, cosmetics, and foodstuffs.
- (31) STERILIZATION CYCLE is the process where Products and other materials are exposed to Sterilant Gas in a Sterilizer or a Combined Sterilizer/Aerator. A Sterilization Cycle is completed when Products are removed from the Sterilizer or the Combined Sterilizer/Aerator.
- (32) STERILIZED is having undergone a Sterilization Cycle in a Sterilizer or a Combined Sterilizer/Aerator.
- (33) ~~(1)~~ STERILIZER is any chamber or related piece of equipment (excluding a Combined Sterilizer/Aerator) that uses Sterilant Gas ethylene oxide or an ethylene oxide mixture in any sterilization Sterilization or fumigation process.
- (34) ~~(1)~~ STERILIZER EXHAUST VACUUM PUMP is a device (including any associated heat exchanger) used to evacuate sterilant gas Sterilant Gas during the sterilizer cycle Sterilization Cycle, but is not a device used solely to evacuate a Sterilizer or a Combined Sterilizer/Aerator sterilizer prior to the introduction of Sterilant Gas ethylene oxide.
- (35) TIER I WAREHOUSE is a Facility that reports to U.S. Food and Drug Administration (FDA) as a Wholesale Distributor or a Third-Party Logistics Provider as of [Date of Rule Amendment] with an indoor floor area used for Warehousing Activities of at least 250,000 square feet.
- (36) TIER II WAREHOUSE is a Facility that reports to U.S. FDA as a Wholesale Distributor or a Third-Party Logistics Provider as of [Date of Rule Amendment] with an indoor floor area used for Warehousing Activities of at least 100,000 square feet and less than 250,000 square feet.

- (37) TRIGGER RESULT is the 24-hour average Ethylene Oxide concentration obtained via a canister sample or other approved methodology in the Fenceline Air Monitoring Plan collected by the owner or operator, U.S. EPA, California Air Resources Board, or the Executive Officer.
- (38) WAREHOUSING ACTIVITIES ~~is~~ are means operations at a warehouse related to the storage and distribution of goods, including but not limited to the storage, labelling, sorting, consolidation and deconsolidation of Products into different size packages. Supporting office administration, maintenance, manufacturing areas, or retail sales areas open to the general public, within the same warehouse building, that are physically separate from the warehouse area, are not considered Warehousing Activities for the purpose of this rule.
- (39) WASTE STORAGE AREA is any area used to store any Ethylene Oxide-contaminated liquids and solids produced as a byproduct of Sterilization and associated processes.
- (40) WINDWARD WALL ~~is~~ means the exterior wall of a Permanent Total Enclosure which is most impacted by the wind in its most prevailing direction determined by a wind rose using data from the nearest meteorological station.

(d) Large Facility Requirements

(1) Stack Emission Requirements

Beginning on the date specified in Table 1 – Implementation Schedule, the owner or operator of a Large Facility shall:

- (A) Install and maintain a Back-Draft Valve for each Sterilizer and operate the Back-Draft Valve when unloading the Sterilizer;
- (B) Vent the Exhaust Stream of any Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, and Permanent Total Enclosure to a Control System;
- (C) For each Control System either:
 - (i) Meet a control efficiency of 99.99% or greater, by weight, of Ethylene Oxide emissions, demonstrated by a source test that meets the requirements in subdivision (1); or
 - (ii) Not exceed an Ethylene Oxide concentration of 0.01 parts per million (ppm), by volume at stack conditions, demonstrated by a source test that meets the requirements in subdivision (1);

- (D) Demonstrate by a source test meeting the requirements in subdivision (I) that the facility-wide mass emission rate from all exhaust stacks for all Control Systems at the facility does not exceed either:

 - (i) 0.015 pounds per hour (lbs/hr) of Ethylene Oxide; or
 - (ii) A calculated facility-wide mass emission rate of Ethylene Oxide, based on permitted Ethylene Oxide usage and the required control efficiency of 99.99% or greater, by weight, determined pursuant to Appendix 1 – Calculations; and
- (E) Conduct a source test that demonstrates compliance with requirements in subparagraphs (d)(1)(C) and (d)(1)(D):

 - (i) No later than September 1, 2025 for a Control System installed or modified on or before July 3, 2025;
 - (ii) Within 60 days after initial operation of a Control System installed or modified after July 3, 2025;
 - (iii) No later than 12 calendar months from the date of the most recent source test for any Control System used to demonstrate a control efficiency of 99.99% or greater, by weight; and
 - (iv) No later than 12 calendar months from the date of the most recent source test of the Control System used to demonstrate the Ethylene Oxide concentration requirement in clause (d)(1)(C)(ii) or the facility-wide mass emission rate requirement in subparagraph (d)(1)(D), unless the owner or operator of the Large Facility monitors the Control System by operating a SCEMS or CEMS that is certified by the Executive Officer and conducts an annual Relative Accuracy Test Audit (RATA) for the SCEMS or CEMS monitoring the Control System.
- (2) Stack Emission Monitoring Requirements

Beginning on the date specified in Table 1 – Implementation Schedule, the owner or operator of a Large Facility shall:

 - (A) Monitor the Ethylene Oxide emissions from each exhaust stack of a Control System at the Facility by operating a SCEMS or CEMS that meets the requirements in subdivision (j);
 - (B) Demonstrate by a SCEMS or CEMS that the facility-wide mass emission rate of Ethylene Oxide from all exhaust stacks for all Control Systems at the Facility does not exceed either:

- (i) 0.015 lbs/hr on a rolling 30-day period, determined pursuant to Appendix 1 – Calculations; or
 - (ii) The calculated facility-wide mass emission rate on a rolling 30-day period, based on permitted Ethylene Oxide usage and the required control efficiency of 99.99% or greater, by weight, determined pursuant to Appendix 1 – Calculations; and
 - (C) For each Control System complying with clause (d)(1)(C)(ii), demonstrate by a SCEMS or CEMS that emissions of Ethylene Oxide do not exceed a concentration of 0.01 ppm, by volume at stack conditions, at each exhaust stack in the Control System on a rolling 30-day period, determined pursuant to Appendix 1 – Calculations.
- (3) Fugitive Emission Requirements
Beginning on the date specified in Table 1 – Implementation Schedule, the owner or operator of a Large Facility shall:
 - (A) Maintain all Sterilizers, Combined Sterilizer/Aerators, Back-Draft Valves, Sterilizer Exhaust Vacuum Pumps, Aerators, Post-Aerators, Elements in a Sterilant Gas Storage Area, Elements in a Sterilant Gas Dispensing Area, and Elements in a Waste Storage Area within a Permanent Total Enclosure that meets the requirements in subdivision (k);
 - (B) In lieu of maintaining all Post-Aerators within a Permanent Total Enclosure pursuant to subparagraph (d)(3)(A), maintain at least one (1) Post-Aerator within a Permanent Total Enclosure that meets the requirements in subdivision (k) where any materials Sterilized at the Facility are loaded and stored for at least seven (7) calendar days after completing Aeration, provided:
 - (i) The existing Large Facility was permitted as such as of [Date of Amendment];
 - (ii) The Large Facility is permitted to use less than or equal to 40,000 lbs of Ethylene Oxide per calendar year; and
 - (iii) The owner or operator proposes at least two (2) monitoring locations in a Fenceline Air Monitoring Plan;
 - (C) In lieu of maintaining all Elements in a Sterilant Gas Storage Area within a Permanent Total Enclosure pursuant to subparagraph (d)(3)(A) at a Large Facility permitted as such as of [Date of Amendment];

- (i) Monitor all Elements in a Sterilant Gas Storage Area by implementing a Leak Detection and Repair Program that meets the requirements in subdivision (m);
 - (ii) Install, calibrate, operate, and maintain a real-time monitor that measures ambient Ethylene Oxide concentrations at a minimum of three (3) locations in the Sterilant Gas Storage Area;
 - (iii) Measure and record ambient Ethylene Oxide concentration using an established methodology approved by the Executive Officer that has a method detection limit of 1.0 ppb or lower every one (1) minute;
 - (iv) Install and maintain an emergency enclosure that vents to a Control System in the Sterilant Gas Storage Area;
 - (v) Conduct a Leak inspection of all Elements in the Sterilant Gas Storage Area immediately upon measurement of an ambient Ethylene Oxide concentration exceeding 3.0 ppb in the Sterilant Gas Storage Area; and
 - (vi) Store any Element in the emergency enclosure that vents to a Control System upon discovery the Element is a contributing source of the Ethylene Oxide concentration exceeding 3.0 ppb in the Sterilant Gas Storage Area; and
- (D) For each Control System, either monitor all Components up to the exhaust stack of the Control System by implementing a Leak Detection and Repair Program that meets the requirements in subdivision (m) or operate the Control System within a Permanent Total Enclosure that meets the requirements in subdivision (k).

Table 1 – Implementation Schedule

<u>Facility Category</u>	<u>Rule Requirement</u>	<u>Effective Date</u>
<u>Large Facility existing as of [Date of Rule Amendment]</u>	<u>(d)(1)</u>	<u>September 1, 2025 or 60 days after final SCEMS or CEMS certification is issued by the Executive Officer for each Control System at the Facility, whichever is earlier</u>
	<u>(d)(2)</u>	<u>18 months after receiving approval for an application for SCEMS or CEMS</u>
	<u>(d)(3)</u>	<u>September 1, 2025 or 60 days after final SCEMS or CEMS certification is issued by the Executive Officer for each Control System at the Facility, whichever is earlier</u>
<u>Large Facility existing after [Date of Rule Amendment]</u>	<u>(d)(1)</u>	<u>[Date of Rule Amendment]</u>
	<u>(d)(2)</u>	<u>Date of Permit to Operate issuance</u>
	<u>(d)(3)</u>	<u>[Date of Rule Amendment]</u>

(4) Labeling and Facility Diagram Requirements

Beginning [90 Days After Date of Amendment], the owner or operator of a Large Facility shall:

(A) Prior to a Sterilized Palletized Unit leaving a Post-Aerator, affix on a vertical surface on each Sterilized Palletized Unit at least one (1) label, size 8.5 inches by 11 inches, with letters of sufficient size and contrast as to be readily visible and legible, reading:

TREATED WITH ETHYLENE OXIDE (EtO/EO)
AERATION COMPLETED ON {Date of Completion}

(B) Clearly label each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, Permanent Total Enclosure, Sterilant Gas Storage Area, Sterilant Gas Dispensing Area, and Waste Storage Area with:

(i) Type of equipment, area, or room;

- (ii) Unit number or other identifier, if applicable; and
 - (iii) South Coast AQMD permit number, if applicable;
 - (C) Label or write on each bill of lading listing Sterilized Products, “TREATED WITH ETHYLENE OXIDE (EtO/EO)”; and
 - (D) Maintain a Facility diagram onsite that identifies the location of each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, Permanent Total Enclosure, Sterilizer Exhaust Vacuum Pump, Sterilant Gas Storage Area, Sterilant Gas Dispensing Area, and Waste Storage Area.
- (5) Submittal of Permit and SCEMS or CEMS Applications
The owner or operator of a Large Facility shall:
 - (A) No later than May 1, 2024, submit complete South Coast AQMD permit application(s) to meet stack emission requirements pursuant to paragraph (d)(1) and fugitive emissions requirements pursuant to paragraph (d)(3); and
 - (B) No later than May 1, 2025, submit to the Executive Officer applications for new SCEMS or CEMS to meet stack emission monitoring requirements pursuant to paragraph (d)(2).
- (6) Control System Implementation Requirements
The owner or operator of a Large Facility shall:
 - (A) If operating a Control System containing an acid-water scrubber, either:
 - (i) Sample the scrubber liquor at least once per calendar week and analyze and record the ethylene glycol concentration using American Society for Testing and Materials (ASTM) D 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography (1988); or
 - (ii) Measure and record at least once per calendar week the level of the scrubber liquor in the recirculation tank and install, maintain, calibrate, and use a liquid level indicator to measure the scrubber liquor tank level;
 - (B) If operating a Control System containing a catalytic oxidation unit or thermal oxidation unit, continuously monitor and record the oxidation temperature at the outlet to the catalyst bed or at the exhaust point from the thermal combustion chamber using a temperature monitor:
 - (i) Installed, calibrated, operated, and maintained to an accuracy within ± 5.6 degrees Celsius (± 10 degrees Fahrenheit); and

- (ii) Verified for accuracy twice each calendar year with a reference temperature monitor traceable to National Institute of Standards and Technology (NIST) standard, or with an independent temperature measurement device dedicated for this purpose. During accuracy checking, the probe of the reference device shall be at the same location as that of the temperature monitor being tested; and
 - (C) If operating a Control System containing an air pollution control device other than an acid-water scrubber, catalytic oxidation unit, or thermal oxidation unit, monitor specific parameters of the device as approved by the Executive Officer.
- (7) Interim Mobile Monitoring Requirements
 - (A) Beginning February 1, 2024 and ending when implementation of a Fenceline Air Monitoring Plan pursuant to subparagraph (p)(1)(A) begins, the owner or operator of a Large Facility shall utilize either:
 - (i) The Executive Officer or a third-party contracted with the Executive Officer to conduct mobile monitoring; or
 - (ii) An independent third-party operator to conduct mobile monitoring capable of:
 - (I) Measuring Ethylene Oxide using an Ethylene Oxide specific instrument, or other method approved by the Executive Officer, with a method detection limit of 1.0 ppb or lower, and a measurement frequency of at least once every five (5) seconds; and
 - (II) A measurement protocol approved by the Executive Officer, capable of collecting concurrent grab canister samples for subsequent analysis per ~~subparagraph clause (d)(7)(E)(D)~~.
 - (B) The owner or operator of a Large Facility shall report no later than [14 Days After Date of Amendment] to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov of the mobile monitoring option selected pursuant to subparagraph (d)(7)(A).
 - (C) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to clause (d)(7)(A)(i) shall:
 - (i) Pay fees pursuant to Appendix 2 – Mobile Monitoring Fee and Program Fund; and

- (ii) No later than 30 days prior to no longer electing to have the Executive Officer or a third-party contracted with the Executive Officer conduct mobile monitoring, report to the Executive Officer in writing by electronic mail to *Rule1405notifications@aqmd.gov* Rule1405notifications@aqmd.gov.
 - (D) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to clause (d)(7)(A)(ii) shall measure the concentration of Ethylene Oxide:
 - (i) At least once per calendar month during a single calendar day;
 - (ii) For at least two (2) hours along a drivable and accessible route that is closest to all property boundaries of the Facility and surrounding area; and
 - (iii) Pursuant to a measurement protocol approved by the Executive Officer.
 - (E) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to ~~clause~~ subclause (d)(7)(A)(ii) shall:
 - (i) Collect a grab canister sample at locations with three (3) consecutive readings of Ethylene Oxide that measure above the Level 2 concentration specified in Table 5 – Trigger Threshold for Sterilization Facilities, unless three (3) canister-based grab samples were previously collected during the mobile monitoring calendar day; and
 - (ii) Analyze grab canister samples collected pursuant to clause (d)(7)(E)(i) using a method specified in either subclause (p)(2)(B)(ii)(I) or (p)(2)(B)(ii)(II) with a method detection limit of 0.2 ppb or lower.
- (8) Interim Fenceline Air Monitoring
The owner or operator of a Large Facility shall implement a Fenceline Air Monitoring Plan pursuant to subdivision (p).
- (9) Submittal of Plans
The owner or operator of a Large Facility may elect to submit permit applications for a Control System Implementation Plan and/or a Facility Implementation Plan.
- (e) Medium Facility Requirements
 - (1) Stack Emission Requirements
Beginning January 1, 2026, the owner or operator of a Medium Facility shall:

- (A) Vent the Exhaust Stream of any Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, first Post-Aerator used to store Sterilized materials removed from an Aerator or a Combined Sterilized/Aerator, and Permanent Total Enclosure to a Control System;
- (B) For each Control System either:

 - (i) Meet a control efficiency of 99.9% or greater, by weight, of Ethylene Oxide emissions, demonstrated by a source test that meets the requirements in subdivision (l); or
 - (ii) Not exceed an Ethylene Oxide concentration of 0.01 ppm, by volume at stack conditions, demonstrated by a source test that meets the requirements in subdivision (l); and
- (C) Conduct a source test that demonstrates compliance with the requirements in subparagraph (e)(1)(B):

 - (i) No later than January 1, 2026 for a Control System installed or modified on or before November 2, 2025;
 - (ii) Within 60 days after initial operation of a Control System installed or modified after November 2, 2025; and
 - (iii) No later than 12 calendar months from the date of the most recent source test of the Control System.

(2) Fugitive Emission Requirements

Beginning January 1, 2026, the owner or operator of a Medium Facility shall:

- (A) Operate each of the following, if applicable to the Medium Facility, within a Permanent Total Enclosure that meets the requirements in subdivision (k):

 - (i) Sterilizer;
 - (ii) Aerator;
 - (iii) Back-Draft Valve;
 - (iv) Sterilizer Exhaust Vacuum Pump;
 - (v) All Elements in a Sterilant Gas Dispensing Area;
 - (vi) All Elements in a Sterilant Gas Storage Area; and
 - (vii) First Post-Aerator used to store Sterilized materials removed from an Aerator or a Combined Sterilizer/Aerator; and
- (B) Either monitor each of the following, if applicable to the Medium Facility, by implementing a Leak Detection and Repair Program that meets the requirements in subdivision (m) or maintain each of the following, if applicable to the Medium Facility, within a Permanent Total Enclosure that meets the requirements in subdivision (k):

- (i) Combined Sterilizer/Aerator;
- (ii) All Components up to the exhaust stack of the Control System; and
- (iii) All Elements in a Waste Storage Area.

(3) Labeling and Facility Diagram Requirements

Beginning [90 Days After Date of Amendment], the owner or operator of a Medium Facility shall:

(A) Clearly label each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator subject to the requirements of clause (e)(2)(A)(vii), Permanent Total Enclosure, Sterilant Gas Storage Area, and Waste Storage Area with:

- (i) Type of equipment, area, or room;
- (ii) Unit number or other identifier, if applicable; and
- (iii) South Coast AQMD permit number, if applicable;

(B) Maintain a Facility diagram onsite that identifies the location of each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator subject to the requirements of clause (e)(2)(A)(vii), Permanent Total Enclosure, Sterilant Gas Storage Area, and Waste Storage Area;

(C) Prior to a Sterilized Palletized Unit leaving the first Post-Aerator, affix on a vertical surface on each Sterilized Palletized Unit at least one (1) label, size 8.5 inches by 11 inches, with letters of sufficient size and contrast as to be readily visible and legible, reading:

TREATED WITH ETHYLENE OXIDE (EtO/EO)
AERATION COMPLETED ON {Date of Completion}

; and

(D) Label or write on each bill of lading listing Sterilized Products, "TREATED WITH ETHYLENE OXIDE (EtO/EO)".

(4) Submittal of Permit Applications

No later than January 1, 2025, the owner or operator of a Medium Facility operating prior to [Date of Amendment] shall submit complete South Coast AQMD permit application(s) to meet stack emission requirements pursuant to paragraph (e)(1) and fugitive emission requirements pursuant to paragraph (e)(2).

(5) Submittal of Plans

The owner or operator of a Medium Facility may elect to submit permit applications for a Control System Implementation Plan and/or a Facility Implementation Plan.

(f) Small Facility Requirements

(1) Stack Emission Requirements

Beginning January 1, 2026, the owner or operator of a Small Facility shall:

(A) Vent the Exhaust Stream of any Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, and Permanent Total Enclosure to a Control System;

(B) For each Control System either:

(i) Meet a control efficiency of 99.9% or greater, by weight, of Ethylene Oxide emissions, demonstrated by a source test that meets the requirements in subdivision (l); or

(ii) Not exceed an Ethylene Oxide concentration of 0.01 ppm, by volume at stack conditions, demonstrated by a source test that meets the requirements in subdivision (l); and

(C) Conduct a source test that demonstrates compliance with requirements in subparagraph (f)(1)(B):

(i) No later than January 1, 2026 for a Control System installed or modified on or before November 2, 2025;

(ii) Within 60 days after initial operation of a Control System installed or modified after November 2, 2025; and

(iii) No later than 12 calendar months from the date of the most recent source test of the Control System.

(2) Fugitive Emission Requirements

Beginning January 1, 2026, the owner or operator of a Small Facility shall:

(A) Operate each of the following, if applicable to the Small Facility, within a Permanent Total Enclosure that meets the requirements in subdivision (k) if Aeration is not exclusively performed in a Combined Sterilizer/Aerator:

(i) Sterilizer;

(ii) Aerator;

(iii) Back-Draft Valve;

(iv) Sterilizer Exhaust Vacuum Pump; and

(v) All Elements in a Sterilant Gas Dispensing Area; and

(B) Either monitor each of the following, if applicable to the Small Facility, by implementing a Leak Detection and Repair Program that meets the requirements in subdivision (m) or maintain each of the following, if

applicable to the Small Facility, within a Permanent Total Enclosure that meets the requirements in subdivision (k):

- (i) Combined Sterilizer/Aerator;
- (ii) All Components up to the exhaust stack of the Control System;
- (iii) All Elements in a Waste Storage Area; and
- (iv) All Elements in a Sterilant Gas Storage Area.

(3) Labeling and Facility Diagram Requirements

Beginning [90 Days After Date of Amendment], the owner or operator of a Small Facility shall:

(A) Clearly label each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Sterilant Gas Storage Area, and Waste Storage Area with:

- (i) Type of equipment, area, or room;
- (ii) Unit number or other identifier, if applicable; and
- (iii) South Coast AQMD permit number, if applicable; and

(B) Maintain a Facility diagram onsite that identifies the location of each Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, Permanent Total Enclosure, Sterilant Gas Storage Area, and Waste Storage Area.

(4) Submittal of Permit Applications

No later than January 1, 2025, the owner or operator of a Small Facility operating prior to [Date of Amendment] shall submit complete South Coast AQMD permit application(s) to meet stack emission requirements pursuant to paragraph (f)(1) and fugitive emission requirements pursuant to (f)(2).

(5) Submittal of Plans

The owner or operator of a Small Facility may elect to submit permit applications for a Control System Implementation Plan and/or a Facility Implementation Plan.

(g) Post-Aeration Storage Facility Requirements

Beginning September 1, 2025, the owner or operator of a Post-Aeration Storage Facility shall not receive Sterilized Products unless the following requirements are met:

- (1) For each Control System, meet a control efficiency of 95% or greater, by weight, demonstrated by a source test that meets the requirements in subdivision (l);
- (2) Conduct a source test that demonstrates compliance with the requirements in paragraph (g)(1) for each Control System:
 - (A) No later than September 1, 2025 for a Control System installed or modified on or before July 3, 2025;

- (B) Within 60 days after initial operation of a Control System installed or modified after July 3, 2025; and
 - (C) No later than 12 calendar months from the date of the most recent source test of the Control System;
 - (3) Either monitor all Components up to the exhaust stack of each Control System by implementing a Leak Detection and Repair Program that meets the requirements in subdivision (m) or operate each Control System within a Permanent Total Enclosure that meets the requirements in subdivision (k);
 - (4) Clearly label each Post-Aerator and Permanent Total Enclosure with:
 - (A) Type of equipment, area, or room, if applicable;
 - (B) Unit number or other identifier, if applicable; and
 - (C) South Coast AQMD permit number, if applicable; and
 - (5) Maintain a Facility diagram onsite that identifies the location of each Post-Aerator and Permanent Total Enclosure.
- (h) Warehouse Requirements
 - (1) The owner or operator of a Tier I Warehouse or Tier II Warehouse shall record each month according to the dates specified in Table 2 – Warehouse Recording Period, the number of Sterilized Palletized Units received from any entity performing Sterilization.

Table 2 – Warehouse Recording Period

<u>Type of Warehouse</u>	<u>Start Date to Record Number of Sterilized Palletized Units</u>	<u>End Date to Record Number of Sterilized Palletized Units</u>
<u>Tier I Warehouse or Tier II Warehouse</u>	<u>April 1, 2024</u>	<u>March 31, 2025</u>

- (2) No later than June 1, 2025, the owner or operator of a Tier I Warehouse or Tier II Warehouse subject to the requirements in paragraph (h)(1) shall submit to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov a summary report that includes the following:
 - (A) Name of warehouse;
 - (B) South Coast AQMD Facility ID, if applicable;
 - (C) Address of warehouse;
 - (D) Contact information for owner or operator of warehouse;

- (E) Total number of Sterilized Palletized Units received from any entity performing Sterilization each month during the consecutive 12-month period specified in Table 2 – Warehouse Recording Period;
 - (F) Addresses of entities performing Sterilization where Sterilized Palletized Units shipped from; and
 - (G) Diagram identifying receiving and storage areas for Sterilized Palletized Units and locations of Ethylene Oxide monitors, if any.
- (3) The owner or operator of a Tier I Warehouse shall either:
 - (A) Implement a Fenceline Air Monitoring Plan pursuant to subdivision (p);
 - (B) Conduct an emission study pursuant to paragraph (h)(5) and the approved Emission Study Plan;
 - (C) No later than [180 days After Date of Rule Amendment], fund and participate in a real-time fenceline air monitoring demonstration program by the South Coast AQMD to monitor in real-time ambient Ethylene Oxide concentrations near Tier I Warehouse property boundaries and meet the following requirements:
 - (i) Submit payment to the South Coast AQMD pursuant to the payment schedule in Appendix 2 – Mobile Monitoring Fee and Program Fund for funding a real-time fenceline air monitoring demonstration program;
 - (ii) Provide access for South Coast AQMD personnel and its contractors; and
 - (iii) Provide for each real-time monitor an appropriate location to operate and the infrastructure to operate; or
 - (D) Not receive Sterilized Palletized Units between April 1, 2024 to March 31, 2025 from any entity performing Sterilization.
- (4) No later than [60 days after Rule Amendment], the owner or operator of a Tier I Warehouse operating prior to [Date of Rule Amendment] shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov of the compliance option selected pursuant to paragraph (h)(3).
- (5) Emission Study

The owner or operator of a Tier I Warehouse electing to implement an emission study to meet the requirements of subparagraph (h)(3)(B) shall:

 - (A) Determine the annual Ethylene Oxide emissions from the warehouse with a methodology approved in the Emission Study Plan by using:

- (i) Emission factors approved by U.S. EPA, CARB, or South Coast AQMD; or
- (ii) Emissions rates from source tests or other sample testing consisting of at least duplicate runs or samples unless otherwise specified in the Emission Study Plan;
- (B) No later than [180 days After Date of Rule Amendment], submit an Emission Study Plan that contains the information specified in Appendix 3 – Emission Study Plan to the Executive Officer;
- (C) Within 30 calendar days after disapproval of the Emission Study Plan, resubmit the revised plan to the Executive Officer that includes any information necessary to address deficiencies;
- (D) If the resubmitted Emission Study Plan is denied, meet the requirements of the Emission Study Plan modified and approved by the Executive Officer;
- (E) Within 180 calendar days of approval of the Emission Study Plan, submit the results of the Emission Study to the Executive Officer; and
- (F) If the results of Emission Study indicate that more than four (4) lbs of Ethylene Oxide is emitted per year by the Tier I Warehouse, meet the requirements of subdivision (p).

(i) Interim Requirements

- (1) The following requirements shall be met by December 21, 1992 by ~~the owner or of~~ operator of a Facility performing Sterilization ~~all persons who that~~ uses a total of 400 ~~pounds~~ lbs or less of ~~e~~ Ethylene ~~e~~ Oxide per calendar year shall meet the following requirements until the date specified in Table 8 – Interim Requirements under subdivision (u):
 - (A) Sterilizer(s) and Combined Sterilizer/Aerator(s) shall be vented to control equipment with an efficiency of 99 ~~percent~~ % or ~~greater~~ more, by weight.
 - (B) If ~~e~~ Ethylene ~~e~~ Oxide emissions from ~~a~~ Aeration are greater than four (4) lbs ~~pounds~~ per calendar year, the ~~a~~ Aerator(s) shall be vented to control equipment with an efficiency of 95 ~~percent~~ % or ~~greater~~ more, by weight.
 - (C) If the ~~e~~ Exhaust ~~s~~ Streams from the equipment identified in subparagraphs (i)(1)(A) and (i)(1)(B) are vented to the same control equipment, the combined efficiency must be 98.8 ~~percent~~ % or ~~greater~~ more, by weight.
- (2) The following requirements shall be met by June 21, 1992 by ~~the owner or of~~ operator of a Facility performing Sterilization ~~all persons who~~ uses a total of more than 400 ~~pounds~~ lbs and less than or equal to 4,000 ~~pounds~~ lbs of ~~e~~ Ethylene

ethylene oxide per calendar year until the date specified in Table 8 – Interim Requirements under subdivision (u):

- (A) Sterilizer(s) and Combined Sterilizer/Aerator(s) shall be vented to control equipment with an efficiency of 99.9 percent or greater, by weight.
 - (B) Aerator(s) shall be vented to control equipment with an efficiency of 95 percent or greater, by weight.
 - (C) Back-draft-exhaust Valve(s) shall be vented to control equipment with an efficiency of 95 percent or greater, by weight.
 - (D) If the Exhaust Streams from the equipment identified in subparagraphs (i)(2)(A), (i)(2)(B), and (i)(2)(C) are vented to the same control equipment, the combined efficiency must be 99.6 percent or greater, by weight.
- (3) The following requirements shall be met by December 21, 1991 by the owner or operator of a Facility performing Sterilization all persons who use a total of more than 4,000 pounds of ethylene oxide per calendar year shall meet the following requirements until the date specified in Table 8 – Interim Requirements under subdivision (u):
- (A) Sterilizer(s) and Combined Sterilizer/Aerator(s) shall be vented to control equipment with an efficiency of 99.9 percent or greater, by weight.
 - (B) Aerator(s) and Sterilizer door hood Exhaust Stream(s) shall be vented to control equipment with an efficiency of 99 percent or greater, by weight.
 - (C) Back-draft-exhaust Valve(s) shall be vented to control equipment with an efficiency of 99 percent or greater, by weight.
 - (D) If the Exhaust Streams from the equipment identified in subparagraphs (i)(3)(A), (i)(3)(B), and (i)(3)(C) are vented to the same control equipment, the combined efficiency must be 99.8 percent or greater, by weight.
- (4) Persons owning or operating aeration only facilities where more than four pounds of ethylene oxide are emitted per calendar year shall install control equipment with an efficiency of 95 percent or more, by weight, by June 21, 1992.
- (4) The owner or operator of a Facility that stores materials that are Sterilized with Sterilant Gas at another Facility, where more than four (4) lbs of Ethylene Oxide are emitted, and has as a permit to operate to control Ethylene Oxide emissions issued by South Coast AQMD prior to [Date of Amendment] shall vent to control equipment with an efficiency of 95% or greater, by weight.

- (5) The owner or operator of a Facility subject to either paragraph (i)(1), (i)(2), (i)(3), or (i)(4) shall not exceed a maximum concentration of 10 ppm by volume of Ethylene Oxide. This measurement shall be taken one (1) centimeter away from any portion of a Sterilizer, Combined Sterilizer/Aerator, Aerator, control equipment, or emissions collection system that could emit Ethylene Oxide and during conditions of maximum Sterilant Gas flow, at least once every six (6) months, and meeting the requirement as specified in paragraph (i)(8).

~~Sterilizers, aerators, control equipment, and emissions collection systems shall be leak free effective December 21, 1990. The maximum sterilant gas mass flow shall be less than 30 parts per million ethylene oxide for sterilant gas composed of 12 percent ethylene oxide/88 percent chlorofluorocarbon¹², by weight, and less than 10 parts per million ethylene oxide for other compositions of sterilant gas, as measured one (1) centimeter away from any portion of a sterilizer, aerator, or control equipment that could have an ethylene oxide leak. Leak tests shall be conducted during conditions of maximum sterilant gas mass flow. Leak tests shall be conducted every six months, as specified in paragraph (f), Test Methods.~~

- (6) The owner or operator of a Facility subject to either paragraph (i)(1), (i)(2), (i)(3), or (i)(4) All persons subject to this rule shall conduct source tests on control equipment within 60 days after the initial operation of the equipment to verify compliance with control efficiency requirements, as specified in paragraph (i)(7)(f), Test Methods. Thereafter, annual source tests shall be conducted on catalytic oxidation, carbon, or solid bed control equipment at least once per calendar year. More frequent source tests, or source tests on other control equipment, may be required at the District's discretion.

- (7) ~~A person shall not discharge any sterilizer exhaust vacuum pump working fluid to the wastewater stream.~~

- (8) ~~By July 1, 1992, all persons who use more than 30,000 pounds of chlorofluorocarbons per calendar year for ethylene oxide sterilization, except at hospitals, shall vent the sterilizer exhaust to recovery or reclamation equipment with an efficiency of 70 percent or more, by weight.~~

- (9) ~~A person shall not use chlorofluorocarbon diluents in ethylene oxide sterilization, effective January 1, 1997.~~

(e) Record Keeping

~~Any person subject to this rule shall maintain written records for a minimum of two years and shall make them available to the District upon request. Records shall include:~~

- ~~(1) Documentation and results of leak tests; and either~~
- ~~(2) The number of sterilizer cycles and the pounds of ethylene oxide (measured or calculated) used per cycle for each sterilizer each day; or~~
- ~~(3) The total pounds of ethylene oxide purchased and used per calendar year, provided that monthly totals are also kept.~~

~~(f) Test Methods~~

~~(7)(1)~~ Source tests shall be conducted according to CARB Test Method 431 or an acceptable source test method approved by ~~the~~ CARB and the ~~District~~ Executive Officer. Unless otherwise specified in a source test protocol approved by the Executive Officer ~~In addition~~, the following requirements shall be met:

- ~~(A)~~ Tests on control equipment shall be run with a typical load in the ~~sterilizer~~ Sterilizer, Combined Sterilizer/Aerator, or aerator/Aerator.
- ~~(B)~~ The inlet and outlet of the control equipment shall be sampled simultaneously during testing to measure the control efficiency.
- ~~(C)~~ The efficiency of control equipment shall be determined under normal operating conditions. To measure the control efficiency on the ~~sterilizer~~ Sterilization Cycle exhaust-Exhaust stream-Stream, sampling shall be done during the entire duration of the first ~~sterilizer~~ Sterilization Cycle evacuation and subsequent air washes after ~~ethylene oxide~~ Ethylene Oxide has been introduced. To measure the control efficiency on an ~~aerator~~ Aeration exhaust-Exhaust stream-Stream with a constant air flow, sampling shall be done during a period of at least 60 minutes and during normal operations. To measure the control efficiency of the control equipment on an ~~aerator~~ Aeration exhaust-Exhaust stream-Stream with a non-constant air flow, sampling shall be done during the entire duration of the first ~~aerator~~ Aeration evacuation after ~~aeration~~ Aeration begins.

~~(8)(2)~~ ~~Leak~~ ~~Tests~~ pursuant to paragraph to ~~(i)(5)~~ shall be conducted by CARB Test Method 21 using a portable flame ionization detector or a non-dispersive infrared analyzer calibrated with methane, or an acceptable alternative method or analytical instrument approved by the Executive Officer ~~District~~. ~~A chlorofluorocarbon 12 detector with an audible signal using a metal oxide semiconductor sensor shall be considered an acceptable alternative for exhaust systems carrying a sterilant gas mixture of ethylene oxide and chlorofluorocarbon 12.~~

(j) SCEMS or CEMS Requirements for Stack Emissions

(1) The owner or operator of a Facility required to monitor the emissions from a Control System shall install, operate, and maintain a SCEMS or CEMS complying with the following requirements:

(A) Measures the following parameters:

(i) Ethylene Oxide concentration, with a resolution of at least 0.001 ppm, by volume;

(ii) Oxygen concentration, if required by the SCEMS or CEMS certification; and

(iii) Exhaust stack flow rate;

(B) Measures at a location reviewed and approved by the Executive Officer during the SCEMS or CEMS certification process;

(C) Meets the performance specifications for certification and quality assurance of the SCEMS or CEMS established by the Executive Officer; and

(D) Is equipped with a data acquisition system (DAS) that is capable of logging direct measurements and providing the date, time in local standard time, and applicable Ethylene Oxide performance standard.

(2) No later than the next calendar day, the owner or operator of a Facility required to operate a SCEMS or CEMS shall calculate and record the facility-wide mass emission rate in lbs/hr from all exhaust stacks of each Control System at the Facility, determined pursuant to Appendix 1 – Calculations.

(3) The owner or operator of a Facility required to operate a SCEMS or CEMS shall provide an uninterruptible power supply, including the installation and operation of a backup battery, to ensure operation of the SCEMS or CEMS for a minimum of 60 consecutive minutes.

(4) The owner or operator of a Facility required to operate a SCEMS or CEMS shall maintain and calibrate each SCEMS or CEMS pursuant to manufacturer specification and applicable requirements in Rule 218 through Rule 218.3, including conduct:

(A) A calibration error test for every 24 hours with a two (2) hour grace period;

(B) A cylinder gas audit for every calendar quarter when relative accuracy test audit is not conducted, but in no more than three quarters in succession; and

(C) A relative accuracy test audit performed annually no later than the end of the calendar quarter of the previous relative accuracy test, in the as-found unit operating condition.

(5) Beginning 30 months after receiving approval from the Executive Officer for an application for SCEMS or CEMS, the owner or operator of a Facility required to operate a SCEMS or CEMS pursuant to paragraph (d)(2) shall not exceed 96 hours of missing or invalid data per SCEMS or CEMS over a rolling 30-day period for days when a Sterilization Cycle is performed.

(k) Permanent Total Enclosure Requirements

The owner or operator of a Facility required to operate a Permanent Total Enclosure shall:

(1) Maintain any Permanent Total Enclosure at a negative pressure of at least 0.007 inches of water column averaged over a rolling 15 minutes one (1) hour period;

(2) Install, operate, and maintain a digital differential pressure monitoring system for each Permanent Total Enclosure to demonstrate compliance with paragraph (k)(1):

(A) A minimum of one (1) digital differential pressure monitor at each of the following three (3) walls in each Permanent Total Enclosure having a total ground surface area of 10,000 square feet or more:

(i) The Leeward Wall;

(ii) The Windward Wall; and

(iii) An exterior wall that:

(I) Connects the Leeward and Windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall;

(II) Intersects within plus or minus ten (+/-10) meters of the midpoint of a straight line between the two (2) other monitors specified in clauses (k)(2)(A)(i) and (k)(2)(A)(ii); and

(III) Is not located on the same wall as either of the other two (2) monitors described in clauses (k)(2)(A)(i) or (k)(2)(A)(ii);

(B) A minimum of one (1) building digital differential pressure monitor at the Leeward Wall of each Permanent Total Enclosure that has a total ground surface area of less than 10,000 square feet;

(C) Certified by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.005 to 0.110 inches of water column with a minimum increment of measurement of plus or minus 0.001 inches of water column;

- (D) Equipped with a continuous strip chart recorder or electronic recorder approved by the Executive Officer. If an electronic recorder is used, the recorder shall be capable of writing data on a medium that is secure and tamper-proof. The recorded data shall be readily accessible upon request by the Executive Officer. If software is required to access the recorded data that is not readily available to the Executive Officer, a copy of the software, and all subsequent revisions, shall be provided to the Executive Officer at no cost. If a device is required to retrieve and provide a copy of such recorded data, the device shall be maintained and operated at the Facility;
- (E) Calibrated pursuant to manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer;
- (F) Equipped with a backup, uninterruptible power supply to ensure operation of the monitoring system during a power outage; and
- (G) Equipped with an audible alarm that alerts when the negative pressure of the Permanent Total Enclosure is not maintained at least at the value specified in paragraph (k)(1); and
- (H) Record the differential pressure reading at a minimum of every one (1) minute for each differential pressure monitor; and
- (3) Demonstrate an inward air velocity of at least 200 feet per minute (fpm) at each natural draft opening at least once per calendar quarter and pursuant to Appendix 4 – PTE Inward Face Air Velocity Measurement Procedures.

(I) Source Test Requirements

The owner or operator of a Facility required to conduct source test pursuant to either subdivision (d), (e), (f), or (g) shall:

- (1) Prior to conducting the initial source test to demonstrate compliance with subdivision (d), (e), (f), or (g) for the Control System, submit a source test protocol for approval to the Executive Officer that includes:
 - (A) Operating conditions of any Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, and Permanent Total Enclosure being controlled by the Control System;
 - (B) Number of Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, and Permanent Total Enclosure being controlled by the Control System; and
 - (C) Planned sampling parameters and performance standard;

- (2) Prior to conducting any subsequent source test to demonstrate compliance with subdivision (d), (e), (f), or (g) for the Control System, submit a source test protocol that includes the conditions, numbers, and parameters referenced by subparagraphs (1)(1)(A) through (C) if there are any changes in the conditions, numbers, or parameters referenced by subparagraphs (1)(1)(A) through (C) in the most recently-approved source test protocol or if the Executive Officer requests an updated or new source test protocol;
 - (3) Report the source test schedule to the Executive Officer at least 10 days prior to the start of any source test in writing by electronic mail to Rule1405notifications@aqmd.gov or verbally by telephone to 1-800-CUT-SMOG;
 - (4) Report any changes to the source test schedule in writing by electronic mail to Rule1405notifications@aqmd.gov or verbally by telephone to 1-800-CUT-SMOG 24 hours prior to the start of source testing or within one (1) hour of discovery of a change in the source testing schedule;
 - (5) Conduct a source test:
 - (A) Pursuant to the most recent source test protocol approved by the Executive Officer;
 - (B) With triplicate runs at either typical operating conditions or at maximum operating parameters, as specified in the source test protocol;
 - (C) With each run being a minimum of 60 minutes;
 - (D) Pursuant to CARB Method 431, U.S. EPA Method TO-15 or TO-15A, or an acceptable source testing method approved by the Executive Officer; and
 - (E) When assessing the efficiency of controlling Ethylene Oxide emissions:
 - (i) Measure or determine the total inlet mass emissions in lbs of Ethylene Oxide entering the Control System from any Sterilizer, Combined Sterilizer/Aerator, Back-Draft Valve, Aerator, Post-Aerator, and Permanent Total Enclosure being controlled by the Control System; and
 - (ii) Measure or determine the total outlet mass emissions in lbs of Ethylene Oxide exhausted from the Control System; and
 - (6) Submit the source test report to the Executive Officer within 60 days of completing all sampling for the source test.
- (m) Leak Detection and Repair (LDAR) Program Requirements

The owner or operator of a Facility required to implement an LDAR program shall:

- (1) Prepare and maintain onsite a plot-plan that identifies all Components subject to the LDAR program;
- (2) Maintain clear labeling using tags or other means to physically identify all Components subject to the LDAR program;
- (3) Maintain all Components and Elements subject to the LDAR program free of Leaks greater than 2 ppm, by volume, above background;
- (4) Conduct audio-visual checks once per operating day for all applicable Components and Elements; and
- (5) No later than 60 calendar days of being required to implement an LDAR program and no later than every 60 calendar days thereafter, conduct Leak inspections of all applicable Components and Elements pursuant to CARB Test Method 21, or an approved alternative method, using a portable photoionization detector, or an approved alternative analytical instrument, calibrated with Ethylene Oxide, or an appropriate calibrating gas provided:
 - (A) All alternatives used are capable of determining or detecting Leaks greater than 2 ppm, by volume, above background and approved by the Executive Officer in writing; and
 - (B) If an appropriate calibrating gas is used, the correction factor is recorded and the measured reading is correlated to and also expressed as Ethylene Oxide.

(n) Prohibitions

- (1) The owner or operator of a Facility performing Sterilization ~~A person~~ shall not discharge any ~~sSterilizer eExhaust vVacuum pPump~~ working fluid to the wastewater stream.
- (2) The owner or operator of a Facility performing Sterilization ~~A person~~ shall not use ~~eChlorofluorocarbon dDiluents in-ethylene-oxide sSterilization,~~ effective January 1, 1997.
- (3) The owner or operator of a Facility performing Sterilization shall not allow the release of uncontrolled emissions of Ethylene Oxide to atmosphere from any Permanent Total Enclosure at any time.
- (4) The owner or operator of a Facility performing Sterilization shall not remove Sterilized materials from the Facility before completing Aeration, except for testing with no further distribution.

- (5) The owner or operator of a Post-Aeration Storage Facility shall not remove or render inoperable a Control System unless it is replaced by a Control System permitted by South Coast AQMD to meet the applicable Ethylene Oxide performance standard specified in paragraph (g)(1) or (i)(4).
- (6) The owner or operator of a Large Facility not maintaining all Elements in a Sterilant Gas Storage Area within a Permanent Total Enclosure that meets the requirements in subdivision (k) shall not allow any materials that contain Ethylene Oxide, other than Sterilant Gas, in the Sterilant Gas Storage Area.
- (o) Facility Performing Sterilization Exceeding Applicable Ethylene Oxide Usage
 - (1) No later than 24 months from the date of using 2,000 lbs or more of Ethylene Oxide within in a calendar year, the owner or operator of a Facility performing Sterilization, excluding a Large Facility, that uses 2,000 lbs or more of Ethylene Oxide in a calendar year shall meet the requirements in subparagraphs (d)(1)(A) through (d)(1)(E); (d)(2)(A) through (d)(2)(C); (d)(3)(A) through (d)(4)(D) and ~~(d)(3)(B)~~; and (d)(4)(A) through (d)(4)(D).
 - (2) No later than 24 months from the date of using more than 400 lbs of Ethylene Oxide within in a calendar year, the owner or operator of a Facility performing Sterilization, excluding a Large Facility or Medium Facility, that uses more than 400 lbs of Ethylene Oxide in a calendar year shall meet the requirements specified in subparagraphs (e)(1)(A) through (e)(1)(C), (e)(2)(A) and (e)(2)(B), and (e)(3)(A) through (e)(3)(D).
 - (3) No later than 24 months from the date of using more than 4 lbs of Ethylene Oxide within in a calendar year, the owner or operator of a Facility performing Sterilization, excluding a Large Facility, Medium Facility, or Small Facility, that uses more than 4 lbs of Ethylene Oxide in a calendar year shall meet the requirements specified in subparagraphs (f)(1)(A) through (f)(1)(C), (f)(2)(A) and (f)(2)(B), and (f)(3)(A) through (f)(3)(B).
 - (4) No later than 12 months from the date of exceeding the applicable Ethylene Oxide usage limit in Table 7 – Applicable Ethylene Oxide Usage, the owner or operator of a Facility performing Sterilization subject to the requirements of paragraphs (o)(1), (o)(2), or (o)(3) shall submit complete South Coast AQMD permit application(s) to modify existing permit conditions, modify existing equipment, or install new equipment to meet the requirements specified in paragraphs (o)(1), (o)(2), or (o)(3).

(p) Interim Fenceline Air Monitoring Requirements

(1) Submittal and Approval of a Facility Air Monitoring Plan

(A) The owner or operator of a Large Facility or a Tier I Warehouse shall submit a Fenceline Air Monitoring Plan that includes the information listed in Appendix 5 – Fenceline Air Monitoring Plan pursuant to the schedule specified in Table 3 – Submission of Fenceline Air Monitoring Plan:

Table 3 – Submission of Fenceline Air Monitoring Plan

<u>Facility Type</u>	<u>Applicability</u>	<u>Submission Due Date</u>
<u>Large Facility</u>	<u>Pursuant to the requirements of paragraph (d)(8)</u>	<u>[60 Days After Date of Rule Amendment]</u>
<u>Tier I Warehouse</u>	<u>Pursuant to the requirements of subparagraph (h)(3)(A)</u>	<u>[180 Days After Date of Rule Amendment]</u>
	<u>Pursuant to the requirements of subparagraph (h)(5)(F)</u>	<u>60 calendar days after submission of results of Emission Study</u>

(B) Within 30 calendar days after disapproval of the Fenceline Air Monitoring Plan, the owner or operator of a Facility subject to subparagraph (p)(1)(A) shall resubmit a revised plan to the Executive Officer that includes any information necessary to address deficiencies.

(C) If the resubmitted Fenceline Air Monitoring Plan is denied, the owner or operator of a Facility subject to subparagraph (p)(1)(A) shall implement the Fenceline Air Monitoring Plan as modified and approved by the Executive Officer.

(2) Implementation of a Facility Air Monitoring Plan

(A) Beginning 90 days after approval of the Fenceline Air Monitoring Plan, unless a different date is specified in the approved Fenceline Air Monitoring Plan, the owner or operator of a Facility subject to subparagraph (p)(1)(A) shall implement the approved Fenceline Air Monitoring Plan.

(B) The owner or operator of a Facility implementing a Fenceline Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) by 24-hour canister sample collection shall:

(i) Collect a 24-hour canister sample at a frequency of 1-in-6 days, unless a more frequent schedule is specified in the approved

- Fenceline Air Monitoring Plan, at each location specified in the Fenceline Air Monitoring Plan;
- (ii) Collect and analyze the 24-hour canister sample pursuant to either:
 - (I) U.S. EPA Compendium Method TO-15 Second Edition Determination Of Volatile Organic Compounds in Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/ Mass Spectrometry; or
 - (II) U.S. EPA Method TO-15A Determination of Volatile Organic Compounds in Air Collected in Specially Prepared Canisters and Analyzed by Gas Chromatography–Mass Spectrometry; and
 - (iii) Determine Ethylene Oxide concentration of the sample with a method of detection limit of 0.2 ppb or lower.
- (C) The owner or operator of a Facility implementing a Fenceline Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) by real-time monitoring shall:
- (i) Conduct real-time monitoring at each monitoring location approved in the Fenceline Air Monitoring Plan;
 - (ii) Operate equipment pursuant to manufacturer specifications and instructions; and
 - (iii) Measure and record the concentration of Ethylene Oxide for each monitoring location using an established methodology that:
 - (I) Has a method detection limit of 1.0 ppb or lower every 15 minutes; and
 - (II) Generates a minimum of one (1) measurement every 15 minutes.
- (D) The owner or operator of a Large Facility implementing a Fenceline Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) by real-time monitoring shall:
- (i) Calculate and record the average hourly concentration of Ethylene Oxide for each monitoring location using data obtained pursuant to clause (p)(2)(C)(iii); and

Table 4 – Concentration Threshold

<u>Applicable Date</u>	<u>Average Concentration</u>
<u>[Date of Amendment] – October 31, 2025</u>	<u>> 17.5 ppb</u>
<u>On or after November 1, 2025</u>	<u>≥ 3.0 ppb</u>

- (ii) If a real-time monitor measures an Ethylene Oxide 3-hour average concentration that exceeds the concentration specified in Table 4 – Concentration Threshold:
 - (I) No later than one (1) hour after, begin collecting a 24-hour canister sample at the monitoring location, unless currently collecting a 24-hour canister sample at the monitoring location or unless otherwise specified in the Fenceline Air Monitoring Plan;
 - (II) Collect no more than one (1) 24-hour canister sample at each monitoring location concurrently;
 - (III) Collect and analyze the 24-hour canister sample pursuant to clause (p)(2)(B)(ii) and (p)(2)(B)(iii); and
 - (IV) Submit the 24-hour canister sample collected for analysis within one (1) calendar day of collection.
- (E) The owner or operator of a Facility implementing a Fenceline Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) shall continuously record wind speed and direction data at all times using equipment capable of meeting the U.S. EPA Performance Criteria for Wind Sensors for both wind speed and wind direction at a location approved in the Fenceline Air Monitoring Plan.
- (F) For each monitoring location, the owner or operator of a Facility implementing a Fenceline Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) shall not miss collecting over a consecutive 30-day period:
 - (i) Due to calibration, maintenance, malfunction, or other occurrence beyond the control of the Facility:
 - (I) More than one valid 24-hour canister sample; and
 - (II) More than 96 hours of valid real-time data; and
 - (ii) Due to any other reason:

- (I) Any valid 24-hour canister sample; and
 - (II) Any valid real-time data.
 - (3) Fenceline Air Monitoring End Date
 - (A) Beginning 60 days after final SCEMS or CEMS certification is issued by the Executive Officer for each Control System at the Facility, the owner or operator of a Large Facility shall no longer be required to implement a fenceline air monitoring program pursuant to paragraph (d)(8).
 - (B) The owner or operator of a Tier I Warehouse shall no longer be required to implement a Fenceline Air Monitoring Plan pursuant to subparagraph (h)(3)(A) or (h)(5)(F), provided the owner or operator either:
 - (i) Collected 60 valid 24-hour canister samples for each monitoring location during a period of at least 365 calendar days; or
 - (ii) Collected 8,760 hours of valid real-time data for each monitoring location.
- (q) Curtailement of Sterilization Operations
 - (1) Within 24 hours of the owner or operator of a Large Facility, Medium Facility, or Small Facility receiving the Trigger Result that is at or above the applicable trigger threshold specified in Table 5 – Trigger Threshold for Sterilization Facilities, the owner or operator shall not use more than the applicable Ethylene Oxide daily limit specified in Table 6 – Curtailement Daily Usage Limit.

Table 5 – Trigger Threshold for Sterilization Facilities

<u>Trigger Type</u>	<u>Trigger Threshold</u>	<u>Facility Type</u>	<u>Applicability Start Date</u>	<u>Applicability End Date</u>
<u>Level 1</u>	<u>> 17.5 ppb and ≤ 25.0 ppb</u>	<u>Large Facility</u>	<u>[Date of Amendment]</u>	<u>October 31, 2025</u>
		<u>Medium Facility or Small Facility</u>	<u>[Date of Amendment]</u>	<u>March 1, 2026</u>
<u>Level 2</u>	<u>> 25.0 ppb</u>	<u>Large Facility</u>	<u>[Date of Amendment]</u>	<u>October 31, 2025</u>
		<u>Medium Facility or Small Facility</u>	<u>[Date of Amendment]</u>	<u>March 1, 2026</u>
<u>Level 3</u>	<u>> 3.0 ppb</u>	<u>Large Facility</u>	<u>November 1, 2025</u>	<u>None</u>
		<u>Medium Facility or Small Facility</u>	<u>March 2, 2026</u>	<u>None</u>

Table 6 – Curtailment Daily Usage Limit

<u>Trigger Type</u>	<u>First Result</u>	<u>Second Result</u>	<u>Third Result</u>
<u>Level 1</u>	<u>80% of Baseline Operation</u>	<u>50% of Baseline Operation</u>	<u>0% of Baseline Operation*</u>
<u>Level 2</u>	<u>50% of Baseline Operation</u>	<u>0% of Baseline Operation*</u>	<u>Not Applicable</u>
<u>Level 3</u>	<u>50% of Baseline Operation</u>	<u>0% of Baseline Operation*</u>	<u>Not Applicable</u>

**Subsequent sample results exceeding a trigger threshold would maintain a daily usage limit of 0% of Baseline Operation*

- (2) If required to curtail operations by 100%, the owner or operator may complete any Sterilization Cycles in progress at the start of the curtailment event.
- (3) The owner or operator of a Facility shall not be subject to the curtailment requirements specified in paragraph (q)(1) provided either:
 - (A) If collecting 24-hour canister samples to meet the requirements of subparagraph (p)(2)(A):

- (i) Subsequent result(s) of a 24-hour period obtained via a 24-hour canister sample collected during a scheduled sampling day at the sampling location(s) that triggered the applicable curtailment are below the applicable Level 1 or Level 3 concentration specified in Table 5 – Trigger Threshold for Sterilization Facilities; and
- (ii) Subsequent results of a 24-hour period at all monitoring locations are below the applicable Level 1 or Level 3 concentration specified in Table 5 – Trigger Threshold for Sterilization Facilities; or
- (B) If not collecting 24-hour canister samples to meet the requirements of subparagraph (p)(2)(A):
 - (i) Subsequent result(s) of a 24-hour period obtained via a 24-hour canister sample or other approved methodology in the Fenceline Air Monitoring Plan obtained at the sampling location(s) that triggered the applicable curtailment are below the applicable Level 1 or Level 3 concentration specified in Table 5 – Trigger Threshold for Sterilization Facilities; and
 - (ii) Meet requirements specified in clause (q)(3)(A)(ii); or
- (C) The Executive Officer determines, based on credible evidence, that the result of a 24-hour period obtained via a 24-hour canister sample or other approved methodology in the Fenceline Air Monitoring Plan was not due to the contribution of the Facility to ambient air concentration of Ethylene Oxide.
- (4) The number of Trigger Results that are at or above the applicable trigger threshold specified in Table 5 – Trigger Threshold for Sterilization Facilities shall reset to zero (0), provided a period of no fewer than 30 consecutive calendar days demonstrated no results exceeded an applicable trigger threshold.
- (r) Plan Administration
An Emission Study Plan, Fenceline Air Monitoring Plan, Control System Implementation Plan, or Facility Implementation Plan shall each be subject to fees specified in Rule 306 – Plan Fees.
- (s) Recordkeeping
 - (1) The owner or operator of any Facility performing Sterilization shall maintain records of, as applicable:

- (A) The number of Sterilization Cycles and the lbs of Sterilant Gas (measured or calculated) used per Sterilization Cycle for each Sterilizer and each Combined Sterilizer/Aerator each operating day;
 - (B) The total lbs of Sterilant Gas purchased and the total lbs of Sterilant Gas used per calendar month and calendar year, respectively;
 - (C) Data collected from the SCEMS or CEMS pursuant to paragraphs (j)(1) through (j)(2);
 - (D) Source test reports pursuant to paragraph (l)(6);
 - (E) Measurements of inward face velocity pursuant to paragraph (k)(3);
 - (F) Data collected from the digital differential pressure monitoring system in Permanent Total Enclosures pursuant to paragraph (k)(2);
 - (G) Plot-plan, audio-visual checks, and leak inspections for LDAR programs pursuant to subdivision (m);
 - (H) The number of Sterilized Palletized Units shipped, grouped by First Destination, pursuant to paragraph (t)(5);
 - (I) Facility diagrams pursuant to subparagraphs (d)(4)(D), (e)(3)(B), or (f)(3)(B);
 - (J) Annual reports pursuant to paragraph (t)(1);
 - (K) Semi-annual reports pursuant to paragraph (t)(2); and
 - (L) For each Sterilization Cycle, a log entry with the following:
 - (i) Cycle number, product identifier or batch number;
 - (ii) Starting and ending time of Aeration in local time;
 - (iii) Minimum required time of Aeration; and
 - (iv) Document source of minimum required time of Aeration specified in clause (s)(1)(L)(iii).
- (2) The owner or operator of a Post-Aeration Storage Facility subject to subdivision (g) shall maintain records of, as applicable:
- (A) Source test reports pursuant to paragraph (l)(6);
 - (B) Measurements of inward face velocity pursuant to paragraph (k)(3);
 - (C) Data collected from the digital differential pressure monitoring system in Permanent Total Enclosures pursuant to paragraph (k)(2);
 - (D) Plot-plan, audio-visual checks, and leak for LDAR programs pursuant to subdivision (m); and
 - (E) Facility diagrams pursuant to paragraph (g)(5).
- (3) The owner or operator of a Facility shall provide all available onsite records to the Executive Officer upon request.

(4) The owner or operator of any Facility subject to this rule shall retain all applicable records for at least five (5) years with two (2) years of records maintained onsite.

(t) Reporting

(1) Annual Reporting

The owner or operator of a Large Facility shall submit an annual report in writing by electronic mail to Rule1405notifications@aqmd.gov each calendar year on or before March 1 for the preceding calendar year. The annual report shall contain at a minimum either:

(A) The number of Sterilization Cycles and the lbs of Sterilant Gas (measured or calculated) used per Sterilization Cycle for each Sterilizer and each Combined Sterilizer/Aerator each operating day; or

(B) The total lbs of Sterilant Gas purchased and the total lbs of Sterilant Gas used per calendar month and calendar year, respectively.

(2) Semi-Annual Reporting

The owner or operator of a Large Facility shall submit a semi-annual report in writing by electronic mail to Rule1405notifications@aqmd.gov on or before February 28 of each calendar year for the preceding July-December semi-annual reporting period and on or before August 31 of each calendar year for the preceding January-June semi-annual reporting period. The semi-annual report shall contain at a minimum:

(A) Semi-Annual Summary Report pursuant to Appendix 6 –~~Contents of Semi-Annual Summary Reports~~; and

(B) Semi-Annual Excess Emission Report pursuant to Appendix 7 –~~Contents of Semi-Annual Excess Emission Reports~~, if the duration of excess emissions or parameter monitoring exceedances for the reporting period exceeds 1% of the reporting period or the total monitored downtime for the reporting period exceeds 5% of the reporting period.

(3) Exceeding Ethylene Oxide Permit Limit Reporting

The owner or operator of a Facility performing Sterilization that exceeds a limit of Ethylene Oxide, either as a facility-wide permit limit or a permit limit for equipment that performs Sterilization, shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov or by telephone to 1-800-CUT-SMOG within 30 days of the exceedance.

(4) Exceeding Ethylene Oxide Threshold Reporting

The owner or operator of a Facility performing Sterilization that uses more Ethylene Oxide than the amounts shown in Table 7 – Applicable Ethylene Oxide Usage in one (1) calendar year shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov or by telephone to 1-800-CUT-SMOG within 30 days of the exceedance.

Table 7 – Applicable Ethylene Oxide Usage

<u>Facility Type</u>	<u>Ethylene Oxide Usage per Calendar Year</u>
<u>Medium Facility</u>	<u>2,000 lbs</u>
<u>Small Facility</u>	<u>400 lbs</u>
<u>Other*</u>	<u>4 lbs</u>

*Any Facility performing Sterilization other than a Large Facility, Medium Facility, or Small Facility

(5) First Destination Reporting

The owner or operator of a Large Facility shall:

(A) Beginning April 1, 2024 until March 31, 2025, record either:

- (i) The First Destination of Sterilized Palletized Units shipped and the number of Sterilized Palletized Units shipped each month to each First Destination; or**
- (ii) The customer who ordered the Sterilization of the Sterilized Palletized Units and the number of Sterilized Palletized Units ordered by the customer each month; and**

(B) No later than June 1, 2025, submit a summary report to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov that includes the following:

- (i) List of all First Destinations shipped more than 500 Sterilized Palletized Units or customers that order more than 500 Sterilized Palletized Units over the reporting period pursuant to subparagraph (t)(5)(A) that includes the following:**
 - (I) Name of First Destination or customer;**
 - (II) Mailing address of First Destination or customer; and**
 - (III) Contact information of responsible party; and**

- (ii) Total number of Sterilized Palletized Units shipped to each First Destination or ordered by each customer identified in clause (t)(5)(B)(i) over the reporting period; and
 - (iii) Electronic copy of records maintained pursuant to subparagraph (t)(5)(A).
- (6) Mobile Monitoring Reporting
 - (A) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to clause (d)(7)(A)(ii) shall, if a one (1) minute average reading obtained via mobile monitoring measures above the Level 2 concentration specified in Table 5 – Trigger Threshold for Sterilization Facilities:
 - (i) No later than three (3) hours, report the concentration and the location where the reading occurred to the Executive Officer by calling 1-800-CUT-SMOG; and
 - (ii) No later than 48 hours, submit preliminary monitoring data for the calendar day to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov
 - (B) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to clause (d)(7)(A)(ii) shall report to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov the results of all mobile monitoring within seven (7) calendar days of measurement that includes a concentration map showing the mobile monitoring route along with measurements of Ethylene Oxide concentration (or indirect concentration) at all locations.
 - (C) The owner or operator of a Large Facility electing to conduct mobile monitoring pursuant to subclause (d)(7)(A)(ii)(II) shall report as soon as reasonably possible, but no later than 9:00 a.m. of the next operating day after receiving the results of a grab canister sample collected pursuant to clause (d)(7)(E)(i):
 - (i) Results to the Executive Officer by calling 1-800-CUT-SMOG; and
 - (ii) Laboratory results package to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov.
- (7) Fenceline Air Monitoring Reporting

The owner or operator of a Facility implementing a Fenceline Air Monitoring Plan shall:

(A) If meeting the requirements of subparagraph (p)(2)(A) by 24-hour canister sample collection;

(i) No later than 14 days after the date of sampling, report the Ethylene Oxide concentration to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov; and

(ii) No later than two (2) hours after knowing that a valid 24-hour canister sample was not collected, report to the Executive Officer by calling 1-800-CUT-SMOG or by electronic mail to Rule1405notifications@aqmd.gov and provide Facility name, name of fence line air monitor, date of occurrence, and reason of occurrence;

(B) If meeting the requirements of subparagraph (p)(2)(A) by real-time monitoring;

(i) No later than the 14th of each calendar month, report the daily average concentrations of Ethylene Oxide for the prior calendar month to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov;

(ii) As soon as reasonably possible, but no later than 48 hours after exceeding 24 hours of valid data not recorded over a consecutive 30-day period at a monitoring location, report to the Executive Officer by calling 1-800-CUT-SMOG or by electronic mail to Rule1405notifications@aqmd.gov and provide Facility name, name of fence line air monitor, date of occurrence, and reason of occurrence; and

(iii) No later than two (2) hours after starting to collect a 24-hour canister sample, the location and the start time of collecting the 24-hour canister sample to the Executive Officer by calling 1-800-CUT-SMOG or by electronic mail to Rule1405notifications@aqmd.gov; and

(C) No later than 14th of each calendar month, report wind speed and direction data for the prior calendar month to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov.

(8) Trigger Level Reporting

The owner or operator of a Large Facility implementing a Facility Air Monitoring Plan to meet the requirements of subparagraph (p)(2)(A) shall report as soon as reasonably possible, but no later than 9:00 a.m. of the next operating day after

receiving the results of a 24-hour sample that is at or above the applicable concentration specified in Table 4 – Concentration Threshold either:

- (A) Results of the 24-hour canister sample to the Executive Officer by calling 1-800-CUT-SMOG and Laboratory results package of the canister sample to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov; or
- (B) If exclusively using real-time monitoring data:
 - (i) The daily average concentration; and
 - (ii) Date when exceeded the applicable daily average concentration.

(9) SCEMS or CEMS Exceedance Reporting

The owner or operator of a Facility required to monitor the emissions from a Control System by SCEMS or CEMS shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov or by telephone to 1-800-CUT-SMOG within two (2) hours of the following occurrences:

- (A) Exceeding the facility-wide mass emission rate of Ethylene Oxide specified in subparagraph (d)(2)(B) for any rolling 30-day period; or
- (B) For each Control System complying with clause (d)(1)(C)(ii), exceeding the outlet concentration specified in subparagraph (d)(2)(C) for any rolling 30-day period.

(10) Permanent Total Enclosure Monitor Reporting

The owner or operator of a Facility required to operate a Permanent Total Enclosure shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov or by telephone to 1-800-CUT-SMOG within 24 hours of the following occurrences:

- (A) The negative pressure in any Permanent Total Enclosure does not meet the requirement in paragraph (k)(1); or
- (B) There are more than 24 consecutive hours of missing data for data used to demonstrate compliance with paragraph (k)(1).

(11) Operational Noncompliance Reporting

The owner or operator of a Facility shall report to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov or by telephone to 1-800-CUT-SMOG within 24 hours of knowing of the following occurrences:

- (A) A source test conducted pursuant to subdivision (l) indicating noncompliance with an applicable performance standard; or

(B) A Component or Element subject to the LDAR program pursuant to subdivision (m) is not maintained free of Leaks greater than 2 ppm, by volume, above background.

(u) Exemptions

g)

~~The provisions of paragraph (d), "Requirements," of this rule shall not apply to any person who uses less than or equal to four pounds of ethylene oxide per calendar year.~~

(1) The following requirements do not apply to an owner or operator of a Facility that uses four (4) lbs or less of Ethylene Oxide per calendar year:

(A) Subdivisions (i) and (n); and

(B) Subparagraph (s)(1)(L).

(2) The requirements of subdivision (i) do not apply to an owner or operator of a Facility subject to requirements of subdivision (d), (e), (f), or (g) pursuant to the schedule specified in Table 8 – Interim Requirements:

Table 8 – Interim Requirements

<u>Applicable Subdivision</u>	<u>Beginning Date of Exemption</u>
<u>(d)</u>	<u>September 1, 2025 or 60 days after final SCEMS or CEMS certification is issued by the Executive Officer for each Control System at the Facility, whichever is earlier</u>
<u>(e)</u>	<u>January 1, 2026</u>
<u>(f)</u>	<u>January 1, 2026</u>
<u>(g)</u>	<u>September 1, 2025</u>

(3) The requirements of paragraph (k)(1) and (n)(3) do not apply to an owner or operator of a Facility during the loss of power or other unplanned event outside of the control of the owner or operator provided, as applicable:

(A) No Products or other materials are added or removed from Sterilizers, Combined Sterilizer/Aerators, Aerators, Post-Aerators, or Permanent Total Enclosures;

(B) All natural draft openings (NDOs) are closed except for the purposes of exiting a Permanent Total Enclosure or restarting a Control System;

- (C) The Ethylene Oxide concentration at all NDOs are monitored and recorded at least once every calendar day during the loss of power or other unplanned event outside of the control of the owner or operator using a portable photoionization detector calibrated with Ethylene Oxide or other calibrating gas, or an acceptable alternative method or analytical instrument approved by the Executive Officer provided:

 - (i) All alternatives used are capable of determining or detecting Leaks great than 2 ppm above background and approved by the Executive Officer in writing; and
 - (ii) If an appropriate calibrating gas is used, the correction factor is recorded and the measured readings is correlated to and also expressed as Ethylene Oxide; and
- (D) Event reported pursuant to paragraph (t)(10).
- (4) The requirements of subdivision (d) do not apply to an owner or operator of a Large Facility provided:

 - (A) The owner or operator submits to the Executive Officer a complete permit application or a Facility Implementation Plan to limit the facility-wide use of Ethylene Oxide to be less than 2,000 lbs per calendar year;
 - (B) The complete permit application or the Facility Implementation Plan submitted to meet the requirements of subparagraph (u)(4)(A) is not cancelled; and
 - (C) The owner or operator uses less than 167 lbs of Ethylene Oxide facility-wide per calendar month, either:

 - (i) Beginning the 1st day of the month following the date of the complete permit application submittal and until the date the permit associated with the permit application submitted pursuant to subparagraph (v)(4)(A) has been issued; or
 - (ii) Beginning the 1st day of the month following the date of the Facility Implementation Plan submittal and until the date the Facility Implementation Plan has been approved.
- (5) The requirements of paragraph (d)(7) do not apply to an owner or operator of a Large Facility, provided either:

 - (A) The Executive Officer conducts fenceline air monitoring at a sampling frequency at least 1-in-6 days; or

- (B) The owner or operator of the Large Facility conducts fenceline air monitoring for Ethylene Oxide pursuant to a plan approved by the Executive Officer.
- (6) The requirements of subparagraph (d)(2)(B) do not apply to an owner or operator of a Large Facility that is unable to demonstrate compliance with the applicable performance standard specified in (d)(2)(B) during the present rolling 30-day period, provided the owner or operator:

 - (A) Does not perform Sterilization for at least 48 consecutive hours after being unable to demonstrate compliance with the applicable performance standard;
 - (B) After resuming operations, demonstrates by a SCEMS or CEMS that the sum of mass emission rates, averaged over a calendar day and measured at each exhaust stack, meets the performance standard specified in either clause (d)(2)(B)(i) or (d)(2)(B)(ii); and
 - (C) Reports to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov 24 hours prior to initiating a new Sterilization Cycle.
- (7) The requirements of subparagraph (d)(2)(C) do not apply to an owner or operator of a Large Facility with a Control System that is unable to demonstrate compliance with the performance standard specified in subparagraph (d)(2)(C) during the present rolling 30-day period, provided the owner or operator:

 - (A) Does not perform Sterilization with Sterilizers and Combined Sterilizer/Aerators controlled by the Control System for at least 48 consecutive hours after being unable to demonstrate compliance with the performance standard;
 - (B) After resuming operations, demonstrates by a SCEMS or CEMS that emissions of Ethylene Oxide do not exceed a concentration of 0.01 ppm, by volume at stack conditions, at each exhaust stack in a Control System averaged over each calendar day in operation after resuming Sterilization with Sterilizers and Combined Sterilizer/Aerators controlled by the Control System; and
 - (C) Reports to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov 24 hours prior to initiating a new Sterilization Cycle with Sterilizers and Combined Sterilizer/Aerators controlled by the Control System.

- (8) The requirements of paragraph (j)(5) do not apply to an owner or operator that exceeded 96 hours of missing or invalid data per SCEMS or CEMS over a rolling 30-day period for days when a Sterilization Cycle is performed, provided the owner or operator:
 - (A) Does not perform Sterilization for at least 48 consecutive hours after exceeding 96 hours of missing or invalid data per SCEMS or CEMS the present rolling 30-day period;
 - (B) After resuming operation, does not exceed more than one (1) hour of missing or invalid data during a calendar day when a Sterilization Cycle is performed; and
 - (C) Reports to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov 24 hours prior to initiating a new Sterilization Cycle.
- (9) The requirements of clause (p)(2)(D)(ii) do not apply to owner or operator of a Large Facility implementing a Fenceline Air Monitoring Plan by real-time monitoring, provided:
 - (A) The real-time monitoring method is approved by the U.S. EPA, CARB or South Coast AQMD; and
 - (B) In the Fenceline Air Monitoring Plan:
 - (i) The Executive Officer approves the real-time monitoring method to be exclusively used; and
 - (ii) The owner or operator agrees to the stipulation that the results of real-time monitoring are sufficient for curtailment requirements specified in subdivision (q).
- (10) The following requirements do not apply to a new or modified Large Facility, not permitted as a Large Facility on [Date of Rule Amendment] and permitted as a Large Facility after [Date of Rule Amendment]:
 - (A) Paragraphs (d)(5), (d)(7), and (d)(8);
 - (B) Subdivision (i);
 - (C) Subdivision (p); and
 - (D) Paragraphs (t)(5), (t)(6), (t)(7), and (t)(8).
- (11) The requirements of subdivision (q) to curtail Sterilization by 100% do not apply to the owner or operator of a Large Facility, Medium Facility, or Small Facility provided the owner or operator Sterilizes only Products that are in the Preconditioner at the start of the curtailment and not suitable for use if a

Sterilization Cycle is not completed, based on validation documents approved by the U.S. FDA or manufacturer's specification.

(12) The requirements of subdivision (q) to curtail Sterilization do not apply to a Product (including medical devices that are life-supporting, life-sustaining, or intended for use in emergency medical care or during surgery or Palletized Units containing the Product) determined by a local, state, or federal public health agency, such as the U.S. FDA, or a California hospital or medical center, to be reasonably likely to experience a reduced supply and is critical to public health, as certified by the owner or operator or reported to the Executive Officer, provided:

(A) For owner or operator certification, the owner or operator no later than 12 hours prior to initiating the first Sterilization Cycle each operating day during the curtailment event, reports to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov for each Product reasonably likely to experience a reduced supply and is critical to public health the following:

(i) Product name;

(ii) Product code assigned by the U.S. FDA; and

(iii) Name of public health agency, or California hospital, or medical center that made the determination; ~~and~~

(B) Where applicable and as soon as reasonably possible, the owner or operator provides the Executive Officer with either:

(i) A communication written by the public health agency or California hospital or medical center that made the determination, dated within 90 days of certification that identifies the Product, the date of determination, and estimated duration of the status; or

(ii) A statement from the owner or operator certifying that the communication from the public health agency or California hospital or medical center is non-public if prohibited by law;

(C) The owner or operator maintains daily records of the amount of Sterilant Gas (measured or calculated, in lbs per day) used to sterilize Products, including Palletized Units containing Products, reported pursuant to paragraph (u)(12) for each operating day during the curtailment event; and

(D) For each Palletized Unit containing the Product reasonably likely to experience a reduced supply and is critical to public health, the owner or operator affixes on a vertical surface on the Palletized Unit at least one (1)

yellow label, size 8.5 inches by 11 inches, with black letters of sufficient size and contrast as to be readily visible and legible, with the following prior to entering a Sterilizer or Combined Sterilizer/Aerator:

- (i) Product name;
- (ii) Product code assigned by the U.S. FDA; and
- (iii) Name of public health agency or California hospital or medical center that made the determination.

(13) The requirements of paragraphs (h)(1) and (h)(2) do not apply to the owner or operator of a Tier I Warehouse provided:

- (A) No later than [60 Days After Date of Rule Amendment], reports to the Executive Officer in writing by electronic mail to Rule1405notifications@aqmd.gov that the Tier I Warehouse would not receive Sterilized Palletized Units between April 1, 2024 to March 31, 2025 from any entity performing Sterilization; and
- (B) The owner or operator does not receive Sterilized Palletized Units between April 1, 2024 to March 31, 2025 from any entity performing Sterilization.

(14) The requirements of paragraph (k)(1) do not apply to an owner or operator of a Facility for any one (1) hour period when wind speed is greater than 20 miles per hour, averaged over a minute, at the Facility provided the owner or operator:

- (A) Has an approved Fenceline Air Monitoring Plan that is being implemented pursuant to subdivision (p) or an approved Facility Implementation Plan, which includes the location and operation of a wind sensor;
- (B) Records wind speed and direction data at a minimum of once per minute at all times using equipment capable of meeting the U.S. EPA Performance Criteria for Wind Sensors pursuant to the approved Fenceline Air Monitoring Plan or Facility Implementation Plan;
- (C) Records the one (1) hour period when differential pressure data is excluded from determining compliance with paragraph (k)(1) and the corresponding wind speed and direction, averaged over a minute; and
- (D) For each operating day with a one (1) hour period recorded pursuant to subparagraph (u)(14)(C), no later than 9:00 a.m. of the next operating day, submit to the Executive Officer by electronic mail to Rule1405notifications@aqmd.gov the information recorded pursuant to subparagraph (u)(14)(C).

Appendix 1 – Calculations

1. Applicability

This appendix specifies the methodology for calculating performance standards specified in the rule.

2. Facility-Wide Mass Emission Rate

Subparagraph (d)(2)(B) requires a demonstration by SCEMS or CEMS that the facility-wide mass emission rate from all exhaust stacks at the Facility does not exceed 0.015 lbs/hr on a rolling 30-day period. The 30-day rolling facility-wide mass emission rate shall be determined as follow.

A. Determine Hourly Average for each Exhaust Stack

- i. An hourly average covers the 60-minute period commencing on the hour. For each exhaust stack, compute the hourly average utilizing all valid data points with at least one valid data point in each 15-minute quadrant of the hour.
- ii. For any hour in which required maintenance or quality assurance activities are performed, a minimum of two (2) valid data points, separated by at least 15 minutes, is required to calculate the hourly average, if the unit operates in two (2) or more quadrants of the hour. If the unit operates in only one (1) quadrant of the hour, at least one (1) valid data point is required to calculate the hourly average.
- iii. A valid data point for quantification is any data point recorded and reported from the SCEMS or CEMS meeting the quality assurance and quality control program requirements as specified in the applicable requirements of Rules 218 through 218.3.
- iv. If the conditions specified in A.i. or A.ii. are not met, then the hourly average is not valid.

B. Determine Daily Average for each Exhaust Stack

- i. For each exhaust stack, compute the daily average by averaging all valid hourly averages in the calendar day.
- ii. At least one (1) valid hourly average is required to compute the daily average for the exhaust stack.
- iii. If the conditions specified by B.ii. are not met, then the daily average for the exhaust stack is not valid.

C. Determine Daily Facility-Wide Mass Emission Rate

- i. Compute the daily facility-wide mass emission rate by adding all valid daily averages for each exhaust stack in the calendar day.

- ii. If any exhaust stack has a daily average that is not valid for the calendar day, the facility-wide mass emission rate for that calendar day is not valid.
- iii. Example below represents a facility with two exhaust stacks.

	<u>Stack A</u>	<u>Stack B</u>	<u>Daily Facility-Wide Mass Emission Rate</u>
<u>Day 1</u>	<u>0.002 lbs/hr</u>	<u>0.005 lbs/hr</u>	<u>0.007 lbs/hr</u>
<u>Day 2</u>	<u>0.002 lbs/hr</u>	<u>INVALID</u>	<u>INVALID</u>

The facility-wide mass emission rate for Day 2 is not valid and would not be considered in the 30-day rolling facility-wide mass emission rate.

D. Determine 30-Day Rolling Facility-Wide Mass Emission Rate

- i. Compute the 30-day rolling facility-wide mass emission rate by adding the facility-wide mass emission rate for that day with the previous 29 daily facility-wide mass emission rates and divide by 30.
- ii. Example

<u>Day</u>	<u>Emission Rate (lb/hr)</u>		
	<u>Stack A</u>	<u>Stack B</u>	<u>Facility-Wide</u>
<u>Day 1</u>	<u>0.006</u>	<u>0.000</u>	<u>0.006</u>
<u>Day 2</u>	<u>0.001</u>	<u>0.005</u>	<u>0.006</u>
<u>Day 3</u>	<u>0.005</u>	<u>0.006</u>	<u>0.011</u>
<u>Day 4</u>	<u>0.004</u>	<u>0.006</u>	<u>0.010</u>
<u>Day 5</u>	<u>0.017</u>	<u>0.006</u>	<u>0.023</u>
<u>Day 6</u>	<u>0.015</u>	<u>0.005</u>	<u>0.020</u>
<u>Day 7</u>	<u>0.014</u>	<u>0.001</u>	<u>0.015</u>
<u>Day 8</u>	<u>0.013</u>	<u>0.007</u>	<u>0.019</u>
<u>Day 9</u>	<u>0.002</u>	<u>0.004</u>	<u>0.005</u>
<u>Day 10</u>	<u>0.007</u>	<u>0.002</u>	<u>0.008</u>
<u>Day 11</u>	<u>0.001</u>	<u>0.007</u>	<u>0.009</u>
<u>Day 12</u>	<u>0.008</u>	<u>0.007</u>	<u>0.016</u>
<u>Day 13</u>	<u>0.014</u>	<u>0.004</u>	<u>0.018</u>
<u>Day 14</u>	<u>0.002</u>	<u>0.003</u>	<u>0.006</u>
<u>Day 15</u>	<u>0.011</u>	<u>0.009</u>	<u>0.020</u>
<u>Day 16</u>	<u>INVALID</u>	<u>0.010</u>	<u>INVALID</u>
<u>Day 17</u>	<u>0.012</u>	<u>0.008</u>	<u>0.021</u>

<u>Day</u>	<u>Emission Rate (lb/hr)</u>		
	<u>Stack A</u>	<u>Stack B</u>	<u>Facility-Wide</u>
<u>Day 18</u>	<u>0.011</u>	<u>0.001</u>	<u>0.011</u>
<u>Day 19</u>	<u>0.005</u>	<u>0.001</u>	<u>0.005</u>
<u>Day 20</u>	<u>0.018</u>	<u>0.005</u>	<u>0.023</u>
<u>Day 21</u>	<u>0.019</u>	<u>0.003</u>	<u>0.022</u>
<u>Day 22</u>	<u>0.016</u>	<u>0.005</u>	<u>0.021</u>
<u>Day 23</u>	<u>0.010</u>	<u>0.009</u>	<u>0.019</u>
<u>Day 24</u>	<u>0.012</u>	<u>0.008</u>	<u>0.020</u>
<u>Day 25</u>	<u>0.005</u>	<u>INVALID</u>	<u>INVALID</u>
<u>Day 26</u>	<u>0.019</u>	<u>0.003</u>	<u>0.022</u>
<u>Day 27</u>	<u>0.006</u>	<u>0.009</u>	<u>0.014</u>
<u>Day 28</u>	<u>0.008</u>	<u>0.008</u>	<u>0.016</u>
<u>Day 29</u>	<u>0.008</u>	<u>0.002</u>	<u>0.010</u>
<u>Day 30</u>	<u>0.001</u>	<u>0.006</u>	<u>0.007</u>
<u>Day 31</u>	<u>0.011</u>	<u>0.004</u>	<u>0.014</u>
<u>Day 32</u>	<u>0.012</u>	<u>0.002</u>	<u>0.014</u>

Add the most recent 30 valid daily facility-wide mass emission rates at the Facility and divide by 30. Day 16 and Day 25 would not be considered as part of the calculation. Day 31 and Day 32 would be considered as part of the calculation.

30-day rolling average = (0.006 + 0.006 + 0.011 + 0.010 + 0.023 + 0.020 + 0.015 + 0.019 + 0.005 + 0.008 + 0.009 + 0.016 + 0.018 + 0.006 + 0.020 + 0.021 + 0.011 + 0.005 + 0.023 + 0.022 + 0.021 + 0.019 + 0.020 + 0.022 + 0.014 + 0.016 + 0.010 + 0.007 + 0.014 + 0.014)/30 = **0.014 lbs/hr**

3. Concentration

For each Control System complying with the concentration limit specified in clause (d)(1)(C)(ii), subparagraph (d)(2)(C) requires a demonstration by SCEMS or CEMS that the emissions of Ethylene Oxide do not exceed a concentration of 0.01 ppm, by volume at stack conditions, on a rolling 30-day period. The 30-day rolling concentration shall be determined as follow.

A. Determine Hourly Average for the Exhaust Stack

- i. An hourly average covers the 60-minute period commencing on the hour. For each exhaust stack, compute the hourly average utilizing all valid data points with at least one valid data point in each 15-minute quadrant of the hour.
- ii. For any hour in which required maintenance or quality assurance activities are performed, a minimum of two (2) valid data points, separated by at least 15 minutes, is required to calculate the hourly average, if the unit operates in two (2) or more quadrants of the hour. If the unit operates in only one (1) quadrant

of the hour, at least one (1) valid data point is required to calculate the hourly average.

- iii. A valid data point for quantification is any data point recorded and reported from the SCEMS or CEMS meeting the quality assurance and quality control program requirements as specified in the applicable requirements of Rules 218 through 218.3.
- iv. If the conditions specified in A.i. or A.ii. are not met, then the hourly average is not valid.

B. Determine Daily Average Concentration for the Exhaust Stack

- i. For each exhaust stack, compute the daily average by averaging all valid hourly averages in the calendar day.
- ii. At least one (1) valid hourly average is required to compute the daily average concentration for the exhaust stack.
- iii. If the conditions specified B.ii. are not met, then the daily average concentration for the exhaust stack is not valid.

C. Determine 30-Day Rolling Concentration

- i. Compute the 30-day rolling concentration by adding the daily average concentration with the previous 29 daily average concentrations and divide by 30.
- ii. Example

<u>Day</u>	<u>Concentration (ppm)</u>	<u>Day</u>	<u>Concentration (ppm)</u>	<u>Day</u>	<u>Concentration (ppm)</u>
<u>Day 1</u>	<u>0.014</u>	<u>Day 12</u>	<u>INVALID</u>	<u>Day 23</u>	<u>0.020</u>
<u>Day 2</u>	<u>0.012</u>	<u>Day 13</u>	<u>0.002</u>	<u>Day 24</u>	<u>0.006</u>
<u>Day 3</u>	<u>0.007</u>	<u>Day 14</u>	<u>0.000</u>	<u>Day 25</u>	<u>0.015</u>
<u>Day 4</u>	<u>0.006</u>	<u>Day 15</u>	<u>0.019</u>	<u>Day 26</u>	<u>0.006</u>
<u>Day 5</u>	<u>0.002</u>	<u>Day 16</u>	<u>0.003</u>	<u>Day 27</u>	<u>0.013</u>
<u>Day 6</u>	<u>0.004</u>	<u>Day 17</u>	<u>0.016</u>	<u>Day 28</u>	<u>0.015</u>
<u>Day 7</u>	<u>0.006</u>	<u>Day 18</u>	<u>0.005</u>	<u>Day 29</u>	<u>0.008</u>
<u>Day 8</u>	<u>0.003</u>	<u>Day 19</u>	<u>0.016</u>	<u>Day 30</u>	<u>0.008</u>
<u>Day 9</u>	<u>INVALID</u>	<u>Day 20</u>	<u>0.009</u>	<u>Day 31</u>	<u>0.008</u>
<u>Day 10</u>	<u>0.017</u>	<u>Day 21</u>	<u>0.015</u>	<u>Day 32</u>	<u>0.011</u>
<u>Day 11</u>	<u>0.004</u>	<u>Day 22</u>	<u>0.006</u>		

Add the most recent 30 valid daily average concentration for the exhaust stack and divide by 30. Day 9 and Day 12 would not be considered as part of the calculation. Day 31 and Day 32 would be considered as part of the calculation.

30-day rolling average = (0.014 + 0.012 + 0.007 + 0.006 + 0.002 + 0.004 + 0.006 + 0.003 + 0.017 + 0.004 + 0.002 + 0.000 + 0.019 + 0.003 + 0.016 + 0.005 + 0.016 + 0.009 + 0.015 + 0.006 + 0.020 + 0.006 + 0.015 + 0.006 + 0.013 + 0.015 + 0.008 + 0.008 + 0.008 + 0.011) / 30 = **0.009 ppm**

4. Calculated Facility-Wide Mass Emission Rate

Clause (d)(1)(D)(ii) requires a demonstration via a source test that the facility-wide mass emission rate from all exhaust stacks at the Facility does not exceed a calculated facility-wide mass emission rate. Clause (d)(~~2~~)(~~3~~)(B)(ii) requires a demonstration via SCEMS or CEMS that the facility-wide emission rate from all exhaust stacks at the Facility does not exceed a calculated facility-wide mass emission rate. The calculated facility-wide mass emission rate is calculated from permitted usage (lbs), which is either from the facility-wide permit limit for a calendar year or from the sum of permit limits for equipment that performs Sterilization at the Facility for a calendar year, and the lowest allowable control efficiency expressed to the thousandths of a percent to demonstrate compliance with a control efficiency of 99.99% or greater, by weight, divided by 365 days and 24 hours, expressed to the nearest thousandths lbs/hr.

A. Example

Facility-Wide Permit Limit: 1,000,000 lbs

Lowest allowable control efficiency, by weight: 99.985% (rounds to 99.99%)

1,000,000 lbs * (1-0.99985) = 150 lbs/365 days/24 hours = 0.017 lbs/hr

Appendix 2: - Mobile Monitoring Fee and Program Fund

1. Applicability

The following apply to an owner or operator of a Facility electing to either:

- A. Have the Executive Officer or a third-party contracted by the Executive Officer conduct mobile monitoring for a Large Facility pursuant to clause (d)(7)(A)(i); or
- B. Fund a real-time Fenceline Air Monitoring demonstration program for a Tier I Warehouse pursuant to clause (h)(3)(C)(i).

2. Mobile Monitoring Fee

A. The owner or operator electing to have the Executive Officer conduct mobile monitoring for a Large Facility shall pay:

- i. An hourly staff rate of \$209.31 unless Regulation III - Fees assigns a fee amount associated with the mobile monitoring conducted to meet the requirements of clause (d)(7)(A)(i) that shall be paid in lieu of this rate
- ii. Other fees associated with consumables and analyses
- iii. The total fees assessed in A.i. ~~Appendix 1 - (2)(A)(i)~~ and A.ii. ~~Appendix 1 - (2)(A)(ii)~~ shall not exceed \$13,000 for a monitoring day

Paying the preceding fees is required to meet the requirements of subparagraph (d)(7)(C).

B. If the Executive Officer contracts mobile monitoring to an independent third-party contractor, the fee would:

- i. Be determined in a contractual agreement between the Executive Officer and the independent third-party contractor for services provided by the third-party contractor
- ii. Include a 6.25% of administrative cost for South Coast AQMD to oversee the contract
- iii. Not exceed \$33,000 for a monitoring day

C. The mobile monitoring fee will be billed on a quarterly basis, and payment shall be due on or before 30 calendar days from the billing date. The mobile monitoring fee shall be based on monitoring conducted during the preceding quarter and include any other unpaid mobile monitoring fees.

D. If the mobile monitoring fee is not paid in full within 60 calendar days of its due date, a 10% surcharge shall be imposed.

3. Real-time Fenceline Air Monitoring Demonstration Program Fund

The owner or operator electing to fund and participate in a real-time Fenceline Air Monitoring demonstration program at a Tier I Warehouse shall pay South Coast AQMD

an initial payment not to exceed \$150,000 within 6 months of [Date of Amendment] for South Coast AQMD or its contractors to acquire, assemble, install, maintain, train, test, analyze, administer, and decommission a real-time Fenceline Air Monitoring demonstration program to meet the requirements of subparagraph (h)(3)(C). The owner or operator shall pay South Coast AQMD a second payment, not to exceed \$100,000, within 18 months of [Date of Amendment] for the remaining costs for the demonstration program exceeding the initial payment.

Appendix 3: – Emission Study Plan

1. Applicability

The following conditions apply to an owner or operator of a Tier I Warehouse electing to conduct an Emission Study pursuant to paragraph (h)(5). The Emission Study would assess the annual Ethylene Oxide emissions emitted from the Tier I Warehouse.

2. Contents of Emission Study Plan

The following information is required in an Emission Study Plan:

A. Tier I Warehouse information

B. Identification of Ethylene Oxide emission sources and emission activity

C. Diagram of warehouse building(s) identifying:

i. The following areas:

a. Warehousing Activity (i.e., exclude administrative spaces such as offices)

b. Loading docks

c. Shipping and Receiving

d. Storage of Sterilized Palletized Units

ii. Ventilation system(s) with collection and discharge points, if any

D. If emission factors are proposed to be used, provide the basis or source of each emission factor such as U.S. EPA, CARB, South Coast AQMD or others.

E. If emission testing or sampling is proposed, provide the following:

i. Parameters of the emission testing or sampling including the operation of any ventilation systems during tests or sampling

ii. Emission source or emission activity to be tested or sampled

iii. If not conducting two runs or collecting two samples:

a. Number of runs or samples

b. Basis for a different number of runs or samples

iv. Equipment to be used for testing or sampling (include recent calibration or certifications for equipment)

v. Laboratory to be used for purposes of sample analysis

vi. Methods that will be used for sample analysis

vii. Procedures for determination of airflow of ventilation system to be used for calculations mass emission rate or concentration

F. Proposed methodology to quantify annual Ethylene Oxide from each emission source and emission activity

3. Disapproval of Emission Study Plan

The Executive Officer may disapprove the Emission Study Plan if the plan is incomplete, incorrect, inaccurate, or proposes inappropriate elements. The Executive Officer would inform the owner or operator of the Facility of the disapproval of the Emission Study Plan.

Appendix 4 – PTE Inward Face Air Velocity Measurement Procedures

1. Applicability

This method applies to an owner or operator of a Facility required to measure the inward face air velocity of each natural draft openings (NDO), defined in U.S. EPA Method 204 as “Any permanent opening in the enclosure that remains open during operation of the Facility and is not connected to a duct in which a fan is installed.”

2. Equipment – Anemometer

The anemometer shall be capable of measuring the inward face air velocity in feet per minute (fpm) within an appropriate velocity range with an accuracy within +/- 10% of full scale.

The anemometer shall be operated and calibrated per the manufacturer’s recommendations.

3. Test Conditions

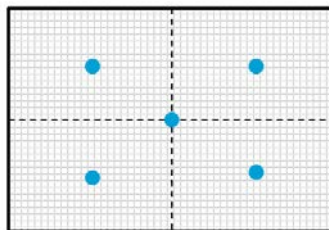
The inward face air velocity measurement test shall be conducted while the Permanent Total Enclosure is in normal operation and under typical conditions representative of the Facility’s operations.

4. Procedure

The inward face velocity air measurements shall be taken at the plane of the NDO.

The inward face air velocity measurement shall be conducted over a five-point grid pattern such as shown in the below example. For a NDO one (1) square foot or less, the single center point may be used in lieu of the five-point grid:

Natural Draft Opening
Using a Five-Point Grid
Pattern



● = Measurement Point

The inward face velocity air measurements shall be taken at the plane of the NDO. The measurement with the anemometer should be performed where a steady reading is obtained and recorded at each measurement point.

5. Recordkeeping

The following information shall be recorded for each inward face air velocity measurement.

Anemometer Make and Model:

Anemometer Calibration Factor:

Anemometer Calibration Date:

Inward Face Air Velocity Measurements:

Natural Draft Opening Location: _____

Upper Left: _____ fpm

Upper Right: _____ fpm

Center: _____ fpm

Lower Left: _____ fpm

Lower Right: _____ fpm

Measurements Conducted by:

Measurement Date:

Appendix 5: – Fenceline Air Monitoring Plan

1. Purpose

The purpose of implementing a Fenceline Air Monitoring Plan at a Large Facility is to assess concentrations of Ethylene Oxide at the fenceline of the Facility until the requirements of paragraphs (d)(1), (d)(2), and (d)(3) are met. Collected information may result in the Large Facility curtailing operations, if fenceline concentration is at or above certain trigger thresholds.

The purpose of implementing a Fenceline Air Monitoring Plan at a Tier I Warehouse is to collect information regarding fenceline concentrations of Ethylene Oxide at the largest warehouses receiving Sterilized Palletized Units.

2. Applicability

The following apply to an owner or operator of a Facility required to conduct fenceline air monitoring to meet the requirements of subdivision (p). The Fenceline Air Monitoring Plan would identify sources of Ethylene Oxide emissions, equipment to conduct fenceline air monitoring, and methods that would be used to conduct fenceline air monitoring.

3. Contents of Fenceline Air Monitoring Plan

The following information shall be included in a Fenceline Air Monitoring Plan:

- A. Ethylene Oxide monitoring data that was collected in the past year
- B. Nearest South Coast AQMD meteorological station
- C. Meteorological information collected at the Facility
- D. A map of the Facility and surrounding area that identifies the location of the following, as applicable:
 - i. Property boundary of the Facility
 - ii. Areas within the property boundary of the Facility that are inappropriate to site a monitor
 - iii. Each Sterilizer, Combined Sterilizer/Aerator, Aerator, Post-Aerator, Sterilant Gas Storage Area, Sterilant Gas Dispensing Area, Waste Storage Area, Control System, and exhaust stack of a Control System
 - iv. Buildings and associated building openings that contain a Sterilizer, Combined Sterilizer/Aerator, Aerator, Post-Aerator, Sterilant Gas Storage Area, Sterilant Gas Dispensing Areas, Waste Storage Areas, or Control Systems
 - v. Nearest sensitive receptor

- vi. Nearest sensitive receptor downwind of the Facility based on meteorological data
 - vii. Proposed Ethylene Oxide monitor(s)/sampler(s)
 - viii. Proposed Ethylene Oxide sampler, if collecting real-time monitoring data
 - ix. Proposed meteorology station;
 - x. Loading dock(s)
 - E. A list of all applicable equipment and methods used to:
 - i. Collect a 24-hour canister sample
 - ii. Collect real-time monitoring data
 - F. The company name(s), location, and contact information that will be conducting:
 - i. Sample collection and sample retrieval
 - ii. Sample analysis
 - iii. Maintenance of monitoring infrastructure and equipment
 - iv. Set-up of monitoring equipment
 - G. If collecting a canister sample to meet the requirements of paragraph (p)(4):
 - i. Sampling frequency
4. Number and Location of Ethylene Oxide Monitors

The owner or operator shall propose a minimum number of Ethylene Oxide in the Fenceline Air Monitoring Plan based on facility type and operation specified in Table 9 – Minimum Number of Required Monitoring Locations.

At least one (1) monitoring location shall be downwind of the Facility’s operation that handles Ethylene Oxide operation at or near the property boundary.

For a Large Facility proposing two (2) monitoring locations, the additional monitoring location shall be located downwind of a location that would be a potential source of fugitive or stack emission.

For a Tier I Warehouse proposing two (2) monitoring locations, the additional monitoring location shall be located downwind of a location that would be potentially a source of fugitive emission.

Table 9 – Minimum Number of Required Monitoring Locations

<u>Facility Type</u>	<u>Minimum Number of Required Monitoring Locations</u>
<u>Large Facility permitted to use ≤ 100,000 lbs of Ethylene Oxide per calendar year</u>	<u>1</u>
<u>Large Facility permitted to use ≤ 40,000 lbs of Ethylene Oxide per calendar year and proposing not to maintain all Post-Aerators within a Permanent Total Enclosure</u>	<u>2</u>
<u>Large Facility permitted to use > 100,000 lbs of Ethylene Oxide per calendar year</u>	<u>2</u>
<u>Tier I Warehouse</u>	<u>2</u>

5. Modification of Monitoring Locations

The Executive Officer may require a Facility to relocate monitoring locations prior to and following the approval of a Fenceline Air Monitoring Plan if information becomes available demonstrating either:

- A. A new or existing source of Ethylene Oxide was not previously identified or fully disclosed.
- B. An increase in Ethylene Oxide emissions from an existing source where existing monitoring location(s) are not capturing the potential Ethylene Oxide concentration.
- C. Existing monitoring location(s) are not capturing fenceline locations or near fenceline locations with the highest Ethylene Oxide concentration based on new information.

If required to relocate existing Fenceline Air Monitoring locations after the implementation of a Fenceline Air Monitoring Plan, within 30 days of receiving written notice from the Executive Officer, the owner or operator of a Facility shall relocate the monitoring location. The written notice would be considered an addendum to the approved Fenceline Air Monitoring Plan.

6. Disapproval of Fenceline Air Monitoring Plan

The Executive Officer may disapprove the Fenceline Air Monitoring Plan if the plan is incomplete, incorrect, inaccurate, or proposes inappropriate elements. The Executive

Officer would inform the owner or operator of the Facility of the disapproval of the Fenceline Air Monitoring Plan.

Appendix 6 – Semi-Annual Summary Reports

Semi-annual summary reports shall, at a minimum, contain the following information specified in CARB’s Ethylene Oxide Airborne Toxic Control Measure and listed below:

1. The Large Facility name and address
2. The date of the report, and the beginning and ending dates of the reporting period
3. A brief description of each Control System including air pollution control devices and the SCEMS or CEMS
4. For each Control System air pollution control device:
 - A. The operating parameter limitations specified in the Permit to Operate, Control System Implementation Plan, and/or the Facility Implementation Plan
 - B. The monitoring equipment manufacturer and model number for each continuous monitoring system (CMS)
 - C. The date of the latest monitoring system certification or audit for each CMS
 - D. A monitoring system performance summary, including the total monitoring system downtime recorded in hours, the total duration of monitoring system downtime expressed as a percentage of the total source operating time during that reporting period, and a breakdown of the total monitoring system downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance, quality control calibrations, other known causes, and other unknown causes for each CMS
 - E. A description of any changes in monitoring system, processes, or controls since the last reporting period for each CMS
5. For each Control System exhaust stack:
 - A. The emission limitations specified in the Permit to Operate, Control System Implementation Plan, and/or the Facility Implementation Plan
 - B. The monitoring equipment manufacturer(s) and model number(s) for each SCEMS or CEMS
 - C. The date of the latest monitoring system certification or audit for each SCEMS or CEMS
 - D. An emissions data summary, including the total duration of excess emissions during the reporting period (recorded in hours), the total duration of excess emissions expressed as a percentage of the operating time during the reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control or monitoring

equipment problems, process or process equipment problems, quality assurance, quality control calibrations, other known causes, and other unknown causes for each SCEMS or CEMS

E. A monitoring system performance summary, including the total monitoring system downtime recorded in hours, the total duration of monitoring system downtime expressed as a percentage of the total source operating time during that reporting period, and a breakdown of the total monitoring system downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance, quality control calibrations, other known causes, and other unknown causes for each SCEMS or CEMS

F. A description of any changes in monitoring system, processes, or controls since the last reporting period for each SCEMS or CEMS

6. The total operating time during the reporting period

7. The name, title, and signature of who is certifying the accuracy of the report

Appendix 7 – Semi-Annual Excess Emission Reports

Semi-annual excess emission reports shall, at a minimum, contain the following information specified in CARB’s Ethylene Oxide Airborne Toxic Control Measure:

1. The name, title, and signature of who is certifying the accuracy of the report
2. The date and time identifying each period during which the monitoring system was inoperative except for zero (low-level) and high-level checks
3. The date and time identifying each period during which the monitoring system was out of control
4. The specific identification (i.e. the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, that occurs during periods other than startups, shutdowns, and malfunctions
5. The specific identification (i.e. the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, that occurs during startups, shutdowns, and malfunctions
6. The nature and cause of any malfunction, if known
7. The corrective action taken or preventive measures adopted
8. The nature of the repairs or adjustments to the monitoring system that was inoperative or out of control
9. The total process operating time during the reporting period

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report

Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

December 2023

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
CHAPTER 1 – BACKGROUND.....	1-1
1.1 Introduction	1-1
1.2 Health Effects of Ethylene Oxide and Risk	1-1
1.3 Regulatory History	1-2
1.4 Ambient Air Monitoring Near South Coast AQMD Ethylene Oxide Facilities	1-8
1.5 Ambient Air Monitoring Technology	1-15
1.6 Curtailment Based on Fenceline Air Monitoring.....	1-23
1.7 Affected Rule 1405 Facilities.....	1-28
1.8 Process Description of Ethylene Oxide Sterilization	1-30
1.9 Facility Emission Sources and General Control Approach.....	1-32
1.10 Ethylene Oxide Control Technologies And Capabilities	1-33
1.11 Summary of Source Test and Continuous Monitoring Data	1-36
1.12 Need for Proposed Amended Rule 1405.....	1-39
1.13 Public Process	1-39
CHAPTER 2 – SUMMARY OF PROPOSED AMENDED RULE 1405	2-1
2.1 Overall Approach	2-1
2.2 Proposed Amended Rule Structure	2-4
2.3 Proposed Amended Rule 1405.....	2-4
CHAPTER 3 – IMPACT ASSESSMENT	3-1
3.1 Affected Sources	3-1
3.2 Emissions Impact	3-1
3.3 California Environmental Quality Act.....	3-2
3.4 Socioeconomic Impact Assessment	3-2
3.5 Draft Findings under Health and Safety Code Section 40727	3-2
3.6 Comparative Analysis	3-3
APPENDIX A – Ethylene Oxide Fact Sheet (OSHA 2002)	A-1
APPENDIX B – Impacted Facilities (Sterilization and Post-Aeration Storage Facilities)	B-1
APPENDIX C – Impacted Facilities (Warehouses)	C-1
APPENDIX D – U.S. Facilities Subject to EtO NESHAP.....	D-1
APPENDIX E – Responses to Comments	E-1

LIST OF FIGURES

Figure 1-1 – Federal, State, and South Coast AQMD Regulations for EtO Sterilization.....	1-3
Figure 1-2 – Ambient Air Monitor of EtO for Medline Waukegan	1-6
Figure 1-3 – Location of Monitoring Sites for Sterigenics Vernon.....	1-9
Figure 1-4 – 24-Hour Near-Source Samples in Vernon	1-10
Figure 1-5 – Location of Monitoring Sites for Sterigenics Ontario.....	1-11
Figure 1-6 – 24-Hour Near-Source Samples in Ontario	1-12
Figure 1-7 – Location of Monitoring Site for Parter Carson	1-13
Figure 1-8 – 24-Hour Near-Source Samples in Carson	1-13
Figure 1-9 – 24 Hour Near-Source Samples in Carson in 2023	1-14
Figure 1-10 – Examples of Mobile Monitoring Platform Survey of Warehouses.....	1-15
Figure 1-11 – Sterigenics Vernon Curtailment of Operations	1-24
Figure 1-12 – Sterigenics Ontario Curtailment of Operations.....	1-26
Figure 1-13 - Comparison of Ambient Air EtO Concentrations.....	1-27
Figure 1-14 – Example of Commercial EtO Sterilization Process	1-30
Figure 1-15 – Facility Emission Sources	1-32
Figure 1-16 – Examples of Building Enclosures to Reduce Fugitive Emissions	1-35
Figure 1-17 – Medline Waukegan Mass Emission Rates	1-38
Figure 2-1 – PAR 1405 EtO Usage for Facilities in the South Coast AQMD.....	2-2

LIST OF TABLES

Table 1-1 – Rule 1405 Control Efficiency Requirements for APCDs.....	1-3
Table 1-2 – Summary of EtO Ambient Monitoring Technologies	1-22
Table 1-3 – Sterigenics Vernon Curtailment Schedule.....	1-24
Table 1-4 – Sterigenics Ontario Curtailment Schedule	1-25
Table 1-5 – Industry Type of PAR 1405 Facilities in the South Coast AQMD	1-29
Table 1-6 – EtO Source Tests Results for Large Sterilization Facilities	1-36
Table 1-7 – EtO Source Tests Results for Non-Large Sterilization Facilities	1-37
Table 2-1 – Proposed Emission Limits for PAR 1405	2-3
Table 2-2 – Example of Baseline Operation Calculation for Curtailment.....	2-7

EXECUTIVE SUMMARY

South Coast Air Quality Management District (South Coast AQMD) Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes was adopted in 1990 to control ethylene oxide (EtO) and amended in 1991.

In March 2022, following the U.S. EPA's reconsideration of the potential toxicity of EtO, South Coast AQMD began investigating facilities that emit EtO. The 2016 U.S. EPA risk study determined that EtO is 30 to 50 times more carcinogenic than previously reported. The cancer inhalation unit risk factor is also being updated by California's Office of Environmental Health Hazard Assessment (OEHHA) with a draft risk factor about 38 times more carcinogenic than previously reported. During South Coast AQMD's monitoring efforts at several commercial EtO sterilization facilities, the agency became aware of emissions from fugitive sources that were not previously known. South Coast AQMD's investigation identified that existing pollution controls would need to be upgraded and measures would need to be implemented to reduce stack and fugitive emissions.

South Coast AQMD's approach to controlling EtO emission is multifaceted. Rule 1405 is a source specific rule that applies to the general sterilization industry, and includes requirements based on best available technologies. In addition, facilities may also be subject to Rule 1402 – Control of Toxic Air Contaminants from Existing Sources through the AB2588 Hot Spots Program for additional risk reduction measures. South Coast AQMD's other activities such as ambient air monitoring, facility inspections, evaluations of process and control equipment during permitting, along with complaint investigations, can lead to additional measures to further reduce levels of EtO emissions from specific facilities.

Proposed Amended Rule 1405 (PAR 1405) would strengthen requirements to address stack and fugitive emissions based on control measures that have been demonstrated to minimize EtO emissions. In addition, due to concerns about EtO off-gassing from sterilized materials, PAR 1405 would also add certain information-gathering requirements for warehouses to assess the potential of EtO emissions from these operations.

This Draft Staff Report is organized into three chapters. Chapter 1 provides background information regarding PAR 1405 and a general description of sterilization and related operations. Chapter 1 also provides a summary of ambient monitoring activities South Coast AQMD staff conducted at and near sterilization facilities and warehouses receiving sterilized materials. Chapter 2 provides a summary and explanation of provisions in PAR 1405. Chapter 3 provides a summary of the impact assessments and the comparative analysis of PAR 1405.

CHAPTER 1 – BACKGROUND

1.1 INTRODUCTION

Ethylene oxide (EtO) is a flammable, colorless gas used in many industries to make products including antifreeze, textiles, solvents, detergents, and adhesives. EtO also is used to sterilize medical equipment for commercial or on-site use. EtO is a known carcinogen identified by the California Air Resources Board (CARB) as a Toxic Air Contaminant (TAC)¹ and by the United States Environmental Protection Agency (U.S. EPA) as a Hazardous Air Pollutant.² California's Office of Environmental Health Hazard Assessment (OEHHA) lists EtO as a chemical that causes developmental and reproductive toxicity in both male and females.³ U.S. EPA completed a reassessment of the cancer potency of EtO in 2016⁴ and OEHHA is currently reassessing the toxicity of EtO, with a draft risk factor released in April 2023.⁵

In January 2022, U.S. EPA proposed to reconsider issues related to risks posed by EtO emissions for certain types of chemical manufacturing after consideration of the risk value proposed by the Texas Commission on Environmental Quality.⁶ Following the U.S. EPA reconsideration of the potential toxicity of EtO, South Coast AQMD began investigating facilities that emit EtO in March 2022. During South Coast AQMD's monitoring efforts at several commercial EtO sterilization facilities, the agency became aware of emissions from fugitive sources that were not previously known. South Coast AQMD's investigation has identified that existing pollution controls will need to be upgraded and measures will need to be implemented to reduce stack and fugitive emissions. PAR 1405 will strengthen requirements to address stack and fugitive emissions based on control measures that have been achieved in practice. In addition, due to concerns of EtO off-gassing from sterilized materials, PAR 1405 added certain requirements for warehouses to assess the potential of EtO emissions from these operations.

1.2 HEALTH EFFECTS OF ETHYLENE OXIDE AND RISK

Ethylene oxide is closely associated with a wide range of health effects, including short-term, acute hazards and long-term, chronic health effects including cancer. EtO is a human carcinogen and is also known to interfere with male and female reproductive health.

¹ CARB Identified Toxic Air Contaminants | California Air Resources Board. (n.d.).

² Initial List of Hazardous Air Pollutants with Modifications | U.S. EPA
<https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications>

³ Chemicals Considered or Listed Under Proposition 65 – Ethylene oxide | OEHHA
<https://oehha.ca.gov/proposition-65/chemicals/ethylene-oxide>

⁴ IRIS Assessment for Ethylene Oxide | U.S. EPA
https://iris.epa.gov/ChemicalLanding/&substance_nmbr=1025

⁵ Draft Cancer Inhalation Unit Risk for Ethylene Oxide | OEHHA
<https://oehha.ca.gov/air/crn/notice-public-comment-period-and-workshops-draft-cancer-inhalation-unit-risk-ethylene-oxide>

⁶ News Release “EPA to Reconsider Issues Related to Risks Posed by Ethylene Oxide Emissions for Certain Types of Chemical Manufacturing” | U.S. EPA
<https://www.epa.gov/newsreleases/epa-reconsider-issues-related-risks-posed-ethylene-oxide-emissions-certain-types>

Acute health effects, usually associated with worker exposure to EtO, include headaches, dizziness, trouble breathing, sleepiness, weakness, and fatigue. Exposure to higher concentrations of EtO is also linked to nausea, vomiting, diarrhea, and other gastrointestinal distress.⁷

EtO has been shown to be associated with at least two different classes of cancers: hematopoietic (white blood cell) cancers, such as non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia as well as breast cancer in women.

Non-cancer chronic exposure to EtO, typically caused by low level exposure of EtO over several years, is linked to irritation of the eyes, skin, and respiratory passages effects to the nervous system. In addition, EtO is known to cause reproductive harm to both males and females.

OEHHA is the lead state agency for the assessment of health risks posed by environmental contaminants. OEHHA's current EtO risk values for cancer were last updated in 2009⁸ and U.S. EPA updated their EtO cancer risk values in 2016, which is more stringent than current OEHHA risk values. The 2016 U.S. EPA risk study determined that EtO is 30 to 50 times more carcinogenic than previously reported.^{9,10} In April 2023, OEHHA released their draft cancer inhalation unit risk factor and the value is about 38 times more carcinogenic than previously identified.¹¹

1.3 REGULATORY HISTORY

Federal, State, and Local Ethylene Oxide Sterilization Regulations

In 1990, both the California Air Resources Board and South Coast AQMD adopted regulations to control EtO emissions from sterilization operations in the form of an Air Toxics Control Measure (ATCM) and Rule 1405, respectively. This was due to the harmful health effects listed by U.S. EPA health assessment and OEHHA in the 1980s and the requirement under the Federal Clean Air Act mandating the reduction of hazardous air pollutants, which included EtO. South Coast AQMD Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes was adopted in 1990 to control EtO emissions. Rule 1405 was also intended to reduce the emissions from chlorofluorocarbons (CFCs) by eliminating the use of CFC diluents in sterilant gas mixtures by January 1, 1997. In 1994 the National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart O - Ethylene Oxide Emissions Standards for Sterilization Facilities was adopted. The figure below shows the Federal, State, and South Coast AQMD regulations for EtO sterilization operations.

⁷ <https://www.cdc.gov/niosh/topics/ethyleneoxide/default.html>

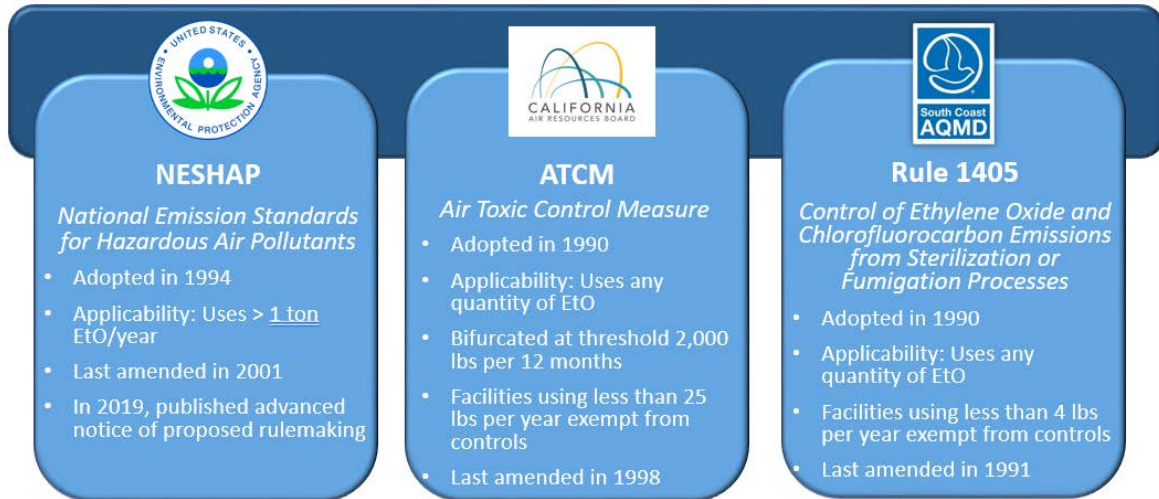
⁸ Ethylene Oxide. (2009). California Office of Environmental Health Hazard Assessment. Retrieved February 28, 2023, from <https://oehha.ca.gov/chemicals/ethylene-oxide>

⁹ [Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide. \(2016, December\). U.S. EPA. Retrieved August 30, 2023, from https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/1025tr.pdf](https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/1025tr.pdf)

¹⁰ Health Assessment Document for Ethylene Oxide. (1985, June). U.S. EPA. Retrieved August 30, 2023, from https://ordspub.epa.gov/ords/eims/eimscomm.getfile?p_download_id=459635

¹¹ <https://oehha.ca.gov/media/downloads/crn/etocrnriur040723.pdf>

Figure 1-1 – Federal, State, and South Coast AQMD Regulations for EtO Sterilization



Rule 1405 Existing Requirements

Rule 1405 currently requires facilities subject to the rule to control EtO emissions using air pollution control devices (APCD) complying with specific control efficiencies. The table below shows the required control efficiencies based on facility size and type of EtO source that is being controlled.

Table 1-1 – Rule 1405 Control Efficiency Requirements for APCDs

Quantity EtO Used	Sterilizer	Aerator	Back-draft	Combined
> 4,000 lbs	99.9%	99%	99%	99.8%
400 – 4,000 lbs	99.9%	95%	95%	99.6%
4 – 400 lbs	99%	95%	Not required	98.8%
Aeration-only	Not applicable	95%	Not applicable	Not applicable

In addition to Rule 1405, facilities are also subject to Rule 1402 which is the implementation of Assembly Bill 2588 (AB2588) Air Toxic “Hot Spots” program by the South Coast AQMD. Unlike source-specific rules like Rule 1405, which address emissions from the industry, Rule 1402 addresses facility-specific risks that a facility may pose to nearby receptors based on the type

(residential, schools, or off-site worker), distances, and unique meteorological conditions. The facility's emissions and unique configuration such as stack height are also taken into consideration.

Recent Ethylene Oxide Sterilization Regulatory Requirements in Other States

EtO is currently used to treat approximately 50% of sterile medical devices used in the United States, totaling 20 billion medical devices annually.¹² In many cases, EtO is the only approved method of sterilization of certain medical devices, despite known health risks associated with the substance. These billions of medical devices are sterilized by approximately 100 domestic commercial sterilization facilities,¹³ located in 32 different U.S. states and Puerto Rico.¹⁴ Since 2018, many of these sterilization facilities and related operations have been identified by U.S. EPA or state or local authorities as locations with elevated risk due to EtO emissions, elevated ambient EtO levels in surrounding communities, or both. Several of these States, such as Illinois and Georgia, have already taken steps to reduce their emissions of EtO by implementing new regulatory requirements.

State of Illinois

In 2019, the State of Illinois passed two laws that placed restrictions on the emission of ethylene oxide. Senate Bill 1852, also known as Public Act 101-0022, prohibits EtO sterilization facilities from operating in Illinois unless they continuously monitor ethylene oxide stack emissions, capture 100% of all ethylene oxide emissions within the facility using a permanent total enclosure (PTE), and conduct third-party community monitoring of EtO. Senate Bill 1854, also known as Public Act 101-0023, addresses emissions from “nonnegligible ethylene oxide emission sources,” which means a source that currently emits more than 150 pounds of EtO per year and is located in a county with a population of at least 700,000.

Case Study of Sterigenics US, LLC in Willowbrook (Sterigenics Willowbrook)

Sterigenics Willowbrook was a commercial sterilization facility located in the Village of Willowbrook, a suburb of Chicago located in DuPage County. Sterigenics Willowbrook sterilized primarily medical supplies and pharmaceuticals as well as spices, using EtO as its primary sterilant gas; a second sterilant gas, propylene oxide, was also used. Sterigenics Willowbrook originally began operations in 1984, and in 2020, Sterigenics Willowbrook notified authorities of their intent to permanently close the facility.

In 2018, while Sterigenics Willowbrook was still in operation, U.S. EPA released an update to the National Air Toxics Assessment (NATA), referenced as the 2014 NATA. This national screening assessment used emissions and weather data from 2014 to estimate health risks from toxic air pollutants.¹⁵ U.S. EPA used new estimates of the cancer potency of EtO that were issued in 2016 and not available for the previous version of NATA in 2011. The 2014 NATA revealed that the

¹² <https://www.fda.gov/news-events/press-announcements/fda-continues-efforts-support-innovation-medical-device-sterilization>

¹³ <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/forms/ethylene-oxide-risk-commercial-sterilizers>

¹⁴ <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/ethylene-oxide-commercial-sterilization-facilities>

¹⁵ <https://www.epa.gov/national-air-toxics-assessment>

census tract containing Sterigenics Willowbrook and other nearby census tracts had overall cancer risk estimates as high as 500 to 1000 in 1 million.¹⁶

From November 2018 to March 2019, U.S. EPA monitored ambient EtO levels around Sterigenics Willowbrook.¹⁷ Based on the findings of ambient EtO monitoring, U.S. EPA's Agency for Toxic Substances and Disease Registry (ATSDR) concluded residents and workers are exposed to elevated airborne EtO concentrations from facility emissions, and that if measured and modeled data represent typical EtO ambient concentrations in ambient air, an elevated cancer risk exists for residents and off-site workers in the Willowbrook community surrounding the Sterigenics facility.¹⁸

In February 2019, a Seal Order was issued by the Illinois EPA that effectively stopped sterilization operations at the Willowbrook facility. The seal order was removed after the facility agreed to a Consent Order in July 2019¹⁹ and submitted an application to Illinois EPA to make improvements to control emissions using additional layers of controls that meet a control efficiency of 99.9% or 0.2 ppm, and a permanent total enclosure to capture fugitive emissions to address the sources of EtO that contributed to elevated ambient readings.²⁰ A test protocol was submitted in October 2019 that included the proposed improvements that would be tested to demonstrate compliance.²¹ However, in July 2020, the facility submitted a request to the Illinois EPA to withdraw their operational permits to end operations at the facility.²²

Case Study of Medline Industries, Inc. in Waukegan, IL (Medline Waukegan)

Medline Waukegan is a commercial sterilization facility located in the City of Waukegan, a suburb of Chicago located in Lake County. Medline Waukegan manufactures and sterilizes surgical packs as well as sterilizes pharmaceuticals and laboratory equipment. Beginning in June 2019, air monitoring began at multiple off-site locations in the Waukegan area near the facility. The highest outdoor EtO levels were measured at station Air 038.²³ Also in 2019, Medline Waukegan was issued a Construction Permit to reduce EtO emissions by installing additional control technology, capturing 100% of fugitive emissions with a PTE, and decreasing the number of exhaust points to atmosphere with a single new stack. Medline Waukegan was also required to monitor stack

¹⁶ <https://www.epa.gov/sites/default/files/2019-05/documents/risk-assessment-results-sterigenics-willowbrook.pdf>

¹⁷ <https://www.epa.gov/il/outdoor-air-monitoring-willowbrook-community>

¹⁸ https://www.atsdr.cdc.gov/HAC/pha/sterigenic/Sterigenics_International_Inc-508.pdf

¹⁹ Amended Joint Motion to Enter Proposed Consent Order. (2019, July 19). Illinois EPA. Retrieved August 25, 2023, from <https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/community-relations/sites/sterigenics/documents/sterigenics-18ch1329-amended-joint-motion-to-enter-consent-order-filed-7-19-2019.pdf>

²⁰ Construction Permit Application - Sterigenics Willowbrook. (2019, June 24). Illinois EPA. Retrieved August 25, 2023, from <https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/community-relations/sites/ethylene-oxide/documents/043110aac-sterigenics-19060030-screened.pdf>

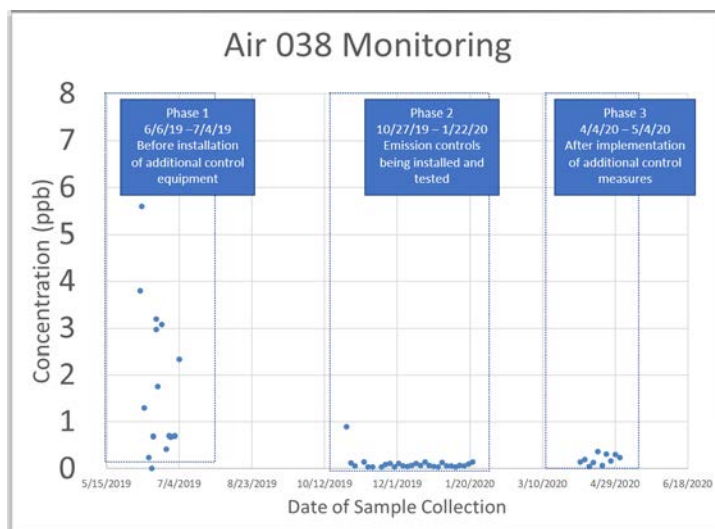
²¹ Protocol for Ethylene Oxide Testing - Willowbrook I Facility. (2019, October 4). Illinois EPA. Retrieved August 25, 2023, from <https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/community-relations/sites/ethylene-oxide/documents/13990-1-sterigenics-eto-final-protocol.pdf>

²² Sterigenics Willowbrook - Request to Withdraw Permits. (2020, July 24). Illinois EPA. Retrieved August 25, 2023, from <https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/community-relations/sites/ethylene-oxide/documents/sterigenics-permit-withdrawal-request.pdf>

²³ <https://www.lakecountyil.gov/4192/Medline-Independent-EtO-Monitoring-Resul>

emissions by using a continuous emission monitoring system.²⁴ Construction began on these facility improvements in 2019 and were completed in 2020. Ambient EtO monitoring occurred before, during, and after this commissioning period (see figure below). As monitoring data is publicly available, South Coast AQMD staff assessed the monitoring data and compared it to when operations were shut down and control measures were implemented.

Figure 1-2 – Ambient Air Monitor of EtO for Medline Waukegan



The ambient data from station Air 038 revealed that EtO concentrations decreased after implementation of the EtO capture and control measures.

State of Georgia

The State of Georgia, under the Georgia Air Quality Act, designates the Georgia Department of Natural Resources, Environmental Protection Division (EPD) to administer the provisions of the Air Quality Act including the authority to adopt rules or issue permits to sources of emissions. At the present time, Georgia EPD has not promulgated a rule regarding ethylene oxide sterilization but has issued permits to several EtO sterilization facilities stipulating conditions or limitations.

Case Study of Sterigenics US, LLC in Atlanta, GA (Sterigenics Atlanta)

Sterigenics Atlanta is a commercial sterilization facility located in Cobb County within the Atlanta metropolitan area. Sterigenics Atlanta sterilizes medical devices and some spices using the sterilant gas EtO as well as some propylene oxide. The 2014 NATA identified two census tracts in close proximity to Sterigenics Atlanta requiring further study, however the Georgia EPD, after completing modeling analysis of emissions of the facility, determined that the risk associated with Sterigenics Atlanta did not exceed 100 in 1 million lifetime cancer risk.

Despite the modeled risk, in 2019, Georgia EPD and Sterigenics Atlanta voluntarily entered into a Consent Order that required Sterigenics Atlanta to modify their facility and their work practices

²⁴ Construction Permit, Application No. 19020013 | IEPA
<https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/community-relations/sites/ethylene-oxide/documents/medline-industries-19020013-final.pdf>

including rerouting emissions from the acid-water scrubber to a dry bed scrubber for additional polishing, installing a taller emission stack, constructing a PTE, installing new air pollution control devices, conducting more frequent leak monitoring, offering initial and annual training of staff, and implementing a continuous emission monitoring system.²⁵

Case Study of Becton, Dickinson and Company (BD) Global Distribution Center in Covington

BD Global Distribution Center is a warehouse facility located in the city of Covington, a suburb of Atlanta in Newton County. BD Global Distribution Center receives EtO-sterilized medical devices from two BD sterilization facilities in Georgia and other sterilization facilities outside of the state before shipping these medical devices to customers. In 2019, BD submitted a fugitive emission estimate report for Global Distribution Center to Georgia EPD, estimating that the facility emits approximately 5,600 lbs of EtO per calendar year.²⁶ Subsequently, Georgia EPD required that BD Global Distribution Center record the amount of sterilized materials received, conduct a variety of ambient EtO air monitoring, submit a permit application, and, within nine months, design and install air pollution control equipment to capture and control EtO emissions.²⁷

Non-Air Quality Related Ethylene Oxide Regulations in the United States

In addition to the air quality related regulations for EtO, other agencies have oversight of the potential effects of EtO on patients and consumers. These focus primarily upon residual EtO that remains on medical, dental, veterinary, and food products and are tied to required aeration times for those specific products.

Residual EtO for Sterilization of Medical Products

The U.S. Food and Drug Administration (U.S. FDA) limits the amount of residual EtO²⁸ that can remain on medical products based on three different classes of products depending on the product's contact time (exposure) with the patient. Two voluntary consensus standards are specified to develop, validate, and control EtO sterilization process for medical devices and ensure acceptable residual levels of EtO remaining on the product: ANSI AAMI ISO 11135:2014 and ANSI AAMI ISO 10993-7:2008(R)2012. The products must follow a validation process specific to the product and the sterilizer to ensure that the products are sterilized to kill pathogens as well as comply with residual EtO levels on the product. A specific aeration time is specified for each product's cycle parameters at a sterilization facility as part of the validation process.

Residual EtO for Fumigation of Food Commodities

Although there are no permitted facilities with the South Coast AQMD that use EtO to fumigate food commodities using EtO, fumigation is considered a form of sterilization. Similar to medical products, there are limits to residual EtO that can remain on food. The U.S. EPA regulates this process as a registered antimicrobial pesticide under 40 CFR §180.151²⁹ which specifies the

²⁵ <https://epd.georgia.gov/document/document/sterigenics-consent-order/download>

²⁶ <https://epd.georgia.gov/press-releases/2019-12-20/statement-georgia-epd-regarding-bd-notice-violation>

²⁷ <https://epd.georgia.gov/document/document/december182019nov-bdglobaldistributioncenterpdf/download>

²⁸ <https://www.fda.gov/medical-devices/general-hospital-devices-and-supplies/sterilization-medical-devices#how>

²⁹ <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-E/part-180/subpart-C/section-180.151>

tolerances for residues of EtO for food commodities that may expose consumers to EtO through ingestion.

EtO Worker Protection

The Occupational Safety and Health Administration (OSHA), part of the U.S. Department of Labor, is the lead federal agency for the protection of workers in the workplace. In 2002, OSHA published a Fact Sheet to explain the hazards of EtO and requirements for EtO worker protection at that time (see Appendix A). In 2023, U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) released a draft risk assessment and a proposed interim decision to update the acceptable use of EtO to reduce risk at workplaces. Updates to EtO worker protection requirements are expected and a new OSHA EtO Fact Sheet may be forthcoming.

1.4 AMBIENT AIR MONITORING NEAR SOUTH COAST AQMD ETHYLENE OXIDE FACILITIES

South Coast AQMD began investigating facilities that emit EtO in March 2022. The South Coast AQMD used a methodical approach to monitor EtO levels near emission sources:

(1) Conduct initial screening by monitoring VOC signals using a mobile monitoring platform. The platform is equipped with a state-of-the-art Proton Transfer Reaction – Mass Spectrometer (PTR-MS) capable of simultaneous real-time ambient air monitoring of hundreds of VOCs such as ketones, aldehydes, aromatic compounds and many others, in ambient air. This is a fast response instrument (1 second) which has VOC-dependent limits of detection ranging from tens of parts per trillion by volume (pptv) to a few parts per billion by volume (ppbv). This instrument can typically detect enhancements in VOC signals potentially related to EtO that are greater than 1 ppbv over the total background signal. This value is higher than the background levels of EtO in the Los Angeles area that ranged from 0.02 ppb to 0.17 ppb in the 2021 National Air Toxics Trends Stations (NATTS³⁰).³¹

(2) If enhanced signals were observed in the step above, ambient air in silica-lined stainless steel Summa grab canister samples would be collected then analyzed using U.S. EPA method TO-15/TO-15A, either as grab samples of air or fenceline air monitoring with 24-hour integrated samples.

Multiple passes around the facility were made during each mobile survey which included accessible drivable routes around the facility.

As of July 2023, South Coast AQMD has conducted mobile ambient air monitoring at seven active sterilization facilities (all permitted to use 2,000 lbs or more of EtO) and ten warehouses that store or may store EtO-sterilized materials. Among these locations, elevated EtO levels were observed at three large sterilization facilities and one warehouse. In addition, South Coast AQMD has

³⁰ National Air Toxics Trends Stations | Ambient Monitoring Technology Information Center | US EPA Stations. (n.d.). <https://www3.epa.gov/ttnamti1/natts.html>

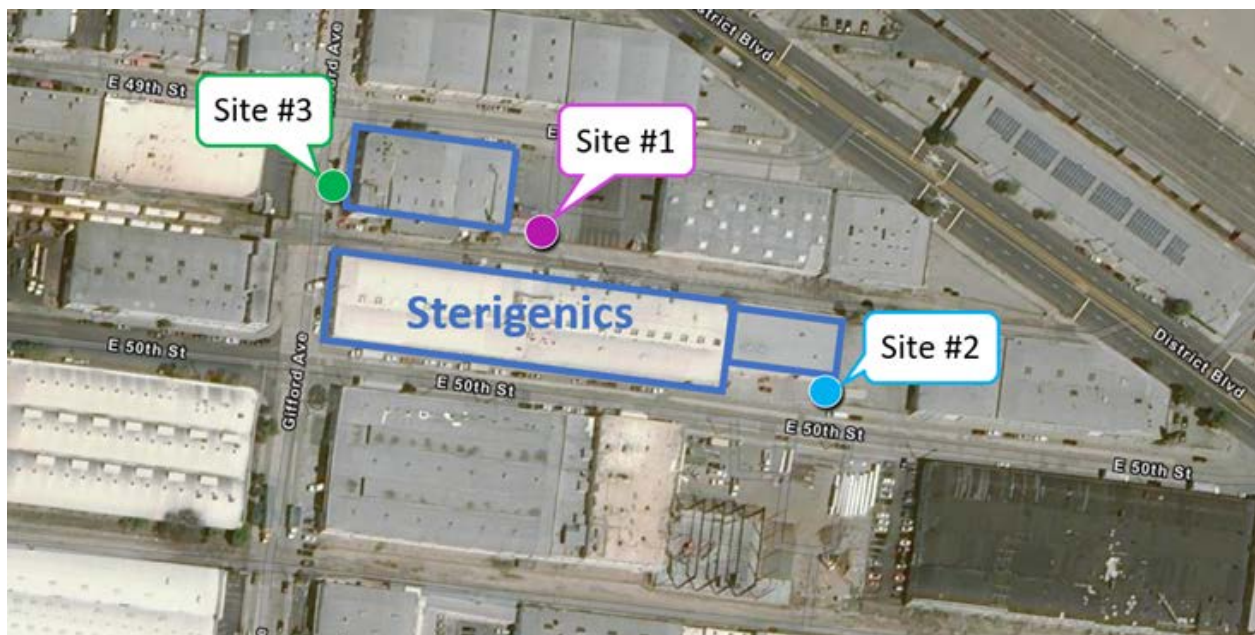
³¹ Monitor Values Report - Hazardous air pollutants | US EPA. (2022, October 12). US EPA. <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report-hazardous-air-pollutants>

conducted fenceline air monitoring using 24-hour canister sampling at the three sterilization facilities with elevated signals of EtO. More details of these three facilities are discussed below.

1.4.1 Sterigenics Vernon Sterilization Facility

The Sterigenics Vernon facility sterilizes medical equipment using EtO and operates within two buildings in an industrial area. The nearest residential area is about 500 feet away, and the nearest school is 1,700 feet away. In March 2022, mobile ambient air monitoring was conducted to monitor VOCs around the facility and the surrounding area. VOC signals associated with EtO were elevated near the facility. Individual grab samples (an air sample collected at one location at one point in time) were taken to confirm elevated EtO levels. Further investigation of EtO emissions at three near-source locations were collected using 24-hour time-integrated samples beginning in April 2022. In March 2022, it was observed that the facility had installed Timilon filter systems without obtaining a permit to reduce fugitive EtO emissions from their sterilized product storage area. Additionally, Sterigenics later reported in April 2022 that they had discovered open hatches for tanks that stored EtO-containing liquids at their facility. A nearby community site at a residential location was included in May 2022. The figure below shows monitoring sites near the Vernon facility.

Figure 1-3 – Location of Monitoring Sites for Sterigenics Vernon



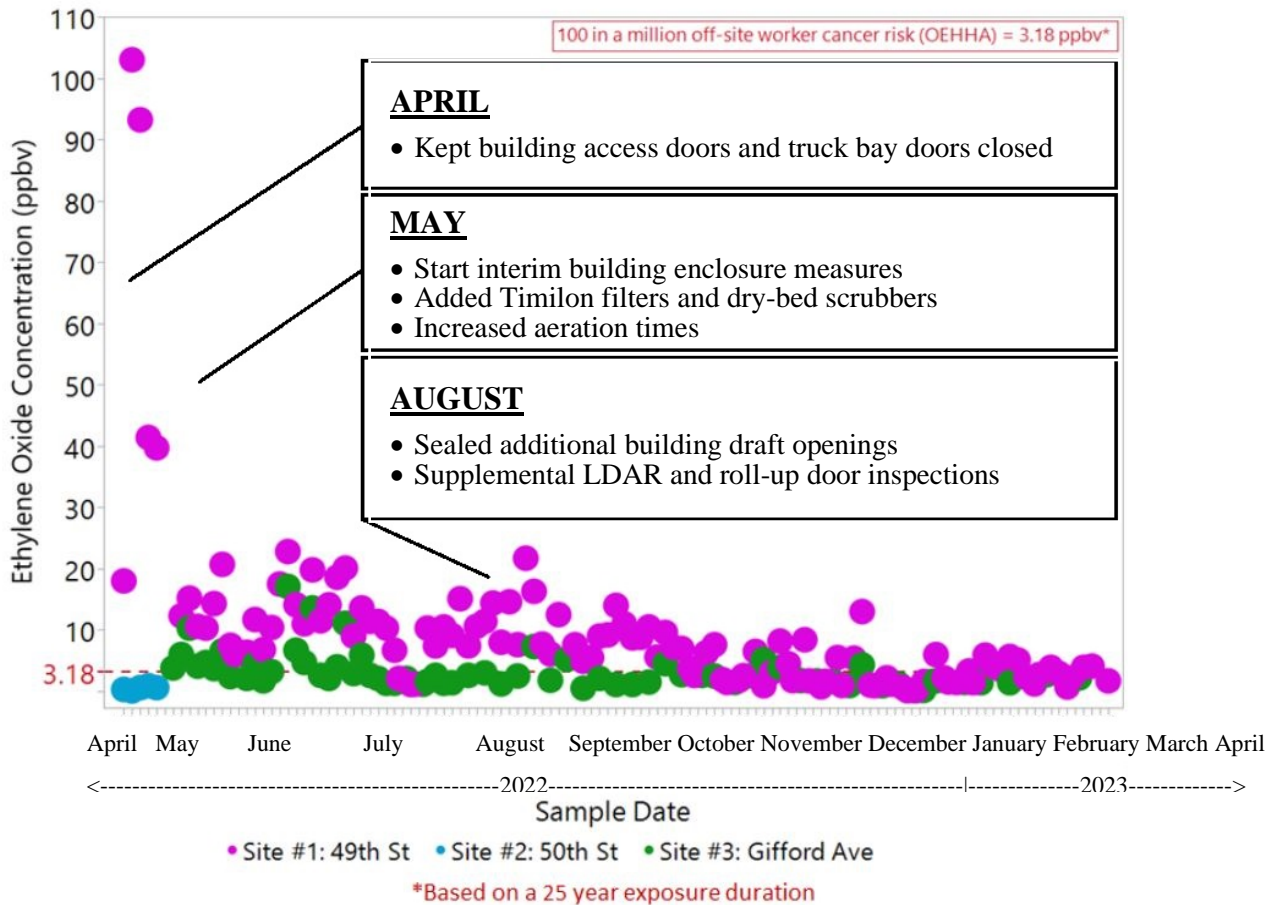
On June 7, 2022 Sterigenics Vernon was designated as a Potentially High-Risk Level Facility under the AB2588 Air Toxic “Hot Spots” program. As part of the Sterigenics Vernon’s Early Action Reduction Plan (EARP)³² under the AB2588 program to control EtO emissions, approved on September 9, 2022,³³ a PTE would be installed to control fugitive emissions. As interim

³² Early Action Reduction Plan - Sterigenics (Vernon). (2022, September 2). Retrieved February 23, 2023, from <https://www.aqmd.gov/docs/default-source/compliance/sterigenics/earp.pdf?sfvrsn=8>

³³ <https://www.aqmd.gov/docs/default-source/compliance/sterigenics/earp-approval-letter.pdf?sfvrsn=8>

measures, the facility kept access doors to process, storage, and shipping areas and truck bay doors closed beginning in April 2022 and implemented other temporary enclosure measures beginning May 2022. The facility also added dry-bed scrubbers and Timilon filter systems to reduce fugitive EtO emissions. In August 2022, the facility completed additional sealing of building draft openings, started daily inspections of roll-up doors, and implemented a supplemental leak detection and repair (LDAR) program. The figure below shows the results of the near-facility EtO levels and the key measures taken at the facility to control EtO emissions in 2022.

Figure 1-4 – 24-Hour Near-Source Samples in Vernon



As shown in the figure above, during the first two weeks of ambient air monitoring, EtO levels (24-hr time integrated samples) at three near-source sites showed were as high as 103 parts per billion by volume (ppbv). Ambient EtO levels decreased below 25 ppbv by mid-May in 2022 and to levels of 10 ppbv or lower during the 4th quarter of 2022. On May 5, 2022, due to the elevated EtO concentrations observed, a Proposition 65 notice was issued notifying Los Angeles County Board of Supervisors, the Los Angeles County Health Officer, and the City of Vernon Director of Health and Environmental Control of the illegal discharge likely to cause substantial injury to public health or safety pursuant to California Public Resources Code 25180.7.

1.4.2 Sterigenics Ontario Sterilization Facility

The Sterigenics Ontario facility sterilizes medical equipment using EtO and operates in an industrial area. The nearest residential area is about 1.4 miles away and the nearest school is about 1.2 miles away. Mobile monitoring was conducted to collect data on VOCs around the facility and the surrounding area and elevated VOC signals associated with EtO were detected near the facility. Individual grab samples (an air sample collected at one location at one point in time) were taken to confirm elevated EtO levels. Beginning in June 2022, South Coast AQMD conducted ambient air sampling to determine levels of EtO near the facility and in the surrounding area, detecting ambient EtO levels several orders of magnitude higher than typical South Coast AQMD ambient EtO levels elsewhere in the Basin.

Figure 1-5 – Location of Monitoring Sites for Sterigenics Ontario



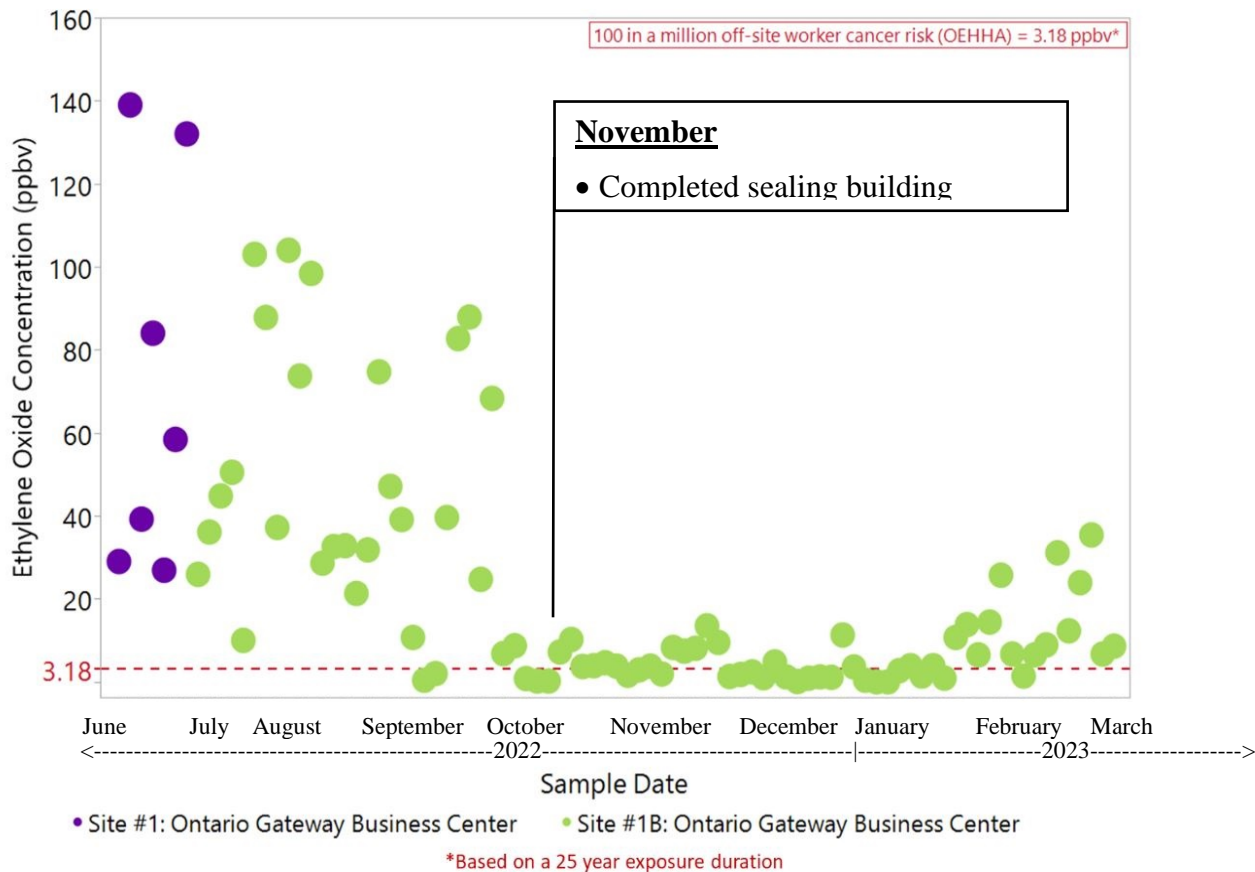
On July 1, 2022, due to the elevated EtO concentrations observed, a Proposition 65 notice was issued notifying San Bernadino County Board of Supervisors and the Health Officer for the San Bernadino Department of Public Health of the illegal discharge likely to cause substantial injury to public health or safety pursuant to California Public Resources Code 25180.7. The figure above shows the monitoring sites near the facility.

On September 29, 2022 Sterigenics Ontario was designated as Potentially High-Risk Level Facility under the AB2588 Air Toxic “Hot Spots” program. As part of the Sterigenics Ontario’s Early Action Reduction Plan (EARP)³⁴ under the AB2588 program to control EtO emissions (approved on April 7, 2023),³⁵ a PTE would be installed to control fugitive emissions no later than July 31,

³⁴ Early Action Reduction Plan - Sterigenics (Ontario). (2023, April 7). Retrieved April 20, 2023, from <http://www.aqmd.gov/docs/default-source/compliance/sterigenics/earp-ontario.pdf?sfvrsn=8>

³⁵ <http://www.aqmd.gov/docs/default-source/compliance/sterigenics/earp-approval-letter-ontario.pdf?sfvrsn=9>

Figure 1-6 – 24-Hour Near-Source Samples in Ontario



2024. The figure below shows the results of EtO monitoring near Sterigenics Ontario and any key measures taken at the facility to control EtO emissions before the approval of the EARP.

1.4.3 Parter Carson Sterilization Facility

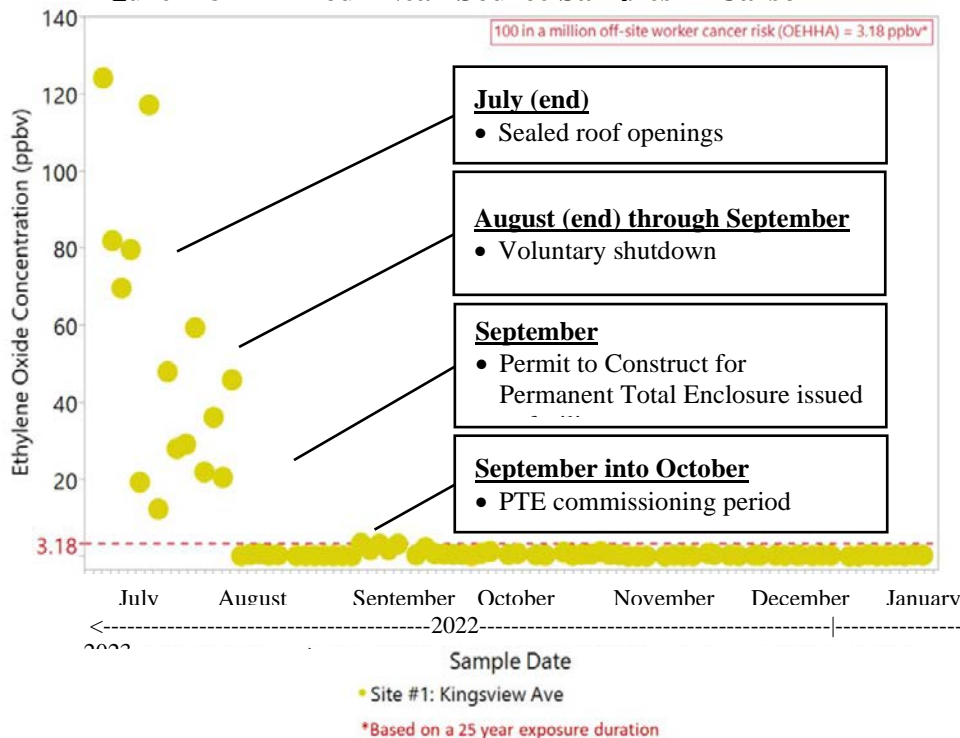
The Parter Carson facility conducts EtO sterilization services for medical device manufacturers with operations that run 24 hours a day, seven days a week. The nearest residential area is about 700 feet and the nearest elementary school is about 2,000 feet from the facility. Mobile ambient air monitoring was conducted to collect data on VOCs around the facility and the surrounding area. VOC signals associated with EtO were elevated near and downwind of the facility. Individual grab samples (an air sample collected at one location at one point in time) were taken to confirm elevated EtO levels. Further investigation of EtO emissions at a near-facility location in addition to three nearby residential communities and school locations were collected using 24-hour time-integrated samples beginning July 2022. On July 28, 2022, due to the elevated EtO concentrations, a Proposition 65 notice was issued notifying Los Angeles County Board of Supervisors, the Los Angeles County Health Officer, and the City of Carson of the illegal discharge likely to cause substantial injury to public health or safety pursuant to California Public Resources Code 25180.7. The figure below shows the monitoring location site near the facility.

Figure 1-7 – Location of Monitoring Site for Parter Carson



On August 19, 2022 Parter Carson was notified that it may be designated as Potentially High-Risk Level Facility under the AB2588 Air Toxic “Hot Spots” program. Beginning late August 2022,

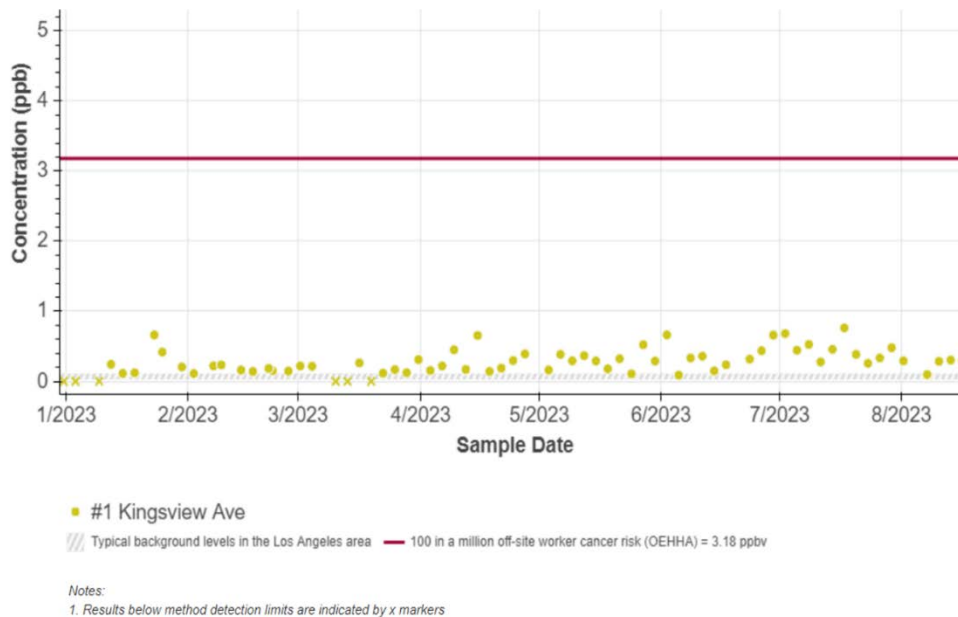
Figure 1-8 – 24-Hour Near-Source Samples in Carson



the facility temporarily ceased operation and voluntarily implemented additional control measures to reduce EtO emissions.

In September 2022, the facility was granted a Permit to Construct to implement a PTE to capture fugitive EtO emissions by installing additional dry bed scrubbers to control fugitive emissions and also polish acid-water scrubber emissions (i.e., second layer of control). Following the implementation of these control measures, fenceline air monitoring showed a decrease in EtO concentrations. The figure above shows the results of EtO monitoring near Parter Carson with the timeline of improvements made by the facility. Fenceline air monitoring results since the improvements have remained, so far in the 2023-year, near background levels as seen in the more detailed view shown in the figure below.

Figure 1-9 – 24 Hour Near-Source Samples in Carson in 2023



1.4.4 Warehouses (Including Aeration-Only Facilities)

As of May 2023, there are 80 facilities reporting to U.S. FDA as wholesale drug distributors or third-party logistics providers that may handle EtO-sterilized products in the South Coast AQMD jurisdiction. Survey requests for information were sent to these facilities but only 14 facilities responded. Of the 14 responses, only three facilities reported receiving EtO-sterilized products while eight reported that they did not; three facilities did not know if they received EtO-sterilized products. As part of the South Coast AQMD monitoring efforts for EtO sources, warehouses were also included and are ongoing. As of July 2023, ten warehouses reporting to U.S. FDA were monitored in the cities of Redlands, Rialto, Riverside, San Bernardino, Sante Fe Springs, and Moreno Valley. These warehouses were prioritized based on their building footprints and a review of online information regarding their association with known EtO sterilization operations nationwide. South Coast AQMD continues to monitor EtO emissions from warehouses. EtO mobile ambient air monitoring measurements have detected significant enhancements in EtO signals at one warehouse near its fenceline. The figure below shows two examples of mobile

Figure 1-10 – Examples of Mobile Monitoring Platform Survey of Warehouses

monitoring platform survey around two warehouses (outlined in orange) and the survey route showing no enhancements in VOC signals (light blue).

1.5 AMBIENT AIR MONITORING TECHNOLOGY

Ambient air monitoring is conducted by measuring the ambient levels of the pollutant(s) of interest, including near the boundaries of a facility or other source of air pollution. Typically, ambient air monitoring methods consist of either sample collection followed by laboratory analysis, or continuous monitoring in real- or near real-time. The following criteria were considered to assess strengths and limitations of available technologies and methods for the purposes of mobile and fenceline EtO measurement applications: 1) documented performance; 2) detection limit; and 3) availability.

- **Documented performance**

For the purpose of this rule, only well-established technologies will be considered for ambient air monitoring. This will ensure that EtO is properly detected and accurately quantified. The most widely method used by air quality agencies for regulatory purposes include canister sample collection followed by laboratory analysis such as U.S. EPA Compendium Method TO-15 or Method TO-15A. Despite some limitations identified below, these are considered to be the current gold standard for EtO ambient monitoring. Alternatively, emerging technologies such as continuous instruments reporting EtO concentrations in real- or near real-time are being considered and evaluated for certain applications, although their performance has not been fully validated yet. These include Cavity Ring-Down Spectroscopy (CRDS) and Tunable Infrared Laser Direct Absorption Spectroscopy (TILDAS), which have been tested by South Coast AQMD and which performance has been documented in scientific publications or technical reports.

- **Detection Limit**

The detection limit of an instrument is defined as the lowest concentration or the lowest amount of an air toxic contaminant that can be measured accurately. A low detection limit is important as an established technology should be able to detect pollutants near a source (e.g., emissions emanating from a facility) at levels that can be slightly above those typically

measured in ambient air (background). As discussed in Chapter 1, background levels of EtO in the Los Angeles area range from 0.02 ppb to 0.17 ppb.

- **Availability**

To ensure that it is feasible for facilities to comply with proposed rule requirements, the monitoring technology considered for implementation should be readily available for purchase. Emerging technologies may have limited availability with long lead times greater than six months compared with established and more mature technologies which have already been adopted. Additionally, there are third-party contractors that already use the technology for ambient air monitoring and offer their services or equipment rental on a contract basis.

The following sections provide an overview of monitoring technologies that can be used for quantifying EtO levels in ambient air. These technologies are classified as either sample collection or continuous real-time/near-real time technologies.

1.5.1 Sample Collection Technologies

These are designed to collect an air sample for subsequent laboratory analysis. Samples are typically collected using either Tedlar bags or Summa canisters. Collection is performed over a preset time period (usually 24-hours) to obtain a time-integrated sample.

Tedlar Bag Collection

- **Overview of Process**

Disposable inert plastic bags are used to collect samples. A separate pump or vacuum source is required to fill the bag. Analysis of the collected sample is later performed in the laboratory using gas chromatograph-mass spectrometry (GC-MS).



- **Documented Performance**

Although Tedlar bag collection is used for source tests to collect samples of relatively higher concentrations analyzed per CARB Method 431 – Determination of Ethylene Oxide Emissions from Stationary Sources, this technology is not an established technology for outdoor ambient air monitoring of EtO.

- **Detection Limit**

The detection limit is in the ppm to sub-ppm range. This technology was used for source testing of EtO with a detection limit of 0.2 ppm (200 ppb).

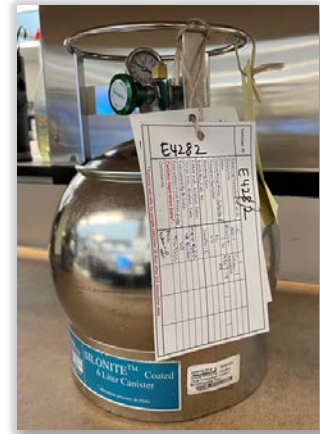
- **Availability**

Tedlar bags are readily available in the market for source testing applications.

Summa Canister Collection

➤ Overview of Process

Stainless steel canisters are used to collect samples, which is then analyzed in the laboratory using a GC-MS. Canister and flowmeter are prepared and validated ahead of time by the laboratory for the specific analysis which includes the expected sampled gas composition. Prior to their use, summa canisters are under negative pressure to collect an air sample over a specified interval of time (e.g., 24-hr time-integrated sample) once the valve is open. When the valve is closed at the end of the sampling collection period, the canister should still be under negative pressure to ensure no loss of the collected sample. Key limitations of this technology include creating only a single data point over a time-integrated period and a turn-around time of several days to a week or more to analyze sample and produce a result.



• Documented Performance

For EtO, South Coast AQMD collects samples using silica-lined metal canisters (to prevent contamination and EtO growth) and analyzed per TO-15A for regulatory purposes. Additionally, canister sampling of EtO has been used across the United States by a variety of regulatory agencies. As such, canister sampling is a well-established technology for outdoor ambient air monitoring of EtO.

• Detection Limit

Canister sampling and analyses pursuant to TO-15A allows for low detection limits (approximately 0.02 ppb of EtO) to be achieved, whereas TO-15 typically has detection limits that are an order of magnitude higher (approximately 0.2 ppb of EtO).

• Availability

Based on information collected from analytical laboratories, preparation, and validation of canisters for TO-15A are very labor intensive and required a dedicated supply of canisters. Thus, many laboratories currently do not offer TO-15A analysis. On the other hand, TO-15 is used more widely.

1.5.2 Continuous Real-Time/Near Real-Time Monitoring Technologies

Real-time or Near Real-Time monitoring involves the use of technology that continuously measures the pollutant(s) of interest at short time intervals (e.g., from a few seconds to a few minutes). Typically, modern monitoring technologies can report results in real- or near real-time (shortly after they have been collected). The main advantage of using this type of technology is the quick turnaround time of the monitoring results. Below are well established continuous monitoring technologies being used or considered for monitoring of EtO:

Proton Transfer Reaction Mass Spectrometer (PTR-MS) Sampling

➤ Overview of Process

PTR-MS technology is a non-specific measurement of EtO concentrations, detecting for signals associated with EtO ions. South Coast AQMD uses this technology during mobile surveys for initial screening. When enhanced signals are observed from the PTR-MS instrument, grab canister

samples can be collected and analyzed per TO-15A (see Canister Collection above) to determine actual EtO concentrations.

- Documented Performance

South Coast AQMD uses this technology to collect information on EtO on a mobile platform. As such, this is an established technology for mobile ambient air monitoring of EtO.

- Detection Limit

Although PTR-MS is capable of non-specific measurements of EtO concentrations in the sub-ppb range, the final measurement of EtO is tied to the grab canister sample and associated detection limit (see Canister Collection above).

- Availability

Aside from the South Coast AQMD, at least one third-party contractor is able to monitor EtO-related measurements using this technology.^{36,37} However, there might be a long lead time to purchase this technology (PTR-MS component).

Tunable Infrared Laser Direct Absorption Spectroscopy (TILDAS)

➤ Overview of Process

TILDAS measures EtO by passing the beam of a laser tuned to the characteristic absorption wavelength of EtO through a sample cell and measuring reductions of the intensity of the signal using a photodiode. Concentration is determined from this reduction in intensity.



- Documented Performance

In 2022, South Coast AQMD worked with a vendor on an EtO monitor evaluation study using this technology, which included both mobile and fixed-site ambient air monitoring of EtO.³⁸ This technology was demonstrated in a study in Massachusetts in 2022 and documented in a peer-reviewed journal.³⁹ During the study, both fixed-site and mobile monitoring were performed. Additional information on this event was presented at the 2022 National Ambient Air Monitoring Conference.⁴⁰ Another study was conducted in the Greater Toronto Area near possible EtO sources

³⁶ PTR-MS for Environmental Analysis | RJ Lee Group, Inc. (RJLG). (n.d.). <https://www.rjlg.com/ptr-ms-environmental-analysis/>

³⁷ Montrose Environmental. (2021, April 7). PTR-TOF-MS Mobile Laboratory - Montrose Environmental. <https://montrose-env.com/services/testing-lab-services/ptr-tof-ms-mobile-laboratory/>

³⁸ South Coast AQMD Board Meeting Item - Recognize Revenue, Appropriate Funds, Execute Purchase Orders and Contracts to Design and Develop a Mobile Air Toxics Measurement Platform. (2021, February 5). South Coast AQMD. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-feb5-005.pdf?sfvrsn=2>

³⁹ Yacovitch, T. I., Dyroff, C., Roscioli, J. R., Daube, C., McManus, J. B., & Herndon, S. C. (2023). Ethylene oxide monitor with part-per-trillion precision for in situ measurements. *Atmospheric Measurement Techniques*, 16(7), 1915–1921. <https://doi.org/10.5194/amt-16-1915-2023>

⁴⁰ Ethylene Oxide Monitor with Ultra-Low Limit of Detection. (n.d.). [Slide show; Presentation]. 2022 National Ambient Air Monitoring Conference, Pittsburg, United States of America. U.S. EPA. https://www.epa.gov/system/files/documents/2022-10/202208_Pittsburg_NAAQS_Herndon.pdf

in 2021.⁴¹ South Coast AQMD has evaluated published studies and determined this technology meets the criteria for PAR 1405 fenceline air monitoring.

- **Detection Limit**

This technology is capable of measurements of EtO concentrations in the sub-ppb range.

- **Availability**

At least one third-party contractor is able to monitor EtO using this technology.⁴² However, there might be a long lead time to purchase this technology.

Cavity Ring-down Spectroscopy (CRDS)

➤ **Overview of Process**

CRDS uses a photodetector that senses light inside a cavity and can measure the exponential decay of the light inside the cavity using a laser tuned to the characteristic absorption wavelength of EtO.



- **Documented Performance**

This technology has been used for fixed-site air monitoring. In June 2021, the State of Washington conducted a study of ambient EtO measurements in western Washington using CRDS at three fixed ambient monitoring sites. Hourly EtO concentrations were measured to be sub-ppb.⁴³ In October 2021, another study using CRDS was conducted at an EtO chemical facility in the midwestern United States to understand EtO emissions sources and to advance next generation emission measurements.⁴⁴ South Coast AQMD has evaluated published studies and determined this technology as appropriate for use with mobile and fixed-site ambient air monitoring of EtO.

- **Detection Limit**

This technology is able to measure in the sub-ppb range.

- **Availability**

At least one third-party contractor is able to monitor EtO using this technology.⁴⁵ However, there might be a long lead time to purchase this technology.

⁴¹ Galarneau, E., Yacovitch, T. I., Lerner, B., Sheppard, A., Quach, B., Kuang, W., Rai, H., Staebler, R., Mihele, C., & Vogel, F. (2023). From hotspots to background: High-resolution mapping of ethylene oxide in urban air. *Atmospheric Environment*, 307, 119828. <https://doi.org/10.1016/j.atmosenv.2023.119828>

⁴² Aerodyne Research Inc. (2022, August 19). Aerodyne Mobile Laboratory - Aerodyne. Aerodyne. <https://www.aerodyne.com/centers/aerodyne-mobile-laboratory/>

⁴³ Ethylene Oxide Measurements in Western Washington during June 2021. (2022, June). Department of Ecology State of Washington. Retrieved June 20, 2023, from <https://apps.ecology.wa.gov/publications/summarypages/2202020.html>

⁴⁴ Thoma, E. D., Gitipour, A., George, I., Kariher, P., MacDonald, M., Queiroz, G., Deshmukh, P., Childers, J., Rodak, T., & Schmid, V. (2023). Assessment of chemical facility ethylene oxide emissions using mobile and multipoint monitoring. *Atmospheric Environment: X*, 18, 100214. <https://doi.org/10.1016/j.aeaoa.2023.100214>

⁴⁵ CleanAir Engineering, Inc. (2023, May 31). Ethylene Oxide monitoring Services. CleanAir Engineering. <https://www.cleanair.com/ethylene-oxide-monitoring/>

Gas Chromatography-Photoionization Detector (GC-PID)

➤ Overview of Process

GC-PID technology measures EtO concentration in near real-time. GC-PID technology is used for monitoring potential worker exposure to EtO indoors but also used for stack emission testing. Ultraviolet light is used to ionize the analyte exiting a heated gas chromatograph column. The concentration is determined from the ions produced and then collected at electrodes.



• Documented Performance

Although this technology is associated with several reference methods including CARB Method 431 – Determination of Ethylene Oxide Emissions from Stationary Sources, U.S. EPA Method 18 – Volatile Organic Compounds by Gas Chromatography, and U.S. EPA Performance Specification 8 and 9, none are referenced for use for ambient air monitoring purposes and no implementation for ambient monitoring is known. As such, this technology is not an established technology for ambient air monitoring of EtO.

• Detection Limit

This technology is capable of measurements of EtO concentrations in the ppb range, as low as 10 ppb (0.01 ppm).

• Availability

GC-PID technology is readily available from multiple vendors for source testing and indoor environments.

Infrared (IR) Absorption Spectroscopy Sensor

➤ Overview of Process

Infrared light is absorbed by EtO to determine its concentration but subject to interference from other compounds such as water. IR technology is commonly used for indoor worker protection and fire/explosion safety monitors at a facility.



• Documented Performance

No established methods were found for its use for ambient air monitoring by any air quality agency. This technology is not an established technology for ambient air monitoring of EtO.

• Detection Limit

This technology is capable of measurements of EtO concentrations in the ppb range, as low as 100 ppb (0.1 ppm).

• Availability

IR technology is readily available and already widely used in indoor environments.

Fourier Transform Infrared (FTIR)

➤ Overview of Process

Inside a chamber in the detector, infrared light is absorbed by infrared active gases each with unique “fingerprint” wavelengths before being measured.

- Documented Performance

This technology is currently used for EtO stack emission monitoring at a sterilization facility outside of South Coast AQMD using reference method U.S. EPA Performance Specification 15 – Performance Specification For Extractive FTIR Continuous Emissions Monitor Systems In Stationary Sources. Reference methods include U.S. EPA Method 320 – Vapor Phase Organic and Inorganic Emissions by Extractive FTIR, and U.S. EPA Performance Specification 15, though none are referenced for use for ambient air monitoring purposes and no implementation for ambient air monitoring is known. Proposed U.S. EPA Performance Specification 19 – Performance Specifications and Test Procedures for Ethylene Oxide (EtO) Continuous Monitoring Systems is not expected to be referenced for ambient air monitoring.⁴⁶ FTIR technology may be useful for other applications including ambient air monitoring, but there is no known application of this technology for ambient air monitoring of EtO. This technology is not an established technology for ambient air monitoring of EtO.



- Detection Limit

Based on available literature this technology has potential for measuring EtO concentrations at sub-ppb levels.

- Availability

There might be a long lead time to purchase this technology of several months up to a year based on conversations with vendors of the technology because of supply chain issues and demand.

Open-Path Fourier Infrared Spectroscopy (OP-FTIR)

➤ Overview of Process

OP-FTIR systems optically transmit IR energy along a fenceline to a reflector and resulting spectra are analyzed for gas concentrations along the open-air light path. The technology is similar to FTIR, but the analyte is in the open-air instead of the chamber of the detector. EtO detection capabilities by OP-FTIR would be affected by environmental conditions as well presence of other pollutants that have strong absorptions in the same spectral region.



- Documented Performance

OP-FTIR is referenced in U.S. EPA Compendium Method TO-16 – Long-Path Open-Path Fourier Transform Infrared Monitoring of Atmospheric Gases for determination of toxic organic compounds in ambient air. However, no published studies or demonstration of its use for ambient air monitoring of EtO were found by the South Coast AQMD

⁴⁶ Regulations.gov. (n.d.). <https://www.regulations.gov/document/EPA-HQ-OAR-2019-0178-0491>

to properly assess application of this technology for monitoring of this pollutant. OP-FTIR has been used extensively for fenceline air monitoring of ammonia and other air pollutants at refineries and other large industrial facilities. This technology is not an established technology for ambient air monitoring of EtO.

- **Detection Limit**

The detection limit ranges from a few ppb to a few tens ppb, depending on the compound. As of July 2023, no published documentation was found demonstrating a detection limit in the sub-ppb range for EtO.

- **Availability**

At least one vendor had indicated they could monitor EtO using this technology at fenceline.⁴⁷ However, there might be a long lead time to purchase this technology.

Summary of EtO Monitoring Technologies

The table below summarizes the technologies as of the time of this staff report. As data from emerging technology, such as published studies or demonstrations, become available for South Coast AQMD evaluation, those technologies would be evaluated and may be determined to be acceptable for ambient air monitoring requirements of EtO.

Table 1-2 – Summary of EtO Ambient Monitoring Technologies

Criteria for Outdoor Ambient Air Monitoring of EtO		Sample Collection		Continuous (Real-Time/Near Real-Time)						
		Summa Canister	Tedlar Bag	GC-PID	PTR-MS	IR	FTIR	OP-FTIR	CRDS	TILDAS
Documented Performance	Mobile Platform	No	No	No	✓	No	No	No	✓	✓
	Fixed-Site	✓	No	No	No	No	No	No	✓	✓
Detection Limit	0.2 ppb	✓	No	No	No	No	No	No	✓	✓
	Sub-ppb	✓	No	No	✓*	No	✓	No	✓	✓
Availability	Contractor Service or Rental	✓	✓	**	✓	**	**	✓	✓	✓
	Purchase Lead Time Less Than 6 Months	**	**	✓	No	✓	No	No	No	No

* *Detection of signals associated with EtO ions*

** *Not applicable*

⁴⁷ <http://www.atmosfir.net/d-fenceline>

1.6 CURTAILMENT BASED ON FENCELINE AIR MONITORING

Curtailement is the temporary limiting of facility operations. Curtailements have been used to reduce the amount of an air contaminant, typically a toxic air contaminant, in response to observed level of that air contaminant, whether from stack emission or fence line air monitoring. Curtailements may be a percentage reduction in the feedstock or complete cessation of certain operations believed to be contributing to the elevated levels observed. Below are examples of curtailements in South Coast AQMD.

Stack Emission Based:

- South Coast AQMD Rule – Rule 1420.1 – *Emissions Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities* included curtailement provisions in January 2014. Curtailement rule provisions were implemented on a sliding scale, based on the level of exceedance.

Fence line Air Monitoring Based:

- Stipulated Orders for Abatement – South Coast AQMD initiated an extensive air monitoring campaign in 2016⁴⁸ in the city of Paramount to assess levels of hexavalent chromium and resulted in the identification of multiple sources. Of those, two aerospace facilities were identified to be contributing to elevated concentration levels of hexavalent chromium and subsequently were subject to curtailement provisions under stipulated orders for abatement.^{49,50}
- Early Action Reduction Plans (EARP) – Two large sterilization facilities were designated as Potentially High Risk Level Facilities under the AB2588 Hot Spots program in 2022-2023. The two facilities are required to reduce their facility risk through implementation of the EARP, which included curtailement provisions.^{51,52}

For EtO, curtailement in EARPs is based on observed levels of EtO at the facility from fence line air monitoring. Considerations were taken for possible contribution from EtO sources other than the facility subject to curtailement. The examples below describe the curtailement provisions in the approved EARPs at two large sterilization facilities in South Coast AQMD.

1.6.1 Curtailements at Sterigenics Vernon Based on EARP

⁴⁸ Paramount Emissions Investigation. (n.d.). <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities>

⁴⁹ Aircraft. (n.d.). <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/facilities---order-for-abatement/aerocraft>

⁵⁰ Anaplex Corp. (n.d.). <http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities/facilities---order-for-abatement/anaplex-corp>

⁵¹ Sterigenics - Vernon. (n.d.). <http://www.aqmd.gov/home/news-events/community-investigations/sterigenics>

⁵² Sterigenics - Ontario. (n.d.). <http://www.aqmd.gov/home/news-events/community-investigations/sterigenics-ontario>

On June 7, 2022, Sterigenics Vernon was designated a Potentially High Risk Level Facility. The facility submitted an EARP which was approved on September 9, 2022. The approved EARP includes requirements for fenceline air monitoring and provisions for curtailment using two thresholds: a lower threshold of 17.5 ppb and an upper threshold of 25.0 ppb. A 20 percent curtailment at the lower threshold and 50 percent curtailment of operation at the upper threshold is required if a 24-hr sample result reaches these thresholds. Repeated exceedances of the threshold within a rolling 30-day period will result in a temporary shutdown of the facility. See table below for a more detailed description of the curtailment schedule and structure. The percentage curtailed is calculated based on the daily average pounds of EtO used by sterilizers or combined sterilizer/aerators in the seven (7) operating days including and prior to the date of the monitoring result or sample that triggered the curtailment.

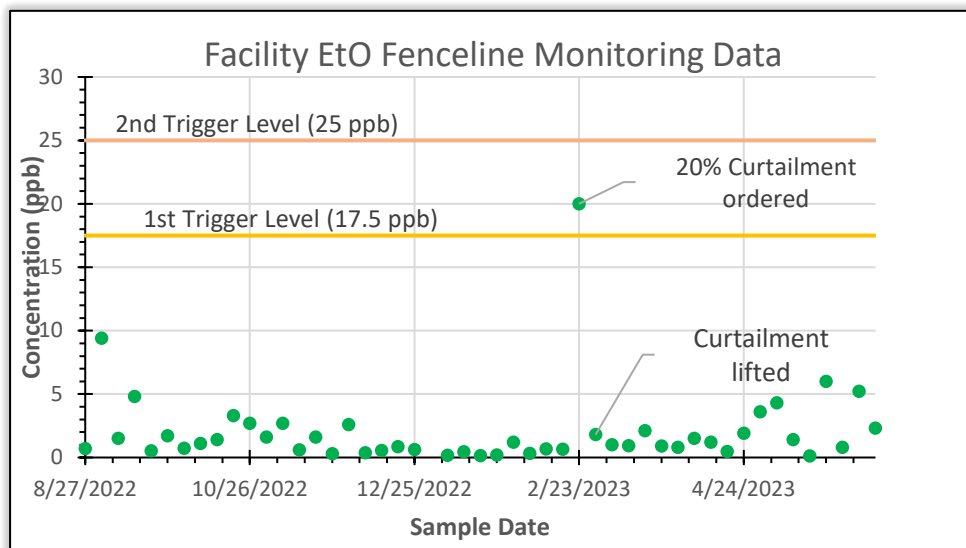
Table 1-3 – Sterigenics Vernon Curtailment Schedule

EtO Level \geq 17.5 ppb but $<$ 25 ppb	Action	EtO Level \geq 25 ppb	Action
First Sample	20% Curtailment of Operations	First Sample	50% Curtailment of Operations
Second Sample	50% Curtailment of Operations	Second Sample	100% Curtailment of Operation
Third Sample	100% Curtailment of Operations		

Curtailment is only lifted when all monitoring results are below the 17.5 ppb lower threshold. If all monitoring results remain below 17.5 ppb for at least 30 calendar days, the curtailment schedule is reset.

As of July 2023, Sterigenics Vernon had one curtailment event which was triggered by a 20 ppb EtO level observed on February 23, 2023. A 20 percent curtailment began on March 4, 2023 until

Figure 1-11 – Sterigenics Vernon Curtailment of Operations



March 7, 2023 where the monitoring result from March 1, 2023 was below the lower curtailment threshold; see figure below.

1.6.2 Curtailments at Sterigenics Ontario Based on EARP

On September 29, 2022, Sterigenics Ontario was designated a Potentially High Risk Level Facility. The facility submitted an EARP which was approved on April 7, 2023. The approved EARP includes requirements for fence-line air monitoring and provisions for curtailment using two thresholds of 17.5 and 25.0 ppb. In May 2023, the two curtailment thresholds were lowered to 8 ppb and 12 ppb. The curtailment schedule is different than that of Sterigenics Vernon due to the lower curtailment thresholds. See table below for a more detailed description of the curtailment schedule and structure. Repeated exceedances of the threshold within a rolling 30-day period will result in a temporary shutdown of the facility. The percentage curtailed is calculated based on the daily average pounds of EtO used by sterilizers or combined sterilizer/aerators in the seven (7) operating days including and prior to the date of the monitoring result or sample that triggered the curtailment.

Table 1-4 – Sterigenics Ontario Curtailment Schedule

EtO Level \geq 8 ppb but $<$ 12 ppb	Action	EtO Level \geq 12 ppb	Action
Second Sample	20% Curtailment of Operations	First Sample	20% Curtailment of Operations
Third Sample	50% Curtailment of Operations	Second Sample	50% Curtailment of Operation
Fourth Sample	100% Curtailment of Operations	Third Sample	100% Curtailment of Operation

Curtailment is only lifted when all monitoring results are below the 8.0 ppb lower threshold. If all monitoring results remain below 8.0 ppb for at least 30 calendar days, the curtailment schedule is reset. As of July 2023, Sterigenics Ontario has had two curtailment events. The first event occurred due to elevated readings ranging from 24.3 to 39.8 ppb on April 12, 15 and 18, 2023 which resulted in a 100 percent curtailment beginning April 28th until the monitoring result from April 30, 2023 was below the threshold. The second curtailment occurred due to a monitoring level of 13 ppb on June 17, 2023 which resulted in a 20 percent curtailment that began on June 23, 2023. The curtailment was lifted on June 27, 2023; see figure below.

Figure 1-12 – Sterigenics Ontario Curtailment of Operations

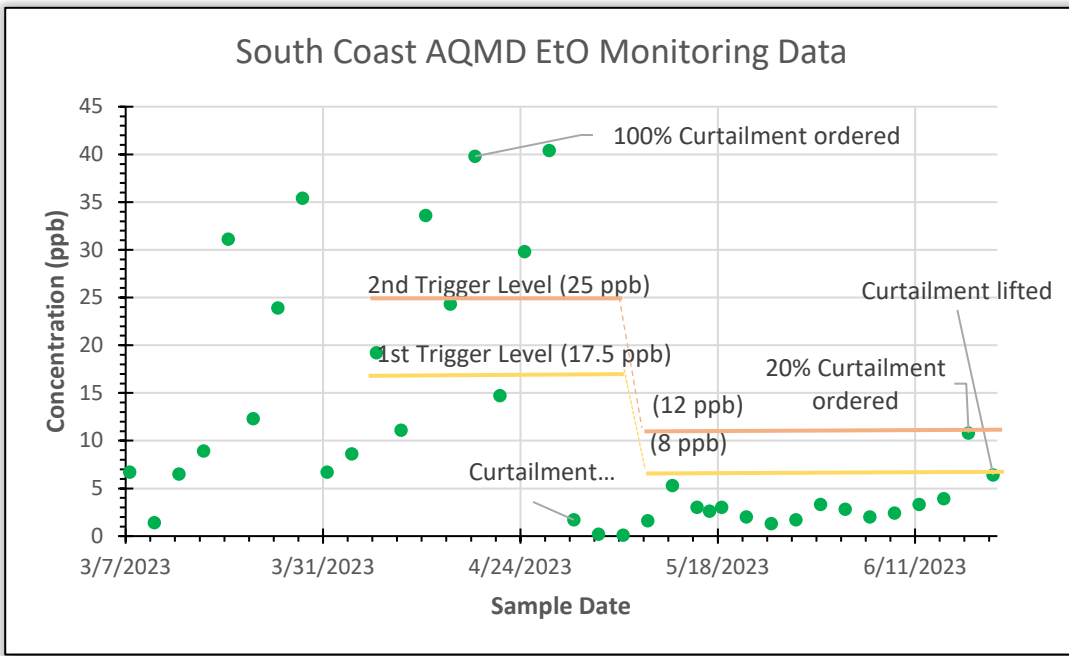
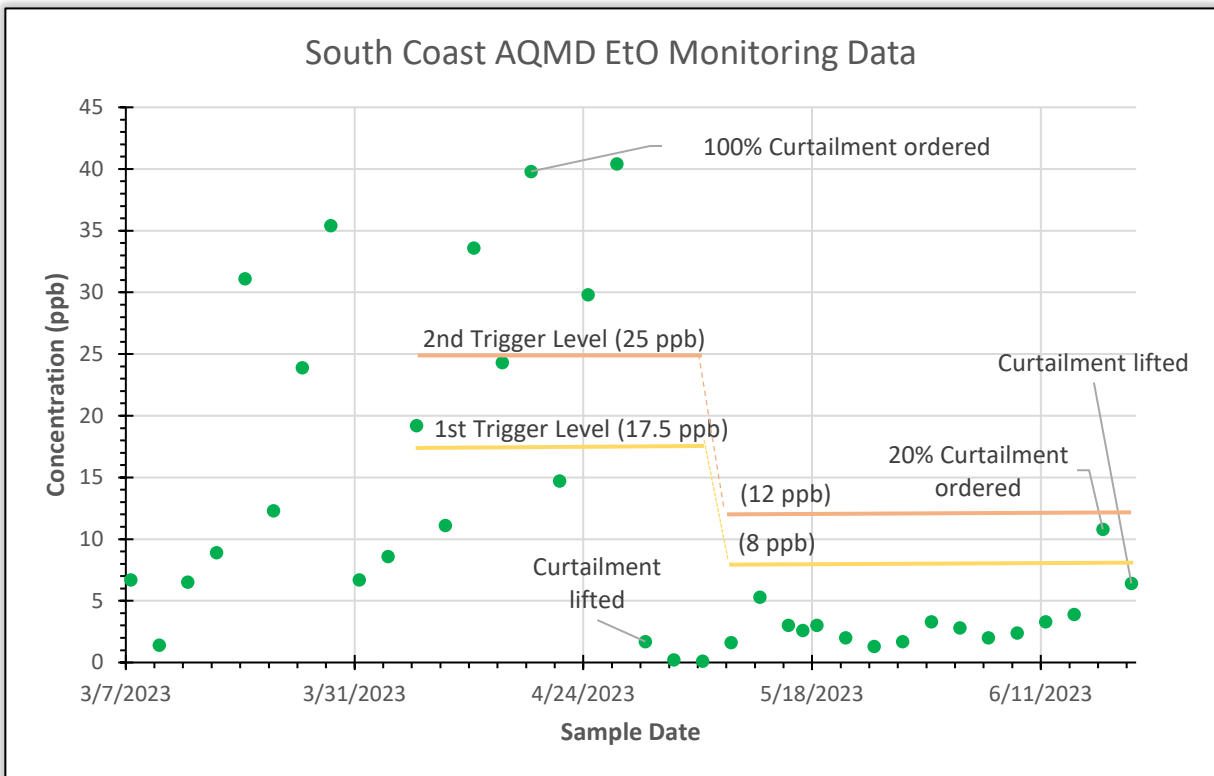


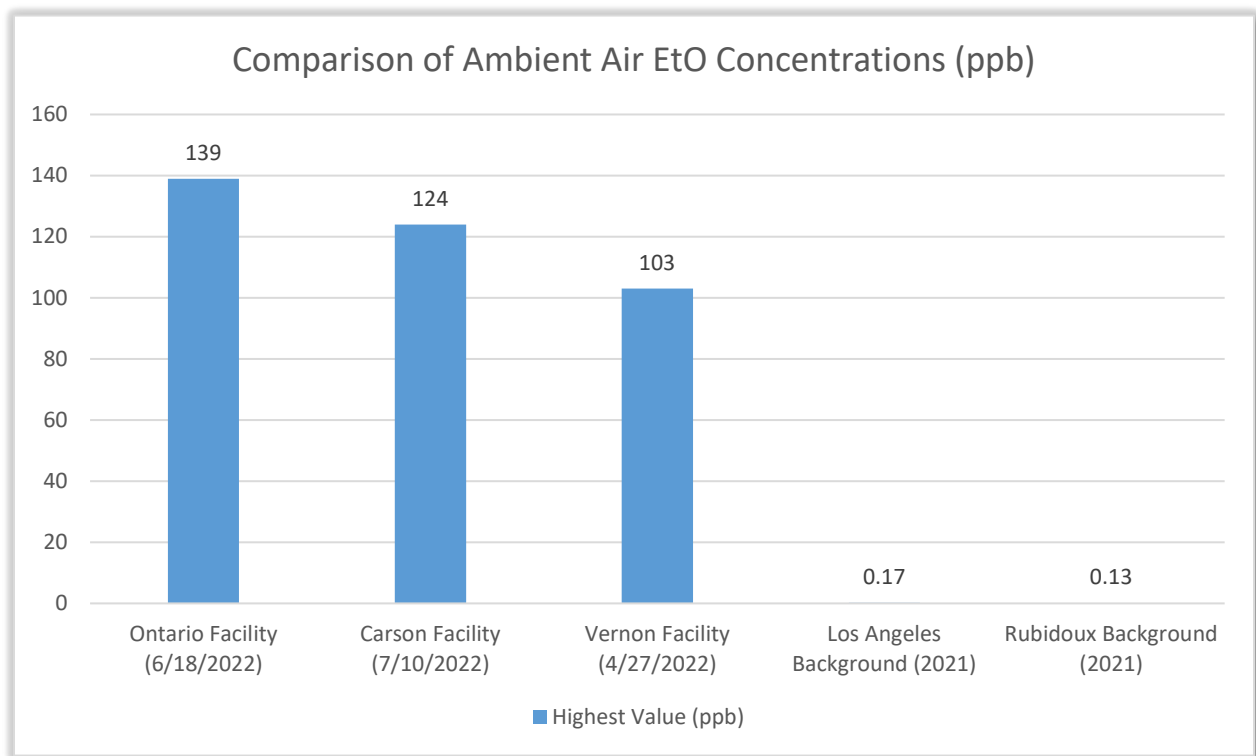
Figure 1-12 – Sterigenics Ontario Curtailment of Operations



1.6.3 Contributions of Background to Ambient Air EtO Levels

In addition to emissions from sterilization and related operations, there could be other sources of EtO emissions that occur from human activities or occur naturally in the environment. The contributions of these sources on background levels are unclear. As discussed earlier, background levels of EtO were measured to be as high as 0.17 ppb in the South Coast AQMD area in 2021. By comparison, fenceline air monitoring indicated peak EtO concentrations above 100 ppb at three different sterilization facilities in 2022⁵³ (see figure below). The highest measured EtO concentrations nearby these sterilization facilities were 2-3 order of magnitude greater than the highest background levels. Therefore, there is sufficient information to conclude that background levels did not significantly impact fenceline air monitoring results. The elevated fenceline air monitoring results were from the sterilization facility and no further considerations, such as background subtraction, were required.

Figure 1-13 - Comparison of Ambient Air EtO Concentrations



1.6.4 Conclusion

Based on the implementation of EARPs in South Coast AQMD, curtailment based on fenceline air monitoring is an effective means to reduce EtO when elevated EtO levels are observed at fenceline.

⁵³ <https://www.aqmd.gov/docs/default-source/compliance/sterigenics/ontario-sample-data-table.pdf>
<https://www.aqmd.gov/docs/default-source/compliance/partner/carson-sample-data-table.pdf>
<https://www.aqmd.gov/docs/default-source/compliance/sterigenics/vernon-sample-data-table.pdf>

1.7 AFFECTED RULE 1405 FACILITIES

Rule 1405 regulates two types of facilities: 1) facilities conducting sterilization onsite (sterilization facilities) and 2) facilities receiving EtO materials which have been sterilized at another facility (aeration-only facilities).

Sterilization facilities use EtO to sterilize products in equipment known as chambers where EtO is introduced and comes in contact with products and any associated packaging to sterilize the contents. Sterilization facilities may sterilize their own products or equipment (manufacturer) or offer their services under contract (contract sterilizer) to manufacturers. The larger sterilizing facilities have sterilization chambers capable of processing multiple pallets of products during each programmed cycle and typically perform aeration activities in a separate area or room. Smaller facilities typically have all-in-one units capable of conducting both sterilization and aeration processes in the same unit where capacity is much less, typically the size of a small cart-load of products. These smaller facilities include research, veterinary, or medical facilities where EtO sterilization is not the primary business of the facility.

Aeration-only facilities receive sterilized products from other facilities in order to aerate the previously EtO-sterilized products through natural or mechanically assisted convection in order to dissipate residual EtO from the sterilized products. Rule 1405's definition of aeration specifies that aeration is complete when the product can be handled, stored, or transported like similar materials that had not been sterilized with EtO. Data on aeration-only facilities is limited as there is only one such facility in the South Coast AQMD area performing aeration-only activities. Data gathering at warehouses by South Coast AQMD staff indicated that some warehouses may not be aware they are receiving EtO-sterilized products.

As of July 2023, there are 16 facilities that are currently subject to Rule 1405, of which 15 facilities using EtO for sterilization include contract sterilizers, medical product manufacturers, surgical or veterinary facilities, or school and zoos. The remaining facility is an aeration-only facility receiving EtO-sterilized materials from sterilizers outside of South Coast AQMD jurisdiction. Based on Rule 1405 thresholds there are six (6) large, three (3) medium, and three (3) small sterilization facilities. There are three (3) PAR 1405 exempt sterilization facilities with permitted EtO sterilization equipment and controls. Finally there is one (1) warehouse that receives EtO-sterilized products that is classified as an aeration-only facility (PAR 1405 redefines this facility now as a post-aeration storage facility).

Since PAR 1405 now defines large facilities as those that are permitted to use 2,000 lbs or more of EtO per year, there are now seven (7) large, three (3) medium, two (2) small sterilization facilities, and three (3) facilities that use four lbs or less of EtO per year. In addition, PAR 1405 will include affect 28 FDA registered warehouses (one is a post-aeration storage facility) with 100,000 square feet or greater warehousing space. The table below shows the affected facilities based on the industry type.

Table 1-5 – Industry Type of PAR 1405 Facilities in the South Coast AQMD

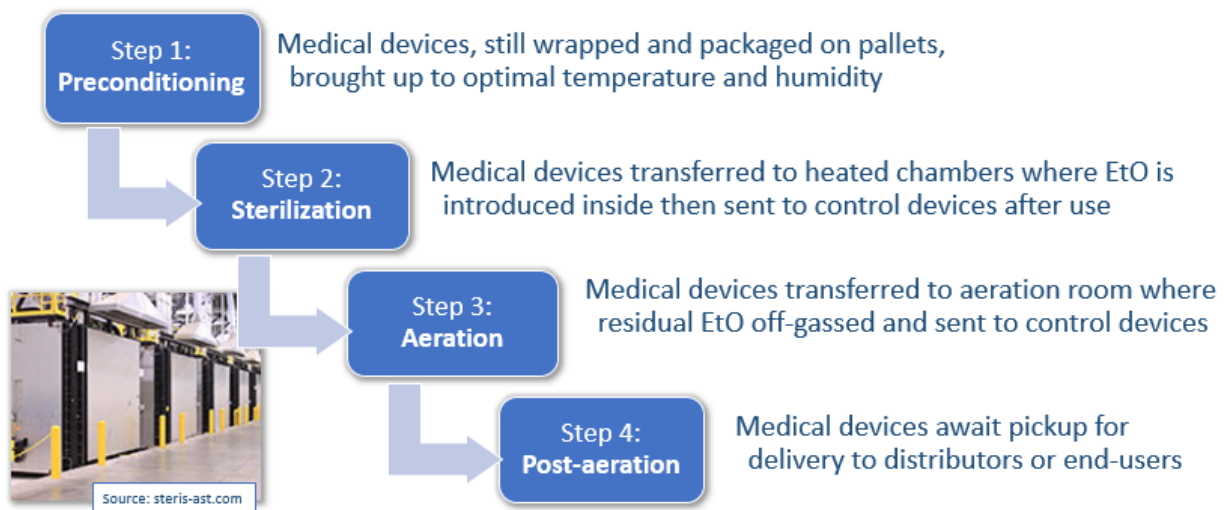
Facility	NAICS Code	Industry Type	PAR 1405 Classification
STERIGENICS US, LLC (Ontario)	339999	All Other Miscellaneous Manufacturing	Large
STERIGENICS US, LLC (Vernon)	339999	All Other Miscellaneous Manufacturing	Large
STERIS, INC.	541380	Testing Laboratories and Services	Large
APPLIED MEDICAL RESOURCES	541611	Administrative Management and General Management Consulting Services	Large
PARTER MEDICAL PRODUCTS INC	561910	Packaging and Labeling Services	Large
AMERICAN CONTRACT SYSTEMS INC	444190	Other Building Material Dealers	Large
ST. JUDE MEDICAL CRMD	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	Large*
MICROVENTION, INC	339112	Surgical and Medical Instrument Manufacturing	Medium
ADVANCED BIONICS, LLC	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	Medium
LIFE SCIENCE OUTSOURCING, INC	339112	Surgical and Medical Instrument Manufacturing	Medium
ANIMAL EYE VET INC.	541940	Veterinary Services	Small
VCA W COAST SPEC & EMERGENCY ANIMAL HOSP	541940	Veterinary Services	Small
LA CITY, GREATER LA ZOO	712130	Zoos and Botanical Gardens	None
UNIVERSITY OF CALIFORNIA, LOS ANGELES	611310	Colleges and Universities	None
MT. SAN ANTONIO COMMUNITY COLLEGE	611310	Colleges and Universities	None
CARDINAL HEALTH	423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	Post-Aeration Storage Facility
28 LARGE WAREHOUSES	493100	Warehousing	Tier I Warehouses or Tier II Warehouses

* *Based on communications with facility representative, permit applications to reduce permitted EtO usage have been submitted; reclassification to a Medium Facility is pending.*

1.8 PROCESS DESCRIPTION OF ETHYLENE OXIDE STERILIZATION

In general, the process of EtO sterilization can be divided into four steps: preconditioning, sterilization, aeration, and post-aeration.⁵⁴ The figure below provides a simple schematic of commercial EtO sterilization process. And the following sections would describe each of the step in more detail.

Figure 1-14 – Example of Commercial EtO Sterilization Process



Preconditioning

Preconditioning is the process of bringing the products, and usually associated packaging, to optimum temperature and humidity prior to the EtO sterilization step and can take hours to days to complete. Preconditioning is typically performed in a separate area of the facility. Preconditioning allows EtO to efficiently penetrate packaging and sterilize the product during sterilization and thereby minimizing sterilization times and the amount of EtO required to be used.

Sterilization

Sterilization of the products occurs in chambers (sterilizers) that will be filled with a gas mixture containing EtO for a predetermined set time (cycle time). A typical cycle involves: 1) air removal; 2) steam injection; 3) EtO Injection sometimes accompanied by inert gas (N₂) overlay to create top pressure to help push EtO into the load through any packaging; 4) exposure or dwell time for EtO to ensure complete sterilization of the load; 5) several series of vacuum and nitrogen flushing to remove the EtO from the products; and finally 6) ventilation (back-venting) of the chamber during unloading of the sterilized products from the chamber.

⁵⁴ U.S. FDA. (2019). Reduction of Ethylene Oxide Sterilization Emissions for Medical Devices and Potential for Utilizing Other Sterilization Modalities. <https://www.fda.gov/media/132186/download>

Because EtO must penetrate through any accompanying packaging of the product in order to kill any pathogens, EtO will be present inside the packaging or in the packaging material itself. The sterilization time varies from product to product and is prescribed in the validation document for a particular product. After sterilization of product, EtO needs to be removed (flushed) from the sterilization chamber and the product. Because the packaging and product still has residual EtO that will continue to off-gas, before the chamber door is opened, there is additional ventilation (back-vent) where chamber gases are pulled toward the back of the chamber or above the opened chamber door using collection hoods to protect workers from EtO as they unload products out of the sterilizer. Chamber gases collected during back-venting are typically lower in concentration of EtO compared to the removal of EtO during flushing portion because back-vented gases include air when the chamber door is opened, thereby diluting the EtO concentration.

Aeration

Following sterilization using EtO to kill any pathogens, the EtO must be removed to prevent harm to patients through exposure to the product. A separate aeration step is required to allow residual EtO to off-gas to ensure sterilized medical devices meet the U.S. FDA's specified standard for acceptable limits for EtO residuals specified in ANSI/AAMI/ISO Standard 10993-7 Biological evaluation of medical devices – Part 7: Ethylene oxide sterilization residuals.⁵⁵ Required aeration times for medical devices are developed through the manufacturer's device validation process but would be incorporated into the sterilization cycle parameters that the device manufacturer will specify to the specific sterilization facility as part of the work order for the batch of devices to be sterilized. For some products that are not for commercial use, aeration times are specified in the instructions for use provided by the device manufacturers.

Aeration is typically conducted under heated or ambient conditions in enclosed rooms or areas over a span of several hours to days. Aeration rooms are typically a negative air pressure environment venting to control devices at large facilities.

Post-Aeration

Post-aeration describes the period of time after the required aeration. Although products such as medical devices may have undergone required aeration to meet U.S. FDA requirements, the products and associated packaging still have residual EtO that continues to off-gas.

Off-Site Storage of Sterilized Material

After the sterilization process, sterilized material is transported from the sterilization facility to distribution warehouse or the customer. While U.S. EPA estimates that 99% of EtO emissions exhaust during the sterilization process (e.g., sterilization chamber vent, aeration room vent, chamber exhaust vent, EtO storage/Sterilizer room, post-aeration, control equipment), 1% of EtO used during the sterilization cycle remains on the sterilized materials even after aeration.⁵⁶

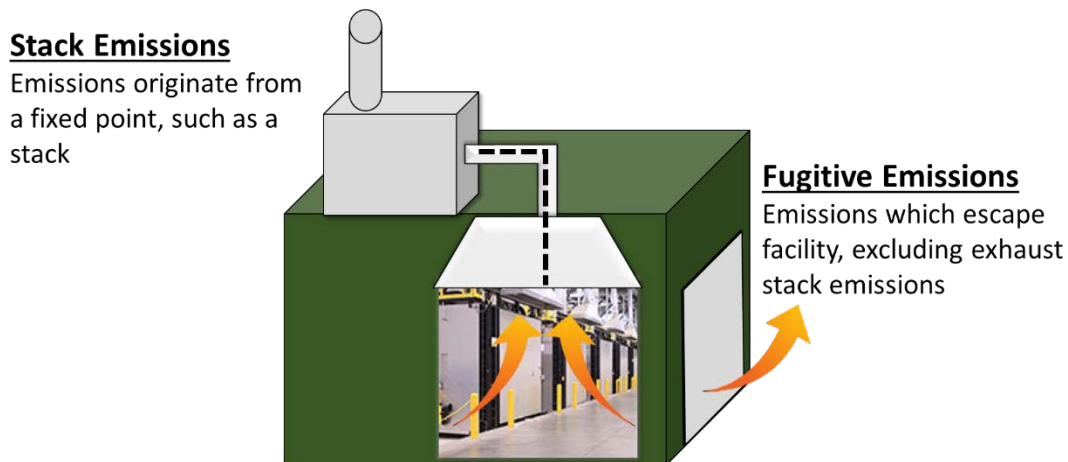
⁵⁵ ISO 10993-7:2008. (n.d.). ISO. <https://www.iso.org/standard/34213.html>

⁵⁶ <https://www.epa.gov/system/files/documents/2022-10/EtO%20sterilizer%202018%20emissions%20calcs.pdf>

1.9 FACILITY EMISSION SOURCES AND GENERAL CONTROL APPROACH

Emissions leaving a facility are categorized into two types: stack emissions and fugitive emissions. Stack emissions, also known as point source emissions, are emissions originating from a fixed point such as the opening of an exhaust stack after collection of emissions from a source or group of sources along with any APCDs used to reduce emissions. Fugitive emissions are all other emissions, excluding the stack emissions, that leave the facility. These can include emission sources that are not collected or controlled by APCD at the facility that are allowed to escape the facility building structures through openings often facilitated by air currents passing through the building at openings. Both stack and fugitive emissions can potentially impact nearby receptors. The figure below illustrates the two general types of facility emission sources.

Figure 1-15 – Facility Emission Sources



Stack Emissions

Stack emissions, also known as point source emissions, are emissions that exit the end of an exhaust stack at a facility. These stack emissions can be reduced through the use of an APCD using various technologies appropriate for the pollutant(s). At sterilization facilities, these would be emissions collected from the sterilizer chamber, backvent, aeration rooms or even a PTE that is vented to an APCD. These emissions are required, by many rules, to be quantified through one-time or periodic source tests and sometimes even through stack emission monitoring.

Fugitive Emissions

Fugitive emissions are emissions that escape the facility, excluding exhaust stack emissions. Fugitive emissions, unlike stack emissions, are much harder to characterize and quantify. There may be many contributing sources within the facility's building(s) that may make their way and become fugitive emissions. Examples of these include spills or leaks of materials containing the toxic air contaminant that can be entrained by air currents or tracked out by vehicles or personnel out the building. Inspecting and maintaining ventilation systems to ensure they are collecting emissions and maintaining process equipment in a leak free condition is also important. Proper housekeeping is effective in minimizing these occurrences for toxic air contaminants in liquid and

solid forms. Daily checks for equipment can identify problems early and can mitigate the amount of toxic air contaminants leaked or spilt, minimizing the required cleanup. EtO, at room temperature, is gaseous and cleanup of a spill is not possible so containment in the form of enclosure is the only option. Implementation of regularly conducted monitoring such as leak detection and repair can to minimize EtO emissions that can become fugitive emissions.

An additional measure to prevent toxic air contaminants from leaving the facility is to enclose the building or a portion of the building containing the source(s) of toxic air contaminants in order to minimize outside air currents that can traverse the interior of the enclosure and carry out any toxic air contaminants from leaks and spills or even interfering with the capture efficiency of APCD. Enclosure provisions have been required in recently amended metal toxic rules that limit openings at opposite ends of a building to prevent air currents through the building which can entrain and carry toxic air contaminants, in the form of dry particulates, out the enclosure and become fugitive emissions. Vestibules, small rooms with two sets of doors that are not open at the same time, near entry points into a building function the same way by preventing a clear path for air currents. These measures are effective in controlling fugitive emissions when the enclosure is not required to be under negative pressure (vacuum). More details can be found in the section of “Permanent Total Enclosure” below.

1.10 ETHYLENE OXIDE CONTROL TECHNOLOGIES AND CAPABILITIES

APCDs control the issuance of air contaminants. The level of control can be measured through several metrics including, control efficiency (e.g., 99%), outlet concentration (e.g., 0.1 ppm), or mass emission rate (e.g., 0.3 lb/hr). The APCD technology used is often dictated by the specific air contaminant, the inlet concentration, and other parameters such as temperature and humidity of the gas stream to APCD. The level of control of the air contaminant by a technology can be verified through conducting a source test of the APCD by a third party and is required by many South Coast AQMD rules to demonstrate compliance with an emission limit. Rule 1405 requires EtO APCDs to meet specific control efficiencies.

The following technologies have been implemented at South Coast AQMD sterilization facilities. Staff researched the implementation of these technologies and their levels of control in reducing EtO emissions.

Filtration

Filtration uses proprietary filters in negative air machines or wall-mounted fans to control EtO in enclosed spaces. These were deployed to control EtO concentrations inside one sterilization facility. This technology has control efficiencies between 75% to 90% and observed to be 81% and 85% at one facility when source tested.



Catalytic Oxidation

Catalytic oxidation technology uses a heated catalytic bed to convert EtO to carbon dioxide and water. This technology is suited to control low concentrations of EtO as concentrations near or above EtO's lower explosive limit (LEL) pose a safety concern. EtO gas is combustible and can provide heat during the process but additional heat to maintain the required operational temperature range may require additional heat from either natural gas or electricity. This technology is capable of achieving control efficiency of 95% or greater. Many source tests demonstrated a control efficiency above 99%.



Dry Scrubbing

Dry scrubber (dry-bed) technology uses a bed of dry reactant media to bond EtO to its surface. This technology is suited to control low concentrations of EtO as the media is consumed during the process and must be replaced before there is breakthrough of EtO through the APCD. As with most control technologies that use expendable media, monitoring the outlet of the APCD is important. Less frequent monitoring is required if the APCD is comprised of pair of dry-beds in series. This technology is capable of achieving a control efficiency of 95% or greater.



Historical source tests from permitted dry-bed scrubbers demonstrated a control efficiency above 99% with the exception at an aeration-only facility which ranged between 92% to 99%. The lower control efficiencies were due to low inlet concentrations (as expected for an aeration-only source) and outlet concentration were at or below (\leq) the detection limit of the sampling equipment. For calculation purposes for control efficiency, the detection limit is used. A lower detection limit, with an accompanying lower concentration level, could have increased control efficiency numbers. This technology was also used as a secondary control to an acid-water scrubber and a primary dry-bed scrubber to increase the overall control efficiency at a facility with a PTE where overall control efficiency was greater than 99.8%.

Acid-Water Scrubbing

Acid-water scrubber technology uses wet scrubber technology with a scrubber solution with sulfuric acid to convert EtO to ethylene glycol. This technology can control high concentration exhaust streams such as those from the sterilization chamber during the initial purge of EtO during flushing. This technology is capable of achieving a control efficiency of 99.9%. Large facilities employed this technology and demonstrated control efficiencies between 99.97% to 99.99% during recent source tests.



Peak Shaving (with additional control technology)

Peak shaver technology, also known as a balancer system, is a packed tower scrubber that uses a solution to temporarily absorb EtO which can then be stripped off at a steady rate (i.e., concentration) before sending it to a downstream EtO control device, typically a catalytic oxidizer. The peak shaver/balancer itself does not control EtO emissions but is part of a control system that steadies out the concentration levels of EtO to the downstream catalytic oxidizer so that levels never approach the lower explosive limit and also maintains an optimal concentration for the catalytic bed to minimize required natural gas or electricity to maintain the optimal temperatures. The APCD systems were able to demonstrate control efficiencies between 99.95% to 99.99% through source testing.



Permanent Total Enclosure (PTE)

Containing fugitive emissions within the facility prevents them from emitting to the atmosphere. Enclosure, in the form of a physical structure (e.g., waste containers or rooms) or entire building, has been a key requirement in many recent metal toxic air contaminant rules to prevent fugitive emissions. The figure below shows range of enclosure types and their relative effectiveness in controlling fugitive emissions. PTEs are specific enclosed structures under negative pressure (vacuum) where the collected air within the enclosure is vented to APCD and represents the best available control technology to prevent fugitive emissions of toxic air contaminant (T-BACT).

Figure 1-16 – Examples of Building Enclosures to Reduce Fugitive Emissions



The requirements for a PTE are specified by U.S. EPA Method 204.⁵⁷ Building openings are designed to be limited in size and required to maintain an inward face velocity of at least 200 feet per minute at each opening, so toxic air contaminants cannot escape the PTE. The negative pressure is created through the use of the APCD's blower that collects the interior air, along with any toxic air contaminants, and sends it to an APCD. PTEs and Method 204 are a common control strategy for limiting sources of process and fugitive VOC emissions to vent them to APCD. Initial and periodic testing is performed to ensure air is flowing into the enclosure (i.e. emissions are not

⁵⁷ Method 204 - Permanent (PTE) or Temporary Total Enclosure (TTE) for Determining Capture Efficiency. (2022, September 14). US EPA. <https://www.epa.gov/emc/method-204-permanent-pte-or-temporary-total-enclosure-tte-determining-capture-efficiency>

flowing out of the enclosure) and also that the air meets the minimum velocity. Continuous monitoring of the PTE is conducted by measuring and recording the difference in pressures between the inside and outside of the enclosure to ensure air continues to flow inward towards the negative pressure created in the PTE.

1.11 SUMMARY OF SOURCE TEST AND CONTINUOUS MONITORING DATA

Source tests are performance tests conducted by an independent third-party to either determine an emission factor or, more commonly, demonstrate compliance with an emission limit by rule or permit condition. A source test collects a sample from an exhaust stack over a certain period of time, and that sample is analyzed to provide the concentration of EtO (in ppm) of the exhaust stream. An exhaust flow measurement is also performed during the test, which can provide the mass emission rate (in lb/hr) when calculated with the exhaust concentration. Source testing results represent a snapshot in time of how effective the control equipment is working to reduce emissions. Rule 1405 requires periodic source testing to ensure that the control equipment is still effective in controlling emissions. To determine the technologically feasible control emission limit for stack emissions, the most recent available source test data were evaluated. The table below shows the source testing results for large sterilization facilities, with Medline Waukegan included as a reference. Among the 15 source test reports analyzed, 12 demonstrated meeting either a control efficiency of 99.99% or a concentration emission limit of 0.01 ppm. The mass emission rates were below 0.015 pounds per hour for four of seven facilities. The table below shows a summary of source test results for other PAR 1405 facilities permitted for less than 2,000 lbs of EtO use. Five out of eight source test reports demonstrated meeting either a control efficiency of 99.9% or a concentration emission limit of 0.01 ppm. One source test report demonstrated an outlet concentration of 0.5 ppm, which is the detection limit of the sampling equipment (collected with a Tedlar Bag) used in the source test.

Table 1-6 – EtO Source Tests Results for Large Sterilization Facilities

Permitted to Use \geq 2,000 lbs of EtO per Year

Facility	Control Efficiency (%)	Outlet Concentration (ppm)	Mass Emission Rate (lb/hr)
Medline Waukegan [Reference]	99.99	0.032	0.011
Facility A	99.84	<0.0079	<0.00022
Facility A	99.1	<0.010	<0.00006
Facility A	99.7	<0.010	<0.00006
Facility B	99.97	<0.01	<0.0008
Facility C	99.991	31.73	0.031947
Facility C	99.97	<0.010	Not Available
Facility D	99.969	1.178	0.0322
Facility D	99.6683	<0.010	<0.000577

Facility D	99.985	1.113	0.02427
Facility D	99.8769	<0.010	<0.000575
Facility E	99.97	0.219	0.00348
Facility F	99.91	<0.010	<0.000084
Facility F	99.95	<0.010	<0.000081
Facility F	99.94	<0.010	<0.000021
Facility G	99.77	2.495	0.01641

Table 1-7 – EtO Source Tests Results for Non-Large Sterilization Facilities

Permitted to Use < 2,000 lbs of EtO per year

Facility	Control Efficiency (%)	Outlet Concentration (ppm)	Mass Emission Rate (lb/hr)
Facility H	99.998	<0.0070	<0.0000024
Facility I	99.7	0.34	0.00720
Facility I	99.7	0.34	0.00750
Facility I	99.9	<0.10	<0.00216
Facility I	99.9	<0.10	<0.00215
Facility J	99.990	<0.0074	Not Available
Facility K	99.60	<0.500	<0.0000509
Facility L	99.99	<0.10	<0.0000014

CEMS and SCEMS for Stack Emissions

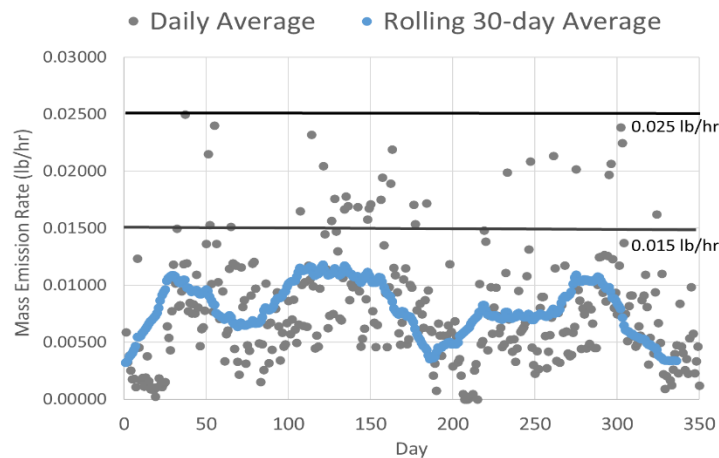
Continuous Emission Monitoring Systems (CEMS) and Semi-Continuous Monitoring Systems (SCEMS) go beyond source testing by using approved and certified systems to monitor stack emissions every minute or every 15 minutes, respectively. CEMS and SCEMS are combined equipment and systems required to sample, analyze, and determine concentrations or mass emission rates of gases in the stack of facilities. Subsystems include those for sampling the stack emissions, an analyzer capable of detecting and measuring the pollutant, and finally a data acquisition system (DAS) to process the information and record the results. Requirements for these systems include daily calibrations using reference gases, quarterly Cylinder Gas Audits (CGA), and annual Relative Accuracy Test Audits (RATA) that test the monitoring system against a reference system of the testing company to ensure accurate monitoring of stack emissions.

These monitoring systems are commonly required and used to measure nitrogen oxides (NO_x) and carbon monoxide (CO) for large combustion sources such as natural gas turbines found at power plants. Whereas implementation of CEMS is mature for the monitoring of NO_x and CO, currently

there is not a promulgated U.S. EPA performance specification for CEMS for EtO specifically.⁵⁸ A draft performance specification for EtO, known as PS-19, has been released but is not yet adopted.

As discussed earlier in the Medline Waukegan study case, the facility was required to install and operate a CEMS to quantify EtO emissions and demonstrate compliance. Medline Waukegan installed a CEMS that used Extractive Fourier Transform Infrared Spectroscopy (FTIR) technology meeting the U.S. EPA Performance Specification 15 (PS-15) from the facility's single combined stack for EtO sources. PS-15 is approved for FTIR CEMS for hazardous air pollutants, the federal equivalent to statewide toxic air contaminants. The CEMS is designed and operated to maintain a limit of quantification that is no greater than 10 ppbv. On 3/5/2020, the EtO CEMS successfully passed a RATA⁵⁹ for construction and CEMS certification. Data available on the Illinois EPA website⁶⁰ for the Construction Permit showed that the facility's daily EtO emissions were below 0.025 lb/hr for the entire case study period (calendar year 2022). On a rolling 30-day average, the mass emission rate was below 0.015 lb/hr (see figure below).

Figure 1-17 – Medline Waukegan Mass Emission Rates



Other technologies, although not yet achieved in practice like FTIR, have potential to be used to continuously or semi-continuously monitor EtO stack emissions. Cavity ring-down spectroscopy, or CRDS, is another monitoring technology able to produce minute-by-minute data regarding low concentration EtO emissions. CRDS is currently in use in at least one EtO application,

⁵⁸ <https://www.epa.gov/emc/emc-performance-specifications>

⁵⁹ Relative Accuracy Test Audit - Medline Industries. (2020, March 26). Illinois Environmental Protection Agency. Retrieved February 27, 2023, from [https://www2.illinois.gov/epa/topics/community-relations/sites/ethylene-oxide/Documents/RATA%20Memo%20-%20Medline%20\(097190AFG\)%20030520.pdf](https://www2.illinois.gov/epa/topics/community-relations/sites/ethylene-oxide/Documents/RATA%20Memo%20-%20Medline%20(097190AFG)%20030520.pdf)

⁶⁰ Illinois EPA information on Ethylene Oxide - Ethylene Oxide. (n.d.). Retrieved February 27, 2023, from <https://www2.illinois.gov/epa/topics/community-relations/sites/ethylene-oxide/Pages/default.aspx>

continuously monitoring indoor EtO concentrations at a commercial sterilization facility in Puerto Rico.⁶¹

Gas chromatography-photoionization detection (GC-PID) is another technology which may be used for monitoring EtO stack emissions, albeit on a semi-continuous basis. GC-PID is currently approved for use to perform EtO stack source testing by CARB and U.S. EPA and in that application routinely demonstrates a limit of quantification that is 10 ppbv or less. GC-PID is also in current use in at least one application in the U.S. to semi-continuously monitor stack emissions of a VOC like EtO, specifically benzene, toluene, ethylbenzene, and xylene at concentrations up to 5 ppbv on a 15-minute cycle at a facility in Vermont.⁶²

In the proposed NESHAP for sterilization facilities,⁶³ U.S. EPA proposed to approve other test methods for continuous EtO monitoring, highlighting the technologies available to monitor EtO emissions on a continuous basis.

1.12 NEED FOR PROPOSED AMENDED RULE 1405

As previously discussed in the ambient monitoring results by the South Coast AQMD and elsewhere in the United States, EtO emissions are being released from sterilizers to the ambient environment through stack and fugitive sources. EtO is a potent carcinogen, and South Coast AQMD's investigation revealed that elevated levels of EtO were detected at or near neighboring businesses. The investigation revealed new fugitive emission mechanisms that are not addressed in current regulations. While existing rules and regulations contain requirements addressing stack emissions, they are outdated and insufficient to control fugitive release of EtO, particularly given current knowledge of the increased cancer risks associated with EtO which can be 30 to 50 times more carcinogenic than previously reported. Some facilities have already begun implementing control measures to reduce EtO emissions. PAR 1405 is needed to further reduce EtO emissions and to ensure that the control measures being implemented are being maintained during operations. PAR 1405 accomplishes this by requiring improved performance standards for stack emissions, control or monitoring of fugitive emissions, and continuous monitoring of key parameters. In addition, due to concerns of EtO off-gassing of from sterilized materials, PAR 1405 added certain requirements for warehouses to assess the potential of EtO emissions from these operations.

1.13 PUBLIC PROCESS

Development of PAR 1405 is being conducted through a public process. A PAR 1405 Working Group has been formed to provide the public and stakeholders an opportunity to discuss important details about the proposed rule and provide staff with input during the rule development process.

⁶¹ Steri-Tech Chooses CleanAir Engineering's Picarro-Based Ethylene Oxide Solution for Multi-Point Indoor Air Quality Monitoring at Commercial Sterilization Facility | Picarro

https://www.picarro.com/company/press-releases/2021/steritech_chooses_cleanair_engineerings_picarrobased_ethylene_oxide

⁶² Instrumentation Information , BTEX (Gas Chromatograph) | State of Vermont, Department of Environmental Conservation. <https://dec.vermont.gov/air-quality/monitoring/instrumentation#BTEX>

⁶³<https://www.federalregister.gov/documents/2023/04/13/2023-06676/national-emission-standards-for-hazardous-air-pollutants-ethylene-oxide-emissions-standards-for>

The PAR 1405 Working Group is composed of representatives from businesses, environmental groups, public agencies, and consultants. South Coast AQMD has held eight working group meetings conducted virtually using Zoom due to COVID-19 restrictions. The meetings were held on August 17, 2022, September 28, 2022, October 26, 2022, January 17, 2023, February 16, 2023, June 8, 2023, July 6, 2023, and October 4, 2023. In addition, a Public Workshop was held on March 23, 2023 to present PAR 1405 and receive public comment. A Public Consultation Meeting was held on July 26, 2023.

As part of PAR 1405 rule development, staff conducted site visits at eight (8) facilities. Due to COVID-19 concerns, five (5) site visits were conducted remotely and three (3) were conducted in-person. Staff has also held a number of individual meetings with impacted stakeholders. A survey was distributed in early September 2022 to the known universe of EtO sterilization facilities as well as warehouses that may handle EtO-sterilized products to gather information about equipment, operations, throughput, storage, controls, monitoring, and waste and byproduct information. The facility survey was sent to sixteen (16) sterilization facilities and seventy (70) warehouses registered with U.S. FDA as Wholesale Drug Distributors or Third-Party Logistics Providers. Throughout the rule development process, individual meetings have been held with operators of the regulated community, as well as community and environmental groups.

CHAPTER 2 – SUMMARY OF PROPOSED AMENDED RULE 1405

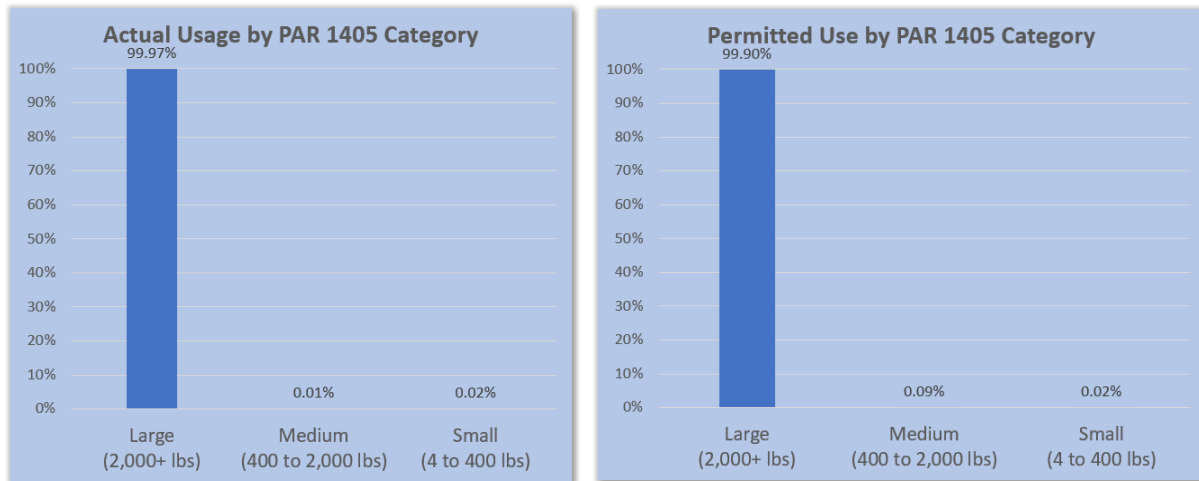
2.1 OVERALL APPROACH

PAR 1405's objective is to further reduce stack emissions of EtO as well as prevent fugitive emissions from facilities that conduct EtO sterilization and related operations. PAR 1405 accomplishes this with revisions to Rule 1405 to establish new emission limits based on achieved in practice levels observed at EtO sterilization facilities and provisions to prevent, detect, repair, and capture any potential EtO emissions from becoming fugitive emissions. Permanent Total Enclosure (PTE) requirements for equipment and areas with known EtO emissions will prevent fugitive emissions from leaving facilities by containing and controlling any EtO gases inside the PTE. PAR 1405 will amend the minimal throughput for classification as a large sterilization facility to align with both state ATCM and federal NESHAP, going from 4,000 to 2,000 pounds per year of EtO, for the most stringent requirements of the proposed rule. PAR 1405 includes interim fence-line air monitoring requirements for large sterilization facilities until CEMS or SCEMS are in place. Certain large warehouses, defined and described later in Chapter 2, that receive EtO sterilized products would be required to provide records and emissions data to help assess EtO emissions from warehouses. Curtailment of sterilization facilities, to reduce fence-line levels of EtO, based on observed 24-hour fence-line monitoring conducted either by the facility or the South Coast AQMD are included in PAR 1405.

Facility Categories and Requirements

Rule 1405 had different requirements for facilities based upon annual EtO usage which could have subjected an individual sterilization facility to different requirements year to year. PAR 1405 categorizes sterilization facilities into different size categories ("Large Facility", "Medium Facility", and "Small Facility") based on their permitted annual EtO limit that now aligns to the same Federal NESHAP and State ATCM thresholds. In addition, Rule 1405 identified Aeration-Only Facility which receive materials that have been sterilized in another facility; this term is updated in PAR 1405 and this facility type is now referred to as a Post-Aeration Storage Facility. Facilities permitted to use 4 pounds or less of EtO were exempt from all emission-related requirements in Rule 1405 and continue to be exempt from the interim requirements in subdivision (i) and specific prohibitions in subdivision (n) in PAR 1405.

Large facilities typically use separate sterilization chambers capable of receiving multiple pallets of products per sterilization cycle and separate equipment/areas for aeration. At medium and small facilities, aeration is almost exclusively performed in smaller all-in-one sterilizers (defined in PAR 1405 as a Combined Sterilizer/Aerator) where there is no transport of off-gassing sterilized products between the sterilization chamber and separate aeration area used at Large Facilities. For the 2021 year, facilities using 2,000 pounds or more of EtO made up about 99.9% of all the EtO, both usage and permitted. The figure shows the actual and permitted EtO limits for PAR 1405 facilities for the 2021 year.

Figure 2-1 – PAR 1405 EtO Usage for Facilities in the South Coast AQMD

In addition to high EtO throughput, South Coast AQMD monitoring efforts showed elevated ambient levels of EtO from three large facilities. As such, requirements for large facilities are the most stringent requirements compared to medium, small, and post-aeration storage facilities. This is consistent with Federal and State regulations, where the most stringent requirements are for facilities that use 2,000 pounds or more of EtO per year. PAR 1405 will include requirements for stack emissions which are feasible based on source test reports and continuous monitoring at facilities. Fugitive control measures represent the most stringent enclosure controls used for VOCs, both in South Coast AQMD and elsewhere in the country (see Chapter 1 above).

Regarding stack emissions, there are several different control performance metrics that a rule may require. These include control efficiency, emission concentration, or mass emission rate. Rule 1405 currently specifies control efficiency requirements only. While an APCD with a 99.9% high control efficiency is considered high, this metric alone will not guarantee that a facility's EtO emissions from the APCD would be low, as air volume is not taken into consideration. This is also true for emission concentration limits expressed as parts per million by volume (ppmv). The flowrate of air moved through an APCD is typically expressed as standard cubic feet per minute. At higher flowrates, the APCD with a high control efficiency of 99.9% or low concentration can still be emitting many pounds of EtO over the course of a year. Additionally, APCD controlling relatively low concentrations of EtO have a harder time demonstrating high control efficiency's such as 99.9% compared with an APCD controlling high concentration sources such as sterilization chambers.

To address the above considerations, PAR 1405 would require that each stack source at the facility meet either a control efficiency, based on the permitted EtO throughput of the facility, or a concentration limit. This approach provides compliance flexibility but also ensures that EtO emissions remain low. The emission limit for control efficiency and outlet concentration limits are based on source tests data that demonstrate performance that could be achieved in practice. Large facilities would also be required to comply with a facility-wide mass emission limit from all stacks combined. The emission limit for the facility-wide mass emission rate is based on the permitted EtO usage limit of the highest throughput facility in South Coast AQMD at 99.99%

control efficiency, which is also in line with the continuous monitoring data of Medline Waukegan's or, alternatively, a calculated emission rate based on the facility's permitted EtO usage limit and a compliant 99.99% control efficiency, as detailed in Appendix 1 of PAR 1405. The table below shows the proposed emission standards for PAR 1405.

Table 2-1 – Proposed Emission Limits for PAR 1405

Annual Permitted Throughput (lbs)	Source Test Performance Standard	
	Facility-wide	Each Stack
> 2,000 (Large)	$\leq 0.015 \text{ lb/hr}$ OR Calculated Emission Rate	$\geq 99.99\% \text{ control efficiency}$ OR $\leq 0.01 \text{ ppm}$
$\leq 2,000$ (Medium & Small)	No proposed amendment	$\geq 99.9\% \text{ control efficiency}$ OR $\leq 0.01 \text{ ppm}$

For large facilities where continuous monitoring is required, outlet concentration and facility-wide emission rate will be determined using a rolling 30-day average. The 30-day average allows for fluctuations in the emissions concentrations, but ensures the long term emission rate remains low.

PAR 1405 will control fugitive emission through the use of PTE and LDAR. PTE represents the most stringent approach to contain, capture, and reduce fugitive emissions from identified sources associated with EtO emission. Large facilities will include the most comprehensive list of equipment that will be required to be under PTE compared to smaller facilities. LDAR requirements will help identify, routinely inspect, and repair key areas of potential leaks that may become fugitive emissions. Equipment in PTE will not be required to be under a LDAR program as any leaks would be contained in the PTE.

As an interim measure for a large facility until continuous monitoring (CEMS or SCEMS) is installed and verified to be reporting accurately (i.e., certification by South Coast AQMD), fenceline air monitoring will be required to ensure fenceline levels remain below specified thresholds which can trigger curtailment of EtO sterilization operations to reduce the observed elevated levels of EtO. Curtailment requirements apply to EtO sterilization facilities and will be based on 24-hour monitoring data conducted either by the facility fenceline air monitoring or a regulatory body such as the South Coast AQMD. As fenceline air monitoring will require time to prepare, submit, as well as review and approve a fenceline air monitoring plan (FAMP), mobile

monitoring around large sterilization facilities will be required until fenceline air monitoring is implemented pursuant to the approved FAMP.

Warehouses reporting to U.S. FDA as either a Whole Distributor or Third-Party Logistics Provider with at least 250,000 square feet in size are classified as Tier I warehouses and will be required to: 1) perform one (1) year fenceline air monitoring for EtO; or 2) demonstrate with an emission study they emit less than 4 lbs of EtO per year; or 3) fund a South Coast AQMD-led demonstration program for real-time fenceline air monitoring. Warehouses reporting U.S. FDA with at least 100,000 square feet, classified as Tier II warehouses, as well as Tier I warehouses, are required to track and report the number of pallets received sterilized with EtO for one (1) year.

2.2 PROPOSED AMENDED RULE STRUCTURE

PAR 1405 includes the following subdivisions and appendices that will contain all the requirements for the control of EtO emissions at sterilization and post-aeration facilities as well as data collection from large warehouses that receive EtO-sterilized shipments from sterilization facilities.

- (a) Purpose*
- (b) Applicability*
- (c) Definitions*
- (d) Large Facility Requirements*
- (e) Medium Facility Requirements*
- (f) Small Facility Requirements*
- (g) Post-Aeration Storage Facility Requirements*
- (h) Warehouse Requirements*
- (i) Interim Requirements*
- (j) SCEMS or CEMS Requirements for Stack Emissions*
- (k) Permanent Total Enclosure Requirements*
- (l) Source Test Requirements*
- (m) Leak Detection and Repair (LDAR) Program Requirements*
- (n) Prohibitions*
- (o) Facility Performing Sterilization Exceeding Applicable Ethylene Oxide Usage*
- (p) Interim Fenceline Air Monitoring Requirements*
- (q) Curtailment of Sterilization Operations*
- (r) Plan Administration*
- (s) Recordkeeping*
- (t) Reporting*
- (u) Exemptions*

2.3 PROPOSED AMENDED RULE 1405

Rule Title Change

The title of this rule will be amended for clarity. Chlorofluorocarbons are no longer allowed to be used and certain associated warehouses that receive EtO-sterilized shipments will be required to

perform fenceline air monitoring, keep recordkeeping, and submit reports. Thus, the rule title is changed from “Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes” to “Control of Ethylene Oxide Emissions from Sterilization and Related Operations.”

Subdivision (a) – Purpose

The purpose of this rule is to protect public health by reducing ethylene oxide emissions from sterilization and related operations and to collect information from warehouses receiving - materials sterilized with ethylene oxide.

Subdivision (b) – Applicability

This rule applies to an owner or operator of any facility performing ethylene oxide sterilization, any post-aeration storage facility, any Tier I Warehouse, and any Tier II Warehouse. Facilities subject to the rule may not be subject to all the provisions of this rule.

Subdivision (c) – Definitions

PAR 1405 includes definitions for specific terms. These terms will be capitalized when they appear in the rule for easy identification of a defined term. Some of the definitions are based on definitions from existing South Coast AQMD rules with slight modifications, while other definitions are unique to PAR 1405. For certain definitions, additional clarification is provided in this chapter where the definition is used with a specific provision. Please see the proposed rule for the full list of definitions.

Deletions:

- **AERATION ONLY FACILITIES**
Because of the revised definition of aeration, this group of facilities is now defined as Post-Aeration Storage Facilities (see below).
- **PERSONS**
Because PAR 1405 uses the term “owner or operator” to be consistent with recent rules or amended rules, this definition is no longer needed.
- **RECOVER and RECLAIM**
These definitions were removed as chlorofluorocarbons are now prohibited and the provisions for its recovery and reclamation were also removed.

Revisions or additions:

- **AERATION**
The definition of aeration aligns with how the term is used by industry to reduce confusion and add clarity. Sterilization facilities follow prescribed temperature, humidity, minimum holding time, and, in some cases, maximum holding time in an aerator in order to meet general consensus standards set forth by U.S. FDA, other regulatory agencies, or device manufacturers to limit the amount of residual EtO on medical devices or other products that come in contact with end users. These prescribed conditions for aeration are

to ensure the safety of an individual product for an individual user that comes in direct physical contact with the product. However, sterilized products and accompanying packaging will continue to off-gas EtO even after completing aeration.

The prescribed minimum and maximum aeration times are typically specified in work orders that travel with batches of products, in some cases multiple pallets. Sterilization facilities also typically record time-in and time-out of the aerator to ensure conformance with minimum and maximum aeration times. The source of these aeration times come from a variety of sources including U.S. FDA-approved or U.S. FDA-registered validation documents, draft protocols during the testing and validation phase to correlate aeration times with residual EtO levels, or published instructions for use by device manufacturers.

For large facilities in the South Coast AQMD, the aerator is typically separate from the sterilizer with exceptions: one large facility performs sterilization and aeration in a single unit. For medium and small facilities in South Coast AQMD, aeration is usually completed in a single-unit combined sterilizer/aerator, however one facility completes aeration in a separate aerator. Aeration is complete when the prescribed minimum aeration time has elapsed and the products are removed from the aerator or combined sterilizer/aerator.

- **AERATOR**

The definition has been revised for clarity to exclude stand-alone sterilizers, typically found at large facilities, and combined sterilizer/aerators, typically found at medium and small facilities and are separately defined.

- **BACK-DRAFT VALVE**

The definition has been revised to include hoods that also collect EtO during the unloading of sterilized materials.

- **BASELINE OPERATIONS**

The definition was added to clarify the 7-day average amount of EtO, in pounds, used by the sterilization facility in order to calculate curtailments specified in subdivision (q). The table below illustrates an example of a curtailment event during a 30-day period for a facility using a 1-in-6 day 24-hour canister sampling schedule where the rolling seven day averages, calculating from the last 7 days of operation (usage in yellow boxes), are used to calculate the respective Curtailed Daily Limits for 1/7/2025 and 1/19/2025 curtailment events.

Table 2-2 – Example of Baseline Operation Calculation for Curtailment

Date	Daily EtO Usage (lbs)	Rolling Seven Day Average (lbs)	Sample Results Received	Above Trigger Level	Subject to Curtailment	Curtailed Daily Limit (lbs)
1/1/2025	400					
1/2/2025	600					
1/3/2025	800		No samples collected	No samples collected	No	No limit
1/4/2025	900					
1/5/2025	1000					
1/6/2025	600					
1/7/2025	800	729	Yes	Yes	20%	583
1/8/2025	400	729				
1/9/2025	200	671	No samples collected	No samples collected	20%	583
1/10/2025	500	629				
1/11/2025	580	583				
1/12/2025	580	523				
1/13/2025	300	480	Yes	No	No	No limit
1/14/2025	700	466				
1/15/2025	1000	551	No samples collected	No samples collected	No	No limit
1/16/2025	1000	666				
1/17/2025	1000	737				
1/18/2025	1000	797				
1/19/2025	1000	857	Yes	Yes	50%	429
1/20/2025	390	870				
1/21/2025	380	824	No samples collected	No samples collected	50%	429
1/22/2025	390	737				
1/23/2025	390	650				
1/24/2025	390	563				
1/25/2025	390	476	Yes	No	No	No limit

- 20% curtailment triggered effective 24 hours of results
- Curtailment lifted after results below trigger level
- 50% curtailment triggered effective 24 hours of results

- **COMPONENT**
The definition was added to describe portions of sterilization or control equipment that are susceptible to leaks of EtO and thus are subject to the LDAR program unless located inside a PTE.
- **CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)**
The definition was needed due to new requirements of stack emission monitoring for large facilities and is based on the existing definition found in Rule 218 regarding Continuous Emission Monitoring. Building off of the definition found in Rule 218, this definition also defines CEMS as able to take and record at least one measurement every one minute.
- **COMBINED STERILIZER/AERATOR**
The definition was added to identify the all-in-one units typically found at medium and small facilities that are capable of completing sterilization and aeration in a single unit.
- **CONTROL SYSTEM**
The definition was added to more accurately describe one or more air pollution control devices, in series or in parallel, that reduce emissions of Ethylene Oxide and exhaust to one or more stacks to meet the performance standards specified in PAR 1405. An example of a multistage control system is a dry-bed scrubber to polish the exhaust stream from an acid-water scrubber in series. To determine EtO control efficiency, compare the sum of mass of EtO at the outlet(s) to the sum of mass of EtO at the inlet(s). The sampling location and methodology would be specified in the source test protocol which includes a description by the facility of how the control system is configured. A facility would specify the air pollution control devices that would be considered part of a control system in either a permit to operate, Title V permit, Control System Implementation Plan, or a Facility Implementation Plan.
- **ELEMENT**
The definition was added to describe any type of container that contains undiluted or diluted EtO sterilant gas or solid or liquid EtO-contaminated wastes. These containers or vessels have the potential to be sources of fugitive emissions of EtO. Examples would

include tanks, cartridges, or ampules of sterilant gas or barrels of liquid used sterilizer vacuum pump working fluid.

- **EXHAUST STREAM**
The definition was expanded to include gaseous effluent from any source, such as a combined sterilizer/aerator or a permanent total enclosure.
- **FACILITY**
The definition was added for clarity as Rule 1405 defined and used the term “person” extensively. PAR 1405 uses the term “owner or operator” and facility to be consistent with recent rules or amended rules. The definition is synonymous or nearly synonymous with the definitions of facility in Rules 1302 and 1402 and any and all facilities identified under those rules as a single facility will be considered a single facility under PAR 1405 as well.
- **FIRST DESTINATION**
The definition was added for clarity for data tracking of EtO-sterilized materials by sterilization facilities as the materials may have travel to many locations before reaching its final destination such as a hospital.
- **LARGE FACILITY, MEDIUM FACILITY, and SMALL FACILITY**
The definitions were added to identify subgroups of sterilization facilities based on permitted EtO limits for purposes of determining requirements in PAR 1405.
- **LEAK**
The definition was added to clarify meaning and identify the appropriate method of determination: CARB Test Method 21.
- **LEEWARD WALL and WINDWARD WALL**
These definitions were added to clarify specific walls to determine placement of differential pressure monitors needed for a PTE.
- **PALLETIZED UNIT**
The definition was added to identify large units of EtO-sterilized materials that need to be labeled for recordkeeping and reporting purposes by sterilization facilities and certain warehouses. Palletized units are identified as sterilized palletized units after undergoing sterilization with EtO. For most contract sterilizers, palletized units are received, sterilized, and shipped out with the same collection of products (i.e., palletized unit) as it arrived with.
- **PERMANENT TOTAL ENCLOSURE**
Also known as a PTE, the definition was added to accurately describe this fugitive control measure. This definition was based on the definition in Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations but slightly modified to clarify that the Executive Officer of the South Coast AQMD would be considered the “Administrator” for the purposes of evaluation of U.S. EPA Method 204 criteria.
- **POST-AERATOR**
The definition was added because aeration was redefined. This new term refers to any equipment, area, or room used to hold Sterilized materials at a facility after Aeration. The definition also contains three exclusions. Aerators are excluded from being considered post-aerators for clarity. In addition, motor vehicles are not to be considered Post-Aerators to allow for the loading, unloading, and transport of the sterilized materials. A

motor vehicle should be considered as any self-propelled vehicle by which a person or property may be propelled, moved, or drawn upon a highway. A trailer, if connected to a self-propelled vehicle, will be a motor vehicle but a trailer unconnected to a vehicle will not be a motor vehicle. A vehicle that is used as storage area of EtO-sterilized materials will be considered as a post-aerator.

- **POST-AERATION STORAGE FACILITY**

The definition was added to replace the previously defined term aeration-only facility due to the revised definition of aeration. The new term refers to a facility that does not perform sterilization but receives and stores sterilized materials that continues to off-gas residual EtO from the product or its packaging which are then collected and sent to a control system.

- **PRECONDITIONER**

The definition was added to identify products already being prepared for sterilization at a sterilization facility that may be eligible for exemption in subdivision (u) to curtailment requirements in subdivision (q). Preconditioners are typically rooms where the products are exposed to increased humidity and temperature to minimize the amount of EtO required to be used later in the sterilizer or combined sterilizer/aerators. Also see section 1.8 above.

- **PRODUCT**

The definition was added to clarify the basic unit of materials that undergo sterilization that include both the device itself and its accompanying primary packing to maintain sterility. An example of a product with primary packaging is a tongue depressor and its protective paper wrapper. Secondary packaging refers to the packaging around one or more products in primary packaging, often containing safety, marketing, or other retail information on the outside. Secondary packaging is sometimes referred to as a “carton”. An example is a paper carton of multiple sterilized tongue depressors. Tertiary packaging refers to corrugated cardboard boxes containing one or more products in secondary packaging. Corrugated boxes of products are commonly assembled on pallets into palletized units, as defined in PAR 1405. The term can refer to the product before, during, or after sterilization and does not describe whether or not the product has residual EtO.

- **SEMI-CONTINUOUS EMISSION MONITORING SYSTEM (SCEMS)**

The definition was needed due to new requirements of stack emission monitoring for large facilities and is based on the existing definition found in Rule 218 regarding Semi-Continuous Emission Monitoring. Building off of the definition found in Rule 218, this definition also defines CEMS as able to take and record at least one measurement every 15 minutes.

- **STERILANT GAS**

The definition was added to clarify its use in existing and amended rule language.

- **STERILANT GAS DISPENSING AREA**

The definition was added to identify the area where containers of sterilant gas containers are connected to sterilizer or combined sterilizer/aerator in order to dispense sterilant gas.

- **STERILANT GAS STORAGE AREA**

The definition was added to specify the areas that store containers of sterilant gas received by the facility used for sterilization. Examples include a dedicated fire cabinet,

an indoor explosion-proof room, or a building enclosure. This does not include the areas where the sterilant gas container is connected to the sterilizer or combined sterilizer/aerator.

- **STERILIZATION**

The definition “STERILIZATION/FUMIGATION” has been revised to sterilization alone and incorporate the term sterilant gas in this definition. Despite the removal of the term fumigation, the definition clarifies that fumigation using sterilant gas is still a form of sterilization. The examples previously illustrated have been removed to be consistent with recent rules or amended rules.

- **STERILIZATION CYCLE**

The definition was added to describe the collection of actions that sterilizers or combined sterilizer/aerators perform to achieve sterility of products and any accompanying packaging. Not all sterilization facilities sterilize products the same way. Large facilities typically sterilize the product, primary packaging, secondary packaging carton, tertiary packaging corrugated boxes, and pallets all together. Small and medium facilities typically sterilize the product and the primary packaging, then finalize packaging in the secondary and tertiary packaging after sterilization, if products are repackaged at all and not used onsite.

- **STERILIZED**

The definition was added to clarify the status of product or materials before and after exposure to sterilant gas in the use of this definition in the rule. Materials can include wooden pallets and dunnage, dummy samples similar to the products needed for sterilization validation, that are put through a sterilization cycle. Because these materials absorb sterilant gas or are similar to products for distribution, they can still off-gas EtO.

- **STERILIZER**

The definition has been revised to differentiate this type of equipment from combined sterilizer/aerator which was added as a new definition for use in PAR 1405. Incorporation of the term sterilant gas in place of “ethylene oxide or ethylene oxide mixture” was made for clarity without change in meaning.

- **STERILIZER EXHAUST VACUUM PUMP**

The definition has been revised for consistency for the use of new or revised definitions including sterilization cycle, sterilizer, and combined sterilizer/aerator without changing the original meaning.

- **TIER I WAREHOUSE and TIER II WAREHOUSE**

These definitions were added to the expanded applicability of PAR 1405 to include wholesale distributors and third-party logistics providers appropriately licensed and reporting licensure and other information to U.S. FDA annually⁶⁴ with at least 100,000 square feet of warehousing space for recordkeeping and reporting requirements. Tier I Warehouses have at least 250,000 square feet of warehousing space, with additional requirements to assess their EtO emissions.

- **TRIGGER RESULT**

⁶⁴ <https://www.fda.gov/drugs/drug-supply-chain-security-act-dscsa/annual-reporting-prescription-drug-wholesale-distributors-and-third-party-logistics-providers>

The definition was added to describe a result of a 24-hour averaged EtO concentration from fenceline air monitoring by either a facility or a regulatory body, collected or conducted by the primary party or an independent third-party contractor on behalf of the primary party. In addition, other rules or programs (e.g., AB2588) may require fenceline air monitoring of EtO and may produce a trigger result. A result over a specified threshold could be used in determination of curtailments at EtO sterilization facilities.

- **WAREHOUSING ACTIVITIES**

The definition was added to clarify what areas of indoor floor area should not be included for determination if a warehouse is a Tier I Warehouse or Tier II Warehouse based on square footage.

- **WASTE STORAGE AREA**

The definition was added to specify the areas that store containers of wastes generated by the facility created as a byproduct sterilization and associated processes, such as the chemical reaction that occurs in acid-water scrubbers to form ethylene glycol. Examples include a dedicated cabinet, a storage room, or a building enclosure.

Subdivision (d) – Large Facility Requirements

This subdivision contains requirements specific for sterilization facilities classified as a large facility. Where applicable, references to additional PTEs requirements found in other subdivisions may be made such as requirements pertaining to PTEs in subdivision (k).

Paragraph (1) – Stack Emission Requirements

Beginning September 1, 2025 or 60 days after final SCEMS or CEMS certification is issued by South Coast AQMD for each control system at the facility, whichever is earlier, as specified in Table 1 located immediately after paragraph (3), existing large facilities are required to meet the control efficiency of 99.99% or a concentration limit of 0.01 ppm or better for each control system. As shown in Chapter 1, 99.99% control efficiency has been achieved in practice at Medline Waukegan and some large facilities within South Coast AQMD. To account for control systems with low inlet concentrations, such as control systems dedicated to controlling aerators, an EtO concentration limit is also available to demonstrate compliance. Large facilities would also have a facility-wide mass emission limit of 0.015 pound per hour or a facility-wide mass emission rate limit, based on pounds of EtO permitted to be used annually and the required control efficiency of 99.99%, determined pursuant to Appendix 1. As shown in Chapter 1, a mass emission limit of 0.015 pounds per hour has been achieved in practice at Medline Waukegan. The alternative calculated facility-wide mass emission rate limit as calculated in Appendix 1, may be appropriate for large facilities permitted to use more EtO than the Medline Waukegan facility. Determination of the facility-wide emission rate based on source tests of more than one control system will be the sum of all mass emission rates results from the applicable source test reports. If a control system was source tested at both maximum load for demonstration of control efficiency and at normal operation, the source test results at normal operation should be used to demonstrate compliance with the facility-wide emission rate limit.

Large facilities would be required to source test at least annually for each control system to demonstrate compliance with the applicable performance standard. Once a large facility is monitoring stack emissions using SCEMS or CEMS, annually source testing is not required if the

control system demonstrates compliance with the 0.01 ppm performance standard and passes annual relative accuracy test audits (RATA). A RATA test is an audit comparing the CEMS or SCEMS against a reference method (i.e., the testing company's reference equipment). A facility that is complying with the control efficiency of 99.99% would still need to conduct annual source tests.

Paragraph (2) – Stack Emission Monitoring Requirements

Beginning 18 months after receiving approval from Executive Officer on the application of SCEMS or CEMS, as specified in Table 1, large facilities are required to monitor the EtO emissions from each exhaust stack of each Control System, using the SCEMS or CEMS to demonstrate compliance with the facility-wide mass emission rate limit and concentration limit (if applicable), both averaged over a rolling 30-day period. These operations include sterilization and related operations with the potential to release EtO such as aeration or storage of EtO-sterilized materials, wastes, or sterilant gas. SCEMS and CEMS are the most advanced in-stack monitoring systems used to quantify emission from a facility and to determine compliance with emission limits. Facilities that demonstrated compliance for control system using control efficiency during source testing would not need to monitor for control efficiency on the SCEMS or CEMS of that Control System. Guidance on how these calculations are made is located in Appendix 1 – Calculations.

Paragraph (3) – Fugitive Emission Requirements

Beginning September 1, 2025 or 60 days after final SCEMS or CEMS certification is issued by South Coast AQMD for each control system at the facility, whichever is earlier, as specified in Table 1, existing large facilities would be required to maintain within a PTE the following: sterilizers, combined sterilizer/aerators, back-draft valves, sterilizer exhaust vacuum pumps, aerator, post-aerators, elements of a sterilant gas storage area, elements in a sterilant gas dispensing area, and elements of a waste storage area.

In lieu of maintaining the above equipment and areas within a PTE, alternatives are available for post-aerators and sterilant gas storage for existing large facilities (permitted as a large facility as of the date of amendment).

An alternative to maintaining all post-aerators within PTE is to maintain sterilized materials within PTE for at least seven (7) calendar days after completing aeration. This alternative is available for existing large facilities permitted to use 40,000 lbs of EtO or less per calendar year. The seven (7) day hold is required as preliminary but unfinalized data indicates that the highest day of post-aeration EtO off-gassing following aeration is the first day and each day after aeration results in less EtO off-gassed. The bulk of off-gassed EtO occurs in the first seven (7) days after completing aeration and at least one (1) facility already holds post-aerated products from distribution to warehousing areas for seven (7) days while awaiting biological indicator (BI) testing results. Any facility utilizing this alternative would also be required to propose and maintain at least two (2) monitoring locations in the fence-line air monitoring plan for interim Phase II monitoring. While these warehousing areas would not be subject to additional fugitive emission requirements in PAR 1405, these areas could be subject to additional controls or requirements based on monitoring or related findings in future rulemaking.

In lieu of storing sterilant gas within a PTE, the facility may monitor the sterilant gas storage area and address the sterilant gas container that is the source of elevated reading. During the

development of PAR 1405, staff observed a variety of methods to store sterilant gas ranging from storage in the open air to storage in an enclosed building. A limited number of stakeholders expressed safety concerns with storing sterilant gas in a building enclosure. The alternative approach requires the use of a real-time EtO monitoring system sensitive to 1.0 ppb EtO or lower at one (1) minute intervals. Three (3) permanent monitoring locations are required as well as an emergency enclosure that vents to a control system. If an ambient EtO concentration of 3.0 ppb is detected, an immediate leak inspection is required, and the leaking element is to be placed in the emergency enclosure. This detection/response practice is similar to certain manufacturer recommendation for addressing smaller ampules of EtO for combined sterilizers/aerators.

Control systems would need to be included in an LDAR program if not within PTE. This paragraph requires that waste storage areas used to store wastes such as waste barrels of sterilizer exhaust vacuum pump working fluid or other elements like drums, containers, bins, or other vessels used to store other EtO-contaminated liquids or solids, be under PTE control. This differs from the requirements of fixed storage tanks of ethylene glycol, produced as byproducts of the interaction between EtO and acid in an acid-water scrubber. These storage tanks are typically described in an acid-water scrubber Permit to Operate and are considered part of the control system. Control systems, including associated ethylene glycol storage tanks, are required to be under an LDAR program or a PTE.

These fugitive emissions requirements, including maintaining PTE, apply to any large facility performing sterilization. Periods of planned maintenance are when the facility is not performing sterilization, there is no sterilant gas in ethylene oxide service connected to sterilizers or combined sterilizer/aerators, there is no sterilized materials in aerators and post-aerators, and all sterilization and related equipment is either not electrically connected or circuits are de-energized and locked out/tagged out of service. During those periods, these equipment units cease to meet their respective definitions in PAR 1405 and thus are not required to comply with fugitive emission requirements, including maintain PTE.

Following paragraph (3), PAR 1405 includes Table 1, an implementation schedule for existing large facilities, operating as large facilities as of the date of amendment, and new or modified large facilities, either not operating as of the date of amendment or in operation but not permitted as a large facility as of the date of amendment, respectively. New and modified large facilities are expected to meet all PAR 1405 large facility requirements prior to operating as a large facility. Existing large facilities are configured to comply with existing Rule 1405 and are granted additional time to comply. Existing large facilities are expected to continue to comply with existing Rule 1405 in the interim, reorganized into subdivision (i) and identified as Interim Requirements.

Paragraph (4) – Labeling and Facility Diagram Requirements

Beginning 90 days after date of rule amendment, large facilities must label sterilized palletized units before they leave a post-aerator. Large facilities must also clearly label specific equipment and areas at the facility and also maintain a facility diagram so these equipment and areas can be easily located and identified by workers and South Coast AQMD staff. Finally, documents accompanying outbound shipments (e.g., bill of lading) with EtO-sterilized materials must indicate the shipment contains EtO-sterilized materials with the prescribed text. These labels and documents will assist warehouses with their recordkeeping and reporting requirements.

Paragraph (5) – Submittal of Permit and SCEMS or CEMS Applications

No later than May 1, 2024, large facilities must submit complete permit application to South Coast AQMD to modify the facility to comply with those paragraphs. Additionally, applications for the CEMS or SCEMS are due no later than May 1, 2025.

Paragraph (6) – Control System Implementation Requirements

Requirements specific to the technologies used for a control system such as acid-water scrubbers, catalytic oxidation units, and thermal oxidation units are listed in this section, consistent with State ATCM requirements.

Paragraph (7) and (8) – Interim Mobile Monitoring Requirements and Interim Fenceline Air Monitoring

PAR 1405 requires permanent continuous monitoring for stack emissions and PTE monitoring for fugitive emissions. However, time is needed to comply with both requirements due to feasibility and the time it takes to go through the CEMS or SCEMS certification process. As such, PAR 1405 requires interim mobile and fenceline air monitoring around the sterilization facility until permanent monitoring is in place. Based on the prior investigations conducted for EtO, the following actions were taken when elevated EtO were observed: 1) identify the source(s) within the facility; 2) determine if the source(s) might have contributed to emissions; and 3) determine if the emissions could have been released into ambient air. The Executive Officer might also place fixed site monitoring to determine fenceline EtO levels which could help determine if the emissions pose a risk to the nearby communities.

Mobile monitoring, as discussed in Chapter 1, can provide an assessment of levels of pollutants around the facility and nearby areas with a high spatial resolution. This monitoring method can be deployed quickly but provides a limited amount of information due to the temporary nature of this method. Mobile monitoring would serve as a bridge until stationary fenceline air monitoring begins. Stationary fenceline air monitoring would take additional time due to the development of a FAMP, approval of a FAMP, and implementation of a FAMP. It is expected that mobile monitoring would be in place for several months and fenceline air monitoring would be in place until 2026 or 2027.

Interim Mobile Monitoring Requirements

Beginning February 1, 2024 and until the implementation of a South Coast AQMD-approved FAMP, a large facility would be required to conduct mobile monitoring. The facility can either select: 1) a third-party contractor to conduct mobile monitoring, or 2) the Executive Officer or third-party contractor selected by the Executive Officer to conduct mobile monitoring. If the facility hires a third-party contractor, a measurement protocol would be submitted to the Executive Officer for approval prior to the start of mobile monitoring. The mobile monitoring measurement protocol would specify key measurement parameters such as instrumentation to be used, mobile platform configuration (sampling inlet configuration, residence times, demonstration of laminar flow, etc.), mobile monitoring route and strategy, data handling and validation procedures, and other information deemed relevant, by the third-party contractor.

For South Coast AQMD-led mobile monitoring, the fee structure is established in Appendix 2 of PAR 1405. While other South Coast AQMD rules and other requirements in PAR 1405 do not explicitly indicate that it could be a South Coast AQMD or third-party contractor, the requirements

are party specific as the specific fee may vary if interim mobile monitoring is performed by South Coast AQMD or if performed by a third-party contractor on behalf of South Coast AQMD.

If the facility elects to switch from having the Executive Officer conduct mobile monitoring to having a third-party contractor conduct mobile monitoring, a formal notice must be provided to the Executive Officer 30 days before ending service. The facility would be responsible for contracting out mobile monitoring until it is no longer required.

Interim Fenceline Air Monitoring

Large facilities are required to conduct fenceline air monitoring pursuant to an approved FAMP to ensure that ambient EtO concentrations are below specified thresholds. The requirements and process for a FAMP are specified in subdivision (p).

Paragraph (9) – Submittal of Plans

The plans specified in this paragraph are optional and provide a pathway to streamline the permitting process. For example, the owner or operator may submit an application for a Control System Implementation Plan where there is complex configuration of multiple APCD on separate permits to operate. Additionally, an application for a Facility Implementation Plan may be submitted to establish a facility-wide EtO limit in lieu of modifying existing multiple permits to operate. This is a permit streamlining mechanism that would allow a facility to have a single enforceable document to identify facility wide requirements rather than having to modify multiple permits for emission sources and control equipment at a facility. This mechanism is available for large, medium, or small facilities.

Subdivision (e) – Medium Facility Requirements

This subdivision contains requirements specific for sterilization facilities classified as a medium facility. Where applicable, references to additional requirements found in other subdivisions may be made such as requirements pertaining to PTE in subdivision (k).

Paragraph (1) – Stack Emission Requirements

Beginning January 1, 2026, medium facilities are required to meet the control efficiency of 99.9% or a concentration limit of 0.01 ppm or better for each control system demonstrated through annual source testing.

Post-aerators first used to store sterilized materials after aeration are required to be controlled as specified in subparagraph (e)(1)(A).

Paragraph (2) – Fugitive Emission Requirements

Beginning January 1, 2026, medium facilities would be required to operate the first post-aerator that stores sterilized materials after aeration within a PTE. Areas used for transport, loading, or unloading between a combined sterilizer/aerator are not required to be under PTE control.

In addition, if a medium facility does not exclusively aerate materials within a combined sterilizer/aerator and instead completes aeration in a separate aerator, including ambient aeration areas, these sterilizers and aerators would also need to be under PTE control in addition to back-

draft valves, sterilizer exhaust vacuum pumps, and elements in a sterilant gas dispensing and storage areas.

For all other potential sources of fugitive EtO emissions, combined sterilizer/aerators, components up to the exhaust stack of a control system, and elements in a waste storage at medium facilities must maintain these under PTE or include them in a LDAR program to prevent fugitive EtO emissions.

Paragraph (3) – Labeling and Facility Diagram Requirements

Beginning 90 days after date of rule amendment, medium facilities must label sterilized palletized units before they leave the first post-aerator. Medium facilities must also clearly label specific equipment and areas at the facility and maintain a facility diagram so these equipment and areas can be easily located and identified by workers and South Coast AQMD staff. Finally, documents accompanying outbound shipments (e.g., bill of lading) with EtO-sterilized materials must indicate the shipment contains EtO-sterilized materials with the prescribed text. These labels and documents would assist warehouses with their recordkeeping and reporting requirements.

Paragraph (4) – Submittal of Permit Applications

This paragraph specifies the deadline that a medium facility must meet when submitting any required permit applications to the South Coast AQMD to comply with stack and fugitive emissions requirements specified in paragraphs (e)(1) and (e)(2), respectively.

Paragraph (5) – Submittal of Plans

A permit streamlining mechanism for a medium facility, discussed further in subdivision (d), paragraph (9).

Subdivision (f) – Small Facility Requirements

This subdivision contains requirements specific for sterilization facilities classified as a small facility. Where applicable, references to additional requirements found in other subdivisions may be made such as requirements pertaining to PTE in subdivision (k).

Paragraph (1) – Stack Emission Requirements

Beginning January 1, 2026, small facilities are required to meet the control efficiency of 99.9% or a concentration limit of 0.01 ppm or better for each control system demonstrated through annual source testing.

Paragraph (2) – Fugitive Emission Requirements

Beginning January 1, 2026, if a small facility does not exclusively aerate materials within a combined sterilizer/aerator and instead completes aeration in a separate aerator, including ambient aeration areas, these sterilizers and aerators would also need to be under PTE control in addition to backdraft-valves, sterilizer exhaust vacuum pumps, and elements in a sterilant gas dispensing area.

For all other potential sources of fugitive EtO emissions, combined sterilizer/aerators, components up to the exhaust stack of a control system, and elements in a sterilant gas storage area or a waste

storage at small facilities must maintain these under PTE or include them in a LDAR program to prevent fugitive EtO emissions.

Paragraph (3) – Labeling and Facility Diagram Requirements

Beginning 90 days after date of rule amendment, small facilities must clearly label specific equipment and areas at the facility and also maintain a facility diagram so these equipment and areas can be easily located and identified by workers and South Coast AQMD staff. Paragraph (4) – Submittal of Permit Applications

This paragraph specifies the deadline that a small facility must meet when submitting any required permit applications to the South Coast AQMD to comply with stack and fugitive emissions requirements specified in paragraphs (f)(1) and (f)(2), respectively.

Paragraph (5) – Submittal of Plans

A permit streamlining mechanism for facility, discussed further in subdivision (d), paragraph (9).

Subdivision (g) – Post-Aeration Storage Facility Requirements

Post-aeration storage facilities are facilities that receive EtO-sterilized materials that continue to off-gas EtO and collect and control EtO emissions with a control system.

Subdivision (g) specifies the requirements for a post-aeration storage facility equipped with a control system to collect the exhaust stream of a post-aerator. The control system must demonstrate a control efficiency of 95% or greater through annual source testing. Post-aeration storage facilities must also monitor all components of each control system under an LDAR program or place their control systems under PTE. Post-aeration storage facilities must clearly label specific equipment and areas at the facility and also maintain a facility diagram so these equipment and areas can be easily located and identified by workers and South Coast AQMD staff. Post-aeration storage facilities may also be subject to warehouse requirements in subdivision (h) if they meet the definition of a Tier I Warehouse or Tier II Warehouse.

Subdivision (h) – Warehouse Requirements

There is limited data on warehouses and associated emissions from EtO-sterilized materials they may be receiving. Warehouses that receive EtO-sterilized products are potential sources of EtO emissions as sterilized products continued to off-gas after the completion of aeration.

Subdivision (h) specifies the requirements for specific warehouses defined as Tier I Warehouses or Tier II Warehouses. Both Tier I Warehouses and Tier II Warehouses are subject to recordkeeping and a one-time report on the number of sterilized palletized units received directly from EtO sterilization facilities, including the sterilization facilities from outside the South Coast AQMD jurisdiction, for the one (1) time period from April 1, 2024 to March 31, 2025. Additionally, Tier I Warehouses would be required to provide additional information to assess EtO emissions by: 1) conducting fenceline air monitoring for one year pursuant to subdivision (p); 2) performing an EtO emission study demonstrating four pounds or less of EtO emission per year; 3) funding and participating in a real-time fenceline air monitoring demonstration program; or 4) not

receiving sterilized palletized units during the one (1) year period specified above for recordkeeping and reporting. If an EtO emission study is conducted and shows more than four pounds of EtO emissions per year, the warehouse would be required to conduct one (1) year of fence-line air monitoring. The data collected will help South Coast AQMD assess if additional rulemaking is required to address and control EtO emissions from warehouses receiving EtO-sterilized products.

Subdivision (i) – Interim Requirements

Subdivision (i) is needed to keep the existing requirements of Rule 1405 in place to prevent a regulatory gap until the new requirements in PAR 1405 are in effect. The interim requirements will sunset based on the schedule specified in exemptions found in subdivision (u) Table 8 for the respective requirements so that there will not be duplicate requirements for facilities.

Paragraph (i)(7) was revised to allow the source test protocol to specify the required operating conditions and parameters to be measured during the source test that are specific to equipment being tested.

Subdivision (j) – SCEMS or CEMS for Stack Emissions

Subdivision (j) specifies the requirements associated with semi-continuous and continuous emission monitoring systems that are required for large facilities to demonstrate continued compliance beyond the source testing requirements of all control systems. These systems are especially important to monitor the amount of EtO that is emitted and ensure that large facilities comply with the rolling 30-day averages of facility-wide mass emission rate limit, and if applicable, the 0.01 ppm concentration limit. These stack monitoring systems will also be subject to requirements for CEMS or SCEMS in Regulation II, specifically Rule 218-- Continuous Emission Monitoring, Rule 218.1-- Continuous Emission Monitoring Performance Specifications, Rule 218.2-- Continuous Emission Monitoring System: General Provisions, and Rule 218.3-- Continuous Emission Monitoring System: Performance Specifications. Applicable requirements refer to the situation specific to the facility and not a choice made by the facility or the South Coast AQMD. For example, a facility operating a SCEMS will be object to the applicable SCEMS requirements in Rule 218 through Rule 218.3.

Paragraph (j)(1) specifies the requirements of the SCEMS or CEMS, including the parameters, locations, performance specification certification and quality assurance, and DAS. EtO resolution of at least 0.001 ppm is required every one (1) minute for CEMS or every 15 minutes for SCEMS.

Paragraph (j)(2) specifies the manner in which the facility-wide total mass emission rate is calculated from the sum of individual stack mass emissions values of the CEMS/SCEMS. For example, a facility with three (3) stacks with daily average mass emission rates of 0.003, 0.001, and 0.004 pound per hour respectively for each stack would have a facility-wide total mass emission rate of 0.008 pound per hour for that calendar day. Instructions and examples to calculate the facility-wide emission rate are located in Appendix 1 – Calculations.

Paragraph (j)(3) requires that SCEMS or CEMS be equipped with an uninterruptible power supply that can keep equipment operating for at least 60 minutes in case of a power interruption. Power events, even a transient power surge, can cause computerized system without backup power to crash, resulting not only in the loss of monitoring data when the computerized system is offline, but possibly data corruption of recorded data files. A review of breakdown reports submitted by sterilization facilities pursuant to Rule 430 indicated that power blackouts or brownouts lasted only a few seconds or minutes. The required minimum 60 minutes of backup power would ensure the collection of data during these temporary power interruptions.

Paragraph (j)(4) requires that each SCEMS or CEMS meet the applicable requirements of Rule 218 through Rule 218.3, but specifies that the maintenance and calibration of SCEMS or CEMS including the daily calibration error checks, quarterly cylinder gas audits (CGA), and annual relative accuracy test audits (RATA) are required to ensure data integrity. CGAs are conducted quarterly except for the quarter the annual RATA is conducted.

Paragraph (j)(5) specifies that, beginning 30 months after receiving final certification for an application for the SCEMS or CEMS, the number of hours of missing data or invalid data shall not exceed 96 hours on a rolling 30-day period per SCEMS or CEMS for days when sterilization cycle is performed. This is more stringent than Rules 218 and 218.2 which allow for any number of 96 consecutive hours of downtime. The allowance in paragraph (j)(5) is based on the need for periodic calibration and maintenance of a SCEMS/CEMS and the estimated time to resolve a potential minor unexpected failure of a SCEMS/CEMS. For example, daily calibration error testing may take one hour per day, or 30 hours in a 30-day period. Quarterly cylinder gas audit (CGA) or annual relative accuracy test audits (RATA) may take an entire day, or 24 hours in a 30-day period.

Currently FTIR CEMS is being used at Medline Waukegan facility using U.S. EPA's PS-15 but amendments to the NESHAP Subpart O are expected and would allow additional technologies such as Cavity Ring-down Spectroscopy and others to be used through a new draft performance specification accompanying the NESHAP known as PS-19. PAR 1405 incorporates provisions and an extended implementation schedule to allow the South Coast AQMD to review and approve these systems that meet the required performance specifications and quality assurance criteria.

Subdivision (k) – Permanent Total Enclosure Requirements

Subdivision (k) specifies the requirements associated with PTE where required in earlier subdivisions. As PTE requirements will require facilities to retrofit and modify an existing structure or building, the implementation schedule provides adequate time for the facility to obtain required planning, permitting, and construction to complete the PTE. PAR 1405 specifies this type of enclosure to capture, collect, and control EtO emission sources within a PTE. A PTE is required to meet the requirements specified in U.S. EPA Method 204 – Permanent (PTE) or Temporary Total Enclosure (TTE) for Determining Capture Efficiency. Method 204 Criteria 5.1 requires all emitting points (EtO source) be at least four equivalent opening diameters of the natural draft opening (NDO) unless otherwise specified by the Administrator. For the purposes of implementing Method 204 under South Coast AQMD Rule 1405, the Administrator refers to the Executive Officer of South Coast AQMD. EtO-sterilized materials are EtO emitting points as they continue to off-gas after completion of aeration. Consideration is needed in cases where EtO-sterilized

products need to be moved out of the PTE through a rollup door or a loading dock for outbound shipping.

Method 204 requirements allow the assumption that the collection efficiency is 100% for all emissions within the PTE being vented to a control system. As such, equipment inside a PTE is not being required to be under the LDAR program, as any leaks inside the PTE are being captured and controlled in PAR 1405.

Paragraph (k)(1) specifies the requirement to ensure the PTE is kept under a specified negative pressure threshold. A rolling one (1) hour period averaging time, determined based on the 60 most recent one-minute data, 15-minute averaging time, consistent with PTE averaging times in other South Coast AQMD toxic rules such as Rule 1420.1, is specified as intermittent opening of doors for ingress and egress may cause instantaneous changes in the readings outside the required threshold level specified. An example of a rolling one (1) hour period would be 10:05 a.m. through 11:04 a.m., which consists of 60 one-minute values. The next one (1) hour period would consist of values recorded from 10:06 a.m. through 11:05 a.m..

Paragraph (k)(2) specifies the parameter monitoring equipment and locations required within the PTE for monitoring the negative pressure specified in paragraph (k)(1). This equipment is required to be maintained and calibrated to ensure measurements are accurate. The monitoring system is required to be equipped with a data recording system to demonstrate compliance. A backup power supply is also required in case of power outages. The required audible alarm will alert the facility should the negative pressure not meet the requirements specified in paragraph (k)(1).

Paragraph (k)(3) specifies additional testing beyond Method 204, to ensure inward face velocity of at least 200 fpm for each natural draft opening is tested at least once each calendar quarter. Appendix 4 is included in PAR 1405 to provide additional instructions and clarifications on how these measurements are to be performed and recorded.

Subdivision (l) – Source Test Requirements

Subdivision (l) specifies the source test requirements required of all control systems that are subject to emission limits. An annual source test is required to ensure that the control system is continuing to operate as designed and meeting the emission limits unless the control system demonstrates compliance with all applicable performance standards with a South Coast AQMD-certified CEMS or SCEMS. Stack monitoring using CEMS or SCEMS provides real-time monitoring of EtO emissions exiting the stack of the control system controlling EtO sources at the facility. Control systems demonstrating compliance with the 0.01 ppb outlet concentration through a certified CEMS or SCEMS and conducting required annual relative accuracy test audits (RATAs) would not be required to conduct annual source tests. Requirements for CEMS and SCEMS are specified in subdivision (j) and include daily calibration error tests and quarterly cylinder gas audits along with RATAs to ensure the data is accurate and valid, making annual source tests unnecessary.

Control systems complying through the 99.99% control efficiency provision would be required to source test annually as both inlet and outlet measurements are needed to determine the control efficiency, whereas the inlet measurement is not required to be measured continuously. Source tests conducted to demonstrate compliance with the 99.99% control efficiency provision may be

conducted under maximum load conditions to show that the control system is able to handle the worst-case scenario of maximum allowable permitted EtO through these control systems. Paragraph (1)(1) specifies requirements for source test protocols (protocols) submitted to be reviewed and approved by South Coast AQMD to help ensure that the source test will be conducted in a manner suitable to demonstrate compliance with the more stringent control efficiency or concentration as well as the facility-wide emission rate limit in PAR 1405. Since these source tests are meeting more stringent performance standards, a new source test protocol must be submitted and approved by South Coast AQMD prior to conducting the first source test after adoption of this rule. The protocol would be required to include key testing parameters such as the planned operating parameters and performance standards the source test is intended to demonstrate compliance with. While a source test may measure many operating parameters, only the specified parameter could be evaluated to determine compliance. For example, if the facility conducts a source test to determine compliance with the control efficiency performance standard and the results indicates a facility-wide mass emission rate limit greater than the performance standard, the facility would not be in violation of exceeding the facility-wide mass emission rate limit. However, if the facility conducts a source test to determine compliance with both control efficiency and facility-wide mass emission rate, both performance standards would be evaluated to determine compliance.

Paragraph (1)(2) specifies the conditions where a revised protocol is required to be submitted and approved by the South Coast AQMD prior to retesting after the source test conducted pursuant to the approved source test protocol in paragraph (1)(1). A revised source test protocol would be required any time there was a change to the EtO source, process, or control system referenced in the earlier source test protocol, rendering the earlier approved source test protocol no longer suitable for use for the reconfigured system. These changes or reconfigurations typically would have required permit modifications with the South Coast AQMD. A new or revised source test protocol may also be requested by the Executive Officer. This may occur if the Executive Officer determines that the former approved source test protocol no longer is appropriate to accurately quantify EtO emissions or performance during source testing. If there have been no changes and the Executive Officer does not request a new or revised source test protocol, the facility's source testing contractor may use the most recent approved source test protocol by the South Coast AQMD.

Paragraphs (1)(3) and (1)(4) specify notification requirements for source tests that allow for source testing observations by South Coast AQMD.

Paragraph (1)(5) specifies that the source test protocol must be approved by the Executive Officer and requirements for source testing that include operational conditions that would accurately quantify emissions from control systems and also allow for specific testing protocols needed to accommodate certain control technologies where safety concerns exist due to the flammability of EtO at high concentrations.

Paragraph (1)(6) specifies requirements for submittal of the source test report for review by South Coast AQMD. A source test may be considered unacceptable if the protocol was not followed. If a source test fails to demonstrate compliance with a performance standard, the facility would need to determine the cause, take corrective action, then conduct another source test to demonstrate that the control system is meeting applicable performance standard(s) and back into compliance prior to operating equipment that are EtO sources controlled by that control system(s).

Subdivision (m) – Leak Detection and Repair (LDAR) Program Requirements

Subdivision (m) specifies the LDAR program requirements. As discussed earlier in Chapter 2, leak inspection is a method to identify leaks and address them in a timely manner. Rule 1405 required a semi-annual leak check of specific equipment that potentially could be a leak. PAR 1405 expands the requirements by requiring the identification of permanent components to be inspected through a prepared diagram and tags on the individual components, daily audio-visual checks, and leak checks at least once every 60 days, including items that are not permanently installed at the facility (elements), such as sterilant gas containers or EtO-waste containers that are delivered or hauled away. The daily checks and periodic leak inspections apply to elements present at the facility on those days, respectively. This approach is consistent with other VOC regulations addressing fugitive emissions from oil fields, refineries, and chemical plants. PAR 1405 is more stringent than other regulations with a lower leak threshold and no allowance for facilities to have an extended repair window for self-identified leaks.

Paragraphs (m)(1) and (m)(2) require a facility to maintain a plot-plan that identifies components and to maintain a clear label (tag) on the components. Components include items such as seals, gaskets, or connection points where EtO may leak. For example, oil fields and refineries utilize tags (see graphic) to identify components that would be subject to the LDAR program.



Paragraphs (m)(3) and (m)(5) require that all components and elements subject to the LDAR program be free of leaks greater than 2 ppm above background and inspected at least once every 60 days using a portable detector to check for leaks pursuant to CARB Test Method 21. CARB Test Method 21 section 8.3.2 specifies how background is assessed in the process area and recorded.⁶⁵ If EtO is not used as the calibration gas, the manufacturer's correction factor must be applied for the calibration gas used and be corrected to EtO. The portable detector should be maintained and operated per the manufacturer to ensure accurate measurements. While components would be identified in the plot-plan, elements may change on regular basis as both waste material and raw EtO may leave the facility. Only elements that are at the facility when components are inspected for the day would be required to be inspected.



Paragraph (m)(4) requires a daily audio-visual inspection of components. The daily inspections allow the early identification of leaks between leak inspections using a portable detector. Audio-visual inspections are expected to occur at ground level and within auditory and visual range of all components.

⁶⁵ METHOD 21 - DETERMINATION OF VOLATILE ORGANIC COMPOUND LEAKS. (2017, August 3). U.S. EPA. Retrieved March 15, 2023, from https://www.epa.gov/sites/default/files/2017-08/documents/method_21.pdf

Subdivision (n) – Prohibitions

Subdivision (n) specifies the general prohibitions for a sterilization facility. PAR 1405 retained and updated prohibitions that were previously in Rule 1405. Four (4) new prohibitions were added: three (3) to prohibit the release of uncontrolled fugitive emissions and one (1) to prohibit backsliding by post-aeration storage facilities.

Paragraph (n)(1) prohibits the release of sterilizer exhaust vacuum pump working fluid to the wastewater stream. This was an existing requirement in Rule 1405 located in paragraph (d)(7).

Paragraph (n)(2) prohibits the use of chlorofluorocarbon diluents in sterilization. This was an existing prohibition in Rule 1405 located in paragraph (d)(9) with an effective date of January 1, 1997. As the date has passed, the effective date has been removed.

Paragraph (n)(3) prohibits the uncontrolled release of EtO emissions from any PTE. As previously discussed in Chapter 2, implementing a PTE is a compliance pathway to prevent the release of fugitive emissions by collecting emissions and exhausting to a control system. Sterilization facilities that are required to continuously or semi-continuously monitor at the exhaust would be able to quantify collected emissions that would include fugitive emissions. However, if the control system is inoperable or if the PTE is compromised, an unquantifiable amount of fugitive emissions may be released. PAR 1405 allows the owner or operator different compliance pathways to address situations where the control system may be temporarily inoperable. This can include installing a back-up power system to power the control system or installing a redundant control system. South Coast AQMD has requirements for addressing breakdowns of control equipment under Rule 430 that include notification and shutdown procedures.

Paragraph (n)(4) prohibits the removal of sterilized materials from the facility before aeration can be completed. Although these materials still continue to off-gas after aeration, emissions are greater prior to completing aeration where they are required to be controlled either in aerator or combined sterilizer/aerator equipped with controls. Samples taken for the purposes of required testing such as for validation and biological indicator (BI) purposes may be removed prior to completion of aeration from the facility.

Paragraph (n)(5) prohibits the removal of installed control equipment at a post-aeration storage facility unless the equipment is being replaced with a control system that meets the applicable performance standards.

Paragraph (n)(6) prohibits the storage of any materials that contain EtO, other than sterilant gas, in a sterilant gas storage area if not maintained under PTE. To minimize potential sources of elevated readings.

Subdivision (o) – Facility Exceeding Applicable Ethylene Oxide Usage

Subdivision (o) specifies the requirements for a sterilization facility that uses more than its category amount (i.e., $\geq 2,000$ lbs for sterilization facilities other than a large facility, >400 lbs for sterilization facilities other than a large facility or medium facility). In addition to being in violation with other applicable South Coast AQMD rules and regulation, sterilization facilities would be required to submit permit applications within 12 months and would be subject to the requirements of the permitted usage based on the exceedance usage within 24 months from the day of exceeding

based on thresholds specified on Table 7 – Applicable Ethylene Oxide Usage in paragraph (t)(4). Even if the sterilization facility does not apply for a change in permitted usage, it would still be subject to the more stringent requirements. Any continued exceedance of the facility's current permitted limit would be subject to compliance action.

Subdivision (p) – Interim Fenceline Air Monitoring Requirements

Subdivision (p) specifies that the requirements for fenceline air monitoring for 1) large facilities and 2) Tier I Warehouses that receive sterilized palletized units directly from EtO sterilization facilities that elect this option to assess their EtO emissions or where their emission study shows more than four (4) pounds of EtO emissions per year.

Paragraph (p)(1) specifies FAMP submission due date based on facility type. The information required to be included in the FAMP is specified in Appendix 5. This paragraph specifies the process from submission of the FAMP to its approval by the Executive Officer. As new data from studies on emerging technologies are available for review or the technology made available for demonstration and evaluation, South Coast AQMD may allow these technologies to be used for determination of compliance with rule requirements. Documentation of previous implementation of a monitoring technology proposed for use for fenceline air monitoring of EtO at a facility should be included with the FAMP application so the South Coast AQMD can evaluate and approve its use. Results from fenceline air monitoring must be accurate and defensible as the data can be the basis for curtailment of facility operations.

Paragraph (p)(2) specifies the implementation of a FAMP. Subparagraph (p)(2)(A) requires implementation of the approved FAMP no later than 90 days after approval by Executive Officer unless other specified in the FAMP. Based on assessment of monitoring technology discussed in Chapter 1, real-time/near real-time monitoring provides the most amount of data, but there remain concerns regarding it being an established method, able to discern from background levels, and available for purchase and use. As such, PAR 1405 would allow canister sampling or real-time/near real-time monitoring to be used to meet the requirements of paragraph (p)(2).

Subparagraph (p)(2)(B) specifies the procedures for implementing a FAMP using canister collection technology, requiring a 1-in-6 day sampling schedule unless otherwise approved in the FAMP, U.S. EPA Compendium Method TO-15 or Method TO-15A, and a method detection limit (MDL) of 0.2 ppb or lower. The proposed MDL was based on limits that could be achieved by laboratories. Although Method TO-15 allows for a higher MDL of 0.5 ppb, a 0.2 ppb can and has been achieved by laboratories.

Subparagraph (p)(2)(C) specifies the procedures for implementing a FAMP using real-time/near real-time monitoring technology, requiring an established method with a MDL of 1.0 ppb or lower and capable of generating a measurement every 15 minutes. The 1.0 ppb MDL was based on the current performance that could be achieved by real-time/near real-time monitoring technologies. Some real-time monitoring technologies have demonstrated that they could detect EtO reliably less than 1 ppb. The real-time/near real-time monitoring technology must be approved by the Executive Officer in the FAMP. Information on past and recent implementation of the particular real-time/near real-time monitoring technology at other facilities demonstrating fenceline air monitoring of EtO should be included for evaluation by the Executive Officer.

Subparagraph (p)(2)(D) places additional requirements for real-time/near real-time monitoring, requiring a Method TO-15 or Method TO-15A 24-hour canister sample be collected if the real-time/near real-time concentration, when averaged over 3 hours, exceeds thresholds outlined in Table 4. This is because the real-time/near real-time monitoring technology may not be an approved method. The hold time for unused canisters, prepared by the laboratory, is 30 days so they may be kept readily available for use.

Subparagraph (p)(2)(E) requires collection of wind speed and direction data and subparagraph (p)(2)(F) specifies allowable missing data.

Paragraph (p)(3) specifies when fenceline air monitoring is no longer required for a large facility or Tier I Warehouse.

Subdivision (q) – Curtailment of Sterilization Operations

Subdivision (q) specifies the process of curtailment of sterilization operations at large, medium, and small facilities based on 24-hr EtO fenceline air monitoring results. Curtailment involves a reduction from a calculated baseline operations of daily EtO usage from the six days preceding and the day of the real-time monitoring result or the sampling day completion. Fenceline air monitoring results (i.e., trigger results) determined by either the sterilization facility (e.g., under the FAMP) or by U.S. EPA, CARB, or South Coast AQMD may be used to trigger curtailment provisions.

Prior to implementation of enhanced stack and fugitive emission control measures, trigger levels for curtailment are at 17.5 and 25.0 ppb. These values are consistent with trigger levels specified in an Early Action Reduction Plan and accompanying FAMP for a large facility in South Coast AQMD. After implementation of the enhanced stack and fugitive measures, the trigger level is a single value at 3.0 ppb EtO over a 24-hr period. This value is set at three times the highest method detection limit allowed (1.0 ppb) for FAMP implementation. Setting limits at three times detection values is consistent with U.S. EPA policy and procedure to allow for variability and uncertainty in the lower detection range. The concentration of 3.0 ppb is also at least one order of magnitude greater than the highest background EtO concentration detected (0.29 ppb) by two different South Coast AQMD ambient air monitors over two years of gathering background concentrations of various toxic air contaminants for the U.S. EPA National Air Toxics Trends Stations study. Additionally, ambient air monitoring from Medline Waukegan and from Parter Carson show fenceline air monitoring results consistently below 1 ppb after implementation of PTE and layered control measures to control EtO emissions. Below are two examples how the progressive curtailment would work using level 1 (> 17.5 ppb and ≤ 25.0 ppb) and level 2 (> 25.0 ppb) trigger types based on Table 6 – Curtailment Amounts if there were sample results that varied in trigger levels.

Example 1

	First	Second*	Third*
24-hr Result	18 ppb	30 ppb	18 ppb
Trigger Level	Level 1	Level 2	Level 1

New daily limit	80% of Baseline Operation	50% of Baseline Operation	0% of Baseline Operation
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**Within 30 consecutive calendar days of first result*

Example 2

	First	Second*
24-hr Result	30 ppb	18 ppb
Trigger Level	Level 2	Level 1
New daily limit	50% of Baseline Operation	0% of Baseline Operation

**Within 30 consecutive calendar days of first result*

Paragraphs (q)(1) and (q)(3) specify the timeline and process of curtailment. Curtailment progression is specified in Table 6 – Curtailment Amounts and is dependent on the magnitude of exceedance. Curtailments are progressive but can result in complete cessation of all sterilization operations at the facility. Curtailment ends with the monitoring results at all required monitoring locations demonstrating levels below the applicable Level 1 or Level 3 concentrations. Curtailment would also end if the Executive Officer determines, based on credible evidence, that the trigger result was not due to the facility's emissions.

Paragraph (q)(2) allows for the completion of any sterilization cycles already in progress in the event of a 100% curtailment. This provision is necessary as some sterilization cycles can span multiple days. Additionally, the facility is still allowed to operate other equipment such as aerators and post-aerators and continue to process EtO-sterilized products to ship out provided the permitted equipment is complying with permit conditions.

Paragraph (q)(4) specifies when the trigger threshold counter (i.e., first, second, or third result) referenced in Table 6 would reset to zero after 30 consecutive calendar days of being below the applicable trigger thresholds at all fence line locations.

Subdivision (r) – Plan Administration

Subdivision (r) specifies that facilities are subject to South Coast AQMD fees specified in Rule 306 – Plan Fees for the processing and evaluation of the following: 1) Emission Study Plan; 2) FAMP; 3) Control System Implementation Plan; and 4) Facility Implementation Plan.

Subdivision (s) – Recordkeeping

Subdivision (s) specifies recordkeeping that the facilities are required to keep in order to demonstrate compliance required in other subdivisions. The recordkeeping provisions of the state ATCM regarding annual and semi-annual reports was also incorporated into this subdivision. Standard record retention requirements of five years with the recent two years of records kept onsite for inspection purposes are also included.

Subdivision (t) – Reporting

Subdivision (t) specifies reporting requirements that facilities must perform.

Paragraphs (t)(1) and (t)(2) incorporate the State ATCM reporting requirements into PAR 1405.

Paragraphs (t)(3) and (t)(4) ~~specifies~~specify the requirement for a sterilization facility to report if it exceeded a limit of permitted use of EtO that can either be an equipment specific limit or a facility-wide limit. Additional notification is required if a sterilization facility exceeds the equivalent threshold of the next higher size category specified in Table 7 – Applicable Ethylene Oxide Usage. This report would assist in determining if the sterilization facility would be subject to subdivision (o) and the day when compliance with the new requirements would be required.

Paragraph (t)(5) specifies first destination reporting requirements for large sterilizers on outbound shipments of sterilized products for data collection on destination warehouses. If the sterilized palletized units are picked up by the customer and the final destination is not known, then specific customer information would need to be reported.

Paragraphs (t)(6) and (t)(7) specify the reporting requirements for large facilities from mobile monitoring and fence line air monitoring pursuant to the FAMP, respectively.

Paragraph (t)(8) specifies the reporting requirements if curtailment is triggered when a triggered level is exceeded pursuant to subdivision (q).

Paragraph (t)(9) specifies reporting requirements for stack emission CEMS or SCEMS exceedances.

Paragraph (t)(10) specifies reporting requirements for facilities for PTE related events.

Paragraph (t)(11) specifies reporting requirements for operational noncompliance for two specific situations: noncompliant source tests and EtO leaks detected.

Subdivision (u) – Exemptions

Subdivision (u) specifies the exemption from specific provisions of the rule.

Paragraph (u)(1) exempts facilities that are permitted to use four lbs or less of EtO per calendar year from the requirements of subdivision (i) – Interim Requirements and (n) – Prohibitions. This exemption is modified from the original exemption in Rule 1405 that was based on the feasibility of controlling four lbs or less of EtO. PAR 1405 modifies the exemption to be based on permitted amount instead, which is more stringent.

Paragraph (u)(2) exempts facilities from the interim requirements specified in subdivision (i) as new PAR 1405 requirements would be in effect. In order to avoid duplicate or conflicting requirements the facility would need to comply with either the interim requirement or the new requirements.

Paragraph (u)(3) exempts PTE requirements in the event of a power outage or other unplanned event outside the owner or operator control provided the event was reported pursuant to paragraph (t)(10). In lieu of complying with the PTE requirements, the owner or operator would need to enact practices for all equipment the facility has as specified in subparagraphs (A), (B), and (C), that would prevent the uncontrolled release of EtO emissions as these emissions would not be collected. Additionally, as the fugitive emissions from the PTE would not be quantified, the owner or

operator is required to conduct daily monitoring at each natural draft opening (NDO) using a handheld monitor, such as a photoionization detector, to serve as a temporary surrogate for emission monitoring. While sterilization and other active processes that are sources of EtO may cease, off-gassing of sterilized material would continue making it imperative that these measures are taken to prevent the release.

Paragraph (u)(4) exempts a large facility from the requirements of subdivision (d) provided the owner or operator has taken steps with the Executive Officer to reduce their permitted amount EtO below 2,000 lbs/yr. To keep this exemption, the facility must keep facility-wide monthly EtO usage below 167 lbs until the permit(s) or plan are issued by the South Coast AQMD.

Paragraph (u)(5) exempts a large facility from the requirements of mobile monitoring if: 1) Executive Officer is already conducting fenceline air monitoring at a sampling frequency of at least 1-in-6 days; or 2) facility is conducting fenceline air monitoring for EtO pursuant to a plan approved by the Executive Officer.

Paragraph (u)(6) exempts a large facility from the facility-wide mass emission rate limit performance standard provided the facility has: 1) ceased sterilization operations for at least 48 hours after being unable to comply with the performance standard; 2) provided the Executive Officer with a 24-hour prior notification when sterilization operations would resume; and 3) facility-wide mass emission remains below the applicable facility-wide mass emission rate on a daily average after resuming sterilization. This exemption is included to prevent an extended shutdown of sterilization in order for the rolling 30-day average to drop back down to compliant levels in the event the results of a single day or a few days are very high. Troubleshooting and repairs can be made during the 48-hour downtime to return equipment to good operating conditions. If the above requirements are met, the facility could operate under this exemption until the rolling 30-day average once again complies with (d)(2)(C) at which point this exemption would end for the event.

Paragraph (u)(7) exempts a large facility from the stack outlet concentration performance standard that is similar to that found in (u)(6) except it is for the concentration limit of 0.01 ppm for EtO.

Paragraph (u)(8) exempts a facility required to monitor stack emissions with SCEMS or CEMS from the data collection performance standard of no more than 96 hours of missing data over a rolling 30-day period, provided the facility does not operate for 48 hours, misses no more than one (1) hour of data per day, and reports resuming sterilization to South Coast AQMD.

Paragraph (u)(9) exempts a large facility from collecting a 24-hour canister sample when there is a real-time monitoring technology for EtO that is approved by a regulatory body that it is a legally defensible method.

Paragraph (u)(10) exempts a new large facility, a facility that did not operate prior to rule amendment and is permitted to use more than 2,000 lbs of EtO per year, or modified large facility, a facility that did operate prior to rule amendment but was not permitted to use more than 2,000 lbs of EtO per year at that time, from interim requirements or transitional requirements that an existing large facility would need to comply with the amended requirements. The interim requirements would not be required as a large facility permitted after the date of amendment would be required to comply with the amended stack, fugitive, and stack monitoring requirements specified in paragraphs (d)(1) through (d)(3).

Paragraph (u)(11) exempts products located in the preconditioner that would no longer be suitable for use if the Sterilization Cycle is not completed within a specified period of time. This would include products that would be rejected and be disposed of, but not products that could go through a sterilization cycle later when curtailment is lifted.

Paragraph (u)(12) exempts medical devices, including pallets containing medical devices, that are reasonably likely to experience a reduced supply and critical to public health, as determined by federal, state or local health agencies or hospitals or medical centers in California, from being subject to curtailment provisions. This communication can be to the Executive Officer or from the owner or operator of the sterilization facility. This would require specific reporting, recordkeeping, and labeling during the curtailment exemption period. The curtailment provisions still apply to products not listed as reasonably likely to experience reduced supply.

For example, when determining whether a device is “reasonably likely to experience a reduced supply” the U.S. FDA considers information similar to determine whether a device is in shortage, including but not limited to:

- Indications of supply disruptions (for example, 506J notifications and additional manufacturer information);
- Indications of distribution pressures (for example, from distributors and group purchasing organizations);
- Indications of demand or projected demand, such as availability issues reported from users (for example, patients, healthcare providers, hospitals and healthcare facilities, and associations representing these groups);
- International factors (for example, export restriction); and
- Certain actions taken to help prevent or mitigate shortages including, but not limited to, actions taken by manufacturers, the FDA, or other stakeholders.

For example, when determining whether a medical device is in shortage, the U.S. FDA considers the entirety of relevant and reliable information and data available to the U.S. FDA at the time of a decision.

For example, when determining a device to be “critical to public health”, the U.S. FDA considers:

- Devices that are critical to public health during a public health emergency, including devices that are life-supporting, life-sustaining, or intended for use in emergency medical care or during surgery; or
- For which the Secretary determines that information on potential meaningful supply disruptions of such device is needed during, or in advance of, a public health emergency.

There are expected to be limited occurrences where an entity (federal, state or local health agencies or hospitals or medical centers in California) reports directly and confidentially to the Executive Officer of specific products that should not be subject to curtailment.

Paragraph (u)(13) exempts a Tier I Warehouse from the recordkeeping and reporting requirements provided the Tier I Warehouse submits a notification and does not receive products in the warehouse recordkeeping and reporting period.

Paragraph (u)(14) allows potential exclusion of differential pressure measurements in a one (1) hour period when average one-minute wind speeds exceed 20 miles per hour, provided the owner

or operator records the wind speed. The wind speed would need to be recorded by equipment that is approved by the Executive Officer in a Facility Air Monitoring Plan or Facility Implementation Plan. During high wind events, it may be infeasible to demonstrate compliance with the differential pressure requirement of a PTE due to extreme wind events outside of the building even with a sufficiently sized blower. An example of the data that would be exempted from meeting the requirements of (k)(1):

At 9:00 a.m., the owner or operator records a one-minute average speed of 28 miles per hour. Any rolling one (1) hour period differential pressure data that includes the minute of 9:00 a.m. would be exempt from demonstrating compliance with the continuous monitoring requirements. This includes differential pressure data recorded from 9:00 a.m. to 9:59 a.m..

Appendices

Appendix 1 – Calculation – provides guidance and examples of how to calculate 30-day rolling average for concentration and facility-wide emission rate as an alternative to the 0.015 lb/hr limit.

Appendix 2 – Mobile Monitoring Fee and Program – provides the fee structure if a large facility elects to have the South Coast AQMD conduct mobile monitoring or if a Tier I Warehouse elects to fund a real-time Fenceline Air Monitoring demonstration program lead by the South Coast AQMD.

Mobile Monitoring Fee

Under PAR 1405, facilities can use a third-party contractor with an approved sampling protocol to conduct mobile monitoring, or they can elect to have the Executive Officer conduct mobile monitoring. The Executive Officer would typically conduct mobile monitoring once per month, but resources, technical issues, or other unforeseen circumstances may prevent the Executive Officer from conducting mobile monitoring. The facility would be billed an hourly rate of \$209.31 for hours needed to conduct mobile monitoring that include field monitoring, data processing, data validation, data approval, unknowns analysis, and calibration. The \$209.31 is consistent for laboratory or source testing hourly rate specified in Rule 301 – Permitting and Associated Table IIB CEMS, FSMS, ACEMS Fee Schedule. In addition to labor, materials and consumables would be charged for each monitoring day, which include gasoline and other laboratory consumables such as grab canister sampling and analysis. A maximum daily fee of \$33,000 could be assessed per mobile monitoring day.

Real-time Fenceline Air Monitoring Demonstration Program Fund

A Tier I Warehouse that receives sterilized palletized units can elect to fund a real-time fenceline air monitoring demonstration program as an alternative to either conducting fenceline air monitoring or an emission study required in subdivision (h). This option would consist of an initial payment not to exceed \$150,000 due within six (6) months of rule amendment and a second payment not to exceed \$100,000 due within 18 months of rule amendment. The collected funds would be used to recover costs associated with monitoring EtO sources using real-time technologies to demonstrate that the technology is appropriate for use in fenceline air monitoring.

Appendix 3 – Emission Study Plan specifies the content of what is to be included in an Emission Study Plan conducted by a Tier I Warehouse to assess ethylene oxide emissions. The Executive Officer may disapprove the plan based on failing to meet the criteria specified in the appendix.

Appendix 4 – PTE Inward Face Air Velocity Measurement Procedures specifies the procedures to measure inward face velocity at NDO for PTE. The procedures are consistent with other South Coast AQMD toxic rules when measuring airflow at a plane. The measurement across five-point would be required for most NDO, except for small openings that measure one square foot or less. The measurement with the anemometer should be performed where a steady reading is obtained and recorded at each measurement point. Steady reading means where the narrowest range of fluctuations are observed with no movement of the anemometer. It is normal to observe small changes in values due to the quick response of the instrument.

Appendix 5 – Fenceline Air Monitoring Plan specifies the required contents of a FAMP, minimum number of fenceline air monitors, and the procedures to modify the monitoring location. The Executive Officer may disapprove the plan based on failing to meet the criteria specified in this appendix.

Appendix 6 – ~~Contents of~~ Semi-Annual Summary Reports specifies the content of the semi-annual report required to be submitted by large facilities.

Appendix 7 – ~~Contents of~~ Semi-Annual Excess Emission Reports specifies the content of the semi-annual excess emission report required to be submitted by large facilities.

CHAPTER 3 – IMPACT ASSESSMENT

3.1 AFFECTED SOURCES

Based on the South Coast AQMD permit database and site visits conducted, a total of 16 facilities would be subject to requirements in PAR 1405, including 15 facilities that conduct EtO sterilization and one post-aeration storage facility that maintains EtO-sterilized materials with control equipment (see Appendix B for a list of existing sterilization and post-aeration storage facilities within South Coast AQMD impacted by PAR 1405).

Warehouse recordkeeping and reporting requirements impact Tier I Warehouses and Tier II Warehouses that report to the U.S. FDA as wholesale drug distributors or third-party logistics providers with an indoor space of 250,000 square feet or more and those between 100,000 and 250,000 square feet, respectively. As of May 2023, 80 facilities that report to the U.S. FDA are located with South Coast AQMD. To determine the indoor area of these facilities, warehouse surveys and a database obtained from a data vendor (CoStar) were used,⁶⁶ which identified 28 of the 80 facilities in these two tiers. As such, it is estimated that 28 large warehouses will be subject to the tracking and reporting requirements in PAR 1405; the name and addresses of these 28 warehouses are listed in Appendix C. PAR 1405 requires Tier I Warehouses and Tier II Warehouses, for the one-year reporting period, to track the number of pallets that are sterilized by EtO received directly from entities performing sterilization. Furthermore, PAR 1405 will require Tier I Warehouses to provide additional assessment of EtO emissions. To assist with identifying sterilization facilities in the U.S., Appendix D of this staff report lists the commercial sterilization facilities subject to NESHAP for Ethylene Oxide Commercial Sterilization and Fumigation Operations. If the applicable warehouses received shipments directly from these commercial sterilization facilities or directly from sterilization facilities outside of the U.S., owners or operators need to identify whether the shipments have been sterilized by EtO and record them accordingly.

3.2 EMISSIONS IMPACT

PAR 1405 affects 16 facilities conducting sterilization or related operations using ethylene oxide. PAR 1405 affects 28 warehouses that receive ethylene oxide sterilized materials.

Fugitive emissions will be reduced through implementation of leak detection and repair programs while permanent total enclosure requirements will ensure that ethylene oxide emissions from sources inside the PTE do not leave the facility as fugitive emissions. Monitoring data has demonstrated that ambient air concentrations of EtO were reduced after the implementation of measures such as those proposed in PAR 1405. Existing Fugitive emissions cannot have not been quantified because there is no practical methodology/technology previously or currently available. Thus, while fugitive emissions are expected to be minimized as a direct consequence of implementing PAR 1405, the quantity of fugitive emission reductions cannot be estimated.

⁶⁶ <https://www.costar.com/>

PAR 1405 will reduce stack emissions by amending the 1991 emission limits to more stringent emission limits based on achieved-in-practice, feasible performance standards for control efficiency, concentration limits and, for large facilities, include a facility-wide mass emission rate limit. Stack emissions at large facilities will be monitored continuously or semi-continuously through the implementation of CEMS or SCEMS, respectively, to ensure continued compliance with the emission limits. Existing Rule 1405 requires the facility owner or operator to demonstrate compliance via control efficiency, which by itself cannot determine EtO emissions without additional information such as flow rate and outlet concentration. While PAR 1405 allows a compliance demonstration via control efficiency or a concentration performance standard, both compliance demonstration methods do not provide a direct way to quantify the actual amount of potential emission reductions from the stack outlet. For this reason, the amount of anticipated EtO emission reductions could not be quantified.

3.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 1405) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption ~~has been~~ will be prepared pursuant to CEQA Guidelines Section 15062, and if the proposed project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor’s Office of Planning and Research.

3.4 SOCIOECONOMIC IMPACT ASSESSMENT

A separate socioeconomic impact assessment has been prepared and ~~will be~~ released for public review and comment together with this staff report on October 31, 2023 ~~at least 30 days prior to~~ the South Coast AQMD Governing Board Public Hearing, which is anticipated to be held on December 1, 2023.

3.5 DRAFT FINDINGS UNDER HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PAR 1405 is needed to reduce emissions of ethylene oxide from sterilization and related operations, as well as related community health impacts caused by those emissions.

Authority

The South Coast AQMD Governing Board has authority to adopt PAR 1405 pursuant to Health and Safety Code Sections 39002, 39650 et. seq., 39666, 40000, 40001 40440, 40441, 40702, 40725 through 40728, 41508, and 41700.

Clarity

PAR 1405 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PAR 1405 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PAR 1405 will not impose the same requirements as or requirements in conflict with any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference

By adopting PAR 1405, the South Coast AQMD Governing Board will be implementing, interpreting or making specific the provisions of the Health and Safety Code Sections 40001 (rules to achieve and maintain ambient air quality standards) and 41700 (nuisance), and Federal Clean Air Act Section 112 (Hazardous Air Pollutants) and Section 116 (Retention of State authority).

3.6 COMPARATIVE ANALYSIS

Health and Safety Code Section 40727.2 requires a comparative analysis of the proposed amended rule requirements with those of any State, Federal or South Coast AQMD rules and regulations applicable to the same equipment or source category.

The proposed requirements in PAR 1405 will affect facilities conducting sterilization using EtO as well as some large warehouses that receive materials sterilized by EtO. PAR 1405 has been compared to the State ATCM – *Ethylene Oxide Airborne Toxic Control Measure for Sterilizers and Aerators* and Federal NESHAP Subpart O – *Ethylene Oxide Emissions Standards for Sterilization Facilities* (commonly referred to as Subpart O). Below is a table summarizing the key requirements of PAR 1405, State ATCM and Federal NESHAP.

Rule Element	PAR 1405	State ATCM	NESHAP Subpart O
Applicability	Facilities that conduct ethylene oxide (EtO) sterilization, post-aeration storage facilities, and warehouses that store materials sterilized with EtO, except, for emission standards, sterilization facilities using less than 4 lbs per calendar year	Sterilizers and aeration-only facilities except, for emission standards, sterilizers using less than 25 lbs per consecutive 12 months	All sterilization sources except beehive fumigators, research or laboratory facilities, human or animal healthcare facilities, or, for emission standards, sources using less than 1 ton
Processes	Sterilization, aeration, post-aeration, and storage operations	Sterilization and aeration operations	Sterilization and aeration operations
Performance Standards	Performance standards based on permitted throughput below: 2,000 lb/year or more permitted EtO facility (“large”): <ul style="list-style-type: none"> • 99.99% control efficiency (CE) OR 0.01 ppm by volume; AND • Facility-wide 0.015 lb/hr or calculated emission limit based on permitted usage 400 lb/year or more permitted EtO facility (“medium”): <ul style="list-style-type: none"> • 99.9% CE OR 0.01 ppmv 4 lb/year or more permitted EtO facility (“small”): <ul style="list-style-type: none"> • 99.9% CE OR 0.01 ppmv Post-aeration storage facility: <ul style="list-style-type: none"> • 95% CE 	Performance standards based on actual usage: 20,000 lbs or more per 12 months: <ul style="list-style-type: none"> • 99.9% CE for sterilizers • 99% CE for aerators and others 5,000 – 20,000 lbs per 12 months: <ul style="list-style-type: none"> • 99.9% CE for sterilizers • 99.0% CE for aerators and others 2,000 – 5,000 lbs per 12 months: <ul style="list-style-type: none"> • 99.9% CE for sterilizers • 95% CE for aerators and others 600 – 2,000 lbs per 12 months: <ul style="list-style-type: none"> • 99.9% CE for sterilizers • 95% CE for aerators • 99.7% CE for sterilizer/aerators 25 – 600 lbs per 12 months: <ul style="list-style-type: none"> • 99.0% CE for sterilizers 95% CE for aeration-only facilities	Performance standards based on actual usage below: 20,000 lb/year or more EtO usage facility: <ul style="list-style-type: none"> • 99% CE for sterilizers • 99% CE OR 1 ppmv for aerators 2,000 lb/year or more EtO usage facility: <ul style="list-style-type: none"> • 99% CE
Continuous Stack Monitoring Requirements	Large sterilization facility: <ul style="list-style-type: none"> • Continuous Emission Monitoring System (CEMS) or Semi-Continuous Monitoring System (SCEMS) 	Not required	Not required

Rule Element	PAR 1405	State ATCM	NESHAP Subpart O
Fugitive Emission Control Requirements	<ul style="list-style-type: none"> • Permanent total enclosure (PTE) – U.S. EPA Method 204 <ul style="list-style-type: none"> ○ Post-aerator alternative ○ Sterilant gas storage area alternative • Continuous differential pressure monitoring • Periodic Natural draft opening (NDO) testing • Leak detection and repair (LDAR) for specific equipment and areas not under PTE <ul style="list-style-type: none"> ○ Periodic inspections using detectors ○ Daily audio/visual inspections 	Exhaust systems and EtO supply systems must be leak free	None
Interim Monitoring Requirements	Large sterilization facility: <ul style="list-style-type: none"> • Phase I mobile monitoring • Phase II fenceline air monitoring 	Not required	Not required
Curtailement of Sterilization Operations	Progressive reduction in allowable facility EtO usage based on elevated fenceline air monitoring results	Not applicable	Not applicable
Recordkeeping	<ul style="list-style-type: none"> • EtO usage records • Air pollution control malfunctions • Records demonstrating compliance with performance standards • Large facilities: First destination for customer recordkeeping • 5 years of records required. Most recent 2 years required onsite 	<ul style="list-style-type: none"> • EtO usage records • Air pollution control malfunctions • Records demonstrating compliance with performance standards • 5 years of records required. Most recent 2 years required onsite 	<ul style="list-style-type: none"> • EtO usage records • General recordkeeping requirements per 40 CFR 63.10(b) • Additional records for continuous monitoring systems per 40 CFR 63.10(c) • 5 years of records required. Most recent 2 years required onsite

Rule Element	PAR 1405	State ATCM	NESHAP Subpart O
Reporting	<ul style="list-style-type: none"> • Semi-annual and annual reporting (incorporation of ATCM requirements) • Reporting of: <ul style="list-style-type: none"> ○ Non-compliant/missing data for differential pressures of PTEs ○ Exceeding threshold to next higher permitted EtO tier, triggering requirements for that tier ○ Failed source test ○ LDAR leak • Large facilities: shipments of EtO-sterilized materials for one year • Tier I Warehouses and Tier II Warehouses: receiving of EtO-sterilized materials for one year 	<ul style="list-style-type: none"> • Semi-annual and annual reporting 	<ul style="list-style-type: none"> • Reporting requirements per 40 CFR 63.10(d) and (e) excluding those relating to opacity monitors, SSM plan, and excess emissions and monitoring system performance reports • If using more than 10 tons, construction or reconstruction reporting per 40 CFR 63.5 • Notifications requirements per 40 CFR 63.9

APPENDIX A – ETHYLENE OXIDE FACT SHEET (OSHA 2002)





OSHA FACT Sheet

Ethylene Oxide

What is ethylene oxide?

Ethylene oxide (EtO) is a flammable, colorless gas at temperatures above 51.3 °F (10.7 °C) that smells like ether at toxic levels. EtO is found in the production of solvents, antifreeze, textiles, detergents, adhesives, polyurethane foam, and pharmaceuticals. Smaller amounts are present in fumigants, sterilants for spices and cosmetics, as well as during hospital sterilization of surgical equipment.

How can ethylene oxide harm workers?

In addition to eye pain and sore throat, exposure to EtO can cause difficult breathing and blurred vision. Exposure can also cause dizziness, nausea, headache, convulsions, blisters and can result in vomiting and coughing. Both human and animal studies show that EtO is a carcinogen that may cause leukemia and other cancers. EtO is also linked to spontaneous abortion, genetic damage, nerve damage, peripheral paralysis, muscle weakness, as well as impaired thinking and memory. In liquid form, EtO can cause severe skin irritation upon prolonged or confined contact.

What should employers know about ethylene oxide?

Employee exposure is limited to one part EtO per million parts of air (1 ppm) measured as an 8-hour time-weighted average (TWA). Employee exposure may not exceed the short-term excursion limit of 5 ppm EtO averaged over any 15-minute sampling period. These limits are called permissible exposure limits (PELs).

Most occupational exposures to EtO are covered by the OSHA standard. The standard does not apply, however, when employers can demonstrate that the processing, use, or handling of products containing EtO will not release airborne concentrations of EtO at or above the standard's action level of 0.5 ppm. The action level is calculated as an 8-hour TWA and is the threshold for increased compliance activities (e.g., air monitoring, medical examinations, labeling, employee information, and training).

For details of the requirements in OSHA's EtO standard for occupational exposures, see *Title 29 of the Code of Federal Regulations (CFR) Part 1910.1047*. *Note:* Workplaces are exempt from this standard when objective data shows that the processing, use, or handling of products containing EtO cannot release airborne concentrations of EtO at or above the action level or in excess of the excursion limit during normal conditions.

What must employers do when exposures exceed the standard's permissible exposure limits?

If employee exposures exceed either the PEL or the excursion limit, employers must take the following actions:

- Use engineering controls and work practices to control employee exposure.

- Establish and implement a written compliance program to reduce exposures to or below the TWA and exposure limit.
- Establish personal air monitoring as well as information and training programs for employees exposed to EtO at or above the action level or above the excursion limit. Conduct training upon initial job assignment and annually.
- Establish a regulated area wherever airborne concentrations of EtO are expected to exceed the 8-hour TWA or the excursion limit.
- Establish a medical surveillance program for employees exposed to EtO at concentrations above the action level of 0.5 ppm, measured as an 8-hour TWA, for more than 30 days per year.
- Place warning labels on all containers that might cause employee exposures at or above the action level or excursion limit.
- Remember that employee rotation is prohibited as a means of compliance with the 8-hour TWA or exposure limit.
- Select, provide, and maintain appropriate personal protective equipment and ensure that employees use it to prevent skin and eye contact.

When must employers require workers to use respirators?

Employers must ensure that workers use respirators to control EtO exposure in the following circumstances:

- During installation or implementation of feasible engineering controls and work practices;
- During maintenance, repair, and certain operations when engineering and work practice controls are not feasible;
- When engineering and work practice controls are not currently available to reduce exposures to or below the PEL; and
- During emergencies.

What are employers required to do concerning exposure monitoring?

To help protect workers, employers must conduct the following exposure monitoring:

- Initial monitoring to determine the airborne concentrations of EtO that workers are exposed to (representative sampling of employees' exposures is permitted).
- Periodic exposure monitoring if the airborne concentration of EtO is at or above the action level or above the 15-minute excursion limit.
- Additional monitoring if there has been a change in workplace conditions, such as a change in the

Ethylene Oxide

process or materials used, and if the change could increase employee exposures.

Note: If the exposure level is maintained below the action level, you may discontinue TWA monitoring until there is a change in production, equipment, processes, personnel, or control measures that may result in new or additional exposure to EtO.

Employers must also do the following:

- Allow affected employees or their designated representatives to observe the monitoring.
- Notify affected employees of the results of the monitoring within 15 working days of receiving the results.

Do all businesses where EtO is present need medical surveillance programs?

Employers must implement a medical surveillance program, conducted or supervised by a licensed physician, for an employee under the following circumstances:

- If the employee is assigned to an area where exposure to EtO may be at or above the action level for 30 days or more during the year.
- If the employee has been exposed to EtO in an emergency situation.

What steps must employers take to communicate with workers about EtO exposure?

Employers must do the following to communicate information to affected workers:

- Establish regulated areas where occupational exposure to EtO exceeds the 8-hr TWA or excursion limit, and clearly mark them to limit the number of workers in the regulated area and to allow only authorized persons to enter.
- Provide the signs and labels specified by the standard clearly indicating EtO's carcinogenic and reproductive hazards in regulated areas.
- Train workers upon initial assignment and then annually if they are at risk of exposure at or above the action level or above the excursion limit.
- Maintain a material safety data sheet for EtO that conforms to the provisions of OSHA's hazard communication standard, 29 *CFR* 1910.1200(g).

Are there any recordkeeping requirements concerning employee exposures to EtO?

Employers are required to maintain the following records relating to employee exposure to EtO:

- Retain employee exposure records for 30 years.

- Keep employee medical records for the duration of employment plus 30 years.

- Keep records of objective data supporting any claimed exemption from the requirements of the OSHA standard.

What should employees do to protect themselves from EtO exposure?

To protect against EtO exposure, follow these safety precautions:

- Wear goggles and skin protection at all times in areas where there is a risk of splashes from liquid EtO.
- Wear proper protective clothing and other approved personal protective equipment when working with EtO.
- Discard clothing that has been degraded by EtO.
- See a doctor if you are exposed to EtO.
- Do not eat, drink, or smoke while working with EtO.

How can you get more information on safety and health?

OSHA has various publications, standards, technical assistance, and compliance tools to help you, and offers extensive assistance through workplace consultation, voluntary protection programs, grants, strategic partnerships, state plans, training, and education. OSHA's *Safety and Health Program Management Guidelines* (*Federal Register* 54:3904-3916, January 26, 1989) detail elements critical to the development of a successful safety and health management system. This and other information are available on OSHA's website.

- For one free copy of OSHA publications, send a self-addressed mailing label to OSHA Publications Office, 200 Constitution Avenue N.W., N-3101, Washington, DC 20210; or send a request to our fax at (202) 693-2498, or call us at (202) 693-1888.
- To order OSHA publications online at www.osha.gov, go to **Publications** and follow the instructions for ordering.
- To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the "U.S. Department of Labor" listing in your phone book, or call toll-free at 800 321-OSHA (6742). The teletypewriter (TTY) number is (877) 889-5627.
- To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website.

This is one in a series of informational fact sheets highlighting OSHA programs, policies, or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to *Title 29 of the Code of Federal Regulations*. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999. See also OSHA's website at www.osha.gov.



APPENDIX B – IMPACTED FACILITIES (STERILIZATION AND POST-AERATION STORAGE FACILITIES)

List of Sterilization and Post-Aeration Storage Facilities

Facility	Address
STERIGENICS US, LLC (ONTARIO)	687 WANAMAKER AVE, ONTARIO, CA 91761
STERIGENICS US, LLC (VERNON)	4801-63 E 50TH ST & 4900 S GIFFORD AVE, VERNON, CA 90058
STERIS, INC.	43425 BUSINESS PARK DR, TEMECULA, CA 92590
APPLIED MEDICAL RESOURCES	9401 TOLEDO WAY, IRVINE, CA 92618
PARTER MEDICAL PRODUCTS INC	17115 KINGSVIEW AVE, CARSON, CA 90746
AMERICAN CONTRACT SYSTEMS INC	14528 MERIDIAN PKY STE B, RIVERSIDE, CA 92518
ST. JUDE MEDICAL CRMD	15900 VALLEY VIEW CT, SYLMAR, CA 91342
MICROVENTION, INC	35 ENTERPRISE, ALISO VIEJO, CA 92656
ADVANCED BIONICS, LLC	28515 WESTINGHOUSE PL, VALENCIA, CA 91355
LIFE SCIENCE OUTSOURCING, INC	830 CHALLENGER ST, BREA, CA 92821
ANIMAL EYE VET INC.	26023 JEFFERSON AVE, MURRIETA, CA 92562
VCA W COAST SPEC & EMERGENCY ANIMAL HOSP	18300 EUCLID, FOUNTAIN VALLEY, CA 92708
LA CITY, GREATER LA ZOO	5333 ZOO DR, LOS ANGELES, CA 90027
UNIVERSITY OF CALIFORNIA, LOS ANGELES	405 HILGARD AVE, LOS ANGELES, CA 90095
MT. SAN ANTONIO COMMUNITY COLLEGE	1100 N GRAND AVE, WALNUT, CA 91789
CARDINAL HEALTH	6275 LANCE DR, RIVERSIDE, CA 92507

APPENDIX C – IMPACTED FACILITIES (WAREHOUSES)



List of Tier I Warehouses

Facilities Registered with U.S. FDA as Wholesale Drug Distributors or Third-Party Logistics Providers as of March 1, 2023 with Estimated Indoor Floor Area of At Least 250,000 Square Feet

Facility Name	Address	City
B. Braun Medical Inc.	1151 Mildred Avenue	Ontario
BECTON, DICKINSON AND COMPANY	2200 W San Bernardino Ave	Redlands
Bluecana LLC	2323 Main Street	Irvine
Cardinal Health 200 LLC - Ontario	4551 E Philadelphia Street	Ontario
Cardinal Health 200, LLC - Riverside	6275 Lance Drive	Riverside
Exel Inc.	9211 Kaiser Way	Fontana
McKesson Corporation	9501 S Norwalk Blvd	Chino
McKesson Medical-Surgical Inc.	18543 E Gale Ave.	City Of Industry
Medline Industries, LP	16415 Cosmos St	Moreno Valley
Medline Industries, LP	1960 W Miro Way	Rialto
Medline Industries, LP	42500 Winchester Rd	Temecula
Owens & Minor Distribution - Southern California DC 65	5125 Ontario Mills Parkway	Ontario
PHOENIX ASSURANCE, LLC	22150 Goldencrest Drive	Moreno Valley
UPS SUPPLY CHAIN SOLUTIONS, INC.	11991 Landon Dr	Mira Loma
UPS Supply Chain Solutions, Inc.	11811 Landon Drive Suite 100	Mira Loma
Walgreen Co.	17500 Perris Blvd	Moreno Valley

List of Tier II Warehouses

Facilities Registered with U.S. FDA as Wholesale Drug Distributors or Third-party Logistics Providers as of March 1, 2023 with Estimated Indoor Floor Area Between 100,000 and 250,000 Square Feet

Facility Name	Address	City
AIT Worldwide Logistics, Inc.	1820 195th Street	Torrance
AmerisourceBergen Drug Corporation	1851 California Ave	Corona
Baxalta - Van Nuys	15903 Strathern Street	Van Nuys
Boxout, LLC	1560 S Baker Ave Ste A	Ontario
Cardinal Health-Valencia	27680 Avenue Mentry	Valencia
Concordance Healthcare Solutions LLC	5010 Azusa Canyon Road	Irwindale
Concordance Healthcare Solutions LLC	14540 Innovation Drive	Riverside
Cypress Medical Products LLC	1938 W Malvern Ave	Fullerton
Grifols USA, LLC	13111 Temple Ave	City of Industry
ICU Medical Sales, Inc.	13939 Borate St.	Santa Fe Springs
Puretek Corporation	7900 Nelson Rd	Panorama City
TWIN MED, LLC	11333 Greenstone Avenue	Santa Fe Springs

APPENDIX D – U.S. FACILITIES SUBJECT TO ETO NESHAP



List of U.S. Facilities Subject to EtO NESHAP

Commercial Sterilization Facilities subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Ethylene Oxide Commercial Sterilization and Fumigation Operations (Subpart O), as of June 6, 2023⁶⁷

Facility Name	Address	City, State
ARIZONA		
American Contract Systems, Inc.	7300 W. Detroit Street	Chandler, AZ
Stryker Sustainability Solutions	10232 S. 51st Street	Phoenix, AZ
ARKANSAS		
Baxter Healthcare Corporation	1900 North Highway 201	Mountain Home, AR
CALIFORNIA		
Microvention, Inc.	35 Enterprise	Aliso Viejo, CA
Life Science Outsourcing, Inc.	830 Challenger Street	Brea, CA
Parter Medical Products Inc.	17115 Kingsview Avenue	Carson, CA
Applied Medical Products Inc.	9401 Toledo Way	Irvine, CA
Sterigenics US, Inc.	4801-63 50th Street	Los Angeles, CA
Blue Line Sterilization Services	401 Bel Marin Keys Blvd, Unit C	Novato, CA
Sterigenics US, LLC	687 Wanamaker Avenue	Ontario, CA
American Contract Systems Inc.	14528 Meridian Parkway, Ste B	Riverside, CA
The Jackson Laboratory	1650 Santa Ana Avenue	Sacramento, CA
Steris Isomedix Services Inc.	7685 Saint Andrews	San Diego, CA
St. Jude Medical CRMD	15900 Valley View Court	Sylmar, CA
Steris, Inc.	43425 Business Park Dr.	Temecula, CA
COLORADO		
LivaNova	14401 W. 65th Way	Arvada, CO
Western	5421 Western Ave	Boulder, CO
Terumo BCT Sterilization Service, Inc.	11308 W. Collins Avenue	Lakewood, CO
Jorgensen Labs, Inc.	2211 West 8th Street	Loveland, CO

⁶⁷ <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/ethylene-oxide-commercial-sterilization-facilities>

CONNECTICUT		
Covidien LP	195 McDermott Road	North Haven, CT
FLORIDA		
Arthrex Manufacturing Inc Finishing	6861 Arthrex Commerce Drive	Ave Maria, FL
Fort Myers Facility	11600 Adelmo Lane	Fort Myers, FL
International Sterilization Laboratory	217 Sampey Road	Groveland, FL
Medtronic ENT	6743 Southpoint Dr N	Jacksonville, FL
American Contract Systems, Inc.	7802 E Telecom Pkwy	Temple Terrace, FL
GEORGIA		
Sterigenics U.S. LLC	2971 Olympic Industrial Court SE, Suite 116	Atlanta, GA
Sterilization Services of Georgia	6005 Boat Rock Boulevard	Atlanta, GA
KPR U.S. LLC d/b/a Kendall Patient Recovery U.S., LLC	1430 Marvin Griffin Road	Augusta, GA
BD (Becton, Dickinson and Company)	8195 Industrial Boulevard	Covington, GA
BD (Becton, Dickinson and Company)	1211 Mary Magnan Boulevard	Madison, GA
IOWA		
American Contract Systems, Inc.	1601 SE Gateway Drive, Suite 120	Grimes, IA
ILLINOIS		
Medline Industries	1160 S Northpoint Boulevard	Waukegan, IL
INDIANA		
Cook Incorporated	6330 North Matthews Drive	Ellettsville, IN
MASSACHUSETTS		
Isomedix Operation, Inc.	435 Whitney Street	Northborough, MA
Professional Contract Sterilization, Inc.	40 Myles Standish Boulevard	Taunton, MA
MARYLAND		
Fuchs North America	3800 Hampstead Mexico Road	Hampstead, MD
Elite Spice, Inc.	1415 Magellan Drive	Hanover, MD
Elite Spice, Inc.	7151 Montevideo Road	Jessup, MD
Trinity Sterile, Inc.	201 Kiley Drive	Salisbury, MD

MINNESOTA		
Cardiac Pacemakers Inc/Boston Scientific	4100 Hamline Ave N	Arden Hills, MN
STERIS Inc.	380 90th Avenue Northwest	Coon Rapids, MN
Medtronic Inc - Rice Creek	7000 Central Ave NE	Fridley, MN
MISSOURI		
Midwest STERILIZATION Corporation	1204 Lenco Avenue	Jackson, MO
American Contract Systems	2610 NE Industrial Dr Ste 220	North Kansas City, MO
NORTH CAROLINA		
Sterigenics US, LLC	10821 Withers Cove Park Drive	Charlotte, NC
Andersen Scientific	1001 Aviation Pkwy Suite	Morrisville, NC
NEBRASKA		
Becton Dickinson Pharmaceutical Systems	920 E 19th Street	Columbus, NE
NEVADA		
Elite Spice, Inc.	1225 E. Greg Street #102	Sparks, NV
NEW HAMPSHIRE		
J-Pac, LLC	25 Centre Road	Somersworth, NH
NEW JERSEY		
Cosmed Group Inc dba Cosmed of NJ	19 Park Drive	Franklin, NJ
ETO Sterilization-Plant #2	2500 Brunswick Ave	Linden, NJ
Steris Isomedix Services Inc	3459 S Clinton Ave	South Plainfield, NJ
NEW MEXICO		
Sterigenics-Santa Teresa, NM	2400 Airport Road	Santa Teresa, NM
NEW YORK		
Long Island Sterilization	175 Wireless Blvd	Hauppauge, NY
Sterigenics US LLC – Kingsbury	84 Park Road	Queensbury, NY
OHIO		
American Contract Systems, Inc.	85 Shaffer Park Drive	Tiffin, OH
OKLAHOMA		
LEMCO Ardmore	3204 Hale Road	Ardmore, OK

<i>PENNSYLVANIA</i>		
B Braun Med Inc/Allentown	901 Marcon Blvd	Allentown, PA
Cosmed Group LLC/Erie	2205 E 33rd Street	Erie, PA
American Contract Systems	4040 Jackson Pointe Court, Building 4000	Zelienople, PA
<i>PUERTO RICO</i>		
Edwards Lifesciences Technology Sàrl	Parque Industrial Carr. PR-402, Km. 1.4 N	Añasco, PR
St. Jude Medical Puerto Rico, LLC.	Carr 682 Int Santana Industrial Park Bo. Santana	Arecibo, PR
Guidant Puerto Rico, B.V. (dba Boston Scientific Puerto Rico)	Road 698 lot No. 12	Dorado, PR
Customed, Inc.	Carretera Igualdad #7	Fajardo, PR
Medtronic Puerto Rico Operations Company (MPROC Juncos)	Carr. PR-31, Km 24.4	Juncos, PR
Steri-Tech, Inc.	Carretera 701 Km 0.7 Salinas Industrial Park	Salinas, PR
Medtronic PR Operation Co.	Carr. 151, Bo. Villalba Arriba	Villalba, PR
<i>RHODE ISLAND</i>		
Boston Scientific Corporation	8 Industrial Drive	Coventry, RI
<i>SOUTH CAROLINA</i>		
STERIS-Isomedix Services	2072 Southport Road	Spartanburg, SC
<i>SOUTH DAKOTA</i>		
3M Company	601 22nd Avenue South	Brookings, SD
<i>TENNESSEE</i>		
Sterilization Services of Tennessee	2396 Florida Street	Memphis, TN
DeRoyal Industries, Inc.	1135 Highway 33 South	New Tazewell, TN
<i>TEXAS</i>		
Steritec, Inc.	1705 Enterprise Street	Athens, TX
Dynatec Scientific Laboratories	11940 Golden Gate Rd	El Paso, TX
Isomedix Operations, Inc.	1435 Isomedix Place	El Paso, TX
Isomedix Operations, Inc.	1175 Isuzu Pkwy	Grand Prairie, TX

Sterigenics U.S. LLC	1302 Avenue T	Grand Prairie, TX
American Contract Systems, Inc.	7702 Parnell St	Houston, TX
Midwest Sterilization Corporation	12010 General Milton	Laredo, TX
Ethicon, Inc.	3348 Pulliam Street	San Angelo, TX
<i>UTAH</i>		
Ethylene Oxide Commercial Sterilization Plant	5725 West Harold Gatty Drive	Salt Lake City, UT
BD Medical	9450 South State Street	Sandy, UT
<i>VIRGINIA</i>		
Central Virginia Health Network	2521 Brittons Hill Road	Richmond, VA
Sterilization Services of Virginia	5674 Eastport Boulevard	Henrico, VA
Lifenet Health	5733 Bayside Rd - Suite 104	Virginia Beach, VA
<i>WEST VIRGINIA</i>		
ALCON - Advance Optic Device Center North	2 Vision Lane	Lesage, WV

APPENDIX E – RESPONSES TO COMMENTS

TABLE OF CONTENTS

1. Ethylene Oxide Sterilization Association, Inc Comment Letter (4/6/2023)
2. Life Science Outsourcing Comment Email (4/6/2023)
3. Sterigenics US, LLC Comment Letter (4/6/2023)
4. California Life Sciences Comment Letter (4/11/2023)
5. Cardinal Health Comment Letter (4/13/2023)
6. Communities for a Better Environment Comment Letter (4/16/2023)
7. AdvaMed Comment Letter (4/16/2023)
8. Communities for a Better Environment Comment Letter (5/11/2023)
9. Greater Coachella Valley Chamber of Commerce Comment Email (7/26/2023)
10. Life Sciences Coalition Comment Letter (7/28/2023)
11. AdvaMed Comment Letter (8/9/2023)
12. Atmosfir Optics Comment Letter (8/9/2023)
13. Coalition For A Safe Environment Comment Letter (8/9/2023)
14. Communities for a Better Environment Comment Letter (8/9/2023)
15. Life Science Outsourcing Comment Email (8/9/2023)
16. Sterigenics US, LLC Comment Letter (8/9/2023)
17. Redlands Chamber of Commerce Comment Email (08/30/2023)
18. Life Science Outsourcing Comment Email (10/4/2023)
19. AdvaMed Comment Letter (10/13/2023)
20. HIDA Comment Letter (10/18/2023)
21. HASC Comment Letter (10/26/2023)
22. Abbott Comment Email (11/1/2023)
23. California Life Sciences Comment Letter (11/6/2023)



The Ethylene Oxide Sterilization Association, Inc.
Managed by B&C® Consortia Management, L.L.C.

April 6, 2023

Via E-mail

Mr. Michael Krause
Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: SCAQMD Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Mr. Krause:

On behalf of its members, the Ethylene Oxide Sterilization Association, Inc. (EOSA) appreciates the opportunity to comment on the South Coast Air Quality Management District's (SC AQMD) Proposed Amended Rule (PAR) 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations.

EOSA members represent a broad spectrum of the U.S. ethylene oxide (EtO) sterilization industry. EOSA is a nonprofit organization that represents EtO suppliers, spice processors, contract sterilizers, sterilization equipment manufacturers, medical device manufacturers, analytical equipment and systems suppliers, and laboratories. EOSA members work diligently to assist in providing life-saving sterile healthcare products around the world, over 50% of which are sterilized using EtO, and assist in providing safe and wholesome spices for consumers. EOSA works to educate industry, regulators, and the public on the essential uses and benefits of EtO sterilization, for which no direct replacement is currently, and not for the foreseeable future, available. EOSA also works to improve safety standards, foster industry communication, and provide a forum for many subjects related to EtO sterilization.

EOSA and its members believe that the safety of surrounding communities and workers in the EtO sterilization industry is critically important. The EtO sterilization industry has historically undertaken, and will continue to undertake, significant efforts to reduce the emissions and potential worker exposure of EtO utilizing the best available technologies and practices. EOSA is providing these comments to ensure that regulatory decisions reflect accurate facts, the best available science, and proven technologies and practices.

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EOSA

Mr. Michael Krause
April 6, 2023
Page 2

EOSA appreciates SC AQMD’s openness and transparency during the process and supports the development of a rule that is clear and workable, enabling the continued and safe use of EtO. EOSA urges SC AQMD to consider the points outlined below, many of which are addressed in more detail in comments that others have provided to SC AQMD:

General comments regarding PAR 1405:

- There is limited time to comment on the PAR 1405 given its potentially significant impact on the global supply chain and healthcare industry. EOSA members are concerned that the scope and requirements of the proposed rule will drive sterilization facilities out of the state and will impact the medical device sterilization industry, which is at or near its capacity. If it is no longer able to operate these facilities, deep and lasting adverse impacts on hospitals and health care systems in southern California, and in the entire country, could occur. EOSA requests SQ AQMD to ensure that the rule does not prevent sterilization facilities from staying open and serving patients, and that the new rule requirements are workable and can be implemented without even temporarily closing facilities; } Comment 1-1

- Implementation timelines are too short given limitations in technology, the limited supply base, complexity of upgrades, limited resources and available equipment, and significant impact of these proposed timelines on current capacity. EOSA members are concerned that some facilities will not be able to modify and meet the new requirements in these short timelines, and/or that local building authorities may impose additional requirements for facility upgrades, which will further increase the complexity and timelines of compliance; } Comment 1-2

- Given the significant differences in products and processes, EOSA strongly encourages SC AQMD to adopt performance-based standards for emission control. This is critical to balance the continuity of sterilized medical device supplies with environmental improvements; and } Comment 1-3

- EOSA notes that the U.S. Environmental Protection Agency (EPA) is in the process of releasing regulations that will have significant impact on the EtO sterilization facilities in the United States, including those within the SC AQMD area. Such regulatory documents include a proposed rule to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Ethylene Oxide Commercial Sterilization facilities and a Proposed Interim Registration Review Decision (PID) for the re-registration of EtO under its pesticide regulations. EOSA believes that SC AQMD should } Comment 1-4

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EOSA

Mr. Michael Krause
 April 6, 2023
 Page 3

consider these regulatory documents, which are planned for publication soon, and their impacts before completing PAR 1405. These rules could have conflicting requirements to those been proposed by PAR 1405, which could be very problematic.

} Comment 1-4 cont.

Technical comments regarding PAR 1405 and the draft staff report:

- EOSA encourages SC AQMD to use a technology neutral approach, and take into consideration technology limitations, to enable facilities to select an effective control method to meet new emissions targets while remaining open and operating safely. For example, PAR 1405 (d)(1)(C) requires that a facility demonstrate EtO emission control efficiency of 99.99% or greater or demonstrate emissions of EtO at a concentration of ≤ 0.01 ppm for each control system. In fact, the proposed rule of 99.99% destruction efficiency or < 0.01 ppm is not achievable for the dry bed adsorber systems typically used to control EtO emissions from high volume, low flow sources such as aeration rooms and chamber back vents. Additionally, the detection limit for the test method used has been as high as 0.01 ppm, so proving a concentration below that is not possible. It will be extremely difficult, if not impossible, to consistently meet the control efficiency and/or concentration limits proposed in the draft rule language;
- PAR 1405 (d)(1)(D) sets a mass emission rate of ≤ 0.025 lb/hr, which EOSA believes based on a single mid-size EtO contract sterilization facility permit. The percentage control efficiency performance requirement set in PAR 1405 (d)(1)(C) should have properly controlled the emissions from the facility, and a mass emission rate limit should not be set, or if necessary, should correspond to existing EtO permitted use amount within the state of California;
- Methods of EtO monitoring can be unreliable. On page 1-23 of the preliminary draft staff report, SC AQMD notes that gas chromatography-photoionization detection (GC-PID) “is another technology which may be used for monitoring EtO stack emissions, albeit on a semi-continuous basis.” Significant challenges measuring EtO ambient concentrations have been noted by many regulatory agencies, including EPA, Georgia Environmental Protection Division, and West Virginia Department of

} Comment 1-5

} Comment 1-6

} Comment 1-7

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EOSA

Mr. Michael Krause
 April 6, 2023
 Page 4

Environmental Protection.^{1,2} These agencies have challenged the existing test method to measure low EtO concentrations and have pointed to other existing sources of EtO, both natural and human-made. Such challenges need to be properly considered and noted in the development of this rule. Furthermore, there have been no feasible fence-line ambient monitoring methods that would address such concerns and provide timely measurements of EtO near sterilization sources;

Comment 1-7 cont.

- Continuous Emission Monitoring Systems (CEMS) and Semi-Continuous Emission Monitoring Systems (SCEMS) equipment are relatively new technologies and their application in commercial sterilization is still an emerging technology. In fact, EPA has recognized the limitations of technology in correspondence related to passive methods such as Method TO-15. Additionally, existing real-time methods based on Fourier Transform Infrared Spectroscopy (FTIR/OE-FTIR) and Gas Chromatography (GC) may not consistently meet the detection limit requirements being proposed by SCAQMD. With only one method currently developed specifically for EtO through the recent publication of EPA Other Test Method 47 (OTM-47),³ facilities have few options for meeting these stringent requirements. The current demand for such equipment is already driving up lead times and the installation and integration of such systems is lengthy as well; and

Comment 1-8

- PAR 1405(o)(3) states that the owner or operator of a facility performing sterilization shall not allow the release of uncontrolled emissions of EtO to the atmosphere from any Permanent Total Enclosure (PTE) at any time. It

Comment 1-9

¹ Ethylene Oxide Monitoring Report, Georgia Department of Natural Resources, Environmental Protection Division. May 12, 2022, available at <https://epd.georgia.gov/ethylene-oxide-information>.

² Ethylene Oxide Monitoring – Characterization of South Charleston and Institute, West Virginia and Surrounding Areas, West Virginia Department of Environmental Protection, Division of Air Quality. February 21, 2023. Available at <https://dep.wv.gov/key-issues/Documents/EtO/Final%20Report/Final%20Report%20Body%202-21-2023.pdf>.

³ Other Test Method 47 (OTM-47) Measurement of Ethylene Oxide Emissions from Stationary Sources by Cavity Ring-Down Spectroscopy. March 23, 2023. Available at https://www.epa.gov/system/files/documents/2023-03/Other%20Test%20Method%2047_R0.pdf.

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EOSA

Mr. Michael Krause
April 6, 2023
Page 5

is not possible for facilities to comply with this condition during unforeseen power outages. Facilities have systems in place to shut down the processes during events such as power outages. Fans, however, can continue to run for some period of time on their own inertia even when scrubber pumps are immediately shut down. Backup generation can take 30 seconds or more to detect the outage, start up, and generate enough power to run processes.

} Comment 1-9 cont.

■ Other technical comments:

➤ EOSA has concerns on the application of Method 204. In mixed use facilities, Method 204 may not be achievable due to Good Manufacturing Practice (GMP) requirements for other U.S. Food and Drug Administration-regulated occupancies; and

} Comment 1-10

➤ Reporting of the number of pallets does not directly translate to calculation of emissions due to differences in product, cycles, product release, processing location, and logistics.

} Comment 1-11

■ It is also critically important to take into consideration the background levels of EtO in the ambient air and the numerous other sources of EtO emissions such as decaying plant material, and those from ubiquitous consumer items like cars and trucks, lawn mowers, gas generators, etc.

} Comment 1-12

Thank you for your consideration of these comments. It is critical that SQ AQMD consider the information outlined in these comments. It is of paramount importance not to overestimate the potential risk of EtO from its critical sterilization use, and to be able to continue using this life sustaining, life-saving, and irreplaceable substance, to sterilize healthcare devices and pasteurize certain food products.

Sincerely,



Meibao Zhuang
Senior Manager
The Ethylene Oxide Sterilization Association, Inc.

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Responses to Ethylene Oxide Sterilization Association, Inc Comment Letter, submitted 4/6/2023

1-1 Response: PAR 1405 has been in development for over a year with multiple opportunities for stakeholder involvement. The public rulemaking process began in August 2022 with eight working group meetings held through October 2023 to solicit public comments. These working group meetings addressed background on EtO, the sterilization process, monitoring data, case studies, proposed rule concepts, the initial rule language, fence line air monitoring, and ultimately curtailment provisions. The initial PAR 1405 was first released on February 10, 2023. In response to feedback from stakeholders, a second version of PAR 1405, known as preliminary draft rule language, together with the preliminary draft staff report was released on March 17, 2023. A third version of PAR 1405 referred to as revised preliminary draft rule language was released on July 21, 2023. A second revised preliminary draft rule language, the fourth version of PAR 1405, was released on September 28, 2023.

A public workshop for PAR 1405 was held on March 23, 2023 to obtain feedback from the affected business and the public. The deadline to submit written comment was set on April 6 to allow for time for updates to the rule language and staff report as necessary. Stakeholders who reached out to staff for additional time were granted an extension of one additional week. A public consultation meeting for PAR 1405 was held on July 26, 2023 to obtain additional feedback with a deadline to submit written comment on August 9. Public comments on PAR 1405 are accepted throughout the public process including the Public Hearing (scheduled for December 1, 2023).

Staff understands that EtO sterilization plays a critical role in the supply chain of medical devices and patient health and has considered carefully the implementation requirements in PAR 1405.

1-2 Response: Staff has received public comments regarding the implementation timeframe, and the concerns of supply chain, time needed for engineering evaluation, time to obtain building permit for PTE construction, increasing lead time of control and monitoring equipment driven by the release of the proposed NESHAP. As a result, PAR 1405 has been revised to increase implementation timelines by six (6) to eight (8) months for sterilization facilities.

1-3 Response: PAR 1405 sets performance standards based on best available technology achieved-in-practice. PAR 1405 is technology-neutral and requires that control systems demonstrate compliance with performance standards based on control efficiency, outlet concentration, and/or mass emission rates that are

achieved-in-practice. Each performance standard, monitoring strategy, or control requirement in PAR 1405 has been evaluated by reviewing source testing reports, permits, facility surveys, site visits, vendor meetings, or other methods to determine if proposed performance standards or control requirements are technologically-feasible. See Chapter 1 of this staff report on the source test / monitoring data and technologies evaluated.

- 1-4 Response: Staff has carefully considered the proposed NESHAP for ethylene oxide from commercial sterilization known as Subpart O, released on April 11, 2023, to ensure that there are no conflicting requirements. The proposed NESHAP will go through its public process and U.S. EPA has signed a consent decree to finalize the regulation by March 1, 2024. Staff is committed to evaluate again for any conflict between PAR 1405 and NESHAP once it is approved, and amend PAR 1405 as necessary. Please note that it is possible that the requirements of PAR 1405, while not in conflict with the NESHAP, may include provisions that are more stringent than the NESHAP. PAR 1405 includes control and monitoring requirements to address stack and fugitive EtO emissions with timely implementation schedules. Approval of PAR 1405 will provide regulatory certainty and obligate facility operators to control emissions by the implementation deadlines.
- 1-5 Response: Based on the public comments and the proposed NESHAP, PAR 1405 has been revised to change the averaging time of the outlet concentration from daily averaging to a rolling 30-day average.
- See Response 1-3 on technological feasibility of performance standards in PAR 1405.
- 1-6 Response: PAR 1405 has been revised to allow for a facility-wide mass emission rate limit to be set to correspond to the existing EtO permitted use amount and the 99.99% control efficiency standard. PAR 1405 also takes into consideration rounding and Appendix 1 includes procedures to determine this facility-specific value and an example of the calculation.
- 1-7 Response: Staff disagrees with this characterization of EtO monitoring technologies. CEMS using FTIR technology was implemented to monitor EtO stack emissions at a sterilization facility in 2019 and successfully passed a Relative Accuracy Test Audit in 2020. SCEMS using GC-PID technology was implemented to continuously monitor stack emissions of certain volatile organic compounds (VOCs) at a facility in Vermont since 1993 and GC-PID technology has been used to measure stack emissions during source testing for many years. A third technology, cavity ring-down spectroscopy (CRDS), was implemented to continuously monitor low concentration indoor EtO levels at a sterilization facility in 2021. In addition, the U.S. EPA has also

proposed continuous monitoring requirements in its proposed NESHAP and proposed to add additional test methods for continuous monitoring of EtO.

For fenceline air monitoring, PAR 1405 relies on a variety of proven, established technologies. One compliance path is U.S. EPA Compendium Method TO-15, now in its second edition and promulgated in 1999. Another path is U.S. EPA Method TO-15A, an update to TO-15 and another canister sampling method. In addition, PAR 1405 allows the use of real-time monitoring, providing more timely data acquisition. As this field is relatively new, PAR 1405 allows for these emerging technologies if established to meet certain performance standards.

See Response 1-3 on technological feasibility of performance standards in PAR 1405.

- 1-8 Response: See Response 1-7 regarding EtO CEMS monitoring technologies.
- 1-9 Response: PAR 1405 has been revised to list the requirements formerly located in the Prohibitions subdivision within the Exemptions subdivision regarding PTEs during the loss of power or other unplanned event outside of the control of the owner or operator.
- 1-10 Response: PTEs complying with U.S. EPA Method 204 have been implemented at multiple sterilization facilities, both within the South Coast AQMD and elsewhere. Staff is aware of challenges regarding the quality of supplied air coming into PTEs but intake filters may be used to remove particulates or dust from makeup air.
- 1-11 Response: Staff agrees that the potential of EtO emissions from warehouses depends on many factors. PAR 1405 has been revised to include fenceline air monitoring for certain large warehouses, referred to as Tier I Warehouses, to determine their impacts on ambient air EtO concentrations. PAR 1405 also allows for Tier I Warehouses to perform an emission study to quantify their emissions or fund a demonstration program to determine ambient air EtO concentrations in real-time.
- 1-12 Response: As noted in PAR 1405 rulemaking materials, background EtO concentrations have been detected at levels at or below 0.17 ppb at ambient air monitoring locations within South Coast AQMD in 2021 and preliminary data indicates background EtO levels at or below 0.29 ppb in 2022. This value was considered in crafting trigger levels for curtailment with the lowest curtailment trigger level more than one order of magnitude greater than the highest background EtO concentration detected. Background EtO is an area of concern but is otherwise outside of the scope of PAR 1405 rulemaking.

Areio Soltani

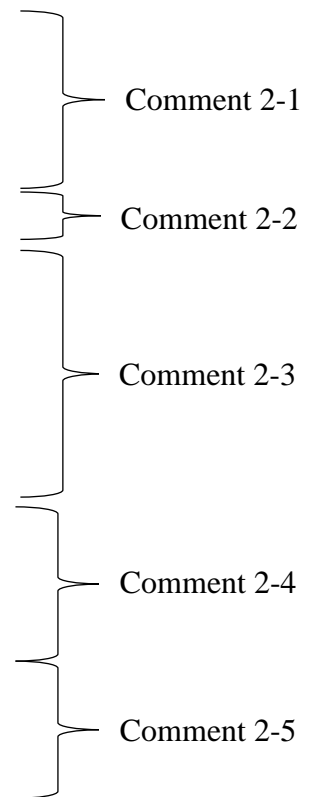
From: Jeffrey Chuang <jchuang@lso-inc.com>
Sent: Thursday, April 6, 2023 5:20 PM
To: Areio Soltani; Neil Fujiwara; Kalam Cheung; Michael Krause
Cc: Souk Phimphasone
Subject: Public Comments for SCAQMD Rule 1405 Proposed Rule Language

Dear SCAQMD team,

Thank you for working so diligently to draft the proposed amendment to SCAQMD Rule 1405. Please accept this email as my official communication for public comment, superseding my previous email on April 4th, 2023.

Please see below questions and comments regarding the March 2023 draft language:

1. (c) Definitions
 - a. "Dunnage" is not defined, nor mentioned, in the draft rule.
 - i. Many ethylene oxide (EO) sterilization cycles are only qualified for a single load configuration.
 - ii. To ensure load uniformity for sterilization, dunnage is often required to backfill the empty space in loads.
 - iii. Dunnage usually consists of packaging material and device surrogates.
 - iv. Dunnage is often stored on-site at the sterilizer.
 - v. Dunnage is often re-used for multiple sterilization cycles.
 - b. (35) Waste Storage Area: Other than OSHA and Cal/OSHA requirements, is there a specific rule for waste handling?
2. (e)(2)(A)(iii) Post-Aerator
 - a. To release sterilized product and dunnage (from aeration and post-aerators) to the warehouse, is there any guidance (e.g., an air emissions target)?
 - i. Products may not have defined aeration parameters and/or EO residue limits, especially those for engineering studies research & development, and validation.
 - ii. Dunnage is often stored on-site. It is often re-used for multiple sterilization cycles.
 - b. If a product's emissions are below a certain limit, are there cases where the use of a post-aerator can be bypassed?
 - i. For some materials (e.g., metals), the use of a post-aerator would not significantly change the amount of EO being emitted.
 - c. For products that are not medical devices, where EO residues are not regulated, what would be the requirements?
 - i. Rule 1405 still applies to labware, foodstuffs, cosmetics, prototype devices, and other products sterilized by EO.
 - ii. ISO 10993-7 only sets limits for medical devices with patient contact.
 - iii. ISO 10993-7 does not apply to other products, product packaging, or air quality emissions.
3. (h)(1) Warehouse Reporting Requirements
 - a. For a facility that both sterilizes in-house AND warehouses EO-sterilized products from contract sterilizers, does the Sterilized Palletized Units include or exclude the number of units sterilized in the same building?
 - i. The current verbiage states, "excluding Sterilized Palletized Units received from other Warehouses".



Best Regards,
Jeffrey Chuang, CISS-EO, CISS-RAD
 Principal Microbiologist
 AAMI-Certified Industrial Sterilization Specialist

Specializing in Ethylene Oxide & Radiation

Life Science Outsourcing
 Office: (714) 672-1090
 Fax: (714) 672-1093
 830 Challenger Street, Brea, CA 92821
 lso-inc.com
 Bringing Medical Innovations to Life.

Responses to Life Science Outsourcing Comment Email, submitted 4/6/2023

- 2-1 Response: Staff agrees that “dunnage” is not specifically defined in PAR 1405. As dunnage is sterilized by EtO in the same manner as the products intended to be sterilized for later distribution, dunnage is considered as “sterilized materials” once it has gone through a sterilization cycle.
- 2-2 Response: PAR 1405 has several requirements regarding waste handling. PAR 1405 requires that elements, such as drums, containers, bins, or other vessels, in a waste storage area be maintained within a PTE at large or medium facilities or monitored under a Leak Detection and Repair (LDAR) program at small facilities. PAR 1405 also requires waste storage areas be identified on the facility diagram, and prohibits the discharge of sterilizer exhaust vacuum pump working fluid to the wastewater stream.
- Owners or operators shall comply with all other regulatory requirements regarding EtO waste handling.
- 2-3 Response: PAR 1405 does not include an air emission target or quantifiable emission rate for Post-Aerator. For medium facilities, PAR 1405 requires that the first storage area following the Aerator or Combined Sterilizer/Aeration be kept in a PTE.
- 2-4 Response: In the situation identified where “residuals are not regulated”, PAR 1405 would defer to protocols, work orders or manufacturer’s instructions for the required aeration time, as included in the definition of aeration in PAR 1405.
- 2-5 Response: For the purpose of subdivision (h) Warehouse Requirements, Tier I Warehouses and Tier II Warehouses would track and report the number of sterilized palletized units shipped from entities performing sterilization.
- Large facilities are subject to the requirements in subdivision (d), which requires the recording of destinations of the sterilized palletized units shipped or customer ordering the sterilization service.



April 6, 2023

Michael Krause
Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Via e-mail at: mkrause@aqmd.gov

Re: *SCAQMD Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations, Preliminary Draft Rule Language*

Dear Mr. Krause,

Sterigenics US, LLC (Sterigenics) appreciates the opportunity to participate in the Working Group Meetings (WGMs) for South Coast Air Quality Management District (SCAQMD or District) Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations (PAR 1405).

Sterigenics operates three facilities within SCAQMD to sterilize medical devices such as surgical kits, delivery systems, medical hardware, gowns and drapes, surgical accessories, and medical packaging. Sterigenics' facilities play an important role in safeguarding public health by using a Food and Drug Administration (FDA)-validated, non-invasive method to sterilize medical equipment prior to use. This FDA-validated method requires use of EtO and is the only method available for sterilizing large quantities of packaged medical equipment. Sterilization prevents biological contamination in health care settings that can lead to patient infections, and in severe cases, deaths. The FDA notes that about 50 percent of all sterilized medical devices are sterilized using EtO.¹ The Sterigenics facilities within the SCAQMD sterilize over 90 million essential medical devices and supplies each year, including surgical kits, catheters, cardiac implants, stents, IV sets and more. These products are supplied to nearly 100 healthcare product manufacturers, including dozens in the greater Los Angeles-area, as well as local hospitals.

As the District considers PAR 1405, we urge that you also take into account the greater context within which Sterigenics' facilities operate. The national capacity for EtO sterilization is limited, and shortages of sterilized products and equipment can have – and have had – direct, significant health consequences. Sterigenics supports efforts to reduce EtO emissions to the extent feasible, and to identify alternative methods of sterilization. However, as the FDA acknowledged recently, “[w]hile signs of innovation are promising, other methods of sterilization cannot currently replace the use of EtO for many devices. To that end, we are equally concerned about the potential impact of shortages of sterilized medical devices that would result from disruptions in commercial sterilizer facility operations.”² Without EtO sterilization, infection

¹See: <https://www.fda.gov/medical-devices/general-hospital-devices-and-supplies/sterilization-medical-devices#what>; please also see Attachment A.

² See Attachment A, also available at: <https://www.fda.gov/news-events/press-announcements/fda-continues-efforts-support-innovation-medical-device-sterilization>



risk associated with surgical procedures and other forms of healthcare would be meaningfully increased.³

Sterigenics has been an active participant in the PAR 1405 rulemaking process. On March 17, 2023, SCAQMD released preliminary draft rule language and a preliminary draft staff report for PAR 1405.^{4,5} Sterigenics appreciates the diligence with which staff has been working with stakeholders but continues to have concerns about the proposed rule language as well as information presented in the staff report, and accordingly offers the following comments.

I. COMMENTS ON THE DRAFT RULE LANGUAGE

1. Rule Impacts to Sterilization Operations in the District.

Sterigenics is extremely concerned that the scope and requirements of the proposed rule will drive sterilization facilities out of the state, which would have deep and lasting impacts on hospitals and health care systems in Southern California. A decrease in regional sterilization capacity also would increase criteria air pollutant and greenhouse gas emissions if healthcare facilities and local medical device manufacturers are required to ship products out of state for sterilization. Sterigenics intends to continue working with the District to improve the rule language such that facilities can continue to operate within the District.

Comment 3-1

2. PAR 1405(d), Large Facility Requirements:

(d)(1)(C): Control Efficiency

PAR 1405 (d)(1)(C) requires that a facility demonstrate EtO emission control efficiency of 99.99% or greater or demonstrate emissions of EtO at a concentration of ≤ 0.01 ppm for each "Control System." The detection limit for the subject test method has been as high as 0.01 ppm, so proving a concentration below that limit is not possible. Accordingly, it will be extremely difficult, if not impossible, to consistently meet the control efficiency and/or concentration limits proposed in the draft rule language. Additionally, specifying such a control efficiency requirement could have the unintended consequence of discouraging facilities from installing equipment that may be beneficial and the only control technology available to achieve emissions reductions from certain emissions streams, but that could not meet the control efficiency because of the nature of the equipment or the emissions stream.

Comment 3-2

For example, Sterigenics is in the process of installing dry beds in the Vernon facilities pursuant to its District-approved Early Action Reduction Plan (EARP) under Rule 1402 to treat small amounts of low-concentration fugitive emissions. The dry beds cannot meet the proposed control efficiency or the proposed concentration limit in the rule, nor will the manufacturer provide a guarantee of such a control efficiency. These dry beds will be part of

³Included here as Attachment B is a presentation published by the FDA illustrating the issues surrounding shortages with EtO-sterilized equipment in particular. The presentation includes information on the clinical impact of such shortages with an example illustration of a child suffering an infection at a tracheostomy insertion point.

⁴PAR1405: Preliminary Draft Rule Language. Available at http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr_031723_draftfinal.pdf?sfvrsn=8.

⁵PAR 1405: Preliminary Draft Staff Report. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.



the permanent total enclosure required by the proposed rule. Additionally, the facilities' oxidizers would also not meet these control efficiency requirements, in part due to low inlet loadings.

We do not believe that the District intends to eliminate or discourage measures such as the dry beds by imposing a control efficiency requirement. Accordingly, Sterigenics urges that the proposed rule language of (d)(1)(C) be revised to provide that a facility must demonstrate a total control efficiency of 99.99% for *all* EtO emissions, not for each individual "Control System." This will encourage achieving the highest control efficiencies in equipment where this is possible, while allowing flexibility to incorporate other emissions reductions measures, such as dry beds, that necessarily have a lower control efficiency simply because of the nature of the emissions they are controlling. Alternatively, we suggest that the control efficiency requirement be revised to 99.9% or a 0.1 ppm concentration limit, which would be more stringent than the Illinois requirement of 99.9% efficiency or 0.2 ppm concentration limit cited by the District in the staff report. Ultimately, however the District addresses this important issue, it should take into account that EtO emissions reductions may be achieved by a suite of measures, including some that may not be contemplated at this time, not all of which may be capable of achieving a specified control efficiency but nonetheless contribute to overall reductions.

We also suggest that a corresponding revision to the definition of "Control System" in (c)(1)(8) may be necessary. The currently-proposed definition would have the unintended consequence of subjecting emissions reducing equipment like the dry beds and oxidizers to control efficiencies that are not achievable for that equipment. (Separately, we believe that the word "adjoining" could be misleading, when what we understand the definition to intend is "in series" or similar language.) Other corresponding changes to other rule provisions may be warranted for consistency.

(d)(1)(D): Mass Emission Rate

PAR 1405 (d)(1)(D) requires that large facilities demonstrate the sum of mass emission rates measured at each exhaust stack is ≤ 0.025 lb/hr of EtO from all control systems. Sterigenics believes this value to be derived from a recently issued permit for the Medline Industries (Medline) facility located in Northfield Illinois. The Medline facility permit limits EtO usage to 375 tons/year. In contrast, the Sterigenics Ontario facility is permitted to use 657 tons/year of EtO. It is therefore not reasonable to require a similar mass emission rate for a facility that processes significantly more EtO. Additionally, the mass emission rate for the Medline facility is provided on a monthly and annual basis. Because the health risk of EtO is based on long term exposure, an hourly mass emission limit is not appropriate. Sterigenics recommends eliminating the mass emission limit or using a limit that corresponds to existing EtO usage amounts. Such rule language should be updated as follows (with our proposed changes shown in bold underlined font for additions and bold strikethrough font for ~~deletions~~):

(d)(1)(D) Demonstrate the sum of mass emission rates measured at each exhaust stack is ~~0.025 pounds per hour (lbs/hr)~~ 380 pounds per year (lb/yr) or less of Ethylene Oxide from all Control Systems by a source test that meets the requirements in subdivision (m); and

Comment 3-2
cont.

Comment 3-3



To the extent other provisions warrant corresponding revisions for consistency (for example, to the monitoring requirements set forth in (d)(2)(B)), we recommend those changes be made accordingly.

} Comment 3-3
cont.

(d)(2): Stack Emission Monitoring Requirements

PAR 1405(d)(2) requires that large facilities monitor EtO emissions from each exhaust stack with a SCEMS or CEMS by December 31, 2025 or within 12 months of approval of such system, whichever is sooner. Such SCEMS or CEMS equipment is relatively new technology with very few current equipment suppliers and installation and integration companies. The current lead times for such equipment is very lengthy and the installation and integration of such systems can be lengthy. In addition, as we saw in the initial stages of the RECLAIM CEM program, there will be a substantial increase in demand for EtO CEMs given the adoption of PAR 1405 and the NESHAP. Sterigenics suggests extending the SCEMS or CEMS installation date to December 31, 2026 or within 18 months of approval, whichever is later, in order to avoid the inevitable administrative burdens associated with numerous requests for variances from a deadline that we can predict now will be difficult to meet.

} Comment 3-4

(d)(3)A: Permanent Total Enclosure (PTE) area

PAR 1405(d)(3)(A) requires that all elements in a Sterilant Gas Storage Area be included within the PTE area. Because of explosion safety concerns and National Fire Protection Association (NFPA) code requirements, Sterigenics has traditionally used exterior EtO storage areas and implemented alternative leak monitoring procedures to ensure there are no fugitive emissions. Because of the explosive nature of EtO, Sterigenics believes that it is much safer to utilize the external storage area with leak detection monitoring rather than enclosing this area and routing this air to a control device. The PAR 1405 leak detection protocols, as well as Sterigenics' facility protocols, are robust and adequately protective. Therefore, Sterigenics suggests eliminating the elements of the sterilant gas storage area from the PTE requirements.

} Comment 3-5

(d)(4)(F): Annual Report

PAR 1405(d)(4)(F) requires that an annual report be submitted by January 30 each year. Sterigenics recommends that this date be updated to align with the Annual Emission Report due date.

} Comment 3-6

3. PAR 1405(i), Interim Requirements:

While our understanding is that Sterigenics' facilities would not be subject to these Interim Requirements because we are instead subject to requirements under subsection (d), we nonetheless note that some provisions of the Interim Requirements warrant further clarification.

} Comment 3-7

(i)(5): Test Requirements

PAR1405(i)(5) provides concentration limits and test requirements. However, it is unclear what type of testing would be subject to these requirements. Sterigenics requests

} Comment 3-8

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clarification as to whether these requirements pertain to leak detection and repair (LDAR) programs, or other test requirements.

} Comment 3-8
cont.

(i)(5)(A): Sterilant Gas Concentration

PAR 1405(i)(5)(A) requires that the maximum sterilant gas mass flow be less than 10 ppm EtO. Values measured in ppm represent concentration. Sterigenics recommends the rule language be updated as follows:

} Comment 3-9

(i)(5)(A) The maximum Sterilant Gas ~~mass flow~~ concentration shall be less than 10 parts per million Ethylene Oxide, as measured one (1) centimeter away from any portion of a Sterilizer, Combined Sterilizer/Aerator, Aerator, or Control System that could have an Ethylene Oxide leak

(i)(5)(B): Test conditions

PAR 1405(i)(5)(B) requires owners or operators to test during conditions of maximum sterilant gas flow, but does not specify which tests are required. If the requirement is specific to LDAR programs, we note that the flow rate does not affect the leak rate. Sterigenics requests further clarification on this requirement in the rule language.

} Comment 3-10

(i)(7)(C): Source Test Operating Conditions

PAR 1405(i)(7)(C) requires that source tests be conducted under normal operating conditions. 40 CFR Part 63 Subpart O provides Ethylene Oxide Emissions Standards for Sterilization Facilities and includes monitoring requirements.⁶ The operational conditions for source tests in the proposed rule should mirror the requirements of the NESHAP.

} Comment 3-11

(i)(8): Test Methods

PAR 1405(i)(8) requires that tests be conducted using CARB Test Method 21. Although this requirement appears to be related to an LDAR program, the language in the rule should be clarified.

} Comment 3-12

4. PAR 1405(k), Permanent Total Enclosure Requirements:

(k)(1): Averaging Time for Negative Pressure Demonstration of Compliance

PAR 1405 (k)(1) requires that a facility demonstrate that the permanent total enclosure (PTE) is maintained at a negative pressure of at least 0.007 inches of water column averaged over one minute. Sterigenics agrees that it is necessary to demonstrate compliance with the negative pressure requirements of the rule, but a 15-minute average is a more reasonable time period for compliance demonstration. SCAQMD has set precedent in Rule 1420.2 for allowing the demonstration to be made on a 15-minute average.⁷ Sterigenics recommends the rule language be updated as follows:

} Comment 3-13

⁶ 40 CFR Part 63, Subpart O. Available at: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-O>.

⁷ SCAQMD Rule 1420.2, Emission Standards for Lead from Metal Melting Facilities. Available at: <http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/Rule-1420-2rev.pdf>.



*(k)(1) Demonstrate the Permanent Total Enclosure is maintained at a negative pressure of at least 0.007 inches of water column averaged over ~~one (1) minute~~ **fifteen (15) minutes**:*

} Comment 3-13
cont.

5. PAR 1405(o), Prohibitions:

(o)(3): Emission Releases

PAR 1405(o)(3) states that the owner or operator of a facility performing sterilization shall not allow the release of uncontrolled emission of EtO to atmosphere from any PTE at any time. It is not possible for facilities to comply with this condition during unforeseen power outages. Facilities have systems in place to shut down the processes. However, fans can continue to run on their own inertia even when scrubber pumps are immediately shut down. Backup generation can take 30 seconds or more to detect the outage, start up, and generate enough power to run process equipment. Sterigenics recommends the rule language be updated as follows:

} Comment 3-14

*The owner or operator of a Facility performing Sterilization shall not allow the release of uncontrolled emission of Ethylene Oxide to atmosphere from any Permanent Total Enclosure at any time **during normal operations**.*

6. PAR 1405(r), Exemptions

(r)(3): Exemptions During Loss of Power or Other Unplanned Event

PAR 1405(r)(3) includes exemptions from certain requirements during the loss of power or other unplanned event outside the control of the owner or operator. Sterigenics agrees with this exemption but believes it should be expanded to include Section (o)(3) for the reasons stated above. Sterigenics recommends the rule language be updated as follows:

} Comment 3-15

*(r)(3) The requirements of paragraph (k)(1) **and (o)(3)** do not apply to any owner or operator during the loss of power or other unplanned event outside of the control of the owner or operator provided, as applicable:*

New Section (r)(4)

Source tests on units equipped with CEMS is not necessary, as it would provide no additional information on equipment emissions. Sterigenics recommends that a new section be added to the rule as follows:

} Comment 3-16

(r)(4) Units equipped with a CEMS or SCEMS pursuant to paragraph (d)(2) are not subject to source testing requirements in this rule.

New Section (r)(5)

PAR 1405(k)(2) requires differential pressure monitoring placed at certain walls within the Permanent Total Enclosure. Sterigenics recommends that only walls with natural draft openings be subject to this requirement. Sterigenics recommends that a new section be added to the rule as follows:

} Comment 3-17

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(r)(5) In a Permanent Total Enclosure, walls that do not contain natural draft openings are not subject to the differential pressure monitoring requirements of paragraph (k)(2).

} Comment 3-17
cont.

II. COMMENTS ON THE DRAFT STAFF REPORT

1. Methods of EtO Monitoring Can Be Unreliable

We note that the draft staff report discusses the ambient EtO monitoring conducted around several facilities, including Sterigenics', in the last two years. Although the District has taken action based on ambient EtO monitoring, we believe the District is aware that significant challenges measuring EtO ambient concentrations have been noted by many regulatory agencies, including the U.S. Environmental Protection Agency (EPA), Georgia Environmental Protection Division, and West Virginia Department of Environmental Protection. These agencies have challenged the existing test method to measure low EtO concentrations and have pointed to other existing sources of EtO. Such challenges should be duly considered in both the development and enforcement of this rule.⁸

} Comment 3-18

Furthermore, there have been no fenceline ambient monitoring methods that would address such concerns and provide timely measurements of EtO near sterilization sources. Sterigenics notes that any need for such potentially unreliable, inaccurate monitoring would be further obviated by the implementation of the robust PTE and CEMS / SCEMS requirements under this rule. We believe that such prioritization of emissions reductions measures under the rule are appropriate.

2. Fugitive Emissions

The fugitive emissions from EtO sterilization facilities are very difficult to quantify. In the draft staff report, SCAQMD assumed that the measured EtO concentrations near some facilities were from fugitive emissions. However, such measurements could be from the dispersion of process emissions downstream of compliant emission control systems.

} Comment 3-19

3. CEQA Impact

When evaluating the potential environmental impacts of PAR 1405, the District should consider whether the rule could result in the closing or curtailing of any affected businesses, and must disclose whether that could result in the need to ship EtO-sterilized medical products and equipment from out of state or out of area in order to assess potential impacts to air quality and greenhouse gas emissions.

} Comment 3-20

4. Socioeconomic Impact

⁸ Attached as Exhibit C are relevant documents illustrating some of the challenges recognized by other agencies, including Ethylene Oxide Monitoring Report, Georgia Department of Natural Resources, Environmental Protection Division. May 12, 2022 (available at: <https://epd.georgia.gov/ethylene-oxide-information>) and Ethylene Oxide Monitoring – Characterization of South Charleston and Institute, West Virginia and Surrounding Areas, West Virginia Department of Environmental Protection, Division of Air Quality. February 21, 2023.



We understand that the socioeconomic impact report is currently in development. We request that this report take into consideration the impact of potential closures or curtailment of facilities subject to PAR 1405, along with economic impacts on the medical industry and resulting challenges – including health risks and treatment of infections or even deaths resulting from inadequately sterilized medical products and equipment.

In addition, many medical device manufacturers and hospitals are dependent on EtO sterilization facilities within the SCAQMD area to supply necessary sterilized product to their customers. Without these facilities, the socioeconomic impact to these end customers and the general public would be substantial.

Comment 3-21

III. CONCLUSION

It should also be noted that the US EPA is in the process of releasing regulations that will have significant impact on the EtO sterilization facilities within SCAQMD's jurisdiction. Such rules include proposed updates to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Ethylene Oxide Commercial Sterilization facilities and a Preliminary Interim Decision (PID) for the re-registration of EtO under US EPA's pesticide regulations. Sterigenics believes that SCAQMD should wait for these rules to be published and their impacts better understood before completing the PAR 1405. These rules could impose requirements that conflict with those proposed in PAR 1405.

Comment 3-22

Sterigenics appreciates the opportunity to provide these comments related to PAR 1405. As outlined above, there are multiple items requiring further analysis and thorough discussion prior to rule adoption. We look forward to continued discussion of this important rulemaking. If you have any questions, please contact me at (630) 928-1771 or via e-mail at kwagner@sterigenics.com.

Sincerely,

Kevin Wagner
Vice President – Global EH&S

Attachments

Cc: Wayne Nastri, SCAQMD
Sarah Rees, SCAQMD
Areio Soltani, SCAQMD
Neil Fujiwara, SCAQMD
Kalam Chung, SCAQMD

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Responses to Sterigenics US, LLC Comment Letter, submitted 4/6/2023

- 3-1 Response: Staff understands that EtO sterilization plays a critical role in the supply chain of medical devices and patient health. Staff has given careful consideration to the implementation requirements in PAR 1405.
- In the rulemaking process, individual meetings were held with facility operators, and no operators expressed that they plan to move out of state because they could not comply with PAR 1405.
- 3-2 Response: The performance standards established in PAR 1405 are based on best available technology that has been achieved in practice. Large facilities are required to comply with either the 99.99% control efficiency performance standard or the 0.01 ppm outlet concentration performance standard for each control system, encouraging the highest control efficiencies in equipment where possible while understanding the physical limits of detection for lower inlet concentration exhaust streams. Based on source test results analyzed, at least two technologies were able to demonstrate compliance with the proposed performances standards.
- The concentration limit of 0.01 ppm is based on evaluation of recent source test reports. See Chapter 1 of this staff report for more details on the data evaluation. The averaging time for the concentration limit has been updated from daily to a rolling 30-day average. See Response 1-5 for more details.
- Lastly, Staff has revised PAR 1405 to include “in series or parallel” and “one or more stacks” to the definition of Control System. This would allow a Control System with multiple stacks to be considered one Control System.
- 3-3 Response: See Response 1-6.
- 3-4 Response: Staff has reached out to vendors and suppliers, and agreed that the lead time to obtain CEMS or SCEMS are longer, and is expected to increase with the release of proposed NESHAP. As such, the implementation timeframe of continuous monitoring for stack emissions has been revised to begin 18 months after receiving approval from the Executive Officer for an application SCEMS or CEMS, whereas the deadline to apply for a SCEMS or CEMS is May 1, 2025.
- 3-5 Response: While indoor sterilant gas storage is feasible and achieved in practice, PAR 1405 has been revised to allow for an alternative to PTE for elements in the sterilant gas storage area, expected to be equally as effective at preventing fugitive EtO emissions.

- 3-6 Response: PAR 1405 has been revised to increase time to submit required reports and to align annual and semi-annual reporting requirement deadlines to South Coast AQMD Title V annual and semi-annual reporting requirement deadlines specified in paragraphs (p)(1) and (p)(2) accordingly.
- 3-7 Response: Sterigenics’s two sterilization facilities using EtO would be subject to the Interim Requirements in paragraph (i)(1) until the sunset date of as listed in PAR 1405. Sterilization facilities would be subject to the new requirements specified in the applicable subdivisions.
- 3-8 Response: The concentration limits and test requirements in paragraph (i)(5) pertain to interim requirements in PAR 1405 to ensure the listed equipment is “leak free”, as described in the existing Rule 1405 language. As the term “leak” is redefined in PAR 1405 and used with a “leak detection and repair” (LDAR) program, the term “leak” was not used in paragraph (i)(5).
- 3-9 Response: PAR 1405 has been revised to use the term “concentration” in paragraph (i)(5).
- 3-10 Response: PAR 1405 has been revised to increase clarity in interim requirements while ensuring continuity with existing Rule 1405 language.
- 3-11 Response: See Responses 3-7 and 3-10.
- 3-12 Response: See Responses 3-7 and 3-10.
- 3-13 Response: PAR 1405 has been revised to a ~~15-minute~~ rolling one (1) hour averaging period.
- 3-14 Response: PAR 1405 has been revised to exempt owners and operators from the prohibition of emission releases during the loss of power or other unplanned events outside of the control of the owner or operator under certain conditions provided that certain conditions are met. The conditions are set to ensure fugitive emissions are minimized to the maximum feasible extent.
- 3-15 Response: See Response 3-14.
- 3-16 Response: Staff disagrees that source tests on units equipped with CEMS (or SCEMS) is not necessary and would provide no additional information on equipment emissions. CEMS and SCEMS continuously or semi-continuously monitor stack emissions and do not monitor inlet EtO concentrations to control systems. As a result, CEMS or SCEMS are unable to determine control efficiency of control systems. If not required to demonstrate the control efficiency of control systems, CEMS or SCEMS coupled with annual RATA is sufficient and additional source testing is not required.
- 3-17 Response: The requirements for differential pressure monitoring included in PAR1405 are very similar to those included in Rule 1420.1. Even for walls with no

- natural draft openings, a differential pressure monitoring device could quantify the level of differential pressure in the area and thereby serve as a tool to verify compliance with requirements in PAR 1405.
- 3-18 Response: PAR 1405 is a technology-based rule reducing stack and fugitive emissions of EtO. PAR 1405 includes various continuous monitoring requirements for stack emissions and differential pressure to verify continuous compliance with proposed performance standards.
- Until continuous monitoring of stack emissions and differential pressure are in place, PAR 1405 requires initially interim mobile monitoring and then interim fence-line air monitoring of fence-line EtO concentrations. See Response 1-7 regarding fence-line air monitoring and Response 1-12 regarding background EtO concentrations in South Coast AQMD.
- 3-19 Response: The Executive Summary and Section 1.1 of the PAR 1405 Staff Report have been revised to reflect contributions from both stack and fugitive emissions.
- 3-20 Response: The commenter provides no evidence that a business would close and other businesses would ship EtO-sterilized products into the area. Pursuant to CEQA Guidelines Section 15131(a), “[e]conomic or social effects of a project shall not be treated as significant effects on the environment.” CEQA Guidelines Section 15131(b) states further, “[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project.”
- However, of the various provisions included in PAR 1405 aimed at further reducing stack and fugitive EtO emissions from sterilization operations, the potential installation of monitoring equipment, control equipment, and PTEs at a select few facilities are the only activities which would involve physical modifications, if any, which may be achieved via minimal construction equipment. Further, no direct or indirect physical changes resulting from economic or social effects have been identified. Thus, it can be seen with certainty that implementing PAR 1405 would not cause a significant adverse effect on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption.
- 3-21 Response: The Socioeconomic Impact Assessment considers potential compliance cost to be incurred by the affected facilities. It also evaluates the cost-to-revenue ratio for those affected facilities with available revenue data. It is highly speculative that PAR 1405 would result in facility curtailment or even closure, along with the associated impacts mentioned in the comment.
- 3-22 Response: See Response 1-4.



April 11, 2023

Sarah Rees
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Dear Deputy Executive Director Rees,

I write to you on behalf of California Life Sciences regarding South Coast Air Quality Management District’s (SCAQMD) proposed amended Rule 1405 – Control of Ethylene Oxide (EtO) and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes. California Life Sciences represents over 1,200 entities representing pharmaceutical, biotechnology, medical technology, and academic research institutions throughout California.

First, California Life Sciences thanks the SCAQMD and its staff for your openness and transparency during this process. Your willingness to meet with and accept feedback from stakeholders in your district throughout this process is greatly appreciated. California Life Sciences wishes to express the following 3 concerns:

First, we are asking for a technology-neutral approach to meet new emissions targets that enable facilities to select an effective control method while remaining open and operating safely. Second, we also request consideration of background levels of EtO in the ambient air, both natural and human causes, and recognition of the numerous other sources of EtO emissions – including those from ubiquitous consumer items like lawn mowers and gas generators. Finally, we seek consideration of the update to the EtO NESHAP expected this year from U.S. Environmental Protection Agency (EPA). This multi-year process has involved significant stakeholder and community engagement; conflicting or overlaying requirements could cause significant confusion and result in disruption to the timely and safe sterilization of essential medical devices. Notably, each year well over 100 million medical devices are sterilized in the SCAQMD region and any impact to the system is likely to result in severe disruptions to the medical device supply chain.

Additionally, we would like to encourage SCAQMD to also take into consideration that EtO sterilization is a critical process used to make these medical devices safe for our patients. Any requirement that could cause the customers of these EtO sterilization facilities to make any changes in the sterilization process, location, or handling may take several years to implement due to external regulatory timelines. Many of the products sterilized in these facilities are distributed globally and are not only governed by the FDA but other agencies’ rules and regulations. Approvals for changes to the sterilization process are

} Comment 4-1

considered so critical to all governing bodies that they will require extensive regulatory review for each impacted product.

Any disruption in the operations of the facilities governed by this rule will destabilize the supply of the lifesaving medical devices sterilized at these facilities and could constitute an immediate public health risk. The IRIS study assessed long-term health risk in the communities based on an assumed 70-year exposure period. CLS and the members that it represents strongly encourages rules that 1) Protect the long-term health of communities surrounding these facilities and 2) provides thoughtful and achievable rulemaking in order to ensure a stable and sustainable solution to keep these-life saving medical devices in our hospitals and available to our patients. We encourage SCAQMD to take a risk based approach when making these rules to ensure that the risk of life is protected in both instances.

Unfortunately, the proposed rule in its current form is neither clear nor workable. It is not technology neutral, does not sufficiently recognize the existence of EtO in the ambient air, and from other sources unrelated to sterilization, and is being done on a timeline that could cause significant confusion with the expected release of the EPA EtO NESHAP.

Below are some concerns specific to the draft rule:

Our more specific concerns include:

- Some of the levels and requirements may not be technologically-feasible
- The prohibition of releasing product prior to completion of aeration negates the need for a post-aeration facilities
- These rules and regulations for PTE are inconsistent with other rules and regulations governed by AQMD for other industries
- Relying on, or requiring use of, non-existent or unproven technology
- Lack of clarity in multiple definitions and standards
- Lack of understanding for implications of requirements for total facility containment
- Introducing complexity to otherwise well-defined and understood standards, for example LDAR requirements
- Unachievable timeline for compliance based on technology and equipment availability, validation, and regulatory approval
- Vague definitions and structure relating to unique warehouse tracking and reporting requirements
- Lack of understanding of FDA sterilization requirements; conflicting elements of draft amendment with FDA mandated procedures
- Potential conflicts with federal regulations given that the NESHAP and FIFRA rules have yet to be published

Comment 4-1
cont.

- Comment 4-2
- Comment 4-3
- Comment 4-4
- Comment 4-5
- Comment 4-6
- Comment 4-7
- Comment 4-8
- Comment 4-9
- Comment 4-10
- Comment 4-11
- Comment 4-12

SCAQMD staff has indicated their intention to present a final draft rule to the Governing Board at the June 3, 2023, meeting. We will work with your staff to address our concerns within this time frame. It is our further hope that SCAQMD staff and the Board recognize the need to avoid unnecessary disruptions to the medical device supply chain rather than adhering to a subjective deadline and that the Board will look to avoid potential conflict and confusion with pending federal regulations. We look forward to the continued open dialogue in the coming months. If you have any additional questions, please feel free to contact me at schung@califesciences.org.

Sincerely,



Sam Chung
Vice President, State Government Relations
California Life Sciences

Responses to California Life Sciences Comment Letter, submitted 4/11/2023

- 4-1 Response: PAR 1405 is a technology-neutral rule that relies on innovative measures to control both stack and fugitive emission sources of EtO based on strategies achieved-in-practice and demonstrated by independent third-party testing. See Response 1-12 regarding background EtO concentrations in South Coast AQMD.
- Consideration has been given on the concerns regarding the surge in demand, supply chain constraints, and long lead time of equipment, and the implementation schedule for large and medium facilities have been extended by six to eight months.
- See Response 1-4 for responses related to comments on proposed NESHAP.
- 4-2 Response: Each performance standard, monitoring strategy, or control requirement in PAR 1405 has been evaluated by reviewing source testing reports, permits, facility surveys, site visits, vendor meetings, or other methods to determine if proposed performance standards or control requirements are technologically-feasible and achieved-in-practice. See Chapter 1 of this staff report on the data and technology evaluated.
- 4-3 Response: Even after completing aeration, products and their associated packaging continue to off-gas EtO and at least one post aeration storage facility within South Coast AQMD maintains Permits to Operate for control systems to capture and control EtO emissions from products and their associated packaging after completing aeration off-site. As such, PAR 1405 includes capture and control requirements for certain post-aeration areas.
- 4-4 Response: Staff agrees that the requirements for PTE under PAR 1405 go above and beyond the requirements of U.S. EPA Method 204 or other South Coast AQMD rules. Because of the nature of EtO as a VOC and a toxic air contaminant, and the high toxicity of EtO, additional requirements are necessary to ensure capture of fugitive EtO emissions.
- 4-5 Response: See Responses 1-3 and 1-8.
- 4-6 Response: The commenter did not provide specific areas where clarity should be improved. However, updates have been made throughout PAR 1405 to improve clarity since the release of the Preliminary Draft Rule.
- 4-7 Response: PAR 1405 does not require “total facility containment”. Various parts of the EtO sterilization process, depending on the throughput and nature of the facility, are required to be maintained under a Permanent Total Enclosure while other parts are required to be monitored for leaks under an LDAR

program. If a facility performs manufacturing or other processes unrelated to EtO, those processes are unaffected by the requirements of PAR 1405 and containment is not required.

4-8 Response: One of the potential sources of EtO emissions identified during the PAR 1405 rulemaking process is fugitive emissions. PAR 1405 enhances semi-annual leak check required by existing Rule 1405 into a robust LDAR program, currently required for at least one sterilization facility in the state of Georgia and used extensively by the oil and gas industry. PAR 1405's LDAR program would require daily audio-visual checks and leak inspections every 60 days of specific potential leak-points at a lower threshold than existing Rule 1405 to reduce potential fugitive emissions.

4-9 Response: See Response 1-2.

4-10 Response: The commenter did not provide specific areas where clarity should be improved. However, updates have been made throughout PAR 1405 to improve clarity.

The warehouse reporting and fenceline air monitoring requirements are required for one year in order for South Coast AQMD to better understand these sources of potential emissions and the number of sterilized palletized units received at warehouses.

4-11 Response: Staff has engaged with U.S. FDA staff to understand U.S. FDA sterilization requirements as they relate to air emissions of EtO. South Coast AQMD is unaware of any conflicts between PAR 1405 and U.S. FDA mandated procedures and is unable to respond or resolve conflicts without additional detail.

4-12 Response: See Response 1-4 regarding proposed NESHAP.

Regarding the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), staff is aware that sterilant gas that contains EtO is considered a pesticide under federal law. In April 2023, U.S. EPA released a proposed interim decision for EtO to protect workers and community members. Staff has carefully studied the proposed interim decision and did not identify any conflict with PAR 1405. The proposed FIFRA requirements will go through its public process. Staff is committed to evaluate again for any conflict between PAR 1405 and the requirements once they are approved, and amend PAR 1405 as necessary.

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April 13, 2023

Via E-mail

Kalam Cheung
Planning & Rules Manager
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765

Re: SCAQMD Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Ms. Cheung:

Cardinal Health (Cardinal) appreciates the opportunity to offer the following comments on the South Coast Air Quality Management District’s (SCAQMD) proposed amended Rule (PAR) 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations:

- 1. Confirmation of the relationship of the proposed “Post Aeration Storage Facility” and “Large Warehouse” categories.

It is Cardinal’s understanding, based on the PAR 1405 Preliminary Draft Staff Report dated March 17, 2023, that the only facility within SCAQMD’s jurisdiction that currently falls within the category of “Post Aeration Storage Facility” is Cardinal’s facility in Riverside, which previously applied for and received a permit from SCAQMD as an “aeration-only” facility under the current version of Rule 1405. It is our understanding based on the proposed text of PAR 1405 and discussions with SCAQMD representatives on April 5, 2023, that Riverside would qualify as both a “Post Aeration Storage Facility” and a “Large Warehouse” under PAR 1405. Cardinal requests formal confirmation that any “Post Aeration Storage Facility” which also satisfies the definition of a “Large Warehouse” is intended to qualify as both a “Warehouse” and a “Post Aeration Storage Facility” for purposes of PAR 1405.

Comment 5-1

- 2. Confirmation of relationship between PAR 1405 and Title 17, Sections 93108 & 93108.5 of the California Code of Regulations.

Cardinal requests confirmation from SCAQMD how the classifications under PAR 1405 relate to the categories of EtO sources subject to regulation under California state law, specifically, 17 CCR Sections 93108 & 93108.5. Title 17 of the California Code of Regulations, at Section

Comment 5-2

SCAQMD
April 13, 2023
Page 2



93108 specifies requirements applicable to “Aeration-Only” facilities (defined as “a facility which performs aeration on materials which have been sterilized with ethylene oxide at another facility”), namely, 95% control efficiency for EtO emissions. The current version of SCAQMD Rule 1405 includes a category for “Aeration-Only” facilities, but PAR 1405 deletes that “Aeration-Only” category and adds a “Post Aeration Storage Facility” category. PAR 1405’s distinction between aeration units at sterilization facilities and the “post-aeration” that Cardinal instituted at its Riverside facility reasonably reflects actual industry activity, but Cardinal requests clarification regarding whether this proposed change in PAR 1405 is intended to affect categorization of such facilities for purposes of 17 CCR Sections 93108 & 93108.5. Cardinal further comments that PAR 1405 should be interpreted consistently with 17 CCR Sections 93108 & 93108.5 so as to avoid conflicts between state and local regulation and avoid any confusion regarding regulatory applicability. Cardinal believes that PAR 1405 can be interpreted consistently if “Post Aeration” facilities are interpreted to be “Aeration Only” facilities for purposes of 17 CCR Section 93108 given the definition of “Aeration” in 17 CCR Section 93108 and the fact that the control efficiency requirements imposed on “Aeration-Only” facilities under 17 CCR Section 93108 is consistent with that imposed on “Post Aeration” facilities under PAR 1405. Likewise, facilities or portions of facilities that do not include control devices for EtO but merely store sterilized product on the same terms as other stored product are not Post-Aeration facilities under PAR 1405 or Aeration-Only facilities under 17 CCR Sections 93108, consistent with 17 CCR Section 93108’s exclusion from the definition of “aeration” of “any equipment or space in which materials that have previously undergone ethylene oxide sterilization and aeration can be handled, stored, and transported in the same manner as similar materials that have not been sterilized with ethylene oxide.” Accordingly, Cardinal understands that the post-aeration trailer venting units permitted at its Riverside facility would be a “Post-Aeration” facility under PAR 1405 and an “Aeration-Only” facility for purposes of 17 CCR § 93108, and the storage area where such product is stored after post-aeration is considered a “Warehouse” under PAR 1405 and likewise not an aeration area under 17 CCR § 93108.

Comment 5-2
cont.

3. Permanent Total Enclosure requirements should be based solely on EPA Method 204.

The definition of Permanent Total Enclosure (PTE) included in PAR 1405 expressly relies on the parameters of EPA Method 204. However, subsection (k) of the PAR 1405 includes additional parameters that go far beyond those required by EPA Method 204, such as continuous pressure monitoring using specific technological sensitivities, averaged over one minute periods. Cardinal is not aware of any facility meeting the definition of a “Post Aeration” facility that has demonstrated that these requirements in excess of EPA Method 204 are technically and economically feasible, especially to the extent they required any retrofit of existing facilities. It is Cardinal’s understanding that the PAR 1405 subsection (k) requirements are based on aeration rooms at various sterilization facilities that had recently undergone costly retrofits. But as PAR 1405 itself recognizes, there are material differences between aeration facilities at sterilization plants and the post-aeration units like those installed at Riverside, which are designed to vent loaded trailers. Because no post-aeration facility SCAQMD or Cardinal is aware of has installed the continuous monitors that would be required for any facility complying with PAR 1405 subsection (k), it is not possible to estimate at this time what capital costs would be required to

Comment 5-3

SCAQMD
April 13, 2023
Page 3



meet those continuous pressure monitoring requirements, and whether or not substantial retrofit costs would be incurred, because that would require an engineering analysis and validation testing under operating conditions that has not yet been demonstrated or performed at a similar facility. By contrast, EPA Method 204 is an industry standard test that has been demonstrated in practice across a variety of industries and control devices. Accordingly, Cardinal proposes that PTE requirements be based solely on EPA Method 204.

} Comment 5-3
cont.

- 4. The change in Method 21 Leak Detection and Repair (LDAR) frequency is unnecessary and unjustified.

Cardinal’s Riverside facility, the only facility in the jurisdiction of SCAQMD that has proactively installed and permitted post-aeration controls, is already required by its current permits issued by SCAQMD to perform Method 21 LDAR testing on a semiannual basis. As SCAQMD is aware, the results of those LDAR tests have been consistently “clean” (i.e., demonstrated a consistent absence of leaks) and have not provided any reason to believe that more frequent testing is necessary or justified. Likewise, PAR 1405 only requires semiannual reports concerning any exceedances found during LDAR. The proposed increase in frequency to monthly Method 21 tests will increase costs related to such testing by at least 600%. Cardinal preliminarily estimates that the increased frequency Method 21 testing is likely to add approximately \$50,000 in additional expenses per facility on an annual basis. Bringing any such testing in-house as opposed to third party testing services is not likely to alleviate cost increases, and may not even be feasible, because existing facilities may not have the excess staffing flexibility absent additional hires. Accordingly, given the additional costs associated with more frequent testing, and the lack of any demonstrated need for additional testing, Method 21 LDAR testing should only be required on a semiannual basis. Alternatively, SCAQMD should consider a graduated requirement that further incentivizes good design and maintenance, such as continuing current requirements of semiannual Method 21 testing for facilities with consistently clean LDAR results, with more frequent testing required for facilities that demonstrate leaks above regulatory thresholds during a given reporting period.

} Comment 5-4

- 5. Regarding Warehouse reporting requirements

To the extent that any Warehouse is subject to reporting under PAR 1405, reporting should not be based on palletized units because that information is not necessarily readily available or standardized. Instead Cardinal suggests that any such reporting be based on the number of trailer truck loads received directly from a sterilizer. Relatedly, the rule should expressly state that reporting is only required for any trailers trucks or palletized units received directly from a sterilization facility. The current PAR 1405 attempts to reach a similar result by exempting reporting of units received from other Warehouses, and this is a justified exclusion since EtO offgassing rapidly dissipates the longer it is from the time of sterilization. But the current exclusion is not as well tailored as a definition specifically stating that only units received directly from EtO sterilization facilities are subject to reporting. For example, although Cardinal’s Riverside warehouse stores product as a Warehouse after post-aeration, it is conceivable that another facility or entity could choose to create or use a Post Aeration unit that

} Comment 5-5

SCAQMD
April 13, 2023
Page 4



is not at the same contiguous facility as a Warehouse area, and it would not be rational to treat such product that has gone through any such additional post aeration more stringently than product that has been received from a Warehouse that has not chosen to install additional aeration controls.

Comment 5-5
cont.

6. Extension of compliance deadlines

It is our understanding that Cardinal’s Riverside facility is the only facility subject to the proposed requirements for “Post Aeration” facilities. But as noted above with respect to the PTE requirements of PAR 1405 subsection (k), demonstrating whether any retrofits would be necessary at any existing “Post Aeration” facility under PAR 1405 subsection (k)’s continuous pressure monitoring requirements will require an engineering analysis, and validation testing under operating conditions for a reasonable period of time, altogether a months long process, and if retrofits were required, would take significantly longer to enact, and may require permitting amendments which would also extend the timeline for being able to demonstrate compliance. The current PAR 1405 deadline of three months for Post Aeration facilities is not sufficient for the engineering assessments that would be required to analyze the feasibility of all the requirements of the proposed rule. Accordingly, if SCAQMD continues to require PTE requirements beyond the requirements of EPA Method 204, Cardinal requests a minimum of one year be permitted for compliance with PTE requirements for Post-Aeration facilities.

Comment 5-6

7. Regulations should distinguish between existing permitted facilities and future new facilities.

SCAQMD should grandfather existing sources, requiring compliance with existing permit terms for already permitted sources. There are multiple justifications for this course of action. First, facilities that have proactively installed additional Post-Aeration controls should not be penalized with additional compliance costs simply because they proactively sought to set a corporate standard higher than existing industry standards. Second, any cost justifications underlying PAR 1405 must account for whether a source is an existing or new source, because any retrofit costs are typically much higher than the costs that would be associated with changing designs for a new facility that has not already constructed control systems.

Comment 5-7

Sincerely,

Lindsay Degnan Stadge
Sr. Counsel, Regulatory
Cardinal Health

Responses to Cardinal Health Comment Letter, submitted 4/13/2023

- 5-1 Response: The Cardinal Health facility in Riverside (Cardinal Riverside) under PAR 1405 would be considered both a post aeration storage facility (formerly known as an aeration-only facility) as well as a Tier I Warehouse, and should comply with the requirements of a Post Aeration Storage Facility (formerly known as an aeration-only facility) and the requirements of a Tier I Warehouse. A list of applicable warehouses is included in Appendix B of this staff report.
- 5-2 Response: The term “aeration-only facility” was revised to “post aeration storage facility” in PAR 1405 to more accurately describe this category of EtO emission sources. PAR 1405 would not change how Cardinal Riverside is regulated under any other local, state, or federal regulation.
- 5-3 Response: See Response 4-4.
- 5-4 Response: See Response 4-8.
- 5-5 Response: Staff engaged with multiple warehouse stakeholders regarding tracking and reporting of sterilized palletized units or some other measure such as trailer truck loads. Based on the feedback received, tracking and reporting of sterilized palletized units was selected.
- The rule language has been updated to clarify that only units received directly from entities performing sterilization (both within and outside South Coast AQMD jurisdiction) need to be tracked and reported.
- 5-6 Response: PAR 1405 has been revised to allow post aeration storage facilities until September 1, 2025 to comply with new requirements. Note that PTE is not a mandatory requirement for post aeration storage facilities but is a compliance path should the owner of operator choose to pursue it. PAR 1405 requires post aeration storage facilities to either operate control systems within a PTE or alternatively monitor components of the control system under an LDAR program.
- 5-7 Response: PAR 1405 addresses stack and fugitive emissions of EtO based on the best available technology achieved-in-practice. The performance standards and other requirements are developed for existing facilities. New facilities will be subject to both Rule 1405 and Rule 1401 – New Source Review of Toxic Air Contaminants including the requirements for Best Available Control Technology for Toxics (T-BACT).

April 13, 2023

Areio Soltani
 Planning, Rule Development, and Implementation
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765



RE: Comments on Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Areio Soltani:

Communities for a Better Environment (“CBE”) submit these comments on Proposed Rule 1405 (“Proposed Rule”). We appreciate the South Coast Air Quality Management District (“AQMD”) revisiting Rule 1405 to strengthen controls of ethylene oxide (“EtO”) emissions following the United States Environmental Protection Agency (“USEPA”) reconsideration of the potential toxicity of EtO. While we applaud AQMD for new control measures and monitoring requirements, we are concerned that the current language will not meaningfully regulate sterilization and related operations that harbors a known carcinogen identified by the California Air Resources Board (“CARB”) as a Toxic Air Contaminant (TAC) and by the USEPA as a Hazardous Air Pollutant.¹

CBE participates in the Southeast Los Angeles AB 617 Steering Committee. We also participated in the workshops and have met with staff working on this Rule over the past several months. The mission of CBE is to build people's power in California's frontline communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy, and sustainable communities and environments. It was concerning that AQMD only began investigating facilities that emit EtO *after* the USEPA announced the reconsideration of the potential toxicity of EtO given that Southeast Los Angeles communities are heavily impacted by transportation, industry, warehouses, and many other pollution sources. Stronger requirements under Rule 1405 can help reduce EtO emissions and protect public health.

We hope AQMD will adopt higher standards for Rule 1405 to reduce the health impacts of EtO emissions on the surrounding communities by, but not limited to:

¹ AQMD (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8, pg 1-1.

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1. Revisiting and amending Rule 1405 immediately if the USEPA’s assessment of EtO requires higher control performance metrics and equipment.
2. Rescheduling implementation dates of emission control requirements sooner rather than later to avoid any potential fugitive emissions.
3. Requiring fenceline monitoring of facilities that emit EtO and warehouses that receive/store products sterilized by EtO, to ensure control systems are performing to the highest standard.

Comment 6-1

I. Purpose

CBE appreciates AQMD in updating the purpose of this Rule by including warehouses that store materials sterilized with EtO.² By including warehouses in this Rule AQMD can monitor if aeration processes and control systems are efficient in reducing fugitive emissions of EtO.

Comment 6-2

II. Large Facility Requirements

CBE would like to address that the timeframes for Large Facilities' Stack Emission, Stack Emission Monitoring, and Fugitive Emission Requirements (d)(1)(2)(3) are too long and can be detrimental for communities who live close to facilities that emit EtO. Instead of implementation starting in 2024 or 2025, AQMD should change the dates closer to the end of 2023 or summer of 2024 given the toxicity of the EtO and how it can stay in the air for several months.³

Comment 6-3

III. Medium Facility Requirements

CBE encourages AQMD to add the requirements from Large Facility (d)(4)(A)(B)(D) to Medium Facility Requirements. This is to ensure the safety and protection of workers and residents who live near or work in warehouses that store or receive materials that were sterilized with EtO. While AQMD’s Warehouse Facility Questionnaire responses were limited, three facilities reported that they do not know if they receive EtO-sterilized products.⁴ USEPA estimates that as much as 1% of EtO used remains on sterilized products even after aeration.⁵

Comment 6-4

² AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 4]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

³ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

⁴ AQMD. (26 October 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 16]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

⁵ AQMD. (28 September 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 32]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

Labeling all materials that have been sterilized with EtO can be critical in protecting consumers and workers who are not aware of the toxic gas and its effect on human health.

Additionally, the timeframes for Medium Facilities' Stack and Fugitive Emission Requirements (e)(1)(2) should be shortened and like our recommendation for Large Facility Requirements, implementation should begin sooner either end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

Comment 6-4
cont.

IV. Small Facility Requirements

Similar to the Large and Medium Facility Requirements, CBE also recommends changing the implementation dates for Small Facilities' Stack and Fugitive Emission Requirements (f)(1)(2). Instead of new requirements beginning in 2025 or 2026, requirements should start at the end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

Comment 6-5

V. Warehouse Reporting Requirements

We appreciate AQMD requiring Large, New and/or Designated Warehouses to record the number of Sterilized Palletized Units received each month as well as other warehouse information in section (h)(2). CBE recommends the initial summary report include information such as the location of sensitive receptors within 500ft of warehouses, the wind direction at warehouses, and a diagram showing where pallets are received and stored at a warehouse. Per EPA, it's difficult to know how far EtO can travel due to factors such as concentration, weather conditions, wind speed, and the amount of dispersion.⁶ As noted earlier, AQMD has even stated at the March 2023 Public Workshop that EtO can stay in the air for several months.⁷

Comment 6-6

VI. Permanent Total Enclosure Requirements

CBE recommends AQMD to adopt a stronger requirement for Permanent Total Enclosures (PTE) by requiring monthly monitoring of PTE for negative pressure efficiency. All PTE equipment should be regularly inspected every month for maintenance, quality assurance, predictive maintenance (if equipment is shown to be slowly deteriorating or failing) in order to protect workers and nearby communities.

Comment 6-7

VII. Lead Detection and Repair (LDAR) Program Requirements

While CBE appreciates AQMD requiring daily audio/visual checks for the LDAR program, we are concerned with the disadvantages of the LDAR control system. Per AQMD, Working Group #4 presentation stated that the disadvantages of LDAR can result with fugitive emissions being

Comment 6-8

⁶ EPA. (2023, January). *Hazardous Air Pollutants: Ethylene Oxide*. USEPA. HYPERLINK "<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto>." "<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto>.

⁷ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

emitted when repairs or replacements are conducted.⁸ As it stands, the Proposed Rule states Large and Medium Facilities require either Permanent Total Enclosure (PTE) or the LDAR program to control fugitive emissions.⁹ Does this mean that a Large and/or Medium Facility will continue operating if the LDAR control system breaks down? No facility that emits EtO should continue to operate without any fugitive emission controls given the dangers of EtO exposures. We urge AQMD to stop facilities who use LDAR from operating until repairs or replacements are resolved. EtO is a known carcinogen that can stay in the air for several months, which harms communities already heavily impacted by many pollution sources.

Comment 6-8
cont.

VIII. Reporting

As it stands, facilities are required to report within 30 days of exceeding the limit of permitted EtO use. CBE believes this is too large of a timeframe given the toxicity of EtO, its proximity to sensitive receptors, and the life span of EtO in the air. Therefore, AQMD should shorten the reporting from 30 days to 1 week to address exceedances in EtO permitted uses in order protect frontline communities.

Comment 6-9

IX. Sterilization Facilities Exceeding Applicable Ethylene Oxide Usage

Similar to Reporting requirements, CBE feels that that the timeframe of 24 months for facilities to adhere to the applicable EtO usage is too long given the dangers of EtO emissions. Any facility that emits more EtO than its category amount should adhere to the requirements of the permitted usage as feasible as possible, preferably less than 6 months. This 24-month timeframe is concerning given the current history of large facilities in the South Coast Air Basin and its high EtO emissions. Facilities using EtO outside their category amount that do not have the proper control equipment and/or systems in place are a danger to nearby communities and the 24-month timeframe is too much of a public health risk.

Comment 6-10

X. Additional Recommendations for Proposed Rule 1405

We urge AQMD to endorse a stronger Rule 1405 by adding additional requirements that provide the following:

Encourage the Adoption of Technologies Above and Beyond Rule Requirements

USEPA is continuing to reassess the toxicity of EtO and current air regulations to determine whether legal standards for EtO emissions can be strengthened.¹⁰ While CBE appreciates the AQMD taking initiative in investigating facilities that emit EtO in early 2022, we recommend

Comment 6-11

⁸ AQMD. (17 January 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 31].

http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm_presentation_011323.pdf?sfvrsn=8.

⁹ AQMD. (17 March 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slides 6-9]., pgs 6-

⁹http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

¹⁰ EPA. (2022, December). *What EPA Is Doing to Address Ethylene Oxide and to Learn More About the Chemical*. USEPA. <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/what-epa-doing-address-ethylene-oxide-and-learn-more-about>.

that AQMD adopt technologies that go above and beyond Rule 1405 requirements. AQMD noted in the third Working Group meeting that Rule 1405 requirements are currently more stringent than CARB’s EtO Airborne Toxic Control Measures.¹¹ In addition, the California Office of Environmental Health Hazard Assessment is also currently reviewing the carcinogenicity of EtO.¹² This is to say that AQMD already takes the lead in requiring higher standards for controlling EtO emissions and should adopt stringent standards if AQMD has new research, data, and/or technologies that are available and efficient in reducing EtO emissions. This includes additional safety requirements and technologies for workers who are exposed to EtO daily. AQMD should revisit and amend the Rule any time there is new information or technology available for the control of EtO emissions.

Comment 6-11
cont.

Fenceline Monitoring

CBE urges AQMD to do fenceline monitoring at Large and Medium Facilities in order to protect communities who live and/or work near facilities that emit EtO. Fenceline monitoring can serve to better understand if the emissions controls put in place are working. For example, fenceline monitoring can determine how much fugitive emissions are emitted when a facility’s LDAR control system is going through repairs. If AQMD does not plan to cease operations when there are LDAR repairs, then implementing a fenceline monitoring system can help make adjustments well before emissions levels become hazardous to the community or workers.

According to the USEPA, there are many benefits of fenceline monitoring. Fenceline monitoring can encourage early detection and correction of problems before they reach high emission levels.¹³ Fenceline monitoring can help identify equipment and control system leaks and contribute to ongoing research of EtO emissions on the federal, state, and local level, including the community.¹⁴ AQMD already has a history of using fenceline monitoring of EtO emissions as their Preliminary Draft Staff Report for Rule 1405 states how fenceline monitoring was conducted at three sterilization facilities with elevated signals of EtO.¹⁵ Fenceline monitoring proved to be effective in detecting high EtO emissions and whether Sterigenics Vernon’s Early Action Reduction Plan (EARP) and interim measures were successful in reducing and controlling EtO Emissions.¹⁶

Comment 6-12

¹¹ AQMD. (26 October 2022) *Working Group #3: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 30]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

¹² Ibid, slide 30.

¹³ EPA. (2016, June). *Petroleum Refinery Fenceline Monitoring Stakeholder Engagement*. USEPA. [slide 9]., pg 9.

¹⁴ Ibid.

¹⁵ AQMD. (2023 March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. SCAQMD. pgs 1-7. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

¹⁶ Ibid.

Overall, fenceline monitoring provides additional protection for frontline communities who already face cumulative impacts from many pollution sources and serves to measure the efficiency of control systems and technologies of EtO emissions.

Comment 6-12
cont.

Effective and Productive Interagency Coordination

CBE has voiced on separate occasions that AQMD needs to cooperate with other state and local regulatory agencies to enforce facilities to comply with best practices for frontline communities.¹⁷ Given the toxicity of EtO, AQMD should coordinate with CalOSHA to better protect workers - being that they are the most impacted group in polluting facilities, are frequently people of color or low-income and may also live in the local community. AQMD should also coordinate with the State Water Board to ensure that facilities are not discharging any Sterilizer Exhaust Vacuum Pump working fluid or any EtO contaminated liquids to the wastewater stream.¹⁸ Interagency coordination is instrumental in protecting public health and the environment, and AQMD should consider hosting interagency community workshops that foster an inclusive and accessible environment for the community.

Comment 6-13

Alternatives to EtO Sterilization

Currently, ethylene oxide accounts for approximately 50% of devices that require sterilization given its advantage of low temperature, penetration of products, and large capacity usage.¹⁹ But ethylene oxide is a known carcinogen by AQMD, OEHHA, and the USEPA, and yet it continues to be used for sterilization and other industrial usage.²⁰ CBE encourages AQMD to look at alternatives to EtO sterilization such as ionizing radiation (gamma),²¹ steam methods, hydrogen peroxide vapor,²² and other safe alternatives human health. The lack of material compatibility of EtO and industrial feasibility should not sacrifice the health of communities, workers, and the

Comment 6-14

¹⁷ AQMD. (2022, November) *BOARD MEETING DATE: November 4, 2022: AGENDA NO. 28*. SCAQMD. pg A-31. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2022/2022-Nov4-028.pdf?sfvrsn=6>.

¹⁸ AQMD. (2023 March). *Preliminary Draft Rule Language*. SCAQMD. pg 24. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

¹⁹ AQMD. (17 August 2022). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes*. [slide 14-15]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm1_081122.pdf?sfvrsn=6.

²⁰ AQMD. (28 September 2022) *Working Group #2: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 10]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

²¹ Gamma Industry Processing Alliance. (2017 August). *A Comparison of Gamma, E-beam, X-ray and Ethylene Oxide Technologies for the Industrial Sterilization of Medical Devices and Healthcare Products*. Stanford University. pgs 10-11. <http://large.stanford.edu/courses/2018/ph241/goronzv2/docs/gipa-aug17.pdf>.

²² Shahbandar, Lena. (2018 November). *Alternatives to Ethylene Oxide*. StopSterigenics. <https://www.stopsterigenics.com/post/alternatives-to-ethylene-oxide>.

environment. AQMD should reconsider adopting sterilizing alternatives based on material combustibility as a solution to reduce and control EtO emissions.

} Comment 6-14
cont.

XI. Conclusion

We appreciate the work of AQMD on Proposed Rule 1405 and the opportunity to comment. We highly encourage AQMD to endorse a stronger Rule. We welcome the opportunity to discuss these matters.

Sincerely,

Ambar Rivera
Staff Researcher

**Responses to Communities for a Better Environment Comment Letter, submitted
4/16/2023**


- 6-1 Response: Staff has considered tighter performance standards than currently proposed and shorter implementation timelines and determined that those are not currently feasible. PAR 1405 now requires that large facilities performing sterilization conduct interim mobile monitoring and fenceline air monitoring until continuous or semi-continuous stack emission monitoring are fully operational. As demonstrated via monitoring data at the two sterilization facilities subject to the EARP, after implementing measures to address stack and fugitive emissions, EtO levels were reduced to near background levels. PAR 1405 requires large facilities to monitor stack emissions and monitor parameters to ensure proper operation of fugitive emission controls. This ensures that sterilization facilities are implementing demonstrated measures to control EtO emissions. Additionally, Tier I Warehouses are required to conduct one year of fenceline air monitoring or other emission evaluations.
- See Response 1-4 regarding proposed NESHAP.
- 6-2 Response: Thank you for the comment.
- 6-3 Response: Staff has received several public comments regarding the implementation timeframe, and most expressed concerns of supply chain, time needed for engineering evaluation, time needed to obtain building permit for PTE construction, and increasing lead time of control and monitoring equipment driven by the release of proposed NESHAP. PAR 1405 includes extensive requirements including PTE and very stringent stack emission limits. It is anticipated that most large and medium facilities will have to install new control equipment and make modifications to existing building structure to comply with the rule. To better reflect a feasible timeframe, PAR 1405 has been revised to increase implementation timelines by six to eight months for large and medium facilities.
- 6-4 Response: Staff agrees that extending the labeling requirements to medium facilities could provide benefits as medium facilities are often commercial sterilization facilities. PAR 1405 has been revised to include the labeling requirements for medium facilities.
- See Response 6-3 regarding implementation timeframes.
- 6-5 Response: Staff has received public comments regarding the implementation timeframe, the concerns of supply chain, time needed for engineering evaluation, time needed to obtain building permit for PTE construction, and

- increasing lead time of control and monitoring equipment driven by the release of proposed NESHAP. Despite these concerns, the implementation timeframe for small facilities is expected to be feasible (i.e., by January 1, 2026).
- 6-6 Response: PAR 1405 has been revised to require a diagram showing where pallets are received and stored at a warehouse.
- 6-7 Response: The PTE requirements for large facilities in PAR 1405 go above and beyond U.S. EPA Method 204 by requiring continuous monitoring of differential pressure and periodic checks of facial velocity at all natural draft openings. These proposed requirements are also more stringent than other South Coast AQMD rules that include PTEs. Staff believes the proposed requirements would ensure capture of all fugitive emissions at subject sterilization facilities.
- 6-8 Response: PAR 1405 requires facilities to report operational noncompliance, including leaks detected under an LDAR program, to South Coast AQMD for compliance and enforcement action.
- 6-9 Response: Staff believes 30 days is appropriate to report when facilities exceed a limit of permitted EtO use as PAR 1405 requires owners and operators to maintain records regarding EtO sterilant gas used per calendar month.
- 6-10 Response: The intent of the subdivision is to provide a mandatory compliance pathway for facilities exceeding EtO thresholds and require these facilities to make changes to their facilities. The implementation timeframe of 24 months is consistent with the implementation schedule for large facilities in PAR 1405.
- 6-11 Response: PAR 1405 is based on the best available technology achieved-in-practice. Staff is committed to evaluate new technologies reducing EtO as they become available.
- 6-12 Response: See Response 6-1 regarding fenceline air monitoring.
- 6-13 Response: Staff has engaged with other regulatory agencies in this rulemaking process and is committed to working cooperatively with regulatory partners to protect public health from EtO.
- 6-14 Response: As noted in Working Group Meeting #1, there are alternatives to EtO sterilization in commercial use as well as new and emerging technologies in development. As noted in the comment, the lack of material compatibility for some materials remains an issue. According to U.S. FDA, EtO may be the only effective and approved sterilization method for many medical devices. PAR 1405 includes stringent performance standards to ensure EtO

emissions are reduced to the maximum extent possible based on technology achieved-in-practice.

**ADVAMED SPECIFIC COMMENTS RE. SCAQMD PRELIMINARY DRAFT AMENDED RULE 1405 --
CONTROL OF ETHYLENE OXIDE EMISSIONS FROM STERILIZATION AND RELATED OPERATIONS
(RELEASED IN CONJUNCTION WITH MARCH 23, 2023 PUBLIC WORKSHOP)**

Section – Section of the preliminary draft rule.
 Comment – Comment.
 Rationale – Rationale for the comment.

#	Section	Comment	Rationale for Comment
1	General	<p>As we have outlined in previous feedback and in our overall comments, we continue to have concerns regarding the very short timeframe for consideration and implementation of this proposal given the wide scope and complexity of substantial updates, confusing terminology, reliance on highly specific and unproven technologies, limited supply base and timeline for compliance, and critical capacity considerations for patient access to medical technologies.</p> <p>With the draft EPA proposed rulemaking now released and undergoing a significant review process, this strongly underscores our request for a pause in moving forward with the rule until after EPA completes its update of its EtO rulemaking. This will help inform a meaningful rule that can be implemented in the context of rigorous federal standards and that avoids direct conflict, including provisions that cannot be implemented with different competing processes in direct conflict with each other and rendering recommendations infeasible. Proposing a rule prior to the EPA rulemaking finalization will lead to serious and deleterious conflicts. Understanding the SCAQMD rule is still in draft form, we urge this reasonable pause to assist with relevant and workable consideration of the rulemakings.</p> <p>In short, the dates both for rulemaking and implementation timelines are far too short to execute effective actionable regulation. As FDA and EPA note, EtO is the only viable effective sterilization option for many devices. Any disruption in critical sterilization infrastructure could lead to delays in patient care and jeopardize vital</p>	
		<p>access to sterile medical devices. The expeditious fashion of this rulemaking has stymied public comments and will result in unenforceable rulings, unintended public health risk, and inconsistencies with federal rules. The time period for this rulemaking is much too short.</p>  <p>Please note these comments are not intended to be comprehensive in nature, but they represent feedback we are able to provide in the time period provided for review.</p>	
2	General	<p>On multiple occasions, the proposal references a 'sterilizer' as distinct from a 'sterilizer/aerator'. Most if not all industrial sterilizers are inherently also sterilizers/aerators because aeration inside them can continue via extending the quantity and/or time of the post-EtO dwell gas washes. The amended rule defines 'Sterilizer' as being any chamber or related piece of equipment <u>excluding</u> a combined sterilizer/aerator.</p>	<p>A separate definition for sterilizer/aerator is not needed when an industrial sterilizer fulfills this same functionality.</p>
3	General	<p>There does not appear to be control efficiencies listed for facilities with high volume, low concentration EtO emissions such as from aeration or chamber back vent emission control systems. Their data is only for combined (high volume / low concentration & low volume / high concentration) or high concentration only.</p>	<p>This is a critical gap in the proposed rule. The</p>

Comment 7-1

Comment 7-2

Comment 7-3

#	Section	Comment	Rationale for Comment
			<p>proposed rule of 99.99% destruction efficiency or < 0.01 ppm is not achievable for the dry bed adsorber systems typically used to control EtO emissions from high volume, low flow sources such as aeration rooms and chamber back vents.</p> <p>Based on source test publicly available and typical for AAT dry bed systems, it appears SCAQMD seems to have used specific results as the basis for other parts of their rule such as the 0.025 lbs/hour max emissions limit yet has not accounted</p>

Comment 7-3
cont.

#	Section	Comment	Rationale for Comment
			<p>for EtO concentration coming out of the dry bed system above 0.01 ppm while the destruction efficiency ranges from 99.2% to 99.6% (which is below the proposed 99.99% destruction efficiency).</p>
4		It is unclear why 0.1 ppm is used as a regulatory threshold.	<p>Does this assume uniform concentration throughout the indoor area? There will be variability depending on area. Concentration is also highly dependent on mixing of the air in the space. EtO is heavier than air. Also note that the measurement of control device destruction</p>

Comment 7-4

#	Section	Comment	Rationale for Comment
			efficiency will be problematic at inlet concentrations of 0.1 ppm and below.
5	General	We note that SCAQMD has listed EtO monitoring technologies that may not be able to detect to 0.01 ppm or are new and not tried and proven for industrial EtO sterilization facility use. For instance, some monitoring technologies may not be usable for monitoring stacks of wet acid scrubbers due to moisture content.	Consider the technical limitations of detection and available technology.
6	General	The use of the LOD versus a Lower Limit of Quantification (LLOQ) should be considered. Since 10 ppb (0.01 ppm) is being proposed as the limit, it should be based on what can be determined with certainty better than +/- 50% otherwise undue process interruptions will occur.	The LOD has significant uncertainty (usually +/- 50%). The LLOQ, while 3x the LOD, has greater certainty (+/- 10%-15%). The LOQ should be used instead of the LOD. Specifying a standard of 10 ppb may also eliminate some technologies that are currently available. Raising the standard from
#	Section	Comment	Rationale for Comment
			10ppb to 30 ppb does not obviate the 0.025 lbs per hour limit.
7	General	Requiring 99.99% DRE or 0.01 ppm eliminates the use of many pollution control devices that are currently installed and result in low actual emissions. If the goal is below 0.025 lbs/hour as an average, technology should be allowed that meets that requirement.	Utilize a flexible performance-based standard allowing for technologies deployed that reduce emissions.
8	(c) (6) Definition of Continuous Emission Monitoring System (CEMS)	The requirement for one (1) minute readings is not feasible. Further with respect to the proposed recommendation for a minimum of one measurement (e.g., concentration, mass emission, flow rate) taken and recorded every one minute, this technology is not proven to work with all abatement equipment.	The one-minute reading is limited to a single technology that is not proven to work with all abatement equipment. This is in direct conflict with statement of being technology neutral. Revise to a reasonable interval (i.e., at least 15 minutes) that is recognized and workable with abatement equipment for

Comment 7-4 cont.

Comment 7-5

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Comment 7-8

#	Section	Comment	Rationale for Comment
			purposes of this type of monitoring and CEMS should include examples of the technologies in the SCEMS definition.
9	(c)(9) Definition of Designated Warehouse	There is little information on the basis for the Executive Officer to make the determination that a designated warehouse is a "potential source of Ethylene Oxide emissions." We do not understand what that means.	Definition requires clarification.
10	(c) (10) Definition of Element	It should be clear that sterilized product and shipping containers are not elements.	Definition requires clarification.
11	(c) (16) Definition of Leak	Leak is defined as 2 ppm. The definition simply states 'above background'. There is not a background definition, and CARB Test Method 21 does not need it to be applied as a standard.	Further consideration requested.
12	General-Warehouses, (c)(19), and (h)	This approach may lead to poor rule development. Each pallet will be different in content. Definition of sterilized palletized unit needs to be provided. Unclear if that would include products sterilized as a palletized unit or sterilized individually and then assembled into a palletized unit, or both. Further, the definitions as drafted for warehouse types do not include anything about EtO. This definition is too broad and could capture warehouse spaces that do not have any EtO sterilized product.	Additional definition required. We propose maintaining the sterilized palletized unit reporting

Comment 7-8 cont.

Comment 7-9

Comment 7-10

Comment 7-11

#	Section	Comment	Rationale for Comment
	Warehouse Tracking and Reporting Requirements	Importantly, concept of term "sterilized palletized unit" is not trackable and industry standardized data point for warehouses. Pallets may contain an inconsistent number of products from shipment to shipment. Most systems instead track individual SKUs and their respective quantities. Additionally, while medical device manufacturers and distributors track which product is sterile or not sterile, the specific sterilization modality may not be tracked with inventory management systems given the large universe of sterile items and various methods of sterilization, such as steam, gamma, e-beam, etc. Further, supply chains are global in scale. Product may be sterilized and imported from outside of the United States by third parties – perhaps weeks if not months before transiting through a warehouse located in South Coast’s jurisdiction. The original sterilizer may be several companies removed from the final medical device distributor, which further complicates data reporting requirements.	requirements for large sterilization facilities but not imposing reporting requirements for warehouses. With the existing large facility requirements, South Coast will have visibility into product sterilized within and delivered to entities within their jurisdiction. This will allow South Coast to focus data collection for products that were more recently sterilized.
13	(c) (21) Definition of PTE	Defining a PTE as an enclosure that has been evaluated to meeting design requirements set forth in US EPA Method 204 and then promulgating verification requirements in Appendix 3 in excess of Method 204 requirements is not consistent. PTE requirements should match Method 204 requirements. The US EPA FAQ for Method 204 at (Frequently Asked Questions (FAQs) for Method 204 (epa.gov)) question 2 states that either a calculation of average face velocity or a measurement of static pressure is sufficient. Both are not required.	Further consideration requested.

Comment 7-12

Comment 7-13

#	Section	Comment	Rationale for Comment
14	(c) (25) Definition of Semi-Continuous Emission Monitoring System (SCEMS)	The definition for SCEMS should be anything greater than 15 minutes. This allows for the use of multiple technologies as outlined in the definition. The Continuous Emissions Monitoring System (CEMS) definition does not include this because there is only a single technology available, and it is proven to not work on all abatement equipment. SCEMS monitoring equipment definition should be included in CEMS.	Fifteen (15) minutes should be the CEMS interval definition and CEMS include the list of technologies included in the SCEMS definition. Further, the relative standard deviation across readings is highly consistent and strongly indicates confidence in readings up to 6 hour intervals in low and / or relatively stable concentration areas, like warehouses. SCEMS should be used for these extended intervals (greater than 15 minutes).
15	(d) Large	Please confirm that all APCD, including those used for PTE in a warehouse, require CEMS or Annual Source Testing.	Clarification.

Comment 7-14

Comment 7-15

#	Section	Comment	Rationale for Comment
	Facility Requirements		
16	(d) (1) and (d) 2) Large Facility Stack Emission Requirements and Emission Monitoring Requirements	What is the purpose of requiring annual source testing and CEMS/SCEMS? Additionally, the source testing requirement and the CEMS/SCEMS requirements do not align.	Annual source testing is redundant where approved CEMS /SCEMS is in place. Requiring annual source testing necessitates the use of additional EtO to achieve required input testing concentrations sufficient to demonstrate compliance as the available technology capabilities are not able to meet the source testing requirements outlined.
17	(d) (2) Large Facility Stack Emission	Multiple CEMs for a facility may be cost prohibitive. Consideration of CEMs used for sources that do not have rapid changes in concentration, such as warehouses, should be given.	A CEMs system costs approximately \$200-300K per stack. Warehouses

Comment 7-16

Comment 7-17

#	Section	Comment	Rationale for Comment
	Monitoring Requirements		or other storage areas do not experience rapid changes in concentration. A single CEMs system could be used to sample multiple low concentration stacks and not compromise data quality.
18	(d) (3) Large Facility Fugitives Emissions Requirements	Waste storage areas are not usually part of the enclosed facility since it is a byproduct of the abatement systems. We recommend allowing for LDAR for external sterilant gas storage and waste storage areas and PTE for the remaining internal areas outlined. All components of fugitive emission control systems cannot be physically housed within a PTE, and components under negative pressure will not leak to atmosphere, therefore only LDAR requirements should apply to external control system components under positive pressure.	Neither control technologies nor waste storage systems are able to be located inside buildings / PTEs due to operational and access requirements. Implementing an LDAR system will ensure those areas not within PTE are fully contained and monitored per the intent of the proposed rule.

Comment 7-17

Comment 7-18

#	Section	Comment	Rationale for Comment
19	(g) Post-Aeration Storage Facility Requirements and General	It is critical that reasonable implementation timeframes be set forth in this proposed updated rulemaking.	As with the other proposed rulemaking provisions and regardless of type of sterilizer, the timelines are much too short for implementation in this proposed rulemaking.
20	(h) Warehouse Tracking and Reporting Requirements	Please provide clarification on tracking of shipments to large warehouses (e.g., sterilizer direct to warehouse). Please provide exclusion for limited quantity shipments (e.g., parcel and LTL shipments).	Clarification.
21	(i) Interim Requirements	The implementation date is unclear for these interim requirements.	Clarification.
22	(j)(3) SCEMS, CEMS, or Other Monitoring Requirements	Back power for CEMs is not required during a power outage as there is no flow through the APCD. Backup power systems sufficient to operate the required equipment do not produce electricity instantaneously	Generators typically require 5 to 10 seconds of startup time before providing power. Most equipment fed by the generator would

Comment 7-19

Comment 7-20

Comment 7-21

Comment 7-22

#	Section	Comment	Rationale for Comment
			also then require a re-start.
23	(k) General-PTE	Method 204 PTE is problematic for typical warehouse design and would require significant modification to existing facilities, including additional space, to implement. Method 204 provides for a choice between verification methods and does not require both implemented simultaneously.	Atmospheric conditions may preclude achieving adequate negative pressure and inward air flow velocity (specifically, wind) at all times. This is redundant and does not provide value. Verification of flow method can be done parametrically and fan operation continuously measured and monitored to ensure conformance with the standard.
24	(k) General-PTE	Enclosure is not feasible for all piping and pollution control systems.	We strongly encourage further consideration. Not all facilities are designed and

Comment 7-22

Comment 7-23

#	Section	Comment	Rationale for Comment
			engineered in the same manner. Not all components can be physically housed within. Consequently, how one site can achieve acceptable air emission control may not work for another site. It will be dependent on facility design.
25	(k) General-PTE	For internal spaces, can indoor monitoring be done rather than PTE? Overall, clarification needed on whether PTE is required for sterilization, aeration, and storage/transport, etc. or if LDAR and Monitoring are an option since PTE is not feasible between areas of the building.	Clarification.
26	General-PTE and (k)(1)	Doors “closed during routine operations” is problematic for warehouse operation where trucks are routinely loaded and unloaded. This may also be problematic to achieve in facilities subject to FDA GMP requirements. Maintaining at least 0.007 inches of water column for a building with loading/unloading at dock doors may not be achievable at all times	Product movement into and out of the building is part of routine operations at the types of facilities under discussion. Atmospheric conditions may preclude achieving

Comment 7-24

Comment 7-25

Comment 7-26

#	Section	Comment	Rationale for Comment
			adequate negative pressure and inward air flow velocity (specifically, wind) at all times.
27	(k)(1) PTE	Indoor monitoring produces varying results depending on the exact location of the sensor relative to product, docks, internal air flow patterns, etc. PTE assumes that the enclosures are separated from each other. As previously mentioned in most facilities, the areas described in the proposed rule are connected to each other and maintaining - 0.007" w.g. from each other is not feasible. For instance, the chamber room air may flow to aeration and therefore is not negative to that space but may be negative to the exterior of the building.	Further consideration requested.
28	(k)(1) PTE	Continuous parameter monitoring will already be in place with a reading at least every 15 minutes - requiring an average over just 1 minute does not allow for NDOs (such as an entry or rollup door) that are operated during the period to average the pressure. The language should be adjusted for consistency.	Requirement as written cannot be met during normal operations. Further consideration requested.
29	(k)(2) PTE	Why are three monitoring locations required in cases when a single monitoring location is representative of the pressure drop across the openings? Pressure drop measurements performed at a single representative location are enough to verify a functioning PTE. The added expense and effort associated with three measurement locations rather than one is not justified and does not provide sufficient (if any) added value. In addition, not all PTEs will have an exterior wall that is Leeward or Windward – some PTEs may be fully internal to a building.	Further consideration requested.

Comment 7-26 cont.

Comment 7-27

Comment 7-28

Comment 7-29

#	Section	Comment	Rationale for Comment
30	(k) (1), k (2), and k (3) PTE	Continuous Differential Pressure Monitoring and Monthly Inward Air Velocity Measurements. Differential pressure across a PTE and inward air velocity at NDOs are redundant parameters for assessing whether fugitive emissions are being captured by a PTE. For example, EPA Method 204 only requires either differential pressure monitoring or inward air velocity determinations, not both equivalent assessments. Therefore, it is unnecessary to require both continuous differential pressure monitoring and monthly inward velocity determinations. Suggest aligning with Method 204 or other method that meets the intent.	Further consideration requested
31	(m)(5)(B) and (m)(5)(C) Source Test Requirements	Testing required at permitted maximum, typical and normal operating conditions. Is the requirement for three (3) runs of testing at both maximum and typical operating conditions for a total of six (6) testing runs? If so, why is more stringent testing than existing standards required?	Clarity needed on requirements
32	(m)(5)(C) Source Test Requirements	Not all sterilization/aeration cycles last 60 minutes, especially for small and medium facilities. Rule should allow for test runs for sterilization/aeration cycles of less than 60 minutes to document compliance when appropriate.	Further consideration requested
33	(n) General-LDAR	Current EPA Leak Detection and Repair (LDAR) leak definitions generally are 500 ppm and not applicable to EtO.	At 2 ppm TOC, it may be difficult to distinguish between EtO and other VOCs (such as propellants for lubricants), creating a "false positive."

Comment 7-30

Comment 7-31

Comment 7-32

Comment 7-33

#	Section	Comment	Rationale for Comment
34	(n) General-LDAR	As written, including the Control System in the LDAR would unnecessarily include sections of control system that are under negative pressure and would not be considered a source of equipment leaks (Leak Detection and Repair Compliance Assistance Guidance Best Practices Guide). The proposed rule should not include negative pressure components of the control system before or after the treatment system if there are other means of ensuring the ductwork or system is maintained at that negative pressure. Consider exception to LDAR for equipment and piping that are under negative pressure at all times.	Under negative pressure, all flow will be into the equipment/pipe, resulting in no detection of leaks. Leaks on a negative pressure system do not result in releases out of the system and these systems can be monitored continually to ensure proper function.
35	(n) (3) LDAR	In the absence of any specific details regarding “maintaining” Components and Elements subject to the LDAR program free of Leaks greater than 2 ppm above background, would an acceptable approach be for subject sites to document an internal process and/or procedure for maintaining Components and Elements Leak free? For example, sites would document reasonable time periods, based on site resources, for repairing Leaks after found that demonstrate that, if followed, the site is “maintaining” Components and Elements free of Leaks and addressing Leaks in a “timely manner” as specified on page 2-14 of the “Preliminary Draft Staff Report” dated March 2023. Sites would also document plans for addressing a Component or Element Leak that can’t physically be repaired to stop the Leak without replacing it with a new Component or Element, including documenting the procedure to be followed when a new Component or Element is not readily available.	Leak free reference is confusing. Clarity needed on requirements.

Comment 7-34

Comment 7-35

#	Section	Comment	Rationale for Comment
36	(n) (3) LDAR	A leak definition of 2 ppm above background is not reasonable per the following considerations. (1) CARB Method 21 equipment (i.e., monitoring instrument, calibration gases) that satisfies the scale (i.e., 2.5% of 2 ppm = 0.05 ppm), calibration precision (<10% of 2 ppm = <0.2 ppm), and calibration gas accuracy (±2% of 2 ppm = ±0.04 ppm) requirements may not be readily available. The added difficulty and effort associated with such a low leak definition is not justified and does not provide sufficient (if any) added value relative to a higher leak definition, such as the existing leak definition that could be more confidently detected (10 ppm).	Further consideration requested.
37	(n)(4) LDAR	Daily audio-visual (AV) checks required. The most frequent periodic AV checks in typical LDAR regulations is weekly. Weekly inspections at most, with an added requirement to respond in the event of any evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, would be more in line with existing, effective LDAR regulations. The statement included on page 2-14 of the “Preliminary Draft Staff Report” dated March 2023 indicating “[t]his approach is consistent with other VOC regulations addressing fugitive emissions from oil fields, refineries, and chemical plants” is an inaccurate statement.	Further consideration requested.
38	(n) (5) LDAR	Please consider adding reasonable exceptions that are common in LDAR regulations to the monthly inspection requirement. What if a component or element is not readily accessible (e.g., requires a manlift to access)? What if a Component or Element isn’t accessible safely on a monthly basis? Can the regulations be modified	Further consideration requested.

Comment 7-36

Comment 7-37

Comment 7-38

#	Section	Comment	Rationale for Comment
		<p>to include for the development of a plan for monitoring such Components and Elements on a greater than monthly frequency if adequate justification is provided in the plan?</p> <p>Might consider frequency of LDAR inspections be aligned with current LDAR programs. They require inspections quarterly (except liquid pumps, which are monthly, and visual checks on liquid service equipment which is daily).</p> <p>Should also allow all methods in CARB 21, not just 2 of the 4 stated.</p>	<p>With the presence of PPM monitoring systems (used to ensure associate exposure remains low), possible leaks in process areas will be identified in a short amount of time.</p> <p>Inappropriately excludes PID and Catalytic Oxidizer types without another approval step.</p>
39	(n) (5) LDAR	<p>There is no detail given for specific requirements of meter characteristics (response time, accuracy, detection threshold, pump vs passive sensing, frequency of meter testing and calibration). The leak threshold must be specific to EtO and not subject to interference from other maintenance chemicals used in the area.</p>	<p>There are a wide variety of meters on the market, with a very wide range of characteristics. Many available meters would not be capable of producing a consistently accurate result.</p>

Comment 7-38 cont.

Comment 7-39

#	Section	Comment	Rationale for Comment
40	(n)(6) LDAR	<p>The requirement to record results of daily audio-visual checks or monthly leak inspections at all components and elements implies either may be performed, but the previous sections indicated both must be performed. Please clarify.</p>	<p>Further consideration requested.</p>
41	Appendix 3 and Related	<p>If negative pressure is continually monitored, monthly face velocity tests are redundant and unnecessarily burdensome.</p>	<p>Requiring both is redundant and not necessary.</p>
42	Appendix 3 and (k)(3)	<p>PTE Inward Face Air Velocity Measurement – EPA Method 204 does not require direct measurements of inward face air velocity at each NDO. Rather, only the calculated facial velocity of air through all NDOs is calculated and compared to the 200 fpm criteria.</p> <p>The proposed PTE Inward Face Air Velocity Measurement procedure will not consistently allow for the determination of representative NDO face velocities. There are established existing EPA Methods for identifying sample points (EPA Method 1 and 1A) and for measuring air velocity (EPA Methods 2-2H) that account for various configurations (e.g., disturbances) and conditions (e.g., ambient) that are completely ignored by the procedure proposed in Appendix 3. The existing facial velocity requirement in EPA Method 204 involves the determination of representative flows which in turn allows for the calculation of a representative facial velocity (FV) for reasonable comparison to the 200 fpm criteria.</p>	<p>Further consideration requested.</p>
43	(o)(4) Prohibitions	<p>Please provide exemption for limited quantity of product where product testing is required (e.g., cycle development, QA/QC, R&D, validation).</p>	<p>Clarification.</p>

Comment 7-40

Comment 7-41

Comment 7-42

Comment 7-43

Responses to AdvaMed Comment Letter, submitted 4/16/2023

- 7-1 Response: See Response 1-1 about the public process of PAR 1405.
See Response 1-2 regarding implementation timeframe.
See Response 1-4 regarding proposed NESHAP.
- 7-2 Response: Staff disagrees that a separate definition for combined sterilizer/aerator is not needed. While some off-gassing of EtO occurs in standalone sterilizers, additional time under specific conditions, known as aeration, is required to achieve residual levels of EtO to ensure patient safety. Only specific tested and validated cycles designed for combined sterilizer/aerators complete aeration in-chamber, do not require pre-aeration handling, and do not have EtO emissions associated with pre-aeration handling. As such, PAR 1405 does not require combined sterilizer/aerators be maintained under PTE at medium or small facilities.
- 7-3 Response: Large facilities with control systems with high volume, low concentration EtO emissions may choose to comply with the 0.01 ppm outlet concentration performance standard as opposed to the 99.99% control efficiency performance standard.
See Response 1-3 regarding technological feasibility of performance standards in PAR 1405.
- 7-4 Response: PAR 1405 does not include indoor concentration monitoring or a 0.1 ppm regulatory threshold.
- 7-5 Response: Each EtO monitoring technology has its own specific technical limitations. PAR 1405 is technology-neutral and allows for multiple compliance pathways while still maintaining its goal of reducing and verifying reductions in EtO emissions.
- 7-6 Response: After careful consideration, PAR 1405 has been revised to require a resolution of at least 0.001 ppm and the averaging time has been revised from daily averaging to rolling 30-day averaging.
- 7-7 Response: PAR 1405 uses a combination of performance standards at large facilities to address control systems with high inlet concentrations, control systems with low inlet concentrations, and facilities with high throughput. Control efficiency, outlet concentration, and mass emission rate limits, respectively, address each specific facet of EtO air quality concern.
Also see Response 1-3.

- 7-8 Response: PAR 1405 does not require the use of CEMS and allows for the use of SCEMS with a 15-minute time interval.
- 7-9 Response: PAR 1405 has been revised to remove this provision.
- 7-10 Response: PAR 1405 has been revised to add clarity to the definition of element as suggested.
- 7-11 Response: PAR 1405’s definition of leak and the phrase “above background” is consistent with other South Coast AQMD rules that define “leak”, such as Rule 1173. Staff disagrees that a definition for “background” is needed in PAR 1405.
- 7-12 Response: Staff reached out to multiple warehouses stakeholders to determine if sterilized palletized units, trailer truck loads, or some other measure of deliveries of sterilized materials was selected. Based on stakeholder feedback, tracking and reporting of sterilized palletized units is used. PAR 1405 includes tracking and reporting of sterilized palletized units for one 12-month period for large facilities and warehouses.
- Staff agrees that the potential of EtO emissions from warehouses depends on many factors and now requires fenceline air monitoring, an emission study, or contribution to a real-time fenceline air monitoring demonstration program for Tier I Warehouses.
- 7-13 Response: Staff believes continuous PTE monitoring of negative pressure with redundant periodic inward face velocity measurements ensures capture of fugitive EtO emissions.
- Also see Response 4-4.
- 7-14 Response: Defining SCEMS as greater than a 15-minute time interval is not consistent with South Coast AQMD emission monitoring Rules 218, 218.1, 218.2 and 218.3. In addition, the proposed NESHAP includes a 15-minute time interval for continuous monitoring.
- 7-15 Response: PAR 1405 requires all control systems, regardless of APCD technology, be source tested annually if demonstrating control efficiency or annual RATA if demonstrating 0.01 ppm outlet concentration and the facility-wide mass emission rate with CEMS (or SCEMS) at large facilities.
- 7-16 Response: See Response 3-16.
- 7-17 Response: Under PAR 1405, large sterilization facilities may combine multiple exhaust stacks into a single monitored emission stack, monitor multiple exhaust stacks with a single SCEMS or CEMS on a timesharing basis, or employ a dedicated emission monitoring system for each exhaust stack.

- 7-18 Response: This Draft Staff Report clarifies that fixed tanks associated with acid-water scrubbers, such as ethylene glycol tanks, are not considered elements of a waste storage area and are instead part of a control system and are required to be monitoring under an LDAR program.
- 7-19 Response: PAR 1405 has been revised to allow post aeration storage facilities until September 1, 2025 to comply with new requirements.
- 7-20 Response: PAR 1405 defines “palletized unit” and believes the rule language is clear that a parcel or a less than truckload (LTL) shipment, if not in a palletized unit directly from a sterilization facility, is not required to be tracked and reported by a warehouse.
- 7-21 Response: PAR 1405 interim requirements would take effect immediately upon rule adoption and were written to mirror existing Rule 1405 language and/or meaning with a table of sunset dates listed in PAR 1405.
- 7-22 Response: After speaking with vendors and other stakeholders regarding emission monitoring systems, staff anticipates CEMS or SCEMS to be equipped with backup battery power, not generators, to deliver primary uninterruptable power and PAR 1405 requires 60 consecutive minutes of backup battery power.
- 7-23 Response: See Responses 3-13 and 4-4.
- 7-24 Response: PAR 1405 allows control systems and associated piping either to be held under PTE or alternatively monitored under an LDAR program.
- 7-25 Response: PAR 1405 does not allow for indoor monitoring as an alternative compliance path to PTE requirements.
- 7-26 Response: Staff expects some retrofitting to occur at facilities required to maintain some or all their operations under PTE. For natural draft openings, owners or operators may choose to employ measures such as fast-opening rollup doors, double-doors/vestibules, or other measures to comply with PAR 1405. PAR 1405 has been revised to potentially exclude differential pressure measurements when average one-minute wind speeds exceed 20 miles per hour in paragraph (u)(14).
- 7-27 Response: Indoor EtO monitoring is not a compliance path within PAR 1405. Regarding PTE, see Response 7-26.
- 7-28 Response: See Responses 3-13 and 4-4.
- 7-29 Response: PAR 1405 continuous PTE monitoring requirements are based on monitor strategies achieved-in-practice, specifically continuous PTE monitoring requirements in Rule 1420.1 regarding large lead-acid battery recycling requirements as well as continuous PTE monitoring requirements in a

- Permit to Operate for an existing EtO sterilization facility in South Coast AQMD.
- 7-30 Response: See Response 4-4.
- 7-31 Response: PAR 1405 has been revised to clarify that triplicate runs at either typical or maximum operating parameters are required.
- 7-32 Response: The minimum testing time is consistent with existing Rule 1405 requirements, and have been performed in many source tests for sterilization facilities including small and medium facilities.
- 7-33 Response: Staff anticipates changes to implement LDAR programs and the 2 ppm threshold including unit replacement, bulb changeout, new calibration gases, or upgrades with additional software for photoionization detectors to comply with lower leak threshold standards.
- 7-34 Response: Staff has carefully considered possible exceptions to components under negative pressure but because of the nature of EtO as a VOC and a toxic air contaminant, no exceptions are appropriate under an LDAR program.
- 7-35 Response: See Response 7-34.
- 7-36 Response: Because of the nature of EtO as a VOC and a toxic air contaminant and OSHA workplace standards regarding excursion limits, a definition for leak at 10 ppm is not appropriate and a definition for leak below the current EtO excursion limit of 5 ppm, at 2 ppm, is more appropriate.
- 7-37 Response: Because of the nature of EtO as a VOC and a toxic air contaminant, staff believes more frequent audio-visual checks are warranted but the approach of audio-visual checks is consistent with LDAR programs for oil fields, refineries, and chemical plants.
- 7-38 Response: See Response 7-34 in response to exceptions. PAR 1405 has been revised to reduce the frequency of leak inspections to every 60 days.
PAR 1405 allows for any method or instrument if approved by the Executive Officer but identified “portable photoionization detector” specifically.
- 7-39 Response: PAR 1405 refers to CARB Test Method 21 for these specific requirements.
- 7-40 Response: PAR 1405 has been revised to reflect both checks and inspections must be recorded.
- 7-41 Response: See Response 4-4.
- 7-42 Response: See Response 4-4.

7-43 Response: PAR 1405 has been revised to allow for product testing with no further distribution as suggested.

May 11, 2023

Mr. Wayne Nastri
Executive Officer
South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765



VIA ELECTRONIC MAIL

RE: URGING Immediate action on Sterigenics and Stronger and Faster Implementation of Ethylene Oxide Emission Control & Monitoring Measures

Dear Director Nastri,

Communities for a Better Environment (“CBE”) appreciates the opportunity to engage in the Ethylene Oxide (EtO) rulemaking process—Rule 1405. CBE is a community-based environmental health and justice organization, organizing with Southeast Los Angeles communities living near the Sterigenics facility in Vernon. We are writing to express our disappointment with the rulemaking process and request a meeting with you to address this urgent air pollution and public health emergency.

EtO has been a known carcinogen since the 1950s. EtO is a flammable, colorless gas that can cause cancer in humans and even damage children’s DNA. Exposure to EtO has detrimental health impacts to communities and workers such as debilitating the respiratory system to cancers such as lymphoma. CBE submitted a comment letter on the Proposed Amended Rule 1405 on April 13, 2023. (See Attachment 1) We believe the current draft language will not meaningfully regulate sterilization and related operations that harbors a known carcinogen identified by the California Air Resources Board (“CARB”) as a Toxic Air Contaminant (TAC) and by the United State Environmental Protection Agency (“USEPA”) as a Hazardous Air Pollutant. It is also disheartening to see that AQMD only began investigating facilities that emit EtO *after* the USEPA announced the reevaluation of the potential toxicity of EtO.

AQMD stated in the April 11, 2023 PAR 1405 study session that fence-line monitoring would not be the most effective tool for PAR 1405 due to other emission capturing and monitoring,¹⁰ but now the USEPA has announced an action proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating

Comment 8-1

¹⁰ AQMD. *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations Study Session*. April 11, 2023.
https://drive.google.com/file/d/1TvxOd5uUIs3MzoVfyLLLszOt2GbR_gnR/view?usp=sharing.

effectively.¹¹ The continuous emissions monitors required by this proposal are the most accurate type of monitoring for EtO emissions from commercial sterilizers.¹²

} Comment 8-1
cont.

CBE requests AQMD impose stronger requirements for facilities that emit EtO such as:

- Requiring Small, Medium, and Large Facilities to adhere to Rule 1405 regulations by end of 2023 instead of 2025-2026.
- Requiring facilities to suspend operations when any control equipment or technology breaks down or is going through repairs or replacements.
- Requiring facilities to suspend operations when a facility emits more EtO than its category amount.
- Requiring Rule updates when stronger control systems and technology becomes available.
- Requiring interagency coordination with CalOSHA to educate and better protect workers from EtO exposure by always requiring personal protection equipment and high-quality respirators.
- Requiring fence-line monitoring at facilities that emit EtO given that EtO can stay in the air for several months. Recently, the USEPA released a proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating effectively and require data to be submitted to EPA electronically twice a year.¹³ Fenceline monitoring can monitor early detection leaks and help evaluate the effectiveness of control systems and equipment to better protect workers and communities from EtO exposure.

} Comment 8-2
 } Comment 8-3
 } Comment 8-4
 } Comment 8-5
 } Comment 8-6
 } Comment 8-7

Frontline communities, such as Southeast Los Angeles, already face a disproportionate amount of pollution from transportation, industry, warehouses, and many other pollution sources. It is critical that AQMD implement a stronger ruling that takes effect immediately rather than a year or two from its adoption date. This is a significant environmental justice issue that impacts all generations of communities, leaving some residents unaware that a facility is harboring a known carcinogen. While environmental justice has been identified as a priority of Governor Newsom, CalEPA, and AQMD Board, we continue to see the same patterns of neglect and injustice in low-income communities of color. We request a meeting with you and your staff to discuss this urgent matter. Please keep in mind that some of the households impacted here are the same that have been severely impacted by the regulatory failures related to Exide. The time to act is now. We appreciate your prompt attention to this issue.

¹¹ USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1-2.

¹² Ibid.

¹³ USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1.

Sincerely,



Ambar Rivera, Staff Researcher
Bahram Fazeli, Director of Research and Policy
Communities for a Better Environment

CC:

Wayne Natri
Executive Officer

Michael Krause
Assistant Deputy Executive Officer

Neil Fujiwara
Program Supervisor

Kalam Cheung, Ph.D.
Planning and Rules Manager

Areio Soltani
Air Quality Specialist

**Responses to Communities for a Better Environment Comment Letter, submitted
5/11/2023**

- 8-1 Response: Thank you for the participation in the public process. Regarding proposed NESHAP for EtO sterilization (Subpart O), continuous stack emission monitoring is optional and there is no requirement for fence line monitoring under the proposed NESHAP.
- 8-2 Response: See Response 6-3 regarding implementation timeframes.
- 8-3 Response: Sterilization facilities are required to comply with all applicable South Coast AQMD rules including Rule 430 *Breakdown Provisions*.
- 8-4 Response: Facilities using more than their category amount would be in violation of their permits to operate and/or approved plans and would be subject to compliance action. In addition, PAR 1405 requires additional actions such as installation of additional controls, PTE, or CEMS as applicable to comply with the new category.
- 8-5 Response: PAR 1405 may be amended again in the future for a variety of reasons, including development and availability of more effective control systems or new technologies.
- 8-6 Response: Staff has engaged with other regulatory agencies in this rulemaking process and is committed to working cooperatively with regulatory partners to protect public health from EtO. Requiring facilities to comply with Cal/OSHA requirements would be outside of the scope of PAR 1405.
- 8-7 Response: PAR 1405 requires interim fence line air monitoring until CEMS or SCEMS is installed and certified at large sterilization facilities.

Areio Soltani

From: Chris Collier <chris.collier@rinconstrategies.com>
Sent: Wednesday, July 26, 2023 11:12 AM
To: Areio Soltani
Subject: [EXTERNAL]Written Comment for 7/26 Public Workshop - PAR 1405

July 25, 2023

Dear Supervisor V. Manuel Perez, Mayor Patricia Lock Dawson and Chair Vanessa Delgado,

We appreciate your measured voice on the AQMD, and your commitment to protecting the lives of Californians here in Riverside County and the greater Coachella Valley Region.

As the Board continues to consider Proposed Amended Rule 1405, we are writing to ask that you take all possible consequences into account – from impacts on patients first and foremost, to the implications for medical technology innovators and care providers that have established a robust presence here in the community.

We were glad to join a coalition letter earlier this year to reiterate our concerns, perhaps best summarized by the staggering presence of innovators here in the AQMD’s jurisdiction: “Sterilizers have an established role within the Southern California healthcare and business ecosystems, sterilizing over 100 million products annually. Disruptions to the process as a result of cumbersome regulations could significantly diminish our position as a leader in medical device sterilization and impact patient access in the process.”

In order to keep Southern California a great place to live, do business, and receive care, we urge you to ensure that any rule – particularly one that has such potential to negatively impact the healthcare supply chain – is fully thought through.

Thank you,

Chris Collier

Chief Policy Advisor
Greater Coachella Valley Chamber of Commerce

} Comment 9-1

Greater Coachella Valley Chamber of Commerce Comment Email, submitted 7/26/2023

- 9-1 Response: The purpose of PAR 1405 purpose is to reduce ethylene oxide emissions from sterilization facilities and related operations. Throughout the rule development process, consideration has been made to minimize disruptions to the medical supply chain for critical products. PAR 1405 includes curtailment exemptions for products that are identified by the U.S. FDA or other local, state, and federal health agency or local hospitals and medical centers as reasonably likely to be in shortage.



July 28, 2023

Wayne Natri
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Continued Concerns Regarding Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Dear Executive Officer Natri:

We are writing today regarding our continued concerns on proposed amended rule (PAR) 1405 – Control of Ethylene Oxide Emissions from Sterilization.

Throughout the rule process have regularly raised consistent concerns with South Coast Air Quality Management District (SCAQMD) regulatory staff. This includes several private meetings, attending nearly all public meetings – including Governing Board Committees, and submitting detailed written comments to the initial proposed amended rule language.

Despite this robust engagement and shared concern from Board members as to the rule’s impact on all stakeholders, regulatory staff has not meaningfully addressed concerns on PAR 1405’s potential impact on patient access to sterile lifesaving medical devices. What’s more, the newest version of PAR 1405 (released July 21, 2023) makes significant modifications – many that heighten these concerns – including relying on unreliable and untimely monitoring technology for rule enforcement, arbitrary curtailment length and thresholds, and continuing to base key parts of the rule on the results from a single sterilization facility in Illinois. Further, regulatory staff continues to propose an unnecessarily abbreviated timeline for approval that restricts the opportunity for thoughtful and informative feedback from both stakeholders and Governing Board members.

Notably, this insistent approach is happening in parallel with a draft updated inhalation risk unit factor (IUR) from the Office of Environmental Health Hazard Assessment (OEHHA) that proposing a level below known background levels of EtO. We appreciate SCAQMD’s public acknowledgement of this reality and also that medical sterilizers are not the source of the background levels via its public comments to OEHHA and the EPA.

Due to uncertainty amongst regulators as to sources of EtO, the multiple moving pieces (i.e., EPA, OEHHA, SCAQMD), and the threat each of these poses to public health and safety, and continued concerns as to the achievability of PAR 1405, we do not believe this rule should move forward as is, especially on its current



timeline. Existing enforcement and monitoring authority are sufficient to ensure compliance and continued protection of all elements of public health until these issues are resolved. At a minimum we request additional time for review and consideration of the significant modifications to PAR 1405 to allow for development and submission of meaningful comments, continued discussion with regulatory staff, and additional opportunities for the Governing Board to hear stakeholder concerns.

} Comment 10-3 cont.

Our objective remains to collaborate with SCAQMD staff to refine PAR 1405 so that there is no immediate or recurring threat to patient access to critical, sterile medical technology, as well as ensure mitigation of hazardous air pollutants found to pose a threat to the community. Thank you for considering our request.

Sincerely,

/s/
Greg Crist
Head of External Affairs
AdvaMed

/s/
Sam Chung
Vice President, State Government
Relations
California Life Sciences

/s/
Jimmy Jackson
Senior Vice President &
Chief Policy Officer
Biocom California

Cc: Vanessa Delgado, Chair, Governing Board, South Coast AQMD
Sarah Rees, Deputy Executive Officer, South Coast AQMD
Michael Krause, Assistant Deputy Executive Officer, South Coast AQMD

Life Sciences Coalition Comment Letter, submitted 7/28/2023

- 10-1 Response: Thank you for participating in the public process. Regarding the reliance on “unreliable and untimely monitoring technology” in PAR 1405, see Response 1-7 regarding fenceline air monitoring technology.
- Regarding “arbitrary curtailment length and thresholds”, PAR 1405 requires curtailment when fenceline levels exceed certain trigger thresholds, and curtailment ends when the fenceline levels are below the thresholds. PAR 1405 initial trigger thresholds are based off curtailment thresholds already in practice in approved Early Action Reduction Plan (EARP), which were mutually agreed upon between South Coast AQMD and a local sterilization facility. The final curtailment threshold is based on the detection limits of real-time monitoring technology and consistent with being approximately 10 times greater than background levels.
- Regarding basing key parts on “results from a single sterilization facility in Illinois”, PAR 1405 requirements are based on data from facilities located within and outside the South Coast Air Basin, including an Illinois sterilization facility. Performance standards are based on technologies achieved-in-practice and are technology-neutral with multiple paths to achieve compliance and reductions in EtO emissions.
- Regarding “unnecessarily abbreviated timeline for approval”, PAR 1405 rulemaking activity began one year ago with the first working group meeting held in August 2022. In that time, staff has held eight (8) working group meetings, a public workshop, and a public consultation meeting. PAR 1405’s schedule for receiving and responding to written comment is consistent with South Coast AQMD policies and procedures.
- 10-2 Response: PAR 1405’s development is occurring in parallel with revisions to IUR from OEHHA, however, PAR 1405 is a technology-based rule, not a risk-based rule, and the emissions reductions proposed are achieved-in-practice by sterilization facilities both within South Coast AQMD and elsewhere. While OEHHA’s draft update to the IUR factor for EtO may have impacts for risk-based rules, such as Rule 1402 *Control Of Toxic Air Contaminants From Existing Sources*, the performance standards and rule requirements of PAR 1405 were not developed based on risk numbers.

10-3 Response: The performance standards in PAR 1405 are based on technologies achieved in practice in multiple sterilization facilities, and adequate compliance timeline is given to implement the proposed requirements. Thus, PAR 1405 is not expected to pose a threat to public health and safety. See Response 10-1 regarding PAR 1405 timelines and Response 1-4 regarding NESHAP timelines.



1301 Pennsylvania Avenue, NW
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P :: 202.783.8700
W :: AdvaMed.org

August 9, 2023

Sarah Rees
Deputy Executive Director
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Deputy Director Rees:

I’m writing today on behalf of AdvaMed, the Medtech Association, regarding South Coast Air Quality Management District’s (South Coast AQMD) proposed amended Rule 1405 – Control of Ethylene Oxide (EtO) and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes. AdvaMed is the world’s largest association of medical technology innovators and manufacturers. Our members are transforming healthcare through earlier disease detection, less invasive procedures, and more effective treatments, leading to improved outcomes for patients.

Thank you for the opportunity to comment on the updated draft of PAR 1405. AdvaMed has consistently supported the development of a clear and achievable rule that continues to protect public health and mitigates hazardous air pollutants found to pose a threat to the community. Patients around the country rely on properly sterilized medical devices for everything from routine exams to emergency surgeries, and any disruption could lead to negative health outcomes.

As covered in our July 28, 2023, letter to Executive Officer Nastri, the updated draft of PAR 1405 remains neither clear nor workable. Further, though some concerns from our April 2023 comments have been addressed, many remain. These include:

- Definitions and technological feasibility of required technologies;
- Achievability of required emissions standards¹;
- Clarity and necessity of warehouse and pallet tracking and monitoring; and
- Definition of background levels of ethylene oxide.

} Comment 11-1

¹ Notably, the updated proposed mass emission rate is lower than the previous version, despite industry concern on the achievability of the previous proposed rate, and the lack of technologies capable of achieving the proposed destruction efficiencies.



advamed.org :: [@AdvaMedUpdate](https://twitter.com/AdvaMedUpdate) :: [in](https://www.linkedin.com/company/advamed) AdvaMed

1 ::

August 9, 2023
Page 2 of 4

As we noted in the June 2023 Stationary Source Committee meeting, key emissions standards rely upon results from a single sterilization facility located in Waukegan, Illinois. Deriving a baseline technological requirement on a single, uniquely designed facility is inappropriate and unachievable. AdvaMed and others have consistently requested a technologically neutral rule allowing each facility to achieve desired emission standards in the manner suited to its layout. Technology based does not equal technology neutral.

Comment 11-2

As to background levels, AQMD itself notes the source[s] of background EtO is unclear but that medical sterilizers are not it. The updated version of PAR 1405 makes several references to background levels without definition yet builds requirements around them. Additional consideration is needed before finalizing a rule with an ambiguous standard.

Comment 11-3

Additional requirements for warehouses also appear unnecessary. The AQMD staff report from March 2023 indicates no elevated levels detected around warehouses. Though staff have indicated this may have changed for one warehouse, this data has not been made public nor has staff indicated why additional monitoring is necessary. Further, tools are already available for AQMD – i.e., Rule 1402 – to mitigate increased levels of EtO that should be applied instead to this situation.

Comment 11-4

The updated version of PAR 1405 introduces fenceline monitoring as an additional enforcement tool. Fenceline monitoring would be unreliable, technically challenging, and unnecessary to monitor EtO emissions for commercial sterilization facilities, and this reasonable conclusion is supported by credible studies and industry experience. Further, proposed allowances for continued operation in curtailment scenarios are unlikely to prevent negative impacts to patients and public health from the widespread sources of EtO unrelated to sterilization facilities.

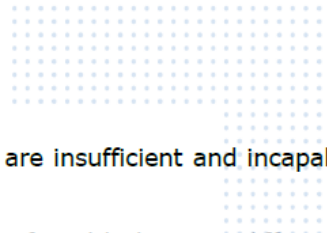
Fenceline monitoring is problematic due to the presence of many sources of EtO in the environment from sources other than sterilization. For example, fossil fuel combustion, organic matter decomposition, and other commercial products emit EtO. Even an employee or third party smoking a cigarette or cars and trucks near an ambient monitor would materially alter results. Further, results will naturally vary significantly due to wind patterns, weather events, and other geographic conditions. For this reason, results often may not reflect plant operations, nor would an industry-wide standard be fair.

Comment 11-5

Recent studies also demonstrate that fenceline monitoring is inaccurate and unhelpful for monitoring EtO emissions. The considerable fluctuation in background readings and the still emerging research into other sources of EtO, coupled with variability even among co-located canisters, has resulted in inconsistent and problematic interpretation at the state and local levels. Technology innovations can overcome



August 9, 2023
Page 3 of 4



some of these shortcomings, but existing capabilities are insufficient and incapable of overcoming the current technological hurdles.

For example, a three-year study conducted in Georgia found little to no difference before or after fugitive emission upgrades. This finding was primarily due to EtO occurring naturally across the United States, even in rural areas near no known sources of EtO. Further, in EPA and other state regulatory ambient air studies, researchers found EtO in levels exceeding the IRIS-designated threshold in the middle of national and state parks where there was no known EtO source. These rigorously conducted studies demonstrate numerous known and unknown sources of EtO in the environment well beyond commercial sterilization facilities.

The relative distance between the emission points and boundary lines for commercial sterilization facilities is unsuitable for EPA’s typical requirements for fenceline monitoring. The EPA typically requires a fenceline monitor to be at least 50 meters from the source of emissions to the property boundary to allow for dispersion.² Meanwhile, the boundaries for commercial sterilization facilities are often the building itself or small easements. Due to the physical configurations of these facilities, the monitoring points are unlikely to be representative of emissions from the release points. As EPA acknowledges, fenceline monitoring would be problematic and “technically challenging to implement for this source category.”

Additionally, current technology does not adequately differentiate sterilizer impacts from other near-site impacts. This deficiency could result in false conclusions by the public, agency, or the company regarding fugitive emissions that are not present nor resulting from the facility’s operation.

As noted at the beginning of this letter, AdvaMed continues to support the development of a clear and achievable rule that continues to protect public health and mitigates hazardous air pollutants found to pose a threat to the community. PAR 1405 falls short of meeting this standard.

Further, due to uncertainty amongst regulators as to sources of EtO, the multiple moving pieces (i.e., EPA, OEHHA, SCAQMD), and the threat each of these poses to public health and safety, and continued concerns as to the achievability of PAR 1405, we do not believe this rule should move forward as is, especially on its current timeline. Existing enforcement and monitoring authority are sufficient to ensure compliance and the continued protection of all elements of public health until these issues are resolved.

Thank you again for the opportunity to submit comments. We look forward to continued discussion on this critical issue for patients.

} Comment 11-5
cont.

} Comment 11-6

² EPA Method 325A § 8.2.1.



August 9, 2023
Page 4 of 4



Sincerely,

Bobby Patrick
Vice President, State Government and Regional Affairs
AdvaMed



advamed.org :: @AdvaMedUpdate :: AdvaMed

4 ::

AdvaMed Comment Letter, submitted 8/9/2023

- 11-1 Response: Thank you for your participation in this public process.
- 11-2 Response: See Response 10-1 regarding the basis of PAR 1405 performance standards.
- 11-3 Response: See Response 1-12.
- 11-4 Response: As indicated in the comment, South Coast AQMD has detected that at least one Tier I Warehouse has elevated signals associated with EtO near fenceline. This information has been presented in the Stationary Source Committee meeting and included in Chapter 1 of this staff report.

In addition, another Tier I Warehouse in South Coast AQMD has installed a control system to capture and control EtO emissions, further demonstrating potential EtO emissions from this sector.

As emissions from warehouses depend on a wide range of factors, PAR 1405 includes information gathering requirements to assess EtO emissions from facilities downstream of sterilization facilities in the medical device supply chain.

- 11-5 Response: The primary purpose of fenceline air monitoring is an interim measure until permanent stack emission monitoring is installed and certified at large sterilization facilities. At that point, fenceline air monitoring requirements sunset. Although CEMS is the most accurate method to ensure proper facility operations by quantifying a sterilization facility's EtO emissions, the implementation timeline is long (i.e., several years). For the interim period, fenceline air monitoring is the next best method despite certain challenges.

Fenceline air monitoring has been used to assess emissions from sterilization facilities and designate sterilization facilities as Potentially High Risk Level Facility under Rule 1402. While background levels of EtO exists and there may be contribution from other sources, fenceline concentration of EtO at sterilization facilities were measured to be much higher than background (1 to 3 order of magnitudes higher) making it easier to discern contributions from other sources. Fenceline air monitoring conducted in Illinois and by South Coast AQMD in Carson, California have demonstrated that ambient EtO levels dropped after

implementation of additional capture and control technologies such as PTE and multilayered control systems, both illustrating the value of these technologies and the value of fenceline air monitoring.

The purpose of fenceline monitoring in PAR 1405 is to verify that fenceline levels are below a specified level and not to serve as a diagnostic tool for the sterilization facility.

Proper placement of fenceline air monitors is crucial in maximizing the value of the methodology but logistical concerns such as access, siting, and utilities may also play a role. For those reasons, PAR 1405 requires mobile EtO monitoring quickly after rule adoption while the fenceline air monitoring plan is prepared, submitted, reviewed, and approved. Additionally, PAR 1405 allows the facility to submit information to refute that the EtO emissions that triggered curtailment were from the facility.

The Fenceline Monitoring and CEMS (or SCEMS) Implementation dates in PAR 1405 are deadlines. A facility may choose to expedite their installation of a CEMS (or SCEMS) to reduce the time of the required Fenceline Monitoring. Expedited processing of CEMS (or SCEMS) certification applications is available upon facility request if a facility is interested in lessening the time prior to CEMS (or SCEMS) certification.

11-6 Response: The performance standards in PAR 1405 are based on technologies achieved in practice in multiple sterilization facilities, and adequate compliance timeline is given to implement the proposed requirements. Thus, PAR 1405 is not expected to pose a threat to public health and safety.



August 2023

Attn: SC AQMD PAR 1405 Staff

- asoltani@aqmd.gov
- mgamoning@aqmd.gov
- kcheung@aqmd.gov
- mkrause@aqmd.gov

**Re: Atmosfir’s comments on PROPOSED AMENDED RULE 1405, CLEAN Version 07-21-2023
CONTROL OF ETHYLENE OXIDE EMISSIONS FROM STERILIZATION AND RELATED OPERATIONS**

Dear Staff,

Atmosfir Optics extends a warm welcome to the proposed rule aimed at reducing the emissions of ethylene oxide from sterilization facilities. Our team at Atmosfir has extensive expertise in air monitoring technologies and methods. Atmosfir is an R&D, Data & Software integration company that offers advanced air monitoring services globally, operating on a SaaS business model. Our group of companies holds ISO 17025 accreditation for various methods including TO-15 (canisters) and for the TO-16 (OP FTIR) method. Our team carefully read the PAR and would like to share the following notes:

General comments

The most efficient approach to reducing fugitive emissions involves prompt identification of significant leaks and expediting their treatment. This can be achieved to the greatest extent through continuous real time fenceline monitoring, especially in cases of batch processes such as Ethylene Oxide (EtO) sterilization. EtO fugitive emissions can be continuously measured in real-time by Open Path-FTIR according to an official method of US EPA TO-16. Nonetheless, this method is neither preferred nor considered an option in the draft rule, while a non-real-time monitoring method of canister sampling, is considered an option. The latter option may be favored by the owners of facilities in order to minimize monitoring and to exempt from real-time alerting the public and the regulator dangerous EtO concentrations are detected, leading to delays in repairment operations.

Using Real-Time 24/7 fenceline monitoring with a public website as in rule 1180 is the Best Available Technology (BAT) for accomplishing this rule's objectives.

Comment 12-1

Specific comments

1. Interim Mobile Monitoring Large Facility Requirements – section (d)(7) comments:

- Please specify if there are official methods or validated procedures for the mobile monitoring survey. A clear SOP is required to set the required spatial resolution of the sampling along the fence, the appropriate revisit time, and the detection level of the measurement.

Comment 12-2

Page:1 of 8

Atmosfir Optics LTD

Mailing address: 5803 Cypress St, Bldg C, Houston Tx 77074; Phone: 1-713-6688818; www.atmosfir.net



- Mobile Monitoring – schedule - P.11 (d)(7)(D) - Monitoring once a month for two hours covers less than 1% of the entire month. This monitoring rate appears to be very low and is prone to missing most of the emissions, especially when batch operations are applied. It is recommended to schedule the monitoring hours throughout the day to cover all working hours and to conduct at least one mobile monitoring every 5 days. } Comment 12-3
- It is recommended to use an OP-FTIR mobile trailer for conducting EtO measurements in accordance with USEPA TO-16 method. This approach enables continuous measurements over the course of days, utilizing an official method, while incurring lower costs. The operation cost of OP-FTIR for a full week 24/7 with (160 hours) equals one day (2 hours) of mobile monitoring! (13,000\$ as of appendix 1.2.iii in p. 44). A mobile OP FTIR trailer can be used for short-term campaigns starting from one week to three years. Mobile OP FTIR trailer can also be rented as a fast solution if required. } Comment 12-4
- Mobile Monitoring – Method detection limit – 1 ppb once every 10 sec – P.10 (d)(7)(A)(i)(I) – Please specify the basis and calculations of this DL. The detection limit should be set in accordance with an official method, and/or a recognized protocol by a standard institute (such as TUV/MCERT/ETV) } Comment 12-5
- Measuring signals associated with Ethylene Oxide - P.10 (d)(7)(A)(i)(II) – the option of indirect EtO measurements seems redundant in light of available precise and selective methods for EtO. In any case, the canister sampling in section (d)(7)(E)(i) will not be relevant to the high signals measurements since sterilizing is a batch process and one-hour late canister monitoring will not reflect the emissions during the exceeding. } Comment 12-6

2. Warehouse Requirements – section (h) comments:

- **Tier I Warehouse** – p. 18 (h)(3) – In our point of view, providing three options is not only unnecessary and confusing, but might lead to the selection of the cheapest option with minimum monitoring coverage and data reporting, specifically, fenceline monitoring by canisters (Option A) and factors calculation (Option B). Following is a short explanation of their limitations. } Comment 12-7
- Option A Fenceline monitoring by canisters - section (p) in the current draft requires canister sampling at a single point once every 6 days that lack the real-time capability for measurements and reporting, lacks spatial coverage, and has poor temporal coverage with monitoring of only 15% of the time. It is either necessary to change the fenceline requirements under section (p) to provide more extensive fenceline measurements (see comment on section (P) below), or to oblige the execution of option C to increase understanding and monitoring capabilities of these facilities. } Comment 12-8



- Option B, emission study – Determine the annual EtO emissions p.19 (h)(5)(A)) & appendix 3 - annual emissions estimation is based on general emission coefficients or based on momentary measurements that are not sufficient to extrapolate the annual EtO emissions.

In order to sufficiently estimate annual emissions, measurements should be conducted in a period of at least a year and cover all seasons and a variety of activities. In any case, the annual emission estimate does not reflect short-term daily exceedances nor provides any time-resolved information. We, therefore, recommend at least removing option B, since warehouse owners will choose this minimal monitoring as the cheapest option to stand in the rule requirements while the real emission will remain unknown.

Comment 12-9

- P.5 (36)-(37) Warehouse dividing to Tier I and Tier II by size does not necessarily reflect the Eto expected emissions. Classification according to quantity, mass, and volume of the sterilized products is more appropriate in our point of view.
- p.17-18 (h)(1)&(2)(E) Warehouse Requirements - In addition to the number, it is advisable to also record and report the weight and volume of the units, including the time elapsed from sterilization.

Comment 12-10

Comment 12-11

3. Interim Fenceline Air Monitoring Requirements- section (p) comments:

- The draft rule 1405 requires fenceline monitoring, by canisters or real time measurements, with a trigger threshold of 24 hours (P.5 (38)). It is recommended to add 1-hour acute trigger threshold to protect the public from high concentrations of ethylene oxide and at the same time to help the facility detect and seize the cause for exceedances as quickly as possible.

Comment 12-12

Fenceline by canisters p.29 (p)(2)(B)

The draft rule gives the option for fenceline monitoring using a canister with 24 hours sampling in 1-2 locations (Appendix 4), for 1 out 6 days (p)(2)(B)(i)), and based on method TO-15 or TO-15A ((p)(2)(B)(ii)).

Fenceline EtO monitoring by canisters has specific downsides and issues that should be considered, including the followings:

- The method:
According to research carried out by the EPA¹, methods TO-15 and even TO-15A are not good enough for measuring EtO concentrations. It is recommended to change to US EPA 327

Comment 12-13

¹ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Office of Air Quality Planning and Standards, Air Quality Assessment Division, Ambient Air Monitoring Group, Technical Note: The Ethylene Oxide (EtO) Canister Effect, 5/25/2021

¹ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF RESEARCH AND DEVELOPMENT RESEARCH, MEMORANDUM, SUBJECT: Effect of Canister Type on Background Ethylene Oxide Concentrations, May 7, 2021



method², which is designed for this. Method 327 includes a wide range of quality controls (duplicate and spiked canisters) and cleaning procedures to ensure the results. Using the TO-15 method will inevitably lead to doubtful problematic results. Even when using the high-quality procedures of method 327, Canister sampling is an extractive sampling that analysis is carried out in a lab, results are due 7-14 days after sampling, which gives a long time after an event to discover an exceeding event as opposed to real time approach.

Comment 12-13
cont.

- The frequency:
Sampling 1 out of 6 days (p.29 (p)(2)(B)(i)) is only 15% if the time. This requirement is probably due to the high cost of sampling 100% of the time – a canister each day. Real-Time monitoring can give a monitoring coverage of 100%. The owner default choice would be to conduct the less frequent sampling. Therefore, it is recommended to require at least 1 sampling every 5 days (20% of the time) – as required by in the latest draft of EPA changes to EtO monitoring from the industry³.

Comment 12-14

- The time average:
The EPA acknowledges that there are some drawbacks of time-integrated sampling, including the lack of immediate feedback on the acquired data and the loss of short-term temporal information⁴. The time average of 24 hours (p.29 (p)(2)(B)(i)) allows significant maximum concentrations higher than acute 1-hour threshold values.

Comment 12-15

- Number of sampling locations - Spatial coverage
Under table 9 in Appendix 4 (p.50) only 1-2 locations are required. 1-2 points do not provide sufficient spatial coverage for fenceline monitoring, namely, do not represent the entire fenceline extent. The number of locations should follow EPA 325 guidelines⁵, at least 12 points around the fences.

Comment 12-16

To conclude, canister sampling should not be considered as a fenceline monitoring technology, for its lack of spatial and temporal coverage, especially for the EtO batch process. The canisters sampling does not allow for acute threshold monitoring and quick detection and repair.

Comment 12-17

² <https://www.epa.gov/system/files/documents/2023-04/Draft%20Method%20327%20%28clean%20proposal%20version%29.pdf>

³ <https://www.epa.gov/stationary-sources-air-pollution/synthetic-organic-chemical-manufacturing-industry-organic-national>

⁴ <https://www.epa.gov/stationary-sources-air-pollution/synthetic-organic-chemical-manufacturing-industry-organic-national.P.25144>

⁵ <https://www.epa.gov/emc/method-325a-volatile-organic-compounds-fugitive-and-area-sources-sampler-deployment-and-voc>



If the option of canister sampling will remain in rule 1405 it is recommended to apply sampling in proper numbers of sampling points, higher frequencies, and lower sampling duration, according to the highest-quality procedures of EPA 327 method.

} Comment 12-17
cont.

Fenceline with real time monitoring p.29 (p)(2)(C)

The draft rule gives the option for fenceline monitoring using real time monitoring. Real time open path monitoring is a prior technology (as stated by the EPA⁶), especially with today’s capabilities, then the canister sampling for fenceline monitoring, for the following reasons:

- High spatial coverage of the facility - Open path measurements provide much better coverage of the facility, unlike point measurements that have great potential to miss the pollutants plume.
- Real time temporal coverage - 24/7/365 measurements in short timeframes - OP-FTIR measurements are continuous and provide real-time data, with short measurement intervals ranging from 1 minute to 1 hour, which can be averaged over longer durations.
- Ethylene oxide has strong absorption in the IR range and is very suitable for FTIR analysis.
- Combining the short-time measurements with wind monitoring on the same scale, can assist in locating the source (based on EPA OTM-10) and estimating and characterizing emissions from the facility.
- Root cause analysis - The real time 24/7 monitoring together with high spatial coverage of the TO-16 method enables to do root cause analysis in a near real-time manner, allowing a quick repair and reduction in emissions.
- Public trust and transparency can be achieved to a higher extent by real-time measurements and reporting (see rule 1180).
- In-situ method – eliminate the time for analysis and the effect of sampling interferences, traveling and storage.
- Experience – Over 20 years of established EPA method. with three years of good experience implemented in SC AQMD rule 1180.

} Comment 12-18

- Considering the above, the rule should prioritize real time measurements, especially based on official methods such as TO-16⁷.

} Comment 12-19

- Special requirement for real time monitoring p.30 (p)(2)(D)(ii) – we recommend removing this section with respect to real time monitoring, especially if it is conducted according to a valid method such as US EPA TO-16. As explained above, canister sampling is not a good choice for fenceline sampling, especially for batch processes. Sampling even one hour after an exceeding event can do the opposite, a facility will be free from regulation demands, only because the canister sampling missed the exceedance period.

} Comment 12-20

⁶ <https://www.epa.gov/stationary-sources-air-pollution/synthetic-organic-chemical-manufacturing-industry-organic-national.P.25144>

⁷ <https://www.epa.gov/sites/default/files/2019-11/documents/to-16r.pdf>



Disqualification under the fence line monitoring p.31 (p)(2)(F)(i)

- Please explain the discrimination in allowed disqualification for canister sampling vs. real-time measurements. For canisters, the rule allows disqualification of one sample out of 5 per month, namely 20% of the samples. In comparison, the rule allows , 48 hours disqualification for the real time method that samples 24/7, which is about 7% of the month. Please note that the standard QA for real time measurement is 90% completeness is the standard. That standard should apply to all fenceline methods in the rule.

} Comment 12-21

Fenceline Air Monitoring End Date - p.31 (p)(3)

- **Fenceline Air Monitoring End Date - Large Facility** - p.31 (p)(3)(A)- The assumption that the installation of CEMS in the chimney provides a monitoring solution for all fugitive emissions options in the facility is fundamentally lacking, and must be validated per facility. We suggest validation by extending the end date of the fenceline monitoring for additional 1 year from starting the CEMS operation. The simultaneous fence measurements and CEMs measurements at the stacks will provide the necessary validation. If all abnormal concentrations that are measured on the fence can be apportioned and explained by abnormal concentrations in the chimneys CEMs, then the fenceline monitoring can end. In cases of indication of additional sources, the facilities owner will get the incentive for corrective actions.
- **Fenceline Air Monitoring End Date – warehouse – p.31 (p)(3)(B)-** the end date of the fenceline monitoring of warehouses in the current draft is not related to above or below the threshold. That means that no corrective action to reduce emission will be initiated and high emissions will not be reduced. The end date of the fence line monitoring of the warehouses should be when the valid results are also under the threshold.

} Comment 12-22

} Comment 12-23

4. Curtailment - section (q) - comment

The rule does not require root cause analysis for exceeding events. The procedure of root cause analysis can reduce emissions in the long run together with curtailments. A root cause analysis is most effective based on real-time measurements and short duration time scales, allowing the facility to investigate the source and cause in a quick and effective way. By implementing this good practice, an overall reduction over time will be larger. This will also allow the facility to return more quickly to normal operation if showing that the corrective action resolved the failure that caused the exceeding. The draft rule should give incentives for facilities to use the real-time monitoring for a good practice of root cause analysis.

} Comment 12-24

5. Other facilities – sections (e)&(g) comment:

The assumptions that Permanent Total Enclosure will work smoothly and continuously in all parts of the plant is not realistic, and malfunctions can happen in a small facility as in a large one. Source tests and CEM's are not covering all non-source emissions. It is recommended that at least for a year and until proven otherwise fence monitoring should be carried out together with the CEMs for all kinds of facilities. If the monitoring of the fence does not indicate

} Comment 12-25



abnormal concentrations, it will be possible to gradually reduce this requirement. If abnormal concentrations are discovered that do not originate in the chimney CEMs, the plant must continue the measurements until a full year is obtained free of abnormalities.

} Comment 12-25
cont.

6. Reporting Requirements - section (t) comment:

The rule should strive for the most transparent reporting. Implementing the reporting requirement from rule 1180 is recommended, real time measurement with real time reporting. Transparent reporting enhances the obligations of the facilities, and the trust of the public in the regulator and industry.

} Comment 12-26



Summary

- A. Considering the health and safety of the communities living in close proximity to the facilities; the dangers posed by EtO chronic and acute exposure; and its explosive nature we recommend using continuous real-time 24/7 fenceline monitoring. } Comment 12-27
- B. We also suggest extending the end date of the fenceline monitoring to at least one year of parallel measurements with CEM's measurement. That can give time to evaluate and repair non-source emissions and the total enclosure effectiveness. } Comment 12-28
 Using OP-FTIR, fenceline monitoring requires minimal annual cost after initial capital investment, allowing for real time protection, real time alerts, and a reduction in EtO emissions in a cost-effective way that justifies the continuous of the system also after the CEMs are operational.
- C. Requiring a very minimal and insufficient protocol of sampling, the current draft rule is giving the benefit to canister options and sets the real-time fenceline monitoring in unfavored position. As is it now, owners of the sterilizing facility will choose to do the bare minimum sampling of one 24 hour canister every 6 days. } Comment 12-29
- D. Canister sampling option should ~~be removed as a fenceline monitoring option~~ or at least, ~~should be required to~~ obligate proper numbers of locations (4-12), higher sampling frequencies (1 of 5 days at least), and the highest-quality procedures of EPA 327 method. } Comment 12-30
- E. A hybrid holistic approach that combines the 2 methods (TO-16 & EPA 327) should be implemented. Using on the fenceline a 24/7 real time OP FTIR , and to evaluate public exposure we recommend placing canister in nearby public receptors downwind. } Comment 12-31
- F. For interim mobile monitoring requirement, we suggest using a mobile trailer with OP-FTIR that can be used for short or long campaigns (weeks to months) with cost-effective advantage } Comment 12-32
- G. The rule should require root cause analysis when exceeding occurs. } Comment 12-33
- H. Acute 1 hour threshold should be established. } Comment 12-34

Best regards,

Gilad Shpitzer,
CEO
Atmosfir Optics

For more information you can contact me by e-mail: gilad@atmosfir.net

Atmosfir Optics Comment Letter, submitted 8/9/2023

- 12-1 Response: PAR 1405 does not preclude technologies but includes criteria to be met to be used as part of mobile or fenceline monitoring. In the course of PAR 1405 rulemaking, staff expressed concerns regarding the detection limit of OP-FTIR for EtO. Per published peer-reviewed materials, the OP-FTIR EtO detection limit is above 1.0 ppb and would not meet PAR 1405 fenceline air monitoring performance standards. OP-FTIR could be a compliance option for PAR 1405 if demonstrated to meet or exceed 1.0 ppb EtO in ambient air. Both canister sampling and real time monitoring are allowed as part of fenceline monitoring in PAR 1405.
- 12-2 Response: PAR 1405 specifies the requirements for mobile monitoring. PAR 1405 requires independent third-party operators conducting mobile monitoring to meet a 1.0 ppb performance standard and maintain a sampling protocol approved by the Executive Officer.
- 12-3 Response: Due to the limited number of vendors available to perform mobile monitoring, once per calendar month is the most frequent sampling schedule deemed feasible. Phase I mobile monitoring is an interim measure until the more frequent Phase II fenceline air monitoring plan (FAMP) is approved and implemented.
- 12-4 Response: OP-FTIR in accordance with U.S. EPA Compendium Method TO-16 may be used for Phase I Mobile Monitoring if demonstrating a method detection limit of 1.0 ppb once every five (5) seconds and a corresponding sampling protocol is approved by the Executive Officer.
- 12-5 Response: The performance standard of 1.0 ppb was selected to be inclusive, allowing multiple real-time EtO monitoring technologies, while achieving the goal of measuring ambient air EtO levels close to background EtO levels, detected in the range of 0.02 to 0.17 ppb in South Coast AQMD in 2021.
- 12-6 Response: Indirect EtO measurement methodologies, such as proton-transfer-reaction mass spectrometry (PTR-MS), are accurate, precise but non-selective, measuring EtO ion signal instead of EtO directly.
- 12-7 Response: PAR 1405 aims to be technology-neutral, allowing for multiple paths towards compliance and allowing facilities to select the most appropriate path to meet PAR 1405 objectives.

- 12-8 Response: Real-time monitoring methods have certain advantages over canister sampling methods, such as temporal coverage and lower operating costs over time. Canister sampling methods have other advantages, such as lower detection limits, lower upfront capital costs, and is an established method used for regulatory purposes. PAR 1405 allows for either provided the methods meet the criteria specified in the requirements.
- 12-9 Response: Shorter term emission studies and source tests to develop emission factors have been used to estimate a facility’s annual emissions. As discussed in the rule development process, different types of emission assessment were performed in the State of Georgia to assess warehouse’s EtO emissions. The Emission Study Plan would be reviewed by the Executive Officer to ensure that sources are accounted for.
- 12-10 Response: Binning warehouses by warehousing floor area is consistent with the approach in other South Coast AQMD regarding warehouses such as Rule 2305 *Warehouse Indirect Source Rule – Warehouse Actions And Investments To Reduce Emissions (Waire) Program*. As discussed throughout the rule development process, there is not enough information on warehouses to make determination on the amount of EtO sterilized material received or annual EtO emissions. The purpose of the proposed requirements for warehouses is for data collection and to serve as first evaluation with additional requirements to follow if necessary.
- 12-11 Response: Requiring sterilized palletized units to be individually weighed and volumes calculated would be unduly burdensome on warehouses. At the present time, the number of sterilized palletized units received directly from facilities performing sterilization should be sufficient to achieve informational goals.
- 12-12 Response: While there are acute hazards associated with EtO, South Coast AQMD ambient air monitoring has not detected EtO concentrations at acute hazard levels offsite of sterilization facilities. Commercial sterilization facilities maintain a variety of real-time monitoring in the acute EtO range using GC-PID, handheld PID, or IR technologies to identify these hazards.
- 12-13 Response: Proposed U.S. EPA Method 327 is currently under development for use for rules pertaining to the hazardous organic chemical manufacturing industry. If and when Method 327 is approved by U.S. EPA in the future, there are feasibility concerns regarding laboratory capacity to analyze

- canister samples in the near term. U.S. EPA Compendium Method TO-15 or Method TO-15A are more appropriate at the present time.
- 12-14 Response: PAR 1405 requires continuous stack emission monitoring for large sterilization facilities, expected to be in place in 2026-2027. In the interim, a 1-in-6 day sampling schedule is consistent with other currently approved sampling schedules in South Coast AQMD for EtO or other air contaminants.
- 12-15 Response: See Responses 12-8 and 12-12.
- 12-16 Response: U.S. EPA Methods 325A and 325B were crafted for petroleum refineries. The nature of petroleum refineries, expansive open facilities with a large number of dispersed emission points, is fundamentally different from sterilization facilities and warehouses, enclosed facilities with ground-level release points and smaller footprints. While 12 monitoring locations may be appropriate for petroleum refineries, it would be inappropriate for sterilization facilities or warehouses where mobile monitoring has indicated EtO signals at only a portion of the fenceline.
- 12-17 Response: See Responses 12-8, 12-13, 12-14, and 12-16.
- 12-18 Response: OP-FTIR in accordance with U.S. EPA Compendium Method TO-16 may be used for Phase II Fenceline Air Monitoring if demonstrating a method detection limit of 1.0 ppb once every 15 minutes to the satisfaction of the Executive Officer.
- 12-19 Response: See Response 12-8.
- 12-20 Response: By exemption, a facility is relieved from canister sampling if implementing an approved FAMP with a real-time monitoring method approved by U.S. EPA such as Compendium Method TO-16.
- 12-21 Response: PAR 1405 has been revised to allow up to 96 hours of missing real-time fenceline air monitoring data over a rolling 30-day period due to calibration, maintenance, malfunction, or other occurrence beyond the control of the facility, consistent with missing data allowances for stack SCEMS or CEMS.
- 12-22 Response: PAR 1405 required implementation of the FAMP for 60 days after final certification of SCEMS or CEMS. Staff believes this is sufficient overlap time to ensure ambient air EtO concentrations correlate with SCEMS or CEMS EtO concentrations. In addition, the SCEMS or CEMS will go

- through a vigorous certification process and annual RATA, ensuring data quality and accuracy.
- 12-23 Response: The purpose of fenceline air monitoring at warehouses is information gathering, to better understand how post-aeration EtO emissions from sterilized palletized units contribute to ambient air EtO concentrations. Staff believes one (1) year of study is sufficient to understand these sources and their seasonality.
- 12-24 Response: While PAR 1405 does not explicitly require root cause analysis, sterilization facilities may conduct their own root cause analysis to avoid future curtailment.
- 12-25 Response: PAR 1405 already has redundant layers of monitoring to ensure proper operations of PTE, requiring both continuous negative pressure monitoring and periodic inward air flow velocity measurement at natural draft openings, above and beyond U.S. EPA Method 204 requirements. These requirements are sufficient and additional layers of monitoring, such as extended interim fenceline air monitoring timelines are not needed.
- 12-26 Response: The purpose of Rule 1180 was to require real-time fenceline monitoring systems that would provide air quality information to the public and local response agencies regarding emissions near the property boundary of the refinery. In PAR 1405, the purpose is to reduce ethylene oxide emissions from sterilization facilities, and elevated fenceline levels would result in curtailment or other enforcement action. PAR 1405 and all records associated with it will fully comply with the California Public Records Acts (CPRA) and the guidelines for implementing the CPRA as adopted by the Governing Board on July 5, 2013.
- 12-27 Response: See Responses 12-8 and 12-12.
- 12-28 Response: See Responses 12-8, 12-18, and 12-22.
- 12-29 Response: See Response 12-8.
- 12-30 Response: See Responses 12-13, 12-14, and 12-16.
- 12-31 Response: See Responses 12-13 and 12-18.
- 12-32 Response: See Response 12-4.
- 12-33 Response: See Response 12-24.

12-34 Response: See Response 12-12.



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Re: Proposed Amended Rule 1405-Preliminary Draft of PAR 1405
Control of Ethylene Oxide Emissions from Sterilization and Related Operations
Su: Public Comments Submission

Dear SCAQMD:

The Coalition For A Safe Environment (CFASE) submits our public comments on the Proposed Amended Rule 1405 - Preliminary Draft of PAR 1405. In our research we also discovered that in addition to typical facility fugitive emissions that industrial accidents are a major source of ethylene oxide (EtO) emissions and public exposure. We submit the following concerns and requests.

- 1. We are concerned that AQMD Staff did not provide a more comprehensive description of public health impacts from Ethylene Oxide (EtO). We request that the following OSHA Fact Sheet Ethylene Oxide (EtO) information be included in the Rule 1405 for workers and the public.

How can ethylene oxide harm workers?

In addition to eye pain and sore throat, exposure to EtO can cause difficult breathing and blurred vision. Exposure can also cause dizziness, nausea, headache, convulsions, blisters and can result in vomiting and coughing. Both human and animal studies show that EtO is a carcinogen that may cause leukemia and other cancers. EtO is also linked to spontaneous abortion, genetic damage, nerve damage, peripheral paralysis, muscle weakness, as well as impaired thinking and memory. In liquid form, EtO can cause severe skin irritation upon prolonged or confined contact.

} Comment 13-1

1. We are concerned that AQMD Staff did not conduct thorough research on the number and types of ethylene oxide (EtO) accidents which have occurred in the past, in order to further enhance new rule making, safety features and public reporting.

CFASE conducted a review of U.S. Dept. of Labor OSHA Ethylene Oxide Accidents, which disclosed that there had been 38 Ethylene Oxide reported accidents which should have been included in a review that addressed lessons learned and accident prevention measures which would prevent worker and public exposure to Ethylene Oxide from industrial accidents and fugitive emissions.

https://www.osha.gov/ords/imis/AccidentSearch.search?acc_keyword=%22Ethylene%20Oxide%22&keyword_list=on

OSHA has a website link for Hazard recognition of specific chemicals and has a listing for Ethylene Oxide.

<https://www.osha.gov/ethylene-oxide/hazards>

An excellent example is the Sterigenics, Inc. in Ontario, CA explosion on September 3, 2004.

- U.S. Dept. of Labor - OSHA Accident Report Detail

https://www.osha.gov/ords/imis/accidentsearch.accident_detail?id=201146065

- U.S. CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD – Investigation Report

https://www.csb.gov/assets/1/20/sterigenics_report.pdf?13828

2. We support and request amendments to Rule 1405 that include a revision to the purpose to state the following, “The purpose of this rule is to protect worker and public health by preventing the release of ethylene oxide (EtO) and reducing ethylene oxide (EtO) emissions from sterilization.”

3. We support and request amendments to Rule 1405 that includes one definition of a warehouse. We disagree with AQMD to create two tier types of warehouses because there is no difference in the purpose and operation of a warehouse. Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting would be the same for all warehouses.

AQMD has provided no research, studies or data that supports that there is a direct correlation between the size of the warehouse building and the ethylene oxide (EtO) emission potential. A small warehouse with a higher volume of sterilization traffic of ethylene oxide (EtO) sterilized product can emit more than larger warehouses with low volume traffic of ethylene oxide (EtO) sterilized product.

4. We support and request amendments to Rule 1405 that includes a proper industry quantitative standard definition of the amount of ethylene oxide (EtO) used to sterilize products on a pallet. We disagree with AQMD’s reference to use the, “Total number of

Comment 13-2

Comment 13-3

Comment 13-4

Comment 13-5

- Sterilized Palletized Units.” The number of items does not provide any quantitative data of the amount of ethylene oxide needed, used or residue chemical that can adhere to an item for a period of time. We request that the standard definition and formula include an estimate using the weight, surface area, volume or mass or combination thereof in addition to quantity. Recording and Reporting should also include the time elapsed from sterilization, the length of time stored and the range of the warehouse temperature during storage.
5. We support and request amendments to Rule 1405 that include new and enhanced requirements to control, prevent and reduce fugitive emissions at commercial facilities using sterilization and fumigation processes using ethylene oxide (EtO).
6. We support and request amendments to Rule 1405 that include new and enhanced requirements to control, prevent and reduce fugitive emissions at commercial facilities while ethylene oxide (EtO) is being delivered, staged in que by tanker truck or train, being unloaded to storage tanks or temporarily parked overnight awaiting unloading and transfer to storage tanks.
7. We support and request amendments to Rule 1405 that include new and enhanced requirements to control, prevent and reduce fugitive emissions at commercial facilities that have ethylene oxide (EtO) storage tanks, attached pumping and transfer equipment components.
8. We support and request amendments to Rule 1405 that include new and enhanced requirements to control, prevent and reduce fugitive emissions of ethylene oxide (EtO) from products treated, packaged and stored on-site and at off-site warehouse locations.
9. We support and request amendments to Rule 1405 that include U.S. EPA approved Method TO-16 Long-Path Open-Path Fourier Transform Infrared Monitoring Of Atmospheric Gases for our requested primary Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting Equipment and Software. Long-Path Open-Path Fourier Transform Infrared Monitoring equipment can achieve a Method Detection Limit (MDL) of 1.0 ppb and lower for many chemicals. Ethylene oxide has strong absorption in the IR range and is very suitable for FTIR analysis.
10. AQMD Staff answer is, Staff is not aware of an open path monitoring technology with this capability.” AQMD Staff has refused our request to research and validate OPEN-PATH FTIR Method Detection Limits (MDL). OPEN-PATH FTIR Method Detection Limit for Ethylene Oxide (EtO) 24hrs. is .02 ppb while the Canister is .07 ppb for 24hrs. OPEN-PATH FTIR MDL is 1 ppb for 30 minutes and a Canister is not capable of real-time or near real-time.
- Fenceline Air Quality Monitoring and Reporting provides extensive nearly 100% spatial coverage of the facility, while canisters may represent only 1%-5% of facility spatial coverage.
- Long-Path Open-Path Fourier Transform Infrared Monitoring Of Atmospheric Gases also allows for the monitoring of numerus other chemicals such as Benzene, 1,3-Butadiene, Ethylene Dichloride and Chloroprene being considered in new rule making by EPA.

Comment 13-5
cont.

Comment 13-6

Comment 13-7

Comment 13-8

Comment 13-9

Comment 13-10

Comment 13-11

Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting provides the public of the right-to-know of large short-term Ethylene Oxide (EtO) chemical release spikes, time-of-day releases (companies often release at night so the public is not aware), episodes of elevated Ethylene Oxide (EtO) chemical concentrations, location source of release and continuous assessment for increasing elevated levels which allows for quicker public alert notification for sheltering-in-place and emergency evacuations which cannot be done with canisters.

We have brought this request up during the previous Rule 1405 meetings and do not understand why AQMD staff refuses to include this as an option and continues to support a non-real time canister sampling and public reporting method.

Comment 13-11
cont.

11. We support and request amendments to Rule 1405 that include new Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting as the primary monitoring and reporting method at commercial facilities using sterilization and fumigation processes using ethylene oxide (EtO). AQMD may use any other sampling method canister or mobile as a secondary validation or during fenceline monitoring equipment downtime such as due to maintenance, a power failure or inclement weather.

Comment 13-12

12. We support and request amendments to Rule 1405 that include new Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting as the primary monitoring and reporting method at warehouses packaging and storing products treated with ethylene oxide (EtO). AQMD may use any other sampling method as a secondary validation or during fenceline monitoring equipment downtime such as due to maintenance, a power failure or inclement weather.

Comment 13-13

13. a. We support and request amendments to Rule 1405 that include using the best available Real-Time 24/7/365 Fenceline Air Quality Monitoring and Reporting Equipment with the lowest ethylene oxide (EtO) PPB detection levels. We do not support AQMD giving facilities the option to select equipment that that cannot meet the best and most accurate worker and public safety exposure levels. CFASE has reviewed samples of all Oil Refinery Fenceline Air Quality Monitoring and Reporting Data and we have discovered that there are major differences in what is being reported and the accuracy of what is being reported. In our review it appears that Valero Oil Refinery has the most accurate reporting Fenceline Air Quality Monitoring Equipment.

Comment 13-14

b. We further request that AQMD compile a comparison chart of the Fenceline Air Quality Monitoring and Reporting Equipment used by each oil refinery so that Environmental Justice Organizations and the public can learn the differences, make educated decisions and recommendations.

14. a. We support and request amendments to Rule 1405 that include using the best available Real-Time 24/7/365 Fenceline Air Quality Monitoring, Assessment and Reporting Equipment Software with the lowest ethylene oxide (EtO) PPB detection levels. We do not support AQMD giving facilities the option to select equipment software that that cannot detect, assess or report the most accurate ethylene oxide (EtO) chemical release in order to protect workers and the public. CFASE has reviewed samples of all Oil Refinery Fenceline Air Quality Monitoring and Reporting Data and we have discovered that there are major differences in what is being reported and the accuracy of what is being reported. In our review it appears that Valero Oil Refinery has the most accurate reporting Fenceline Air Quality Monitoring Data and PPB Level Detection Software.

Comment 13-15

b. We further request that AQMD compile a comparison chart of the Fenceline Air Quality Monitoring and Reporting Equipment Software used by each oil refinery so that Environmental Justice Organizations and the public can learn the differences, make educated decisions and recommendations.

} Comment 13-15
cont.

15. We support and request amendments to Rule 1405 that include ethylene oxide (EtO) Facility Fenceline Thresholds and Community Public Receptor Thresholds. We support that when determining the Thresholds concentration and exposure level, that acute and chronic risks must also be taken into consideration. We request the following:

For the Facility Fenceline we request using the threshold from the Agency for Toxic Substances and Disease Registry (ATSDR):

- * Minimal Risk Level Intermediate (daily) health threshold of 70ppb
- * Minimal Risk Level Acute (hourly) health threshold of 400ppb

For the Public Receptor we request the chronic (70 years) health threshold:

- * CalEPA chronic reference exposure 2.7ppb (0.005 mg/m3)
- * OEHHA Chronic Inhalation REL 16.4 ppb (30µg/m3)
- * TECQ chronic health threshold of 2.4 ppb

} Comment 13-16

16. We support and request amendments to Rule 1405 to include an engineering Root Cause Analysis of when a Facility Fenceline Threshold or Community Public Receptor Threshold has been exceeded and what corrective action must be taken.

} Comment 13-17

17. We support and request amendments to Rule 1405 to include a public transparent reporting plan and program. We recommend that Rule 1180 be a model.

} Comment 13-18

18. We Do Not Support AQMD proposal to use 30-day rolling average or any type of rolling average based on any sampling method because it does not advise workers or the public in real-time that there has been a major release of ethylene oxide (EtO). This deprives the public of the right-to-know, time and opportunity to put on a mask, protective clothing, shelter-in-place or leave to a safe location at a distance from the facility.

} Comment 13-19

Respectfully Submitted,



Jesse N. Marquez
Executive Director

Coalition For A Safe Environment Comment Letter, submitted 8/9/2023

- 13-1 Response: The Occupational Health and Safety Administration (OSHA) Fact Sheet regarding EtO, including the specified information, has been included with the PAR 1405 Staff Report as Appendix A.
- 13-2 Response: PAR 1405 addresses stack and fugitive emissions from sterilization facilities, while other state and federal requirements addresses accidental releases from EtO uses. While control technology can have co-benefits to on-site workers, it is not the intent nor goal. Worker protection generally falls under the purview of OSHA.
- 13-3 Response: See Response 13-2.
- 13-4 Response: See Response 12-10.
- 13-5 Response: The purpose of PAR 1405 as it pertains to warehouses is to gather information and determine if future rulemaking regarding warehouses is warranted. Additional quantitative data would be appropriate at that time.
- 13-6 Response: PAR 1405 includes new and enhanced requirements to capture and control fugitive EtO emissions at facilities that perform sterilization including commercial facilities.
- 13-7 Response: EtO sterilant gas is not typically delivered or stored at sterilization facilities by tanker truck, train, or storage tank. EtO sterilant gas is typically delivered and stored in drums, cylinders, cartridges, or ampules and PAR 1405 has new and enhanced requirements for their storage.
- 13-8 Response: PAR 1405 applies to EtO sterilization and related operations, including new and enhanced requirements for their EtO storage and dispensing. For example, large facilities must store elements in an EtO dispensing area under PTE.
- 13-9 Response: The purpose of PAR 1405 as it pertains to warehouses is to gather information and determine if future rulemaking regarding warehouses is warranted. Additional data is needed to determine whether new or enhanced requirements to capture and control EtO emissions at warehouses are necessary.
- 13-10 Response: See Response 12-18.

- 13-11 Response: Staff has met with a vendor of OP-FTIR to discuss the capabilities and limitations of the technology. See Response 12-18 regarding a compliance path for OP-FTIR technology. See Response 12-26 regarding public reporting.
- 13-12 Response: PAR 1405 is technology neutral and allows for any technology that meets the performance standards for fenceline air monitoring. See Response 12-8.
- 13-13 Response: See Response 13-12.
- 13-14 Response: See Response 12-8. Discussion and requests regarding oil refinery fenceline air monitoring are outside of the scope of PAR 1405 regarding EtO sterilization and related operations.
- 13-15 Response: See Response 13-14.
- 13-16 Response: PAR 1405 is a technology-based rule, not a risk-based rule like Rule 1402. PAR 1405 trigger levels for curtailment from ambient air monitoring were derived from detection limits of monitoring technologies and trigger levels achieved-in-practice for existing EtO fenceline air monitoring plans. PAR 1405 trigger levels are not risk-based. The proposed trigger levels are 24-hour average fenceline levels of 17.5 ppb, 25.0 ppb and 3.0 ppb for Level 1, Level 2 and Level 3 respectively, which are lower than the daily threshold of 70 ppb as proposed by commenter.
- 13-17 Response: See Response 12-24.
- 13-18 Response: See Response 12-26.
- 13-19 Response: PAR 1405 trigger levels for curtailment are based on results of 24-hour time-integrated sampling results. PAR 1405 performance standards; however, facility-wide mass emission rates are based on a 30-day rolling average. The purpose of continuous stack monitoring is to ensure control equipment is performing properly continuously. A 30-day rolling average approach is consistent with South Coast AQMD past practice regarding continuous stack monitoring of performance standards and is also included by U.S. EPA in their proposed NESHAP.

August 9, 2023

Areio Soltani
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765



RE: Comments on Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Areio Soltani:

Communities for a Better Environment (“CBE”) submit these comments on Proposed Rule 1405 (“Proposed Rule”). We appreciate the South Coast Air Quality Management District (“AQMD”) revisiting Rule 1405 to strengthen controls of ethylene oxide (“EtO”) emissions following community concerns on the Preliminary Draft Rule Language released in March 2023.¹ While we appreciate AQMD updating the Proposed Rule with additional measures and requirements, we are disappointed that AQMD continues to fall short in requiring mitigation measures that meaningfully protect environmental justice communities that already face a disproportionate amount of air pollution from transportation, industry, warehouses, and many other sources.

CBE has been involved in the Proposed Rule 1405 process since August 2022 and has continuously advocated for stronger requirements to reduce and control EtO emissions from sterilization facilities. While we acknowledge AQMD for including additional measures such as fence-line monitoring and curtailment of sterilization operations in the Revised Preliminary Draft Rule Language, we are alarmed that these rule additions and updates also fall short in protecting nearby communities that are at risk of high EtO exposure.

As previously mentioned in our April and May 2023 comment letters CBE requests AQMD effectuate strong requirements for facilities that emit EtO such as:

- Requiring Small, Medium, and Large Facilities to adhere to Rule 1405 regulations end of 2023 instead of 2025-2026. } Comment 14-1
- Requiring facilities to suspend operations when any control equipment or technology breaks down or is going through repairs or replacements. } Comment 14-2
- Requiring Rule updates when stronger control systems and technology becomes available. } Comment 14-3
- Requiring interagency coordination with local, state, and federal agencies to educate and better protect workers from EtO exposure by always requiring personal protection equipment and high-quality respirators. } Comment 14-4

¹ AQMD. (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

- Requiring the initial summary report to include information such as the location of sensitive receptors within 500ft of warehouses, the wind direction at warehouses, and a diagram showing where pallets are received and stored at a warehouse. Per EPA, it’s difficult to know how far EtO can travel due to factors such as concentration, weather conditions, wind speed, and the amount of dispersion.² As noted earlier, AQMD has even stated at the March 2023 Public Workshop that EtO can stay in the air for several months.³
- Requiring a Rule update when new technologies and data are available. This includes additional safety requirements and technologies for workers who are exposed to EtO on a daily basis. AQMD should revisit and amend the Rule any time there is new information or technology available for the mitigation of EtO emissions.
- Requiring interagency coordination with state and federal agencies to enforce facilities to comply with best practices for frontline communities. Given the toxicity of EtO, AQMD should coordinate with CalOSHA to better protect workers - being that they are the most impacted group in polluting facilities, are frequently people of color or low-income and may also live in the local community. AQMD should also coordinate with the State Water Board to ensure that facilities are not discharging any Sterilizer Exhaust Vacuum Pump working fluid or any EtO contaminated liquids to the wastewater stream.⁴ Interagency coordination is instrumental in protecting public health and the environment, and AQMD should consider hosting interagency community workshops that foster an inclusive and accessible environment for the community.
- Requiring AQMD to reconsider alternatives to EtO sterilization such as ionizing radiation (gamma),⁵ steam methods, hydrogen peroxide vapor,⁶ and other safe alternatives to human health. The lack of material compatibility of EtO and industrial feasibility should not sacrifice the health of communities, workers, and the environment. AQMD should reconsider adopting sterilizing alternatives based on material compatibility as a solution to reduce and control EtO emissions.

Comment 14-5

Comment 14-6

Comment 14-7

Comment 14-8

² EPA. (2023, January). *Hazardous Air Pollutants: Ethylene Oxide*. USEPA. □HYPERLINK "https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto."https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto.

³ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

⁴ AQMD. (2023 March). *Preliminary Draft Rule Language*. SCAQMD. pg 24. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

⁵ Gamma Industry Processing Alliance. (2017 August). *A Comparison of Gamma, E-beam, X-ray and Ethylene Oxide Technologies for the Industrial Sterilization of Medical Devices and Healthcare Products*. Stanford University. pgs 10-11. <http://large.stanford.edu/courses/2018/ph241/goronzzy2/docs/gipa-aug17.pdf>.

⁶ Shahbandar, Lena. (2018 November). *Alternatives to Ethylene Oxide*. StopSterigenics. <https://www.stopsterigenics.com/post/alternatives-to-ethylene-oxide>.

While the Revised Preliminary Draft Rule Language has included and revised some of our concerns listed above, the Proposed Rule continues to be ineffective in controlling and preventing EtO emissions particularly with the technology used for fenceline monitoring.

- According to AQMD's Working Group #6 presentation,⁷ out of the six EtO monitoring technologies proposed by AQMD, only one meets the criteria – the canister collection – which still faces availability challenges due to potential surge in demand. As for the other EtO monitoring technology, there are issues either with detection limits, established methods, and/or availability. What happens if the Continuous Emission Monitoring System (CEMS) doesn't work and there isn't fenceline monitoring to alert high EtO emissions (since fenceline monitoring will discontinue once CEMS kicks in)?⁸ What type of monitoring will take place? We urge AQMD to continue investigating better EtO monitoring technology that detects EtO emissions at the lowest limit to protect nearby communities.

Comment 14-9

It is critical that AQMD revisit the Preliminary Draft Rule Language and implement a stronger ruling with high quality technology, real-time measurements and analysis, and continuous fenceline monitoring paired with CEMS. AQMD should not take lightly the dangers of EtO exposure and carcinogen toxicity given the reassessments by state and federal agencies.⁹ Environmental justice communities have suffered enough and should not face neglect and injustice by weak and neutral technology and policies that sacrifice their health. We urge AQMD to continue strengthening the Proposed Rule and we welcome the opportunity to discuss these matters.

Comment 14-10

Sincerely,

Ambar Rivera
Staff Researcher

⁷ AQMD. (2023 June 8). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 37]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405_wgm6_final.pdf?sfvrsn=6.

⁸ AQMD. (2023 July 6). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 11]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/pr-1405-wgm7-presentation-063023.pdf?sfvrsn=12>.

⁹ AQMD (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8, pg 1-1.

Communities for a Better Environment Comment Letter, submitted 8/9/2023

- 14-1 Response: See Response 6-3.
- 14-2 Response: See Response 8-3.
- 14-3 Response: See Response 8-5.
- 14-4 Response: See Response 8-6.
- 14-5 Response: See Response 6-6.
- 14-6 Response: See Responses 8-5.
- 14-7 Response: See Response 6-13.
- 14-8 Response: See Response 6-14.
- 14-9 Response: Before SCEMS or CEMS are fully certified, fenceline monitoring is required for the interim time period. In addition, annual performance testing of SCEMS or CEMS, such as a Relative Accuracy Test Audit (RATA) will ensure that data is accurate.
- 14-10 Response: PAR 1405 already has redundant layers of monitoring for stack and fugitive emissions for large facilities. Stack emissions would be required to be monitored with SCEMS or CEMS, which are verified to operate correctly with annual relative accuracy test audits and, as applicable, periodic source testing. A PTE, the method to prevent fugitive emissions, is required to be continuously monitored for negative differential pressure as well as periodic inward face velocity measurements to demonstrate that no emissions are leaving the structure. Before these permanent monitoring requirements are in place, interim fenceline monitoring is required. PAR 1405 contains performance standards based on the best available control technology achieved in practice to ensure EtO is reduced to the maximum extent feasible.

Areio Soltani

From: Jeffrey Chuang <jchuang@lso-inc.com>
Sent: Wednesday, August 9, 2023 2:00 PM
To: Areio Soltani
Cc: Neil Fujiwara; Kalam Cheung; Michael Krause
Subject: [EXTERNAL]Public Comments for PAR 1405

Dear Mr. Soltani,


As I had mentioned at the end of the presentation on July 26th, please see my comments below regarding the draft rule language:

1. (c)(19) PACKAGING AREA: Please update the first sentence to read: "PACKAGING AREA is any area used to perform packaging or re-packaging of Sterilized materials that have completed Aeration."
 - a. This change removes "and biological indicator sterility testing" at the end of the sentence.
 - b. Biological indicators (BIs) may not be required for products undergoing sterilization.
 - i. Example 1: Unlike conventional release, parametric release does not use BIs.
 - ii. Example 2: Engineering or validation runs might not use BIs.
 - c. If passing BI test results are required to move forward with packaging, this only penalizes smaller companies that do not have resources to validate parametric release or rapid-release BIs.
 - i. Parametric release (ISO 11135:2014, §3.25) does not rely on BIs, as confirmation of physical parameters is sufficient to release a load.
 - ii. Though rapid BI results may be available before aeration is complete, conventional BI results may take up to 11 days post-aeration.
 - iii. For many companies, packaging activities occur while BI testing is in progress.
 - iv. For companies using conventional release, large storage areas would be needed to store quarantined work-in-progress.
2. (e)(3)(C) and (e)(3)(D): Please update the verbiage from "STERILIZED WITH ETHYLENE OXIDE (EtO/EO)" to "TREATED WITH ETHYLENE OXIDE (EtO/EO)".
 - a. As the word "Sterilized" is synonymous with "Sterile", it would be misleading to apply a "Sterilized" label, when products have not met the regulatory requirements to be labelled "Sterile".
 - i. Certain products subjected to certain sterilization cycles might not be considered "sterile", or "free from viable microorganisms" (ISO 11139:2018).
 - ii. For medical devices to be labeled "sterile", devices must meet the proper sterility assurance level (ANSI/AAMI ST67:2019).
 - b. "TREATED WITH ETHYLENE OXIDE (EtO/EO)" would better encompass all exposed products and cycle validation states.

Comment 15-1

Comment 15-2

Thank you,
Jeff Chuang, CISS-EO, CISS-RAD
 Principal Microbiologist

 **Life Science Outsourcing**
 830 Challenger Street, Brea, CA 92821
 lso-inc.com
 Bringing Medical Innovations to Life.

Life Science Outsourcing Comment Email, submitted 8/9/2023

- 15-1 Response: The definitions and provisions regarding a packaging area have been removed from PAR 1405.
- 15-2 Response: Thank you for the comment. Suggested updates were incorporated within PAR 1405.



August 9, 2023

Michael Krause
 Assistant Deputy Executive Officer
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765

Via e-mail at: mkrause@aqmd.gov

Re: SCAQMD Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations, Draft Rule Language Version 07-21-2023

Dear Mr. Krause,

Sterigenics US, LLC (Sterigenics) appreciates the opportunity to participate in the Working Group Meetings (WGMs) for South Coast Air Quality Management District (SCAQMD or District) Proposed Amended Rule 1405, Control of Ethylene Oxide (EtO) Emissions from Sterilization and Related Operations (PAR 1405).

Sterigenics operates three facilities within SCAQMD to sterilize medical devices such as surgical kits, delivery systems, medical hardware, gowns and drapes, surgical accessories, and medical packaging. Sterigenics' facilities play an important role in safeguarding public health by using a Food and Drug Administration (FDA)-mandated non-invasive method to sterilize medical equipment prior to use. This method requires use of EtO and is the only method available for sterilizing large quantities of packaged medical equipment. Sterilization prevents biological contamination in health care settings that can lead to patient infections, and in severe cases, deaths. Sterigenics' facilities within the SCAQMD sterilize over 90 million essential medical devices and supplies each year, including surgical kits, catheters, cardiac implants, stents, IV sets and more. These products are supplied to nearly 100 healthcare product manufacturers, including dozens in the greater Los Angeles-area, as well as local hospitals.

As the District considers PAR 1405, we urge you to continue to consider the greater context within which Sterigenics' facilities operate. The national capacity for EtO sterilization is limited, and shortages of sterilized products and equipment can have – and have had – direct, significant health consequences. Sterigenics supports efforts to reduce EtO emissions to the extent feasible, and to identify alternative methods of sterilization. However, as the FDA has acknowledged, "While signs of innovation are promising, other methods of sterilization cannot currently replace the use of EtO for many devices. To that end, we are equally concerned about the potential impact of shortages of sterilized medical devices that would result from disruptions in commercial sterilizer facility operations."¹ Without EtO sterilization, infection risk associated with surgical procedures and other forms of care could be meaningfully increased.²

Comment 16-1

¹ FDA, Press Announcement, Jeffrey E. Shuren, MD, JD, Director – CDRH Offices, FDA Continues Efforts to Support Innovation in Medical Device Sterilization (Aug. 3, 2022), <https://www.fda.gov/news-events/press-announcements/fda-continues-efforts-support-innovation-medical-device-sterilization>.

²Based on a presentation published by the FDA illustrating the issues surrounding shortages with EtO-sterilized equipment in particular. <https://wayback.archive-it.org/7993/20201225232724/https://www.fda.gov/media/132345/download>



Sterigenics has been an active participant in the PAR 1405 rulemaking process over the past year. On July 21, 2023, SCAQMD released revised draft rule language and a public presentation for PAR 1405,^{3,4} although it did not update its staff report, released with an earlier version of the draft proposed rule in March 2023.⁵ Sterigenics appreciates the diligence with which staff has been working with stakeholders, but continues to have concerns about the proposed rule language and the apparent bases for some of these provisions, to the extent they are articulated in the March staff report or July presentation. We offer the following comments on PAR 1405; however, we feel strongly that all stakeholders would benefit from additional time to further develop rule language that addresses the issues below and adequately harmonizes the potentially competing requirements from other oversight agencies, and accordingly request that consideration of the rule be delayed by at least 90 days.

Comment 16-1
cont.

I. COMMENTS ON REVISED DRAFT RULE LANGUAGE

1. Rule Impacts to Sterilization Operations in the District

Sterigenics is extremely concerned that the scope and requirements of the proposed rule will drive sterilization capacity out of the state by forcing facilities to close and/or reduce their throughput. This outcome could have deep and lasting impacts on hospitals and health care systems in southern California. It also has the potential to cause an increase in transportation-related criteria air pollutant, toxic air contaminant and greenhouse gas emissions if health care facilities are required to ship products out of state for sterilization. Sterigenics is also concerned that PAR 1405 could require facilities already subject to early action reduction plans (EARPs) to replace equipment that was installed under the EARP. Sterigenics intends to continue working with the District to improve the rule language such that facilities can continue to operate within the District.

Comment 16-2

2. Interim Fenceline Air Monitoring and Curtailment Provisions

The draft rule currently has three different curtailment provisions, something that has never been done before by the SCAQMD. Sterigenics is strongly opposed to the recently added fenceline air monitoring and curtailment provisions (PAR 1405(p) and (q) sections) because such monitoring is not reliable for EtO emissions, yet the curtailment that could be triggered would have a deleterious effect on sterilization operations which, in turn, will harm healthcare services locally and across the country.

Comment 16-3

We know this from experience: As part of Early Action Reduction Plans (EARP) under Rule 1402 implemented at our Vernon and Ontario facilities, we have been employing such

One example used in this presentation is a shortage in recent years of sterilized pediatric tracheostomy tubes, resulting in infections at the insertion point. FDA, GHPUDP Nov. 6-7, 2019, FDA Presentation - Ethylene Oxide.

³ PAR1405: Preliminary Draft Rule Language. Available at http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_revised_pdrI_072123.pdf?sfvrsn=15

⁴ PAR 1405: Public Presentation available at http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405_publicconsultationmeeting_072123.pdf?sfvrsn=8

⁵ March 2023 Preliminary Draft Staff Report. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

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monitoring, along with monitoring-based curtailment triggers, and it has had considerable adverse impacts on our operations and processing capacity, which undoubtedly has had a ripple effect on healthcare. However, we agreed to these monitoring and curtailment provisions in the EARP with the understanding that they would be in place only until construction of the Permanent Total Enclosures at each of our three facilities, after which time such unreliable monitoring, and the related curtailment triggers, would no longer be necessary. It was an interim effort to monitor fugitive EtO – which occurs throughout the basin and rapidly dissipates – with tools that are not ready for prime time, for the reasons discussed below.

In the year that we have been subject to fenceline EtO monitoring, we have extensively evaluated our monitoring results, including those that triggered curtailment, and have concluded that the monitoring results are not consistent with facility operations or potential emissions. In other words, monitoring results are a poor proxy for facility operations. This is consistent with what other agencies have noted in their efforts to evaluate EtO fenceline monitoring.

Other regulatory agencies, including the US EPA and the Georgia Environmental Protection Division have determined that fenceline monitoring for contract sterilization facilities is not sufficiently reliable to identify emission control problems and support interventions. In addition, there are also other known and unknown sources of EtO that could bias fenceline monitoring results. Further, the Utah Department of Environmental Quality recently published a study that indicates a strong seasonal impact on background EtO concentrations and concentrations measured near sterilization facilities.

Based on the available evidence and data from our facilities, fenceline monitoring and associated curtailment provisions are likely to lead to lengthy facility shutdowns that will impact the availability of sterilized medical devices, even where facility emissions are within permitted levels. Moreover, given the demonstrated inability to reasonably relate monitoring results to operations, the curtailment provision is purely punitive and, troublingly, it would force the closure of a lawfully operating facility without a rational nexus to facility operations or emissions. There are many other problems with these curtailment provisions. To cite one example, the proposed monitoring trigger of 3 ppb could be triggered by vehicles or railroad engines idling near to a monitor. **For all of these reasons, Sterigenics strongly urges SCAQMD to eliminate the Interim Fenceline Air Monitoring Requirements in section (p) and all of the Curtailment of Sterilization Operations requirements in section (q) that were recently added to PAR 1405.**

If curtailment provisions are retained, they must be revised such that facilities will not be fully curtailed for extended periods of times. We recognize that SCAQMD is proposing an exemption from curtailment where the availability of sterilized medical devices is limited. However, the rule should set forth the process for securing such an exemption, and allow for sufficient operations to justify sterilizing those devices. FDA does not have adequate tracking nor regular reports of the availability or shortages of medical products in place to properly report such shortages. It is unclear what data, action by FDA or another third-party or other intervention would be necessary to trigger this exemption process.

Comment 16-3
cont.

3. PAR 1405(d), Large Facility Requirements:

(c) Definitions:

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(c)(4) for curtailment defines baseline operation as follows:

“BASELINE OPERATION is the daily average pounds (lbs) of Ethylene Oxide used in the seven (7) Sterilizer or Combined Sterilizer/Aerator operating days including and prior to the date of the monitoring result or sampling day completion.”

This definition is vague and could be interpreted multiple ways. We recommend that the definition be revised as follows:

*“BASELINE OPERATION is the daily average pounds (lbs) of Ethylene Oxide used in the seven (7) Sterilizer or Combined Sterilizer/Aerator operating days including and prior to the date of the **continuous** monitoring result or sampling day completion.”*

(c)(9): The definition of Control System is not clear, and possibly problematic. (c)(9) states:

“CONTROL SYSTEM is equipment and ducting installed for the purposes of collecting Exhaust Streams and reducing Ethylene Oxide emissions consisting of one (1) or more adjoining air pollution control devices in series or parallel and exhausts to one (1) or more stacks.”

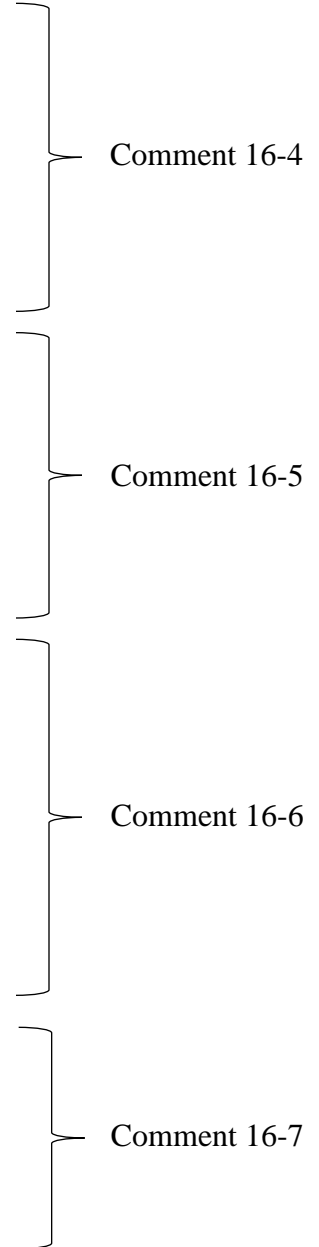
It appears that all of the control equipment at a facility may be in one “Control System”, despite having separate systems with separate stacks. That could cause problems in using the alternatives in section (d)(1)(C). We believe that all control systems combined, including separate systems, should each be able to use the alternatives in (d)(1)(C).

(d)(1)(C): Control Efficiency

PAR 1405 (d)(1)(C) requires that a facility demonstrate EtO emission control efficiency of 99.99% or greater or demonstrate emissions of EtO at a concentration of ≤0.01 ppm for each control system. The detection limit for the test method used has been as high as 0.01 ppm, so documenting a concentration below that is not possible. It will be extremely difficult, if not impossible, to consistently meet the control efficiency and/or concentration limits proposed in the draft rule language. Additionally, Sterigenics recently installed dry beds in the Vernon facilities pursuant to its District-approved EARP under Rule 1402. Operating pursuant to design specifications, the dry beds do not meet the proposed control efficiency in the rule, nor will the manufacturer provide a guarantee of such an efficiency or an outlet concentration that meets 0.01 ppm. These dry beds will be part of the permanent total enclosure required by the proposed rule, and as such they fall under (d)(1)(C) as a result of the problematically broad definition of “Control System” in PAR 1405 (c)(9).

(d)(1): Mass Emission Rate using Source Tests

Section (d)(1) would stop sterilization cycles starting on July 1, 2025 based on a single set of source tests if a source test shows an exceedance of 0.015 lbs/hr and less than 99.99% reduction or 0.01 ppm. This provision overrides the 0.015 lbs/hr 30-day average limit in section (d)(2)(B), to an average over the few hours of the source test period. This is a separate curtailment provision on top of the curtailment provisions based on ambient monitoring, and would not have a sunset date. The minimum curtailment period for exceeding the 0.015 lb/hr or 0.01 ppm limits would be 48 hours, but lifting the curtailment





would require a new source test. This requirement could result in a facility being shut down for several months. There is no provision in PAR 1405 that would even allow a restart to conduct a second test if this curtailment occurs before the continuous emissions monitoring systems (CEMS) are in place. Given the schedule that the SCAQMD has proposed for its review of CEMS, it seems almost certain that the CEMS will not be in place before the July 1, 2025 date.

PAR 1405(u)(6) provides a path to restart only after the CEMS is in place, and it is structured as an exemption:

“The requirements of subparagraph (d)(2)(B) do not apply to an owner or operator of a Large Facility that demonstrates the total mass emission rate of Ethylene Oxide from all exhaust stack(s) at the Facility exceeds 0.015 lbs/hr during the present rolling 30-day period, provided the owner or operator:

- (A) Did not perform Sterilization in the last 48 hours;
- (B) Demonstrates by using the SCEMS or CEMS that the sum of mass emission rates, averaged over a calendar day and measured at each exhaust stack, is 0.015 lbs/hr or less of Ethylene Oxide after resuming Sterilization. . .”

It is certainly possible that the CEMS would have shown compliance with these requirements even though a source test showed non-compliance with (d)(2)(B), which could cause a series of start-ups and curtailments. We request that this curtailment provision be removed.

(d)(2)(A): and Table 1 – Implementation Schedule for CEMS

(d)(2)(A) and Table 1 require installation of a CEMS within 18 months of approval of the CEMS application. The deadline for the application in subsection (d)(5) is March 1, 2025, which we understand is because the District will need 18 months to two years to evaluate CEMS technology. This means that the CEMS may not be installed until late 2026, and possibly much later as there is no deadline for the SCAQMD’s review of the application. Sterigenics is willing to install CEMS much sooner than this but cannot do so without the SCAQMD’s approval of the plan.

(d)(2)(B): Mass Emission Rate Using CEMs

PAR 1405 (d)(2)(B) requires that large facilities demonstrate the sum of mass emission rates measured at each exhaust stack is ≤ 0.015 lb/hr of EtO from all control systems on a rolling 30-day basis. Sterigenics understands that SCAQMD derived this value from a recently issued permit for the Medline Industries (Medline) facility located in Waukegan, Illinois. The Medline facility permit limits EtO usage to 375 tons/year, and we understand that SCAQMD does not have throughput data to match the emissions data from the Medline CEMS, but it is likely considerably lower than the permit limit. In contrast, the Sterigenics Ontario facility is permitted to use 657 tons/year of EtO. It is therefore not reasonable to require a similar mass emission rate for a facility that processes significantly more EtO. Additionally, the mass emission rate for the Medline facility is provided on a monthly and annual basis. Because the health risk of EtO is dependent upon long term exposure, an hourly mass emission limit is not appropriate. Sterigenics recommends that the mass emission limit be increased and provided in the rule on a daily basis. Sterigenics recommends the rule language be updated as follows:

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Comment 16-7
cont.

Comment 16-8

Comment 16-9



(d)(2)(B) Demonstrate the sum of mass emission rates measured at each exhaust stack is 0.025 pounds per hour (lbs/hr) or less of Ethylene Oxide from all Control Systems on a 90-day rolling average basis

} Comment 16-9
cont.

(d)(3)A: Permanent Total Enclosure (PTE) area

PAR 1405(d)(3)(A) requires that all elements in a Sterilant Gas Storage Area be included within the PTE area. However, Sterigenics has traditionally used exterior EtO storage areas (and implemented alternative leak monitoring procedures to ensure there are no fugitive emissions) both as a best management practice for potential explosive hazards and in compliance with National Fire Protection Association (NFPA) code requirements. Given the potentially explosive nature of EtO, Sterigenics believes that it is much safer to utilize the external storage area with the leak detection monitoring rather than capturing the fugitive emissions from this area and routing them to a control device. Additionally, the provision risks conflicting with other applicable requirements by other oversight agencies, such as NFPA 55 and OSHA PSM requirements. The PAR 1405 leak detection protocols, as well as Sterigenics' facility protocols, are robust and adequately protective. Therefore, Sterigenics requests elimination of the elements of the sterilant gas storage area from the PTE requirements.

} Comment 16-10

(d)(4)(F): Annual Report

PAR 1405(d)(4)(F) requires that an annual report be submitted by January 30 each year. Sterigenics recommends that this date be updated to align with the Annual Emission Report due date.

} Comment 16-11

4. PAR 1405(i), Interim Requirements:

(i)(5): Test Requirements

PAR1405(i)(5) provides concentration limits and test requirements, and we appreciate the clarifications from the prior version. However, the type of testing to which this requirement applies is unclear. Sterigenics requests clarification as to whether these requirements pertain to leak detection and repair (LDAR) programs, or other test requirements. This section also refers to "meeting the requirement as specified in paragraph (i)(8)", but that section has been removed in the current draft rule.

} Comment 16-12

(i)(7)(C): Source Test Operating Conditions

PAR 1405(i)(7)(C) requires that source tests be conducted under normal operating conditions. Virtually all of the source test data available for sterilizers uses the methods in 40 CFR Part 63 Subpart O, which provides Ethylene Oxide Emissions Standards for Sterilization Facilities and includes monitoring requirements.⁶ It is quite likely that using the methods required in (i)(7)(C) will result in lower efficiencies than the current NESHAP method, making compliance far more difficult. The operational conditions for source tests in the proposed rule should mirror the requirements of the current NESHAP.

} Comment 16-13

⁶ 40 CFR Part 63, Subpart O. Available at: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-O>.



5. PAR 1405(k), Permanent Total Enclosure Requirements:

(k)(1): Averaging Time for Negative Pressure Demonstration of Compliance

PAR 1405 (k)(1) requires that a facility demonstrate that the permanent total enclosure (PTE) is maintained at a negative pressure of at least 0.007 inches of water column averaged over one minute. Sterigenics agrees that it is necessary to demonstrate compliance with the negative pressure requirements of the rule, but a 15-minute average is a more reasonable time period for compliance demonstration, to accommodate pressure swings caused by wind gusts and other disturbances. SCAQMD has set precedent in Rule 1420.2 for specifying the demonstration - be made on a 15-minute average.⁷ Sterigenics recommends the rule language be updated as follows:

(k)(1) Demonstrate the Permanent Total Enclosure is maintained at a negative pressure of at least 0.007 inches of water column averaged over ~~one (1) minute~~ fifteen (15) minutes;

Comment 16-14

6. PAR 1405(n), Prohibitions:

(n)(3): Emission Releases

PAR 1405(n)(3) states that the owner or operator of a facility performing sterilization shall not allow the release of uncontrolled emission of EtO to atmosphere from any PTE at any time. It is not possible for facilities to comply with this condition during unforeseen power outages. Facilities have systems in place to shut down the processes. However, fans can continue to run on their own inertia even when scrubber pumps are immediately shut down. Backup generation can take 30 seconds or more to detect the outage, start up, and generate enough power to run processes. Sterigenics recommends the rule language be updated as follows:

The owner or operator of a Facility performing Sterilization shall not allow the release of uncontrolled emission of Ethylene Oxide to atmosphere from any Permanent Total Enclosure at any time during normal operations.

Comment 16-15

7. PAR 1405(r), Exemptions

New Section (u)(10)

PAR 1405(k)(2) requires differential pressure monitoring placed at certain walls within the Permanent Total Enclosure. Sterigenics recommends that only walls with natural draft openings be subject to this requirement, since no emissions would be possible from walls without any natural draft openings. Sterigenics recommends that a new section be added to the rule as follows:

(r)(5) In a Permanent Total Enclosure, walls that do not contain natural draft openings are not subject to the differential pressure monitoring requirements of paragraph (k)(2).

Comment 16-16

⁷ SCAQMD Rule 1420.2, Emission Standards for Lead from Metal Melting Facilities. Available at: <http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/Rule-1420-2rev.pdf>.

**8. PAR 1405 (t)(5) First Destination Reporting**

Sterigenics customers handle the logistics of picking up the products, and accordingly, Sterigenics may not have First Destination information. This requirement needs to be removed, as Sterigenics cannot comply.

} Comment 16-17

Sterigenics appreciates the opportunity to provide these comments related to PAR 1405. As outlined above, there are multiple items requiring further analysis and thorough discussion prior to rule adoption. We look forward to continued discussion of this important rulemaking. If you have any questions, please contact me at (630) 928-1771 or via e-mail at kwagner@sterigenics.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Wagner".

Kevin Wagner
Vice President, Global Environmental Health & Safety

Cc: Wayne Nastri, SCAQMD
Sarah Rees, SCAQMD
Areio Soltani, SCAQMD
Neil Fujiwara, SCAQMD
Kalam Chung, SCAQMD
Governing Board Members, SCAQMD

Responses to Sterigenics US, LLC Comment Letter, submitted 8/9/2023

- 16-1 Response: Thank you for your participation in this public process.
- 16-2 Response: See Response 3-1. Regarding replacement of equipment installed under EARPs, staff is sensitive to the issue of stranded assets. However, without additional detail regarding these early actions, staff cannot address specific concerns. Generally speaking, as implied by the title Early Action Reduction Plan, some early actions could be temporary by their nature. PAR 1405 requires permanent measures based on the best available control technology achieved-in-practice.
- 16-3 Response: Interim fenceline air monitoring and curtailment provisions within PAR 1405 are based largely on fenceline air monitoring and curtailment provisions within two EARPs mutually agreed upon by South Coast AQMD and the two Sterigenics facilities locations in Vernon and Ontario, respectively.
- Analysis of curtailment reveals that aside from one initial 100% curtailment at one facility, Sterigenics Vernon and Sterigenics Ontario have operated largely in compliance with EARP provisions and avoided “lengthy facility shutdowns” that would disrupt medical device supply chains. PAR 1405 interim fenceline air monitoring and curtailment provisions, largely based on EARP provisions, are expected to function similarly. PAR 1405 allows for a more frequent sampling schedule, such as 1-in-3 days, or conducting real-time monitoring. Both options would potentially allow an end to curtailment sooner than a sampling schedule of 1 in 6 as data to verify fenceline levels would be available sooner. On top of this, after implementation of measures in EARP, fenceline levels are expected to be reduced.
- The primary purpose of interim fenceline monitoring is to ensure fenceline EtO are below certain levels while facilities make improvements to meet proposed stack and fugitive emission requirements. Fenceline data collected based on 24-hour time integrated samples on a 1-in-3 or 1-in-6 days frequency might not provide the temporal resolution to represent facility operations. However, fenceline monitoring coupled with curtailment provisions allow an immediate response to elevated fenceline EtO concentrations. Based on the fenceline monitoring data at Sterigenics Vernon and Ontario, curtailment is an effective means to reduce fenceline EtO levels at sterilization facilities.

In addition, as noted in the Comment Letter, PAR 1405 has an additional exemption allowing medical devices to continue to be sterilized if declared reasonably likely to be in shortage by U.S. FDA or other federal, state, or local health authorities or California hospitals or medical centers. Curtailment as a consequence of interim fenceline air monitoring is expected to be minimally impactful, serving as a deterrent for elevated ambient air EtO concentrations until the certified stack CEMS or SCEMS is in place. While curtailment provisions do not sunset, the trigger level does change, however, evidence from a sterilization facility with multilayer stack control and PTE fugitive control indicate fenceline air monitoring levels are well below that trigger level.

- 16-4 Response: PAR 1405 has been revised to incorporate the suggested change.
- 16-5 Response: Each Control System, however defined by Permit to Operate, Control System Implementation Plan, or Facility Implementation Plan, must demonstrate compliance with either the 99.99% control efficiency or the 0.01 ppm outlet concentration performance standard. All of the air pollution control devices controlling EtO emissions from a facility could be considered a single Control System, or separate grouping of smaller Control Systems. For example, three dry bed scrubbers with three separate stacks could be considered one, two or three Control Systems as long as it is clearly specified in permits/plans. The definition allows flexibility due to variety of sterilization control implementations in South Coast AQMD.
- 16-6 Response: Due to technical feasibility, the control efficiency requirement will be demonstrated only through source tests. For low inlet scenarios, it is expected that the alternative performance standard of 0.01 ppm is achievable based on source test data evaluated.
- 16-7 Response: The phrasing “the owner or operator of a Large Facility shall not perform Sterilization unless the following requirements are met” has been revised to “the owner or operator of a Large Facility shall” followed by the respective requirements.
- 16-8 Response: As stated at the August 2023 Stationary Source Committee Meeting by Jason Aspell, Deputy Executive Officer of South Coast AQMD’s Engineering and Permitting Division, the processing of permit applications for PAR 1405 equipment is one of the Division’s highest priorities and those permits have been acted on expeditiously.
- The South Coast AQMD Governing Board at their September meeting authorized the purchase of real-time monitoring technology, which would assist in the certification of SCEMS/CEMS. The compliance deadlines represent the deadline when facilities are required to comply with certain

- requirements, facilities are encouraged to work with South Coast AQMD closely to accelerate the certification process and to submit the applications earlier than the proposed deadlines.
- 16-9 Response: PAR 1405 has been revised to allow a facility-wide mass emission rate determined by calculation of a specific facility’s permitted EtO throughput and a compliant control efficiency of 99.99%, expressed to the thousandths of a percent.
- 16-10 Response: See Response 3-5.
- 16-11 Response: See Response 3-6.
- 16-12 Response: Interim test requirements do not pertain to LDAR programs as LDAR programs are only required after interim test requirements sunset. This interim test requirement was formerly known as a “leak test” but the term “leak” has been modified under PAR 1405. Paragraph (i)(8) of PAR 1405 was formerly known as paragraph (f)(2) under *Test Methods*.
- 16-13 Response: Paragraph (i)(7) are interim requirements for source testing that were previously included in Rule 1405. PAR 1405 would not change the existing source testing requirements. However, PAR 1405 source testing requirements specified in subdivision (l) would source testing to be conducting during maximum or typical operating conditions, to be specified in the source test protocol.
- 16-14 Response: See Response 3-13. PAR 1405 has been revised to potentially exclude differential pressure measurements when average one-minute wind speeds exceed 20 miles per hour in paragraph (u)(14).
- 16-15 Response: See Response 3-14.
- 16-16 Response: See Response 3-17.
- 16-17 Response: PAR 1405 has been revised to require either the First Destination or the customer information to be recorded.

From: Evan Sanford <Evan@redlandschamber.org>
Sent: Wednesday, August 30, 2023 11:14 AM
To: Clerk of Board <clerkofboard@aqmd.gov>
Subject: [EXTERNAL]Written Comment (PAR 1405)

Dear SCAQMD Governing Board,

I hope this message finds you well. I am writing to submit a written comment for the upcoming South Coast Air Quality Management District (SCAQMD) Governing Board meeting on September 1st, specifically concerning Proposed Amended Rule (PAR) 1405.

Thank you for your dedication to maintaining the well-being of our community. The significance of sterilization facilities in California extends beyond the prevention of infections; they are integral to securing continued access to vital medical devices that countless patients rely upon. As you deliberate the potential implementation of this regulation, I kindly urge you to conduct a comprehensive assessment of the potential consequences associated with PAR 1405.

} Comment 17-1

Best Regards,
Evan Sanford
Executive Director, Redlands Chamber of Commerce
47 N. First St | Redlands, CA | 92373
Phone: (909) 793-2546
Cell: (818) 425-5667
Email: evan@redlandschamber.org

Redlands Chamber of Commerce Comment Email, submitted 8/30/2023

17-1 Response: Thank you for your participation in this public process. Please refer to the PAR 1405 Socioeconomic Impact Assessment for a comprehensive assessment of the potential economic consequences associated with PAR 1405.

Regarding non-economic impacts, staff understands that EtO sterilization plays a critical role in the supply chain of medical devices and patient health, and has considered the implementation requirements in PAR 1405. Working with sterilization facilities, community and environmental stakeholders, and regulatory agencies like U.S. FDA, PAR 1405 reduces stack and fugitive emissions of the known human carcinogen EtO in a feasible 21-month timeframe with achieved-in-practice technology while ensuring hospital and medical centers continue to receive sterilized medical devices without reduced supply. PAR 1405 also includes a curtailment exemption to allow sterilization to continue if product is reasonably likely to experience reduced supply and is critical to public health. The exemption from curtailment for certain products ensures hospitals and medical centers continue to receive sterilized medical devices without reduced supply of products that would be critical to public health.

Areio Soltani

From: Jeffrey Chuang <jchuang@lso-inc.com>
Sent: Wednesday, October 4, 2023 4:04 PM
To: Areio Soltani
Cc: Kalam Cheung; Neil Fujiwara; Michael Krause
Subject: [EXTERNAL]Comment for PAR 1405

Dear Mr. Soltani,

Could you please update the definition of (c)(36) Tier II Warehouse for clarity? Per the September 28, 2023, Version, the definition may be read ambiguously as either:

A) TIER II WAREHOUSE is a Facility

1. with at least 100,000 square feet and
2. less than 250,000 square feet of indoor floor area used for Warehousing Activities, and
3. reports to U.S. FDA as a Wholesale Distributor or a Third-Party Logistics Provider as of [Date of Rule Amendment].

or

B) TIER II WAREHOUSE is a Facility

1. with at least 100,000 square feet and less than 250,000 square feet of indoor floor area used for Warehousing Activities, and
2. reports to U.S. FDA as a Wholesale Distributor or a Third-Party Logistics Provider as of [Date of Rule Amendment].

I recommend changing the wording to:

TIER II WAREHOUSE is a Facility, which reports to U.S. FDA as a Wholesale Distributor or a Third-Party Logistics Provider as of [Date of Rule Amendment], with an indoor floor area used for Warehousing Activities of at least 100,000 square feet and less than 250,000 square feet.

Comment 18-1

Thanks,
Jeff Chuang, CISS-EO, CISS-RAD
 Principal Microbiologist



jchuang@lso-inc.com
 830 Challenger Street, Brea, CA 92821
lso-inc.com

Bringing Medical Innovations to Life.

Life Science Outsourcing Comment Email, submitted 10/4/2023

18-1 Response: The definitions for both Tier I Warehouse and Tier II Warehouse have been updated to remove ambiguity in their readings.



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Suite 400
Washington, D.C. 20004
W AdvaMed.org

October 13, 2023

Sarah Rees
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Revised Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Deputy Officer Rees:

I'm writing today on behalf of AdvaMed, the Advanced Medical Technology Association, regarding South Coast Air Quality Management District's (South Coast AQMD) proposed amended Rule 1405 – Control of Ethylene Oxide (EtO) and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes. AdvaMed is the world's largest association of medical technology innovators and manufacturers. Our members are transforming healthcare through earlier disease detection, less invasive procedures, and more effective treatments leading to improved patient outcomes.

We appreciate the opportunity to submit comments and the willingness of South Coast AQMD staff to meet with stakeholders on outstanding concerns. Our goal has been consistent since the beginning: a rule that is workable, achievable, and continues to protect public health. The supply of sterile medical technology is an essential part of the latter portion of this goal and the continued, safe use of EtO is important to achieving it.

EtO is used to sterilize approximately 20 billion medical devices annually. The volume of EtO used to sterilize these devices – about 50% of all medical devices – amounts to 1/2 of 1 percent of all EtO used each year. EtO exists ambiently even in areas far from any known human sources and, as SCAQMD itself has noted, commercial sterilizers are not the source of the ambient EtO.

We appreciate the continued engagement of SCAQMD staff with us, our members, and others impacted by PAR 1405 and are grateful that the current draft contains several meaningful changes to help prevent disruptions to patient care. A few issues still need resolution, however, to continue protecting both patient access and public health.

Comment 19-1



advamed.org :: [@AdvaMedUpdate](https://twitter.com/AdvaMedUpdate) :: [in](https://www.linkedin.com/company/advamed) AdvaMed

1 ::

October 13, 2023
Page 2 of 4

Unreliable Compliance Methods Risks Disruption to Patient Care

Fenceline monitoring, as proposed in PAR 1405, uses unreliable technology that is easily manipulated and influenced by sources of EtO other than commercial sterilizers. For example, results can vary significantly due to wind patterns, weather events, and other geographic conditions. This reliance risks significant disruptions to patient care by triggering sterilizer curtailment without any link to actual facility compliance or increased protection of public health. Further, the analysis of the results from this monitoring is – at best – available days after the reading was taken, resulting in curtailment being applied well after any alleged violation. Notably, other jurisdictions have contemplated using fenceline monitoring for compliance; none have adopted it due to the inconsistent and problematic readings.

To account for patient care disruptions, the updated draft proposes several mechanisms for obtaining an exemption for medical technology that may be in short supply. These exemptions are merely a band-aid on the larger issue: that the rule itself is likely to trigger multiple – if not continuous – curtailment of facilities due to factors outside their control, namely the myriad of other sources of EtO which include decaying plants, human respiration, and diesel engines. These unnecessary curtailments could then trigger the very shortages the rule is trying to avoid through proposed exemptions.

In practice, the proposed implementation process also lacks clarity and practicality. For example, it requires a regulatory body or hospital to certify that a product is in short supply but is unclear on how hospitals can or will implement this documentation. Further, sterilizers run multiple cycles of different products and would be required to obtain additional certification from multiple companies across various divisions. Additionally, staff has suggested the FDA medical device shortage list as documentation, however, this list does not encompass the full scope of products or devices that would be impacted by the curtailment.

Attempting to mitigate the negative supply chain impacts through an unworkable exemption fails to acknowledge the underlying issue that fenceline monitoring is unreliable and should not be used for compliance.

Comment 19-2

Additional Remaining Concerns

In addition to the above concerns, the following issues remain:

- **The current timeline is still not feasible.** Once the rulemaking is complete, and regulatory operational requirements are finalized, facilities will need to upgrade control systems. This includes designing and planning, budgeting, ordering equipment, and

Comment 19-3



October 13, 2023
Page 3 of 4

installing and testing the new control systems before January 2026. Existing supply chain issues and competition for consultants and parts will all impact this timeline.

- **Two-hour notification for trigger-level reporting.** The two-hour notification requirement for trigger-level reporting is unreasonable. It is unclear how this will be implemented. Some labs run 24/7 and may deliver results at any time but it is unclear how facilities would handle these varying circumstances.
- **One-minute sample interval for CEMS (c(7)).** The one-minute reading is limited to a single technology not proven to work with all abatement equipment. We recommend revising this to a reasonable interval that is recognized and workable with abatement equipment.
- **Permanent total enclosure requirements – inward face air velocity measurement procedures.** We are concerned with the practical application of K(3) as this requirement may be problematic for some NDOs. Facial velocity measurements, performed by the methodology specified in the proposed Appendix 4, may not be possible in some instances and may lead to results that are not representative. This is likely due to flow disturbances near the NDOs or configurations of the NDOs. NDOs are often odd shapes, such as slits under doors or the circular area surrounding a pipe entering a PTE, and rarely resemble the rectangle example provided in Appendix 4.
- **Leak detection and repair (LDAR) program required daily audio-visual (AV) checks (m(3)).** Required daily audio-visual checks are impractical and excessive. The employee risk of accessing some components subject to LDAR outweighs the value of daily AV inspections. These inspections sometimes require ladders and lifts and/or access to roofs or mezzanines. Weekly inspections would be more appropriate and consistent with the most conservative EPA-required AV inspection frequency for other industries (e.g., 40 CFR Part 63, Subpart H). Rather than require daily checks, employees working in areas subject to LDAR could also be trained to report potential leaks identified during their normal activities to supplement the weekly inspections.
- **Reporting timelines.** In section (t)(7)(A)(i) for fenceline air monitoring, we recommend changing the language "(i) No later than 10 days after the date of sampling," to "After receipt of results." Facilities cannot control contract laboratory delays in processing samples. We also consider the (t)(10)(A) & (B) and (t)(11)(B) 24-hour reporting for PTE delta P and LDAR Exceedance, respectively, as constituting excessive/burdensome reporting. These types of exceedances would be addressed by facilities in a reasonable timeframe and would not be representative of a potential release to the environment.

Comment 19-3
cont.

Comment 19-4

Comment 19-5

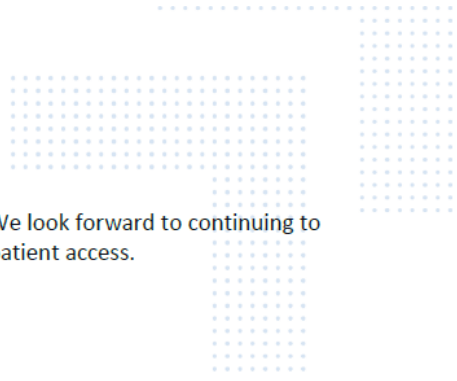
Comment 19-6

Comment 19-7

Comment 19-8



October 13, 2023
Page 4 of 4



Thank you for the opportunity to submit written comments. We look forward to continuing to work with staff to ensure the rule is achievable and protects patient access.

Sincerely,

Bobby Patrick, VI
Vice President, State Government, Regional Affairs, and Alliance Development
AdvaMed



advamed.org :: @AdvaMedUpdate :: AdvaMed

4 ::

AdvaMed Comment Letter, submitted 10/13/2023

- 19-1 Response: Thank you for your participation in this public process. We appreciate the perspective of AdvaMed on these issues including background EtO.
- However, the characterization of the position of the South Coast AQMD regarding background EtO is inaccurate and is outside the scope of this rulemaking activity.
- 19-2 Response: Regarding “unreliable technology”, see Response 1-7 regarding fenceline air monitoring technology.
- Staff disagrees that the curtailment exemption process “lack clarity and practicality”. Rule staff, working closely with stakeholders including U.S. FDA, have carefully crafted the curtailment exemption to streamline the exemption process and remove unnecessary hurdles that were present in previous iterations of the exemption.
- PAR 1405 does not require “a product is in short supply” but instead, after feedback from U.S. FDA, applies the standard of “reasonably likely to experience a reduced supply”. Certification of “reasonable likely” is a communication, such as a website or letter, and is more thoroughly explained in the Staff Report. The U.S. FDA medical device shortage list website was offered as an example only, and was not the only communication acceptable by PAR 1405.
- 19-3 Response: Staff believes that 21 months after rule amendment until the September 1, 2025 compliance deadline for a Large Facility or a Post-Aeration Storage Facility and 25 months until the January 1, 2026 compliance deadline for a Medium Facility or a Small Facility are sufficient for stack and fugitive emission control requirements in PAR 1405.
- 19-4 Response: Rule language has been updated to report “as soon as reasonably possible, but no later than 9:00 a.m. of the next operating day after receiving the results” to account for overnight laboratories and results delivered at any time of day.
- 19-5 Response: PAR 1405, consistent with the South Coast AQMD Rule 218 series, defines a CEMS as able to take record a measurement every one (1) minute and an SCEMS, or a semi-continuous emission monitoring system, as able to take and record a measurement every 15 minutes. Both CEMS and SCEMS are acceptable for stack monitoring for PAR 1405 and allow a wide range of technologies, such as GC-PID, FTIR, CRDS, and tunable infrared laser direct absorption spectroscopy (TILDAS).

- 19-6 Response: Staff is aware of the performance standard in U.S. EPA Method 204 and expects some facilities to modify their building envelopes to permanently close some natural draft openings (NDOs) and create new ones to meet the PTE performance standard at all NDOs. Measurements taken using this method would be representative of the actual operating conditions at the facility. Obstructions or configurations that lead to a deficient inward face velocity would need to be removed or corrected.
- 19-7 Response: Staff believes that Components, Elements, and other equipment capable of leaking EtO should be, at minimum, inspected daily by sight and sound, to see or hear for leaks. As the audio-visual inspection can occur at ground level, it would not be necessary to perform these inspections with a ladder or lift. While the 40 CFR Part 63, Subpart H requires a weekly audio-visual inspection, it is not the most stringent requirement. South Coast AQMD Rule 1173 requires an audio-visual inspection every 8-hour shift.
- 19-8 Response: Staff has reviewed existing fence-line air monitoring plans (FAMPs) for two sterilization facilities in the region and reached out to several laboratories performing U.S. EPA Compendium Method TO-15 analysis. Existing FAMPs contain deadlines ranging from 10 days to 14 days after sampling. After careful review, PAR 1405 has been revised to require results 14 days after the date of sampling.
- Regarding operational noncompliance reporting, staff does not consider either a telephone call or an email, at the facility's choosing, within 24 hours of an EtO leak or failing to maintain sufficient negative pressure within a PTE as excessively burdensome upon a facility.



October 18, 2023

Sarah Rees
 Deputy Executive Director
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765

Re: Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization: Medical Product Distribution Concerns

Dear Deputy Executive Director Rees:

On behalf of the Health Industry Distributors Association (HIDA), I write to provide additional information on the potential impact that Proposed Amended Rule (PAR) 1405 – Control of Ethylene Oxide Emissions from Sterilization – could have on the medical products supply chain. I appreciate the opportunity to share how the PAR could negatively affect the entire care continuum, from timely access to sterile medical products to the quality of patient care.

HIDA is the industry trade association representing 118 medical product distribution companies operating 500+ medical distribution centers across the care continuum nationwide. HIDA members deliver medical products and supplies, manage logistics, and offer customer services to virtually every healthcare provider. In 2020 and 2021, they reliably delivered over 90 billion units of PPE “the last mile” to providers.

HIDA appreciates South Coast Air Quality Management District’s (AQMD’s) commitment to addressing Ethylene Oxide (EtO) risk using the best science and regulatory tools available under the law to protect community members and employees at sterilization facilities. Healthcare distributors also want to protect public health, and to do so they must be able to deliver sterile critical medical products to providers without interruption in the supply chain. Regulatory policies that limit or abolish the use of EtO as a sterilization agent would have a profound negative effect on healthcare providers and patients.

Sterilized medical products are critical to healthcare. Medical devices are composed of many different types of materials that can be damaged if exposed to the wrong type of sterilization. For many medical devices, EtO is the only sterilization method that does not damage a device during the sterilization process. For example, radiation can make plastics brittle, steam can damage electronics, and heat can melt acrylics. Poor or incomplete sterilization can lead to transmission of infectious diseases or compromised patient health. EPA stated in the Federal Register, “Commercial sterilization facilities play

} Comment 20-1

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a vital role in maintaining an adequate supply of medical devices,” and about 50% of all medical devices are sterilized with EtO. This amounts to more than 20 billion devices annually.

} Comment 20-1
cont.

As you deliberate on PAR 1405, we ask that you consider the following:

Availability Of Sterile Product

Due to our healthcare system’s need for sterile medical products and devices for safe patient care, EtO sterilization is currently at capacity. This means that regulations that would have the effect of limiting or restricting commercial sterilization would be catastrophic to the healthcare supply chain, resulting in a public health crisis. EtO sterilizes 95% of all surgical kits. As previously mentioned, it is also the only safe, effective method of sterilization for about 20 billion medical products a year.

} Comment 20-2

Fenceline Monitoring

The updated version of PAR 1405 introduces fenceline monitoring as an additional enforcement tool. Fenceline monitoring is not reliable due to the presence of EtO in the environment from sources other than sterilization. EtO is a naturally occurring gas, and comes from other sources such as buses, charcoal grills, lawn mowers, and other commercial products. As a result, EtO has been measured in places that are nowhere near a commercial sterilization facility. It is for this reason that establishing a baseline threshold is problematic as testing results often may not reflect plant operations.

} Comment 20-3

Additional Warehouse Requirements

The additional requirements for warehouses appear unnecessary. A March 2023 AQMD staff report indicates no elevated levels detected around warehouses. In addition, tools are already available for AQMD (i.e., Rule 1402) to mitigate increased levels of EtO that should be applied instead to this situation. AQMD should utilize current rules to address these situations rather than creating a new and redundant policy.

} Comment 20-4

Thank you for taking our comments on PAR 1405 into consideration. If you have any questions, I can be reached at rouse@hida.org.

Sincerely,

Linda Rouse O’Neill
Senior Vice President, Supply Chain Policy
Health Industry Distributors Association

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HIDA Comment Letter, submitted 10/18/2023

- 20-1 Response: Thank you for your participation in this public process. We appreciate the perspective of the Health Industry Distributors Association (HIDA) on these issues.
- 20-2 Response: Staff disagrees that PAR 1405 would limit or restrict commercial sterilization. Working with sterilization facilities, community and environmental stakeholders, and regulatory agencies like U.S. FDA, PAR 1405 reduces stack and fugitive emissions of the known human carcinogen EtO in a feasible 21-month timeframe with achieved-in-practice technology while ensuring hospital and medical centers continue to receive sterilized medical devices without reduced supply. PAR 1405 includes a calculation method to derive the facility-wide mass emission rate, based on a compliant 99.99% control efficiency control system, from the sterilization facility's specific EtO usage limit, to ensure sterilization is not limited. PAR 1405 also includes a curtailment exemption to allow sterilization to continue if product is reasonably likely to experience reduced supply and is critical to public health. The exemption from curtailment for certain products ensures hospital and medical centers continue to receive sterilized medical devices without reduced supply of products that would be critical to public health.
- 20-3 Response: See Response 1-7 regarding fence-line air monitoring.
- 20-4 Response: See Response 11-4 regarding elevated EtO signal detected near at least one Tier I Warehouse.
- The additional requirements are to assess EtO emissions from warehouses, which are necessary given the lack of emission data from these type of facilities. A survey of warehouse facilities revealed that three (3) of 14 responding warehouses, or more than 20%, were not even aware whether or not they were receiving sterilized pallets. Recordkeeping and emission data would assist in determining the need for additional control requirements. While Rule 1402 is used to address risk from a particular facility, EtO emissions could potentially be emitted from all or a subset of warehouse facilities. Addressing risk facility by facility would be lengthy, resource intensive for both the facility and agency, and could cause a delay in addressing the public's exposure to EtO emissions.



October 25, 2023

The Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Dear Members of the South Coast Air Quality Management District Governing Board:

On behalf of the Hospital Association of Southern California (HASC), I am writing to express our concern in relation to the Proposed Amended Rule 1405 in relation to the control of Ethylene Oxide (EtO) emissions from sterilization. HASC represents over 180 member hospitals and 35 health systems across 6 counties, with the goal of improving the operating environment for hospitals in order to provide quality healthcare to the communities they serve.

We understand the critical role that the South Coast Air Quality Management District (SCAQMD) plays in protecting public health and the environment and appreciate your efforts to maintain a safe and healthy environment for all Californians.

Hospitals in Southern California provide care to patients around the clock, 365 days a year. Access to reliable medical equipment is essential to our ability to deliver life-saving care to those in need. While we recognize and support the need to remove toxic air pollutants from our environment, including the reduction of EtO emissions, we are sensitive to the potential impact a new policy on EtO may have on the supply chain to our hospitals.

Our members have expressed concern over potential supply chain disruptions related to the proposed changes to EtO emissions restrictions from sterilization. Some critical medical items, such as surgical kits, heart valves, pacemakers, and catheters, currently rely on EtO sterilization as the only large scale, viable and safe option. Approximately 20 billion medical devices are sterilized using EtO annually nationwide, highlighting the magnitude of its importance in the healthcare sector.

Comment 21-1



Historically, when sterilization facilities in other states have experienced shutdowns or disruptions, California hospitals have felt the immediate impact. Accessing essential medical devices is becoming increasingly challenging, which directly affects patient care and safety. These disruptions can have life-threatening consequences for our patients.

HASC kindly requests that SCAQMD collaborate closely with sterilization organizations and the healthcare industry to ensure that the good intentions of Proposed Amended Rule 1405 are realized while minimizing the impact on the availability of EtO sterilized medical devices.

We value the opportunity to work collaboratively with SCAQMD to find a balanced solution that prioritizes both environmental protection and the uninterrupted availability of critical medical supplies for healthcare providers. Together, we can strive to achieve cleaner air and a healthier environment without jeopardizing patient care for the communities across Southern California.

Thank you for your attention to this matter, and we look forward to continuing our dialogue and collaboration with SCAQMD to find a solution that safeguards public health while ensuring the continuity of healthcare services.

} Comment 21-1
cont.

Sincerely,

A handwritten signature in black ink, appearing to read "George W. Greene".

George W. Greene, Esq.
President and CEO
Hospital Association of Southern California

HASC Comment Letter, submitted 10/26/2023

21-1 Response: Thank you for your participation in this public process. We appreciate the perspective of the Hospital Association of Southern California (HASC) on these issues. See Response 16-3 regarding curtailment exemptions declared by California hospitals or medical centers.

Based on feedback from sterilization facilities, community and environmental stakeholders, and regulatory agencies, like U.S. FDA, PAR 1405 reduces stack and fugitive emissions of the known human carcinogen EtO in a feasible 21-month timeframe with achieved-in-practice technology. PAR 1405 also includes a curtailment exemption to allow sterilization to continue if product is reasonably likely to experience reduced supply and is critical to public health. The exemption from curtailment for certain products ensures hospital and medical centers continue to receive sterilized medical devices without reduced supply of products that would be critical to public health.

Areio Soltani

From: de Vera, Alex <alexander.devera@abbott.com>
Sent: Wednesday, November 1, 2023 4:00 PM
To: Areio Soltani
Cc: Krogman, Lisa; Farrar, Arlene
Subject: [EXTERNAL]Comments for PAR 1405 Staff Letter & Socioeconomic Report

Hi Areio,

Hope all is well with you. We would like to provide a comment on the recently released Staff Letter and Socioeconomic Report. Both documents list our facility as a “Large” sterilizer. However, we submitted our permit applications (Application Number 646601, 646600, and 646599) in August to reduce our ETO usage to <2,000 lbs . As of September 22, 2023, our applications have been “Deemed Complete” so I believe we should be classified as “Medium” . Would you be able to adjust the letter and report to accurately reflect as such?

} Comment 22-1

646601
AFTERBURNER,/OXIDIZER, CATALYTIC
 Application Status : ASSIGNED TO ENGINEER - CLASS I
 Application Date : 08/23/2023
 Type : Control

646600
STERILIZING EQUIPMENT
 Application Status : ASSIGNED TO ENGINEER - CLASS I
 Application Date : 08/23/2023
 Type : Basic

Application Status Progress



Best,
 Alex
 (he/him/his)



Alex de Vera, CHMM
 Sr. Environmental Specialist

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 Sylmar, CA 91342

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alexander.devera@abbott.com
www.abbott.com

Abbott Comment Email, submitted 11/1/2023

22-1 Response: A footnote has been added to Table 1-5 of the Final Staff Report and Table 1 of the Final Socioeconomic Impact Assessment to reflect this pending change of PAR 1405 Classification.



November 6, 2023

The Governing Board
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765

Re: Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization

Dear Members of the South Coast Air Quality Management District Governing Board,

I write to you on behalf of California Life Sciences to express our concern regarding South Coast Air Quality Management District's (SCAQMD) proposed amended Rule 1405 (PAR 1405) – Control of Ethylene Oxide (EtO) and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes. California Life Sciences represents over 1,200 entities representing pharmaceutical, biotechnology, medical technology, and academic research institutions throughout California.

First, California Life Sciences thanks the SCAQMD and its staff for your openness and transparency during this process. Your willingness to meet with and accept feedback from stakeholders in your district throughout this process is greatly appreciated. California Life Sciences is grateful for the role SCAQMD plays in protecting public health and the environment for all Californians.

Our primary concern--in the most recent version of PAR 1405--remains the use of fenceline monitoring for rule compliance. Fenceline monitoring technology lacks reliability, is subject to weather variations and external sources outside the control of the sterilizer, and is not used by **any** other jurisdiction for compliance – having been explicitly rejected for this purpose by multiple jurisdictions. Those who argue that the previous issues with fenceline monitoring have been resolved offer insufficient support or justification for that position – particularly when patient access to medical care is at risk. Further, the disconnect in time and space from any alleged high reading makes the use of canister fenceline monitoring inappropriate for curtailment – especially at the arbitrary levels proposed in PAR 1405. Thus, California Life Sciences continues to **oppose using fenceline monitoring data for enforcement purposes** because it would restrict the supply of medical technology and negatively impact patient care without any meaningful benefit to the health and safety of the communities around these facilities.

We continue to advocate for the use of existing tools for compliance with PAR 1405 until the deadline for implementation of SCEMS/CEMS systems and believe these to be appropriate for the continued protection of communities until that time. Any disruption in the operations of the facilities governed by this rule will destabilize the supply of the lifesaving medical devices sterilized at these facilities and could constitute an immediate public health risk. We encourage SCAQMD to take a risk based approach when making these rules to ensure that the risk of life is protected in both instances. We will continue to work with your staff to address our concerns and look forward to the continued open dialogue. If you have any additional questions, please feel free to contact me at schung@califesciences.org.

Comment 23-1

Sincerely,



Sam Chung
Vice President, State Government Relations
California Life Sciences

California Life Sciences Comment Letter, submitted 11/6/2023

23-1 Response: Thank you for your participation in this public process. We appreciate the perspective of California Life Sciences on these issues.

See Response 11-5 regarding fence line air monitoring.

See Response 21-1 regarding the curtailment exemption provision that addresses concerns on potential impacts to supply chain.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Final Socioeconomic Impact Assessment For
Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions
from Sterilization and Related Operations**

November 2023

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Assistant Deputy Executive Officer

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ATTACHMENT H
**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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Council Member, Yorba Linda
Cities of Orange County

JOSE LUIS SOLACHE
Council Member, Lynwood
Cities of Los Angeles County/Western Region

EXECUTIVE OFFICER:

WAYNE NASTRI

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
INTRODUCTION	1
LEGISLATIVE MANDATES	1
South Coast AQMD Governing Board Resolutions	1
Health and Safety Code Requirement	2
AFFECTED FACILITIES	3
Small Business Impacts	5
COMPLIANCE COST	7
MACROECONOMIC IMPACTS ON REGIONAL ECONOMY	19
Impact of Proposed Amendments	19
Regional Job Impacts	22
Competitiveness Impacts	24
Public Health Effects from Exposure to Ethylene Oxide	25
REFERENCES	26

EXECUTIVE SUMMARY

A socioeconomic analysis has been conducted to assess the impacts of Proposed Amended Rule (PAR 1405). The following presents a summary of the analysis and findings.

Key Elements of PAR 1405

PAR 1405 will address ethylene oxide (EtO) emissions from sterilization facilities and related operations and would require controlling stack emissions using updated performance standards, annual source tests and, for large facilities, continuous emission monitoring systems or semi-continuous emission monitoring systems (CEMS or SCEMS). Interim mobile monitoring and fence-line air monitoring of large facilities would be required until CEMS or SCEMS are operating and certified. Facilities would be required to curtail operations if 24-hour data from fence-line air monitoring exceeds a certain trigger threshold. PAR 1405 would also require new fugitive emission control strategies which are reliant on permanent total enclosures (PTE), leak detection and repair (LDAR), and enhanced reporting and notification requirements to South Coast AQMD. PAR 1405 would require warehouses which are registered with the United States Food and Drug Administration (U.S. FDA) and that are 100,000 square feet or larger to track inbound EtO-sterilized palletized units for one year and report to South Coast AQMD and U.S. FDA-registered warehouses that are 250,000 square feet or larger to assess their annual EtO emissions via fence-line air monitoring or conducting a facility study.

Affected Facilities and Industries

As of July 2023, 16 facilities are subject to existing Rule 1405 and are expected to be subject to PAR 1405. Of the 16 facilities, 13 facilities belong to the following sectors: 1) medical product manufacturers; 2) surgical or veterinary facilities; 3) surgical and medical instrument manufacturing; 4) contract sterilizers; 5), electromedical and electrotherapeutic apparatus manufacturing; and 6) all other miscellaneous manufacturing. The remaining three facilities which use less than four pounds per year of EtO belong to the following sectors: 1) college and universities; and 2) zoos and botanical gardens.

PAR 1405 proposes to exempt these three facilities from the interim requirements for venting to control equipment in subdivision (i), the prohibitions in subdivision (n), and the recordkeeping requirements in subparagraph (s)(1)(L) specific to maintaining a log for each sterilization cycle. As such, these three facilities will not be expected to install new control equipment or make other physical modifications such that no additional costs will be incurred.

Of the 16 facilities subject to the PAR 1405, 15 are sterilization facilities which conduct onsite sterilization and one facility conducts post-aeration

storage (e.g., receives materials that have been sterilized with EtO at another facility), and their locations are distributed as follows: seven in Los Angeles County, four in Orange County, four in Riverside County, and one in San Bernardino County. Based on PAR 1405 thresholds, there are 15 sterilization facilities consisting of seven large, two medium, three small sterilization facilities, and three sterilization facilities using less than four pounds per year of EtO.

In addition, PAR 1405 is expected to potentially affect 28 large warehouses which mainly belong to the wholesale trade, and transportation and warehousing sectors. These warehouses are divided into either Tier I or Tier II warehouses. Tier I warehouses have at least one building with at least 250,000 square feet of indoor floor area used for warehousing activities and reports to U.S. FDA as a wholesale distributor or a third-party logistics provider, whereas Tier II warehouses have at least one building with at least 100,000 square feet of indoor floor area used for warehousing activities. Both Tier I and Tier II warehouses are subject to recordkeeping and reporting requirements. Tier I warehouses are also subject to requirements to assess their EtO emissions. The locations of the 28 potentially affected warehouses are distributed as follows: nine are in Los Angeles County, two are in Orange County, nine are in Riverside County, and eight are in San Bernardino County.

Assumptions for the Analysis

The main requirements of PAR 1405 that have cost impacts for the affected facilities are: 1) PTE; 2) point source emissions controls; 3) CEMS or SCEMS; 4) LDAR; 5) recordkeeping and reporting; 6) source testing; and 7) interim mobile monitoring and fenceline air monitoring. In addition, there are additional annual operating and maintenance costs associated with PTE, Dry-Bed Scrubbers, CEMS/SCEMS, and equipment required for ambient monitoring.

The total present value of the compliance cost of the PAR 1405 is estimated at \$88.96 million and \$65.45 million with a 1% and 4% discount rate, respectively, from 2023 to 2043. Correspondingly, the average annual compliance cost of PAR 1405 are estimated to range from \$4.56 million to \$4.73 million, depending on the real interest rate assumed (1% to 4%). The following table presents the summary of the average annual cost of PAR 1405 by requirement categories.

**Assumptions for
the Analysis
(concluded)**

Cost Categories	Annual Average (2023-2043)	
	1% Real Interest Rate	4% Real Interest Rate
One-Time Cost		
PTE	\$217,670	\$279,426
Dry-Bed Scrubber	\$258,814	\$333,557
CEMS/SCEMS	\$474,409	\$505,937
One-time report for Sterilized Pallet Destinations	\$2,220	\$2,220
Tier I and Tier II Warehouses One-Time Reports	\$8,880	\$8,880
Permitting Fees for Controls	\$16,343	\$16,343
Fenceline Air Monitoring	\$2,000	\$2,000
FAMP Evaluation Fee	\$11,473	\$11,473
Weather Station	\$4,647	\$4,989
Recurring Costs		
PTE (Electricity)	\$382,357	\$382,357
Dry-Bed Scrubber (Electricity)	\$1,085,950	\$1,085,950
Dry-Bed Scrubber (Media Changeout)	\$1,114,438	\$1,114,438
Dry-Bed Scrubber (Source Test)	\$48,857	\$48,857
CEMS	\$385,714	\$385,714
Recordkeeping	\$11,784	\$11,784
LDAR	\$229,093	\$229,093
Permit Renewal Fees	\$67,190	\$67,190
Mobile Monitoring	\$68,571	\$68,571
Fenceline Air Monitoring	\$163,095	\$163,095
Weather Station	\$4,800	\$4,800
Total	\$4,558,306	\$4,726,674

- Compliance Cost** Dry-Bed Scrubbers and CEMS/SCEMS requirements are estimated to account for about 73 percent (%) of the total annual cost of PAR 1405, followed by the PTE requirement and its associated electricity costs which are estimated to account for about 14% of the total annual cost. About 91% of the total average annual compliance cost is expected to be incurred by the seven facilities designated as “large facility” based on PAR 1405 thresholds.
- Sectors of Professional, Scientific, and Technical Services, Miscellaneous Manufacturing, and Electromedical and Electrotherapeutic Apparatus Manufacturing where most sterilizing facilities belong, will bear most of the annual compliance cost (92%).
- Job Impacts** Direct effects of the proposed project are used as inputs to the Regional Economic Model, Inc (REMI) modeling software to assess secondary/induced impacts for all the industries in the four-county economy on an annual basis and across a user-defined horizon.
- When the compliance cost is annualized using a 4% real interest rate, an annual average of 54 net jobs foregone is projected from 2023 to 2043 which represents less than 0.0005% of total annual jobs in the four-county area. The jobs foregone are a combination of job losses and future jobs not created.
- In earlier years of PAR 1405 implementation, the compliance expenditures incurred by affected facilities for PTE, Dry-Bed Scrubbers, and CEMS/SCEMS would be expected to create positive job impacts. In 2023, when most of the spending is expected to occur, about three additional jobs are projected to be added to the regional economy. The positive job impact would mainly occur in the sector of construction. However, as affected facilities continue to incur the amortized capital expenditures and annual operation and maintenance (O&M) costs, slight reductions in job growth would set in, resulting in jobs foregone in later years.
- Competitiveness** According to the REMI Model, PAR 1405 is projected to have a maximum single-year increase in the cost of production for the miscellaneous manufacturing industry by 0.015% and electromedical and electrotherapeutic apparatus manufacturing by 0.002% in the South Coast region. The maximum increase in delivered prices for these sectors are projected to be 0.012% and 0.002%, respectively. The single-year maximum cost and price increases are expected to take place in 2026.
- Overall, PAR 1405 is not expected to have a significant impact on the competitiveness of the affected industries in the region as these industries are regional businesses and could pass on the costs to their end users. For example, due to the inelastic nature of demand for sterilized health products, the compliance cost incurred by sterilization facilities could

potentially be passed on from sterilization facilities to downstream customers of medical and surgical supplies and to hospitals and end-use consumers.

**Health Effects
From Exposure to
Ethylene Oxide**

This report does not quantify the health effects of EtO. However, the exposure to EtO is known to increase the risk of lymphoid cancer (including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia) and, for females, breast cancer (U.S. EPA, 2016 and 2023). Noncancer health effects from chronic exposure to EtO could include irritation of the eyes, skin, nose, throat, and lungs, and damage to the brain and nervous system. In addition, there is evidence linking EtO exposure to reproductive effects (U.S. EPA, 2018) as it could act directly on DNA and cause chromosome damage.

Overall, PAR 1405 is expected to reduce EtO concentrations, and therefore reduce the adverse public health impacts due to reduced exposure to EtO emissions.

INTRODUCTION

PAR 1405 will address ethylene oxide (EtO) emissions from sterilization facilities and related operations and would require controlling stack emissions using updated performance standards, periodic source tests and, for large facilities, continuous or semi-continuous emission monitoring systems (CEMS or SCEMS). PAR 1405 would also require new fugitive emission control strategies using permanent total enclosures (PTE), leak detection and repair (LDAR), and enhanced reporting and notification requirements. Interim mobile monitoring and fenceline air monitoring would be required for large facilities until CEMS or SCEMS are in place and certified. PAR 1405 would require U.S. FDA registered warehouses that are 100,000 square feet or larger to track inbound EtO-sterilized palletized units for one year and report to South Coast AQMD and U.S. FDA registered warehouses that are 250,000 square feet or larger to assess their annual EtO emissions.

PAR 1405 categorizes sterilization facilities into different size categories (Large, Medium, and Small Facilities) based on their permitted annual EtO limit which aligns with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) and the state Air Toxic Control Measures (ATCM) thresholds. In addition, while existing Rule 1405 identifies Aeration-Only Facilities as facilities which receive materials that have been sterilized in another facility, PAR 1405 refers to this type of facility as a Post-Aeration Storage Facility. Both sterilization and post-aeration storage facilities are subject to PAR 1405 requirements.

Additionally, certain large warehouses are also subject to applicable tracking, reporting, and emission assessment requirements in PAR 1405. A Tier I warehouse is a warehouse that has at least 250,000 square feet of indoor floor area used for warehousing activities and reports to U.S. FDA as a wholesale distributor or a third-party logistics provider, whereas a Tier II warehouse is a warehouse with at least 100,000 but less than 250,000 square feet of indoor floor area used for warehousing activities. Both Tier I and Tier II warehouses would be subject to recordkeeping and reporting requirements. Tier I Warehouses would also be required to assess their EtO emissions.

LEGISLATIVE MANDATES

The legal mandates directly related to the assessment of PAR 1405 include South Coast AQMD Governing Board resolutions and various sections of the Health and Safety Code.

South Coast AQMD Governing Board Resolutions

On March 17, 1989, the South Coast AQMD Governing Board adopted a resolution that calls for an economic analysis of regulatory impacts that includes the following elements:

- Affected industries
- Range of probable costs

- Cost-effectiveness of control alternatives
- Public health benefits

Health and Safety Code Requirements

The state legislature adopted legislation which reinforces and expands the Governing Board resolutions for socioeconomic impact assessments. Health and Safety Code Section 40440.8, which became effective on January 1, 1991, requires a socioeconomic impact assessment to be performed for any proposed rule, rule amendment, or rule repeal which "will significantly affect air quality or emissions limitations."

Specifically, the scope of the socioeconomic impact assessment should include the following:

- Type of affected industries;
- Impact on employment and the regional economy;
- Range of probable costs, including those to industry;
- Availability and cost-effectiveness of alternatives to the rule;
- Emission reduction potential; and
- Necessity of adopting, amending, or repealing the rule in order to attain state and federal ambient air quality standards.

Health and Safety Code Section 40728.5, which became effective on January 1, 1992, requires the South Coast AQMD Governing Board to actively consider the socioeconomic impacts of regulations and make a good faith effort to minimize adverse socioeconomic impacts. It also expands socioeconomic impact assessments to include small business impacts, specifically it includes the following:

- Type of industries or business affected, including small businesses; and
- Range of probable costs, including costs to industry or business, including small business.

Finally, Health and Safety Code Section 40920.6, which became effective on January 1, 1996, requires that incremental cost effectiveness be performed for a proposed rule or amendment that imposes Best Available Retrofit Control Technology (BARCT) or "all feasible measures" requirements relating to ozone, carbon monoxide (CO), oxides of sulfur (SO_x), oxides of nitrogen (NO_x), and their precursors. Since the focus of PAR 1405 is to reduce EtO risk and does not impose BARCT or all feasible measures for these other pollutants, this statute does not apply to PAR 1405. Moreover, cost effectiveness in terms of dollars per ton is not meaningful for risk-related rules and regulations since many other factors besides the amount of pollution affect the risk such as the toxic potency and the location of receptors.

AFFECTED FACILITIES

PAR 1405 would affect three types of facilities: 1) facilities conducting onsite sterilization (Sterilization Facilities); 2) non-sterilization facilities that have installed EtO control equipment (Post-Aeration Storage Facilities) and that receive EtO materials which have been sterilized at another facility; and 3) certain large warehouses receiving EtO-sterilized palletized units and which are registered with the U.S. Food and Drug Administration as a Prescription Drug Wholesale Distributor or a Third-Party Logistics Provider .

As of July 2023, 16 facilities are subject to existing Rule 1405 and are expected to be subject to PAR 1405. Of the 16 facilities, 13 facilities belong to the following sectors: 1) medical product manufacturers; 2) surgical or veterinary facilities; 3) surgical and medical instrument manufacturing; 4) contract sterilizers; 5), electromedical and electrotherapeutic apparatus manufacturing; and 6) all other miscellaneous manufacturing. The remaining three facilities which use less than four pounds per year of EtO belong to the following sectors: 1) college and universities; and 2) zoos and botanical gardens.

Of the 16 facilities subject to the PAR 1405, 15 are sterilization facilities which conduct onsite sterilization and one facility conducts post-aeration storage (e.g., receives materials that have been sterilized with EtO at another facility), and their locations are distributed as follows: seven in Los Angeles County, four in Orange County, four in Riverside County, and one in San Bernardino County. Based on PAR 1405 thresholds, there are 15 sterilization facilities consisting of seven large, two medium, three small sterilization facilities, and three sterilization facilities using less than four pounds per year of EtO.

In addition, PAR 1405 is expected to potentially affect 28 large warehouses which mainly belong to the wholesale trade, and transportation and warehousing sectors. These warehouses are divided into either Tier I or Tier II warehouses. Tier I warehouses have at least one building with at least 250,000 square feet of indoor floor area used for warehousing activities and reports to U.S. FDA as a wholesale distributor or a third-party logistics provider, whereas Tier II warehouses have at least one building with at least 100,000 square feet of indoor floor area used for warehousing activities. Both Tier I and Tier II warehouses are subject to recordkeeping and reporting requirements. Tier I warehouses are also subject to requirements to assess their EtO emissions. The locations of the 28 potentially affected warehouses are distributed as follows: nine are in Los Angeles County, two are in Orange County, nine are in Riverside County, and eight are in San Bernardino County.

Table 1 presents the affected facilities and warehouses with their industry type and North American Industrial Classification System (NAICS) Code.

Table 1
Affected Facilities by Industry Types

Facility	NAICS Code	Industry Type	PAR 1405 Classification
STERIGENICS US, LLC (Ontario)	339999	All Other Miscellaneous Manufacturing	Large
STERIGENICS US, LLC (Vernon)	339999	All Other Miscellaneous Manufacturing	Large
STERIS, INC.	541380	Testing Laboratories and Services	Large
APPLIED MEDICAL RESOURCES	541611	Administrative Management and General Management Consulting Services	Large
PARTER MEDICAL PRODUCTS INC	561910	Packaging and Labeling Services	Large
AMERICAN CONTRACT SYSTEMS INC	444190	Other Building Material Dealers	Large
ST. JUDE MEDICAL CRMD	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	Large*
MICROVENTION, INC	339112	Surgical and Medical Instrument Manufacturing	Medium
ADVANCED BIONICS, LLC	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	Medium
LIFE SCIENCE OUTSOURCING, INC	339112	Surgical and Medical Instrument Manufacturing	Small
ANIMAL EYE VET INC.	541940	Veterinary Services	Small
VCA W COAST SPEC & EMERGENCY ANIMAL HOSP	541940	Veterinary Services	Small
LA CITY, GREATER LA ZOO	712130	Zoos and Botanical Gardens	None
UNIVERSITY OF CALIFORNIA, LOS ANGELES	611310	Colleges and Universities	None
MT. SAN ANTONIO COMMUNITY COLLEGE	611310	Colleges and Universities	None
CARDINAL HEALTH	423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	Post-Aeration Storage Facility
LARGE WAREHOUSES	493100	Warehousing	Warehouses

* *Based on communications with facility representative, permit applications to reduce permitted EtO usage have been submitted; reclassification to a Medium Facility is pending*

Small Business

The South Coast AQMD defines a "small business" in Rule 102 – Definition of Terms for purposes of fees as one which employs 10 or fewer persons and which earns less than \$500,000 in gross annual receipts. The South Coast AQMD also defines “small business” for the purpose of qualifying for access to services from the South Coast AQMD’s Small Business Assistance Office (SBAO) as a business with an annual receipt of \$5 million or less, or with 100 or fewer employees. In addition to the South Coast AQMD's definitions of a small business, the federal Small Business Administration (SBA) and the federal 1990 Clean Air Act Amendments (1990 CAAA) also provide definitions of a small business.

The 1990 CAAA classifies a business as a "small business stationary source" if it: 1) employs 100 or fewer employees; 2) does not emit more than 10 tons per year of either VOC or NOx; and 3) is a small business as defined by SBA. The SBA definitions of small businesses have employee count thresholds that may vary according to designated six-digit NAICS codes. Generally, a small business must have no more than 500 employees for most manufacturing and mining industries. More specifically, the surgical and medical instrument manufacturing (NAICS 339112) has a 1,000-employee threshold and electromedical and electrotherapeutic apparatus manufacturing (NAICS 334510) has a 1,250-employee threshold below which a business is considered as small.

Dun and Bradstreet data on the number of employees and revenues are available for 13 out of the 16 affected facilities. Based on this data, there is only one facility that meets the South Coast AQMD’s definitions of a small business in both Rule 102 and SBAO. Based on SBA’s definition of a small business, nine out of 13 facilities would be classified as small businesses. Under the 1990 CAAA definition, there are no facilities meeting the criteria to be considered as small businesses.¹

The Final Socioeconomic Impact Assessment for Rule 2305 - Warehouse Indirect Source Rule (ISR) assessed the distributional impacts by industry and small businesses.² The economic impacts on the affected warehouses resulting from PAR 1405 are expected to be similarly distributed and would mainly affect the facilities in transportation and warehousing. About 25% of the affected facilities can be considered as small businesses for potential access to services from the South Coast AQMD’s Small Business Assistance Office. However, none of these facilities qualify as a small business based on the definition in the South Coast AQMD Rule 102 (e.g., employing 10 or fewer employees and earning less than \$500,000 in annual sales).

As presented in Table 2, ratios of the annual compliance cost to gross annual revenues of the affected facilities are expected to be less than one percent, with the exception of one facility.

¹ Based on facility-level data on NOx and VOC emissions for calendar years 2018, 2019, and 2020.

² See <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf>, page 1704.

Table 2
Projected Ratio of Annual Compliance Cost to the Gross Annual Sales of Affected Facilities (Ranked High-to-Low by Estimated Compliance Cost)

Affected Facility	% of Annual Cost to Revenue Ratio
Facility A	0.18%
Facility B	0.11%
Facility C	0.02%
Facility D	0.08%
Facility E	0.00%
Facility F	N/A*
Facility G	0.31%
Facility H	0.12%
Facility I	0.01%
Facility J	0.52%
Facility K	0.00%
Facility L	5.78%
Facility M	0.00%
28 Tier I and Tier II Warehouses	N/A*
Total Facilities	\$4,726,674

* Data is not available.

COMPLIANCE COST

PAR 1405 will address EtO emissions from sterilization facilities and related operations. The main requirements of PAR 1405 that have cost impacts for affected facilities are: interim mobile monitoring, interim fence-line air monitoring, PTE, point source emissions controls, CEMS or SCEMS, LDAR, recordkeeping, reporting, and source testing. In addition, there are additional annual operating and maintenance costs associated with PTE, dry-bed scrubbers, CEMS/SCEMS and weather stations.

All the costs discussed in this section are expressed in 2023 dollars. For the purpose of projecting the future compliance cost, it is assumed that these costs would remain the same in the foreseeable future, with any increase being a result of inflation. Additionally, while it is considered in this analysis that all estimated costs would be borne by the affected facilities, due to the inelastic nature of the demand for sterilized health products, the compliance cost incurred to sterilization facilities and warehouses could potentially be passed on to downstream customers of medical and surgical supplies and to hospitals and end-use consumers.

Many of the costs estimated in this analysis are highly dependent on site-specific factors and on business decisions made by facilities subject to PAR 1405. It is also important to note that when conducting the cost analysis, every effort was made to represent costs as realistically as possible, given that many factors would ultimately dictate what price a business will pay to implement a control. The estimated cost for each line item was either represented by an industry average or a reasonable range, based on the information and data available. The procedure and assumptions for each cost estimate are discussed below.

The total cost is calculated over 21 years, from 2023 to 2043. As presented in Table 3, the total present value of compliance cost of PAR 1405 is estimated at \$88.86 million and \$65.45 million, respectively, depending on the discount rate assumed (1% to 4%).³ Correspondingly, the average annual compliance cost of PAR 1405 are estimated to range from \$4.56 million to \$4.73 million, depending on the real interest rate assumed (1% to 4%). Table 3 presents total and average annual compliance cost of PAR 1405 by requirement categories.

³ In 1987, South Coast AQMD staff began to calculate cost-effectiveness of control measures and rules using the Discounted Cash Flow method with a discount rate of 4 percent. Although not formally documented, the discount rate is based on the 1987 real interest rate on 10-year Treasury Notes and Bonds, which was 3.8 percent. The maturity of 10 years was chosen because a typical control equipment life is 10 years; however, a longer equipment life would not have corresponded to a much higher rate-- the 1987 real interest rate on 30-year Treasury Notes and Bonds was 4.4 percent. Since 1987, the 4 percent discount rate has been used by South Coast AQMD staff for all cost-effectiveness calculations, including a best available control technology (BACT) analysis, for the purpose of consistency. The incremental cost reported in this assessment was thus annualized using a real interest rate of four percent as the discount rate. As a sensitivity test, a real interest rate of one percent is also used.

Table 3
Total Present Worth and Average Annual Estimated Costs of PAR 1405

Cost Categories	Present Worth Value (2023)		Annual Average (2023-2043)	
	1% Discount Rate	4% Discount Rate	1% Real Interest Rate	4% Real Interest Rate
One-Time Cost				
PTE	\$5,246,106	\$3,847,117	\$217,670	\$279,426
Dry-Bed Scrubber	\$6,272,661	\$4,624,736	\$258,814	\$333,557
CEMS/SCEMS	\$9,486,164	\$6,924,567	\$474,409	\$505,937
One-time report for Sterilized Pallet Destinations	\$45,854	\$43,678	\$2,220	\$2,220
Tier I and II Warehouses One-Time Reports	\$183,415	\$174,710	\$8,880	\$8,880
Permitting Fees for Controls	\$337,103	\$319,852	\$16,343	\$16,343
Fenceline Air Monitoring	\$41,310	\$39,349	\$2,000	\$2,000
FAMP Evaluation Fee	\$237,360	\$227,205	\$11,473	\$11,473
Weather Station	\$100,199	\$88,018	\$4,647	\$4,989
Recurring Costs				
PTE (Electricity)	\$7,134,193	\$5,125,101	\$382,357	\$382,357
Dry-Bed Scrubber (Electricity)	\$20,268,296	\$14,574,836	\$1,085,950	\$1,085,950
Dry-Bed Scrubber (Media Changeout)	\$20,798,374	\$14,952,191	\$1,114,438	\$1,114,438
Dry-Bed Scrubber (Source Test)	\$911,876	\$655,726	\$48,857	\$48,857
CEMS	\$7,162,199	\$5,064,331	\$385,714	\$385,714
Recordkeeping	\$219,954	\$158,235	\$11,784	\$11,784
LDAR	\$4,306,892	\$3,172,725	\$229,093	\$229,093
Permit Renewal Fees	\$1,253,217	\$899,234	\$67,190	\$67,190
Mobile Monitoring	\$1,425,743	\$1,384,615	\$68,571	\$68,571
Fenceline Air Monitoring	\$3,333,861	\$3,080,776	\$163,095	\$163,095
Weather Station	\$98,082	\$90,541	\$4,800	\$4,800
Total	\$88,862,860	\$65,447,543	\$4,558,306	\$4,726,674

Figure 1 presents the estimated annual compliance cost of PAR 1405 by the requirement categories. Dry-bed scrubbers and CEMS/SCEMS requirements are estimated to account for about 73% of the total annual cost of PAR 1405, followed by the PTE requirement and its associated electricity costs that are estimated to account for about 14% of the total annual compliance cost.

Figure 1
Annual Estimated Costs of the PAR 1405 by the Requirement Categories

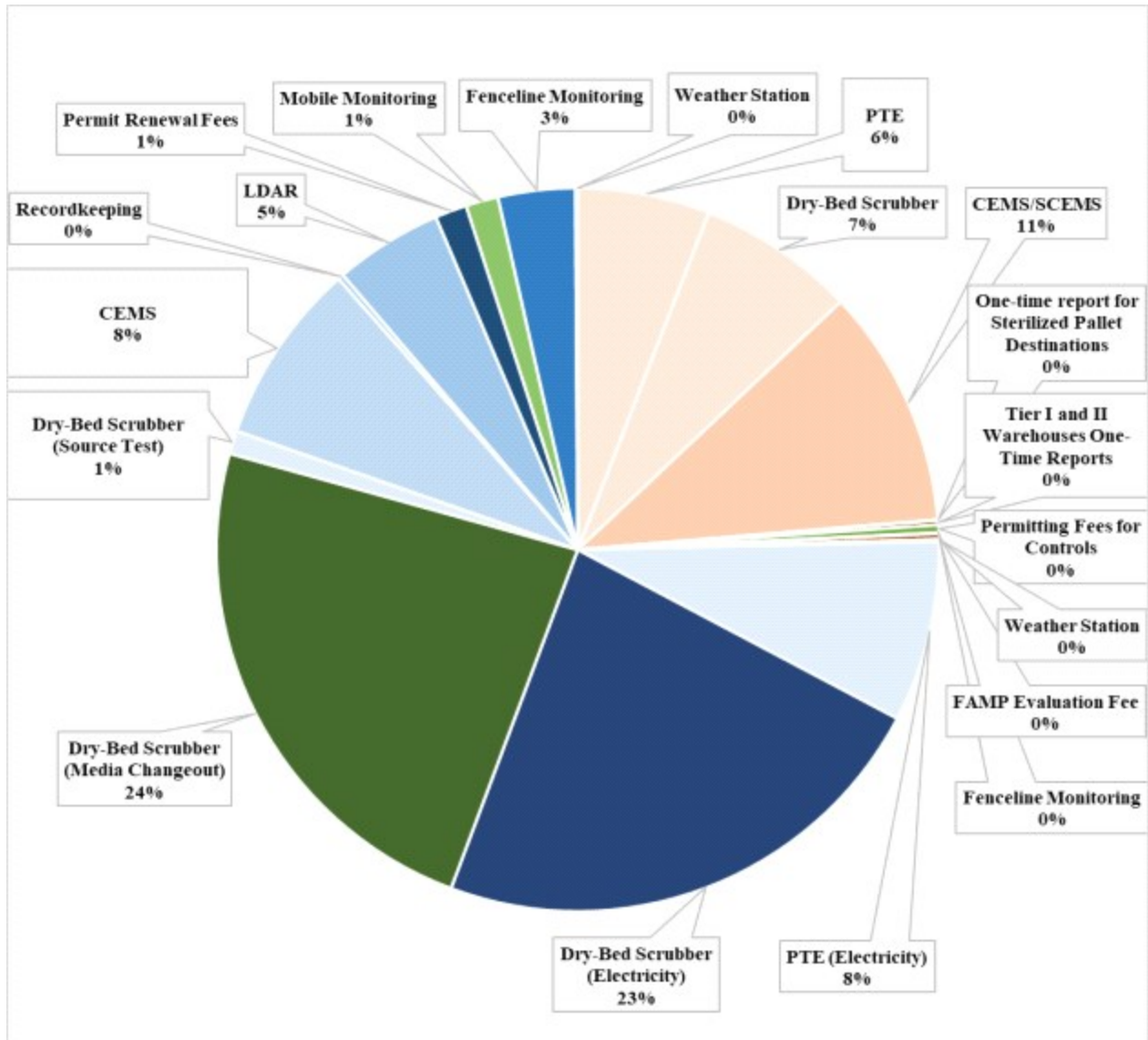


Table 4 presents annual and average annual costs of PAR 1405 by the affected industry. Professional, Scientific and Technical services (NAICS 541), Miscellaneous Manufacturing (NAICS 339) and Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) where most of sterilizing facilities belong, will bear the majority of the annual compliance cost (92%).

Table 4
Annual and Average Annual Estimated Costs of the PAR 1405 by Industry

Industry Name (NAICS)	2023	2030	2035	2043	Average over All Years (2023-2043)
Electromedical and Electrotherapeutic Manufacturing (334)	\$470,678	\$441,146	\$441,146	\$441,146	\$443,848
Miscellaneous manufacturing (339)	\$250,028	\$2,491,478	\$2,491,478	\$2,491,478	\$2,326,206
Wholesale trade (42)	\$85,527	\$10,551	\$10,551	\$10,551	\$77,359
Retail trade (44-45)	\$412,442	\$151,328	\$151,328	\$151,328	\$172,299
Professional, scientific, and technical services (541)	\$913,161	\$1,628,038	\$1,628,038	\$1,628,038	\$1,572,891
Administrative and support services (561)	\$38,398	\$130,240	\$130,240	\$130,240	\$134,071
Total	\$2,170,233	\$4,852,781	\$4,852,781	\$4,852,781	\$4,726,674

The compliance cost will mainly fall on large facilities due to stricter requirements for PTEs, additional controls to meet more stringent performance standards, and CEMS/SCEMS requirements as well as interim mobile and fenceline air monitoring requirements. Large and medium facilities have fewer options to use LDAR in lieu of placing specific operations, equipment, or areas under PTE. Table 5 presents average annual cost of PAR 1405 by the affected facilities. About 91% of the total average annual compliance cost is expected to be incurred by the seven facilities designated as “large facility” based on PAR 1405 thresholds. Three affected facilities which use less than four pounds per year of EtO will be exempted from the control requirements of the PAR 1405 and as such they will incur no additional costs.

Table 5
Projected Annual Compliance Cost by Affected Facilities that Potentially Could Need
Additional Pollution Controls (20 23 Dollars)
Average Annual (2023-2043)

Facility A	\$1,612,392
Facility B	\$768,757
Facility C	\$708,005
Facility D	\$569,874
Facility E	\$337,484
Facility F	\$172,299
Facility G	\$134,071
Facility H	\$106,364
Facility I	\$106,364
Facility J	\$103,933
Facility K	\$14,886
Facility L	\$14,886
Facility M	\$10,382
28 Tier I and Tier II Warehouses	\$66,978
Total Facilities	\$4,726,674

For facilities subject to PAR 1405, incremental costs were estimated for the capital outlays and related expenditures for PTE, dry-bed scrubbers, CEMS/SCEMS, LDAR, source testing, monitoring and recordkeeping and reporting.

Permanent Total Enclosures (PTE)

A PTE is defined in PAR 1405 as any permanent building or containment structure, enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-off) that has limited openings to allow access for people and vehicles, that is free of breaks or deterioration that could cause or result in fugitive emissions. In addition, a PTE is required to undergo an evaluation to confirm that it is capable of meeting the design requirements set forth in U.S. Environmental Protection Agency (U.S. EPA) Method 204, except the term “Administrator” in provision 5.1 is revised to mean Executive Officer, as defined in South Coast AQMD Rule 102. PAR 1405 requires large facilities that are conducting sterilization using EtO to conduct sterilization operations inside a PTE to minimize the release of EtO emissions from specific EtO sources within the enclosure by a specified compliance date. As specified by Implementation Schedules in Table 1 of PAR 1405, existing large facilities would need to comply with this requirement by September 1, 2025, while any large facility permitted after rule adoption would need to meet these requirements before operating as a large facility. Medium and small facilities would need to comply by January 1, 2026. The primary intent of this requirement

is to provide maximum containment and minimize fugitive EtO emissions from any sources within the PTE.

To provide further protection to nearby receptors, PAR 1405 would require all emissions collected by a facility's PTE to be routed to air pollution control equipment that meet the proposed performance standards. In addition, continuous monitoring of each PTE's pressure differential and quarterly face velocity inspections at natural draft openings will need to be conducted.

South Coast AQMD provided notification to three large facilities with elevated EtO readings, that they may be designated as a Potentially High-Risk Level Facility (PHRLF) pursuant to South Coast AQMD Rule 1402 - Control of Toxic Air Contaminants from Existing Sources. Two of the affected three facilities which were designated PHRLF have approved Early Action Reduction Plans which required PTE installations, among other measures, to reduce EtO emissions. The third facility voluntarily installed PTE which reduced EtO emissions from the facility. The PTEs required pursuant to Rule 1402 requirements or those that have already been installed are not considered as incurred costs under PAR 1405; however, cost information was requested from these three facilities that have already installed or are in the process of installing PTEs. The three affected facilities provided information and data on costs incurred for the PTEs.

Cost data provided by one affected sterilization facility, designated as a "large facility" under PAR 1405, indicated the cost for the PTE with air pollution control equipment would be less than \$450,000, excluding consulting and engineering, of which approximately \$310,000 was attributed to the construction of a 190,000 cubic feet PTE and \$140,000 for the air pollution control equipment comprised of two individual dry-bed scrubbers. The facility's building footprint is approximately 27,000 square feet which is larger than the other facilities, except for three large facilities that already have PTE or are required to have PTE under Rule 1402.

Of the remaining facilities, only two facilities have a similar footprint size at approximately 21,000 square feet each; one facility indicated that they already have an enclosure operating under negative pressure and the other facility indicated that they intend to section off a smaller area to be enclosed in a PTE. One facility had sectioned off an area that was over 10,000 square feet. For the other facilities, staff assumed a conservative cost of \$500,000 for each PTE area required, which is based on the actual capital cost to implement a PTE.

The unit cost for installing air pollution control equipment was assumed to be \$75,000 based on the estimates from one large facility. The cost for controls for other facilities were scaled proportionally based on permitted throughputs. For example, the permitted throughput of the facility that had a known cost was 100,000 pounds of EtO. A facility with a permitted throughput of 500,000 pounds of EtO would have an associated cost of installing air pollution control equipment to be $\$75,000 \times 5 = \$375,000$.

Two large facilities each have existing enclosures which operate under negative pressure which have not yet been validated to meet PAR 1405 PTE requirements. For these facilities, the

analysis conservatively assumed that it would cost \$250,000 for additional construction to convert these enclosures to meet the PTE requirements in PAR 1405.

For the purpose of estimating the cost estimates, this analysis assumes that the sterilized materials will continue to off-gas EtO continuously during aeration or post-aeration phases after sterilization. PAR 1405 addresses these fugitive emissions by requiring the installation and operation of a PTE and associated control system. Facilities would be required to maintain negative pressure of the PTE at all times, even when batch sterilization is not taking place to capture and control fugitive EtO emissions.

The annual electricity costs associated with operating PTEs are estimated at \$382,357. The total annual cost of the PTE requirements is estimated to be about \$661,783.

Point Source Emission Controls - Dry-Bed Scrubbers

PAR 1405 includes enhanced performance standards based on the best technology achieved-in-practice. This analysis assumes that the majority of existing air pollution control systems will be able to comply with the proposed performance standards in PAR 1405. For those that do not, this analysis assumes that additional air pollution control equipment, such as dry-bed scrubber technology, will be installed. The assumed cost to operate a single dry-bed scrubber was \$46,500 per year, including \$20,000 for media replacement and \$26,500 for electricity costs. Staff assumed an electricity cost of \$26,500 per year to run each individual dry-bed scrubber based on a 20 hp (15 kW) blower at 100% load, 24 hours per day, 365 days a year at a rate of \$0.20 per kW-hr⁴. Annual operating costs for large facilities were scaled proportionally by conducting a comparison of throughput to the cost data provided by a large facility. It is important to note that while sterilization is a batch process, not a continuous process, and air pollution control equipment is effective at controlling point sources of emissions, sterilized materials will continue to off-gas EtO continuously during aeration or post-aeration phases after sterilization. As such, to control fugitive emissions of EtO, PAR 1405 requires facilities to continuously maintain negative pressure of PTEs and operation of the air pollution control equipment at all times even when batch sterilization is not taking place. For these reasons, the projected electricity cost in this analysis represents an upper-bound estimate of recurring costs while the actual electricity cost may be less.

Beginning September 1, 2025 for large facilities, and January 1, 2026 for both medium and small facilities, PAR 1405 would require facilities to meet the proposed performance standards. A large facility will have the most stringent performance standards (e.g., 99.99% control efficiency or 0.01 parts per million (ppm) concentration) because they collectively account for more than 99% of EtO usage at sterilization facilities in the South Coast AQMD. Three facilities are assumed to require additional air pollution control equipment and another facility is assumed to

⁴ For more details, please see the U.S. Energy Information Administration's Electric Power Monthly report at: www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a.

replace a near end-of-life air pollution control equipment which is expected to require additional controls at a cost over \$800,000.

The analysis also assumed that existing air pollution control equipment operating at most medium and small facilities would meet PAR 1405 performance standards (e.g., 99.9% control efficiency or 0.01 ppm concentration). However, due to PAR 1405 requirements, medium facilities are assumed to require additional air pollution control equipment for their post-aerators and one small facility would require air pollution control equipment for their aerator. The total annual cost of the dry-bed scrubbers is estimated at about \$2.53 million .

Leak Detection and Repair (LDAR)

PAR 1405 requires LDAR as an alternative to PTE depending on the type of facility. Large facilities require most fugitive emission sources to be located inside a PTE while medium and small facilities have greater flexibility to use LDAR. For small facilities, the analysis assumed that all facility operators would elect to use LDAR in lieu of PTE with the exception of one facility which conducts separate aeration outside of their combined sterilizer/aerator units.

Daily audio/visual checks are required and testing using an analyzer to check for leaks every 60 days is required. Consultants and facilities provided cost information with the costs ranging from \$500 to \$1,500 to have a third-party conduct monitoring using a handheld analyzer. To be on the conservative side, the analysis assumed the cost to be \$2,000 for each bi-monthly inspection. The analysis also assumed that all facilities would hire a third-party to conduct the bi-monthly leak tests while having their own workers perform the daily audio/visual checks. Based on wage data for NAICS 54190 (professional, scientific, and technical services), the analysis relied on a prevailing wage of \$37 per hour.⁵ Further, since large facilities were likely to have more components and areas to monitor, the analysis assumed that performing the audio/visual checks for 365 days a year would take 0.5 hour each day for large facilities and 0.25 hours each day for the other facilities. The total annual cost of the LDAR requirements is estimated to be about \$229,093.

Source Tests

PAR 1405 would require demonstration of meeting the performance standards by annual source testing for all control systems for EtO. Large facilities are subject to this requirement by September 1, 2025 whereas both medium and small facilities have until January 1, 2026 to comply. Based on feedback from source testing companies and facilities, a typical cost for each source test at a facility was approximately \$5,000 and an additional \$4,000 for each additional day of testing, if needed. The analysis assumed that the source tests could all be completed in a single day and would cost \$6,000 per control system at a facility even though periodic source tests were already required, with the exception for acid-water scrubbers. Based on these

⁵https://data.bls.gov/cew/apps/table_maker/v4/table_maker.htm#type=1&year=2022&qtr=3&own=5&ind=5419&su pp=0

estimates, the annual cost of source tests is estimated at approximately \$48,857. Note that this is a conservative estimate as some facilities may not be subject to the annual source test requirements if the air pollution control system is capable of demonstrating compliance with the proposed stack emission requirements via CEMS or SCEMS and passing the related quality control quality assurance test.

Continuous Stack Monitoring at Large Sterilization Facilities

Within 18 months of approval of the CEMS/SCEMS application, large facilities are required to perform continuous stack monitoring of EtO emissions using either CEMS or SCEMS, which measure emissions at least once every minute or 15 minutes, respectively. Based on data from vendors, consultants, and facilities, equipment and installation costs ranged from \$250,000 to \$370,000 each. Staff estimated the cost for the battery backup power to be \$80,000. The analysis used the upper bound cost estimate for the CEMS or SCEMS to derive an assumed a cost of \$450,000 to install a CEMS or SCEMS including battery backup power. Vendors and installers indicated that specific systems (with quick response times as brief as five seconds) could potentially time-share to monitor multiple stacks, provided the stacks are physically located close to each other. For this reason, the analysis assumed that each monitoring system will be used to monitor emissions from two stacks. Additionally, some facilities indicated that they intended to install dedicated monitoring systems for each stack and/or would not be combining existing stacks so the analysis relied on this information to calculate costs. In addition, some facilities are assumed to install more than one CEMS/SCEMS. A cost of \$15,000 was included for the required CEMS/SCEMS evaluation based on Rule 301 Table IIB – CEMS, FSMS, & ACEMS Fee Schedule that specified a base fee of \$4,488 up to a maximum fee of \$14,787.

Recurring operating costs for CEMS/SCEMS ranged from \$30,000 to \$55,000 per year, including costs for preventative maintenance plans, calibration gases, and utilities. As such, the analysis assumed a \$50,000 per year O&M cost for each CEMS/SCEMS systems as presented in Table 6. The total annual cost of the CEMS/SCEMS requirements is estimated to be about \$892,000.

**Table 6
Number of CEMS/SCEMS at Large Facilities**

Large Facility Continuous Stack Monitoring	Number of Units	Assumed Unit Cost
CEMS/SCEMS with battery backup	10	\$450,000
Annual Operation and Maintenance	10	\$50,000

Interim Monitoring for Large Sterilization Facilities and Tier I Warehouses

Until a large facility has installed and certified the required stack CEMS or SCEMS, PAR 1405 requires interim ambient air monitoring for EtO. Initial mobile monitoring once a month is required within 30 days of rule adoption while a Fenceline Air Monitoring Plan (FAMP) is prepared and submitted by the facility for review and approval by the South Coast AQMD. Interim fenceline air monitoring, conducted pursuant to the approved FAMP, would replace mobile monitoring.

For mobile monitoring, the analysis assumed that each facility would hire a third-party to conduct mobile monitoring as it would be cheaper than electing to have the South Coast AQMD conduct monitoring for the facility. Based on contacts with vendors of mobile monitoring, quotes range from \$5,000 to \$30,000 for each facility for each sampling day. The duration of the mobile monitoring is expected to only last between two to 12 months, resulting in an annual cost of \$60,000. Three of the seven large facilities with current fenceline air monitoring are not required to conduct mobile monitoring. Thus, the analysis assumed that the remaining four large facilities subject to this requirement would be required to conduct mobile monitoring for one year while their FAMP was prepared, submitted, reviewed, and approved. If any of these four large facilities were to modify their annual EtO permitted usage to less than 2,000 pounds per year of EtO, they would no longer be subject to mobile or fenceline air monitoring requirements.

The same four large facilities and seven Tier I warehouses are required to prepare and submit a FAMP. Based on discussion with consultants, it would take no more than 20 hours to prepare a FAMP. The analysis relied on an hourly rate of \$200 per hour and thus the cost for preparing a FAMP for each facility required to conduct fenceline air monitoring would be \$4,000. Review and approval by South Coast AQMD would require approximately 88 hours of staff time at an hourly rate of \$193.36 per hour based on Rule 306 – Plan Fees, for a total of \$17,210 for each FAMP.

PAR 1405 requires Tier I Warehouses to either conduct fenceline air monitoring for one year, conduct an emission study, or fund and participate in a real-time fenceline air monitoring system demonstration program by the South Coast AQMD. Staff conservatively assumed that seven Tier I Warehouses would elect to conduct fenceline air monitoring. Table 7 presents the interim and fenceline air monitoring requirements for large facilities and Tier I and Tier II warehouses.

Table 7
Interim and Fenceline Monitoring for Large Facilities and Tier I and Tier II Warehouses

Types of Facilities	Interim Mobile Monitoring	FAMP Preparation	Fenceline Air Monitoring
Four Large Facilities	Yes	Yes	Yes
Three Large Facilities*	No	No	No
Seven Tier I Warehouses	N/A**	Yes	Yes
Remaining Tier I warehouses	N/A	No	No

Tier II Warehouses	N/A	N/A	N/A
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*Fenceline air monitoring already implemented at three large facilities

**Not applicable

Implementation of fenceline air monitoring is assumed to use the commonly used and available canister sampling technology that has already been implemented at three large facilities. The cost for each canister sample is estimated to be \$900 which includes the rental of validated silica coated canister and calibrated flowmeter, analysis, and reporting. In addition, the labor cost for each sampling day is estimated to be \$510 based on an hourly rate of \$85 with four hours of travel time and two hours of setup. Therefore, the annual cost to conduct fenceline air monitoring was calculated to be \$85,000 for a facility that monitors at a single fenceline location on a 1-in-6 day schedule and \$140,000 for a facility that monitors two fenceline locations on a 1-in-6 day schedule.

Each large facility subject to this requirement would be required to conduct fenceline air monitoring pursuant to their approved FAMP for three years while their CEMS or SCEMS are sourced, purchased, installed, and certified to accurately monitor EtO stack emissions at the facility. The total annual cost of fenceline air monitoring, including the semiannual calibration, is estimated at \$165,095 (\$163,095, and \$2,000).

Lastly, each facility is assumed to purchase its own weather station to comply with requirements to keep records pertaining to wind speed and direction at a cost of \$6,000 and eight hours for a technician to install at a rate of \$100 per hour. Semiannual calibrations and annual data review are assumed to take eight hours and 20 hours, respectively for each service resulting in a \$3,600 annual cost per weather station. The total annual cost of installing weather stations, including the semiannual calibration, is estimated at \$9,789 (\$4,989 and \$4,800).

Curtailment of Sterilization Operations due to 24-Hour Fenceline Air Monitoring

PAR 1405 subdivision (q) includes requirements to curtail sterilization operations based on 24-hour monitoring results (i.e., Trigger Result) from either the facility’s fenceline air monitoring requirements or South Coast AQMD monitoring efforts. In addition, PAR 1405 subdivision (u) includes an exemption from curtailment requirements to protect public health when specific products such as medical devices may be in shortage. The curtailment schedule and trigger threshold are largely based on the approved Early Action Reduction Plans (EARP) for two of the largest sterilization facilities in South Coast AQMD. With the two facilities installing additional controls to reduce emissions, the impact of curtailment provisions in PAR 1405 is not expected to go beyond the implementation of EARP. For other facilities, monitoring data to date shows that their fenceline levels are below the curtailment trigger thresholds outlined in PAR 1405. Therefore, the impact of the curtailment provision is expected to be minimal.

Permitting Fees

PAR 1405 requires submissions of permit applications by a certain date as specified in the respective subdivisions for the different size sterilization facilities to ensure adequate time for the South Coast AQMD to evaluate and process the required applications. For the cost of initial permitting fees, a \$5,200 fee for each application is assumed based on the fee specified in Rule 301 TABLE FEE RATE-A under Schedule C for permit processing. To account for any equipment that may need to be put under two separate Permits to Operate, this analysis doubled the cost.

For annual operating permit renewal fees, a \$1,700 fee for each permit is assumed based on the fee specified in Rule 301 paragraph (d)(2) Annual Operating Fees under the Schedule for C and D. To account for any equipment that may need to be put under two separate Permits to Operate, this analysis doubled the cost. The total annual cost of the permit fees for air pollution control equipment and permit renewal fees is estimated to be about \$83,533 (permit fee for air pollution control equipment \$16,343 and permit renewal fee \$67,190).

Fees for the review and approval of the fenceline air monitoring plan (FAMP) were discussed earlier in the section on monitoring of large facilities and Tier I warehouses.

Recordkeeping and Reporting

PAR 1405 includes recordkeeping and reporting requirements. Recordkeeping for CEMS performance standard measurements and PTE pressure differential readings are expected to be automated and recorded on computerized systems (e.g., the data acquisition systems for CEMS/SCEMS).

The additional recordkeeping required for LDAR for daily audio/visual checks by facility personnel and the bimonthly LDAR inspections by third-party contractors were already discussed in the above LDAR section.

According to PAR 1405, paragraph (t)(5) a large facility would need to track and record the first destination where the sterilized products are shipped for 12 months in preparation for the one-time report submittal to the South Coast AQMD. For this report, the analysis assumed that 10 hours per month for consecutive 12 months would be required to implement shipment tracking of EtO sterilized products to their first warehouse destination. For each large facility, a total of 120 hours at a rate of \$37 per hour is assumed to be the incurred cost for this one-time reporting cost, the total of which is annualized at \$2,220.

By the schedule specified in PAR 1405 subdivision (h), Table 2, Tier I and Tier II warehouses are required to conduct recordkeeping of received EtO-sterilized palletized units from sterilization facilities during the 2024 and 2025 calendar years in order to generate a one-time summary report to be sent to the South Coast AQMD by the deadline specified in the rule. The analysis also assumed a total of 120 hours at a rate of \$37 per hour as the one-time reporting cost for each large warehouse. When annualized, the cost of reporting by the warehouses is estimated at \$8,880 per year.

In addition, most of the facilities need to keep records of natural draft opening (NDO) testing, which was assumed to require 32 hours per year at a rate of \$37 per hour. The total annual cost of this recordkeeping averaged across all the years (2023-2043) is estimated to be about \$11,784.

MACROECONOMIC IMPACTS ON THE REGIONAL ECONOMY

The Regional Economic Model (REMI, PI+ v3) was used to assess the total socioeconomic impacts of PAR 1405.^{6,7} The model links the economic activities in the counties of Los Angeles, Orange, Riverside, and San Bernardino, and for each county, it is comprised of five interrelated blocks: 1) output and demand; 2) labor and capital; 3) population and labor force; 4) wages, prices and costs; and 5) market shares.⁸

It should be noted that the REMI model is not designed to assess impacts on individual operations. The model was used to assess the impacts of the proposed project on various industries that make up the local economy. Cost impacts on individual operations were assessed outside of the REMI model and used as inputs into the REMI model.

Impact of Proposed Amendments

The assessment herein is performed relative to a baseline (“business as usual”) PAR 1405 would not be implemented. It is assumed that the affected facilities and warehouses would finance the capital and installation costs of the air pollution control equipment, or more specifically, these one-time costs were assumed to be amortized and incurred over the equipment life. The proposed project assumed the implementation of PAR 1405 by the affected facilities, which would create a policy scenario under which the affected facilities would incur an average annual compliance cost of approximately \$4.73 million when costs are annualized using a 4% real interest rate, or \$4.56 million when evaluated using a 1% real interest rate from year 2023 onwards when all controls are assumed to have been installed.

Direct effects of the proposed project are used as inputs to the REMI model in order for the model to assess secondary and induced impacts for all the industries in the four-county economy on an annual basis and across a user-defined horizon: 2023 (first year when the affected facilities are assumed to incur the compliance cost due to PAR 1405 implementation) to 2043 (last year that costs associated with operation and maintenance are incurred). Direct effects of PAR 1405 include: 1) additional costs that the facilities would incur by installing control equipment; 2) additional sales by local vendors of equipment, devices, or services which are needed to meet the proposed requirements; and 3) increased regulatory activities by South Coast AQMD, including

⁶ Regional Economic Modeling Inc. (REMI). Policy Insight® for the South Coast Area (70-sector model). Version 3. 2023.

⁷ REMI v3 has been updated based on The U.S. Economic Outlook for 2021-2023 from the University of Michigan's Research Seminar in Quantitative Economics (RSQE) release on May 21, 2021, The Long-Term Economic Projections from CBO (supplementing CBO's March 2021 report, The 2021 Long-Term Budget Outlook), and updated BEA data for 2020 (revised on May 27, 2021).

⁸ Within each county, producers are made up of 156 private non-farm industries and sectors, three government sectors, and a farm sector. Trade flows are captured between sectors as well as across the four counties and the rest of U.S. Market shares of industries are dependent upon their product prices, access to production inputs, and local infrastructure. The demographic/migration component has 160 ages/gender/race/ethnicity cohorts and captures population changes in births, deaths, and migration. (For details, please refer to REMI online documentation at <http://www.remi.com/products/pi>.)

inspection and grant/renewal of permits.

Whereas all the compliance expenditures that are incurred by the affected facilities would increase their cost of doing business, the additional spending on PTE, LDAR, dry-bed scrubbers, and CEMS/SCEMS and their associated expenditures would increase the spending and sales of businesses in various sectors, some of which may be located in the South Coast AQMD region. Table 8 lists the industry sectors modeled in REMI that would either incur cost or benefit from the compliance expenditures.

Table 8
Industries Incurring vs. Benefitting from Compliance Cost/Spending

Sources of Compliance Cost	REMI Industries Incurring Compliance Cost	REMI Industries Benefitting from Compliance Spending
Permanent Total Enclosure (PTE)	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>One-time-Capital:</i> Construction (NAICS 23) <i>Recurring:</i> Utilities (NAICS 22) Machinery Manufacturing (NAICS 333)
Continuous Emission Monitoring System (CEMS)	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334)	<i>One-time-Capital:</i> Machinery Manufacturing (NAICS 333) Electrical Equipment and Appliance Manufacturing (NAICS 335) <i>Recurring:</i> Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561)
Photoionization Detector	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>One-time-Capital:</i> Machinery Manufacturing (NAICS 333) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) <i>Recurring:</i> Machinery Manufacturing (NAICS 333)
Dry-Bed Scrubber	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>One-time-Capital:</i> Machinery Manufacturing (NAICS 333) <i>Recurring:</i> Machinery Manufacturing (NAICS 333) Utilities (NAICS 22)

Sources of Compliance Cost	REMI Industries Incurring Compliance Cost	REMI Industries Benefitting from Compliance Spending
Permitting for Controls and CEMS; Permit Renewal	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334)	<i>One-time:</i> State and Local Government (NAICS 92) <i>Recurring:</i> State and Local Government (NAICS 92)
One-time Report	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>One-time:</i> Professional, Scientific and Technical Services (NAICS 54)
Recordkeeping for NDO Testing, Including Inspection	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>Recurring:</i> None
Source Test (for Dry-Bed)	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334)	<i>Recurring</i> Miscellaneous Manufacturing (NAICS 339)
Mobile and Fenceline Air Monitoring	Miscellaneous Manufacturing (NAICS 339) Professional, Scientific and Technical Services (NAICS 54) Administrative and Support Services (NAICS 561) Retail Trade (NAICS 44-45) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) Wholesale Trade (42)	<i>One-time:</i> Professional, Scientific and Technical Services (NAICS 54) State and Local Government (NAICS 92) Electromedical and Electrotherapeutic Apparatus Manufacturing (NAICS 334) <i>Recurring:</i> State and Local Government (NAICS 92) Professional, Scientific and Technical Services (NAICS 54)

Regional Job Impacts

When the compliance cost is annualized using a 4% real interest rate, an annual average of 54 net jobs foregone is projected from 2023 to 2043 which represents less than 0.0005% of total annual jobs in the four-county area. The jobs foregone are a combination of job losses and future jobs not created.

In earlier years of PAR 1405 implementation, the compliance expenditures made by affected facilities for PTE, LDAR, dry-bed scrubbers, and CEMS/SCEMS, and fence-line air monitoring are expected to create a few additional jobs. In the first year of implementation, when most of the spending is expected to occur, about three additional jobs are projected to add in the regional economy. The positive job impact would mainly occur in the sector of construction. Operating and maintenance expenditures would benefit the industries involved in electricity generation, transmission, and distribution. However, as affected facilities continue to incur the amortized capital expenditures and annual O&M costs, slight reductions in job growth would set in, resulting in jobs foregone in later years.

The projected reduction in disposable income from the overall jobs foregone in the later years would dampen the demand for goods and services in the local economy, thus contributing to jobs foregone in sectors such as the rest of manufacturing, retail trade, wholesale, and accommodation and food services. As presented in Table 9, many major sectors of the regional economy would experience negative, albeit minor, job impacts in later years from the secondary and induced effects of PAR 1405 implementation.

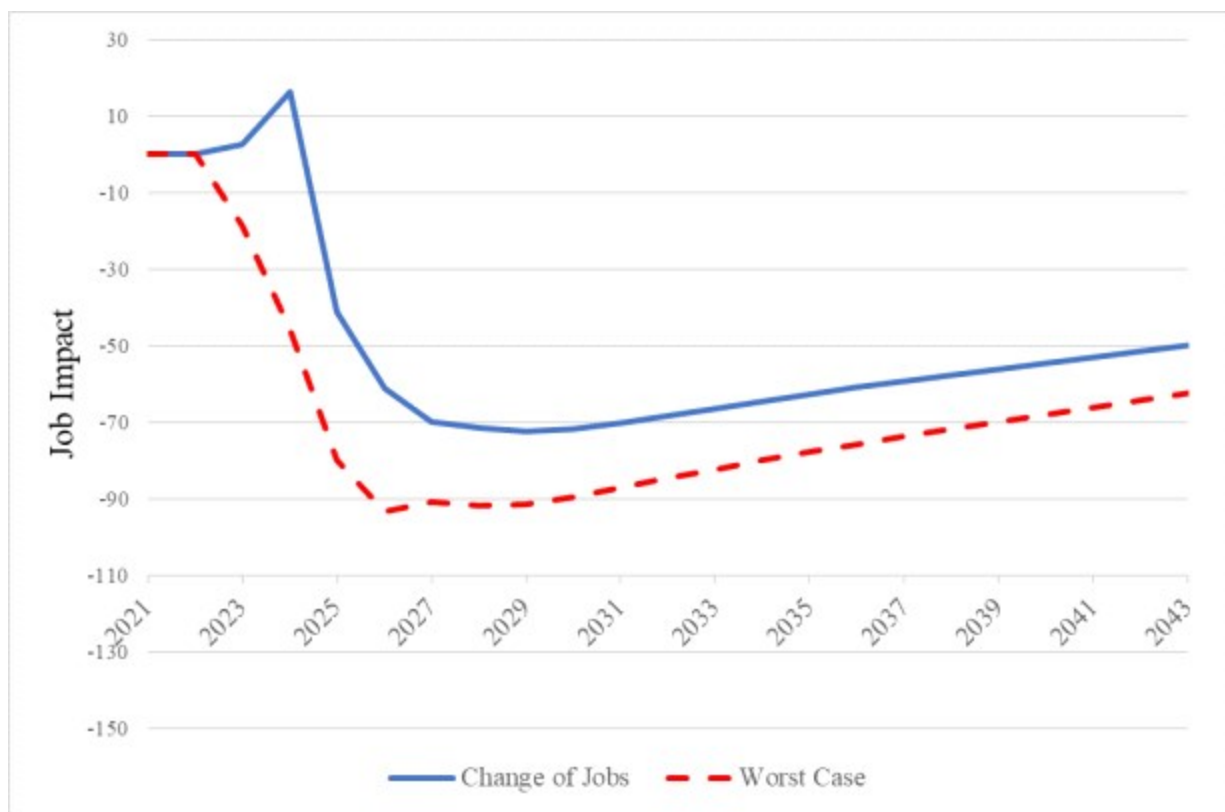
Table 9
Projected Job Impacts of PAR 1405 for Select Industries by Year

Industry	2023	2027	2031	2035	2039	2043	Average Annual (2023-2043)	Baseline Average Annual (2023-2043)	% Change from Baseline
Miscellaneous manufacturing (339)	0	-7	-10	-11	-10	-9	-9	65,984	-0.0130%
Electromedical and Electrotherapeutic Apparatus Manufacturing (334)	-2	-6	-7	-7	-6	-5	-6	117,556	-0.0049%
Retail trade (44-55)	-3	-7	-7	-6	-5	-4	-6	805,858	-0.0007%
State and Local Government (92)	6	-5	-6	-6	-6	-5	-5	942,598	-0.0005%
Professional, scientific, and technical services (54)	0	-5	-6	-5	-5	-4	-4	953,864	-0.0004%
Ambulatory health care services (621)	0	-4	-4	-3	-3	-3	-3	613,270	-0.0005%
Construction (23)	4	-9	-5	-2	-1	-1	-3	506,420	-0.0005%
Food services and drinking places (722)	0	-3	-3	-3	-3	-3	-3	687,711	-0.0004%
Administrative and support services (561)	0	-3	-3	-3	-3	-2	-3	805,398	-0.0003%
Real estate (531)	0	-3	-3	-2	-2	-2	-2	559,990	-0.0004%
Wholesale trade (42)	0	-2	-2	-1	-1	-1	-1	415,711	-0.0003%
Machinery manufacturing (333)	1	1	1	0	0	0	1	24,110	0.0024%
Utilities (22)	0	1	1	1	1	1	1	20,012	0.0042%
All Industries	3	-70	-70	-63	-56	-50	-54	11,349,378	-0.0005%

Figure 2 presents a projected time series of job impacts over the period from 2023 to 2043. Based on Abt Associate's 2014 recommendation to enhance socioeconomic analysis by conducting scenario analysis on major assumptions, this analysis contains an alternative scenario (worst-case scenario) where the affected facilities would not purchase any air pollution control equipment or services from providers within the South Coast AQMD jurisdiction. This is a hypothetical scenario in order to test the sensitivity of the previously discussed scenarios where

the analyses rely on REMI’s embedded assumptions about how the capital and O&M spending would be distributed inside and outside the region. In reality, utilities expenditures are paid to local utilities producers. Moreover, increased construction jobs related to control installation are likely to be offered by the local construction companies. For the worst-case scenario, none of the benefits associated with the spending to comply with PAR 1405 are assumed to incur in the four-county region. This worst-case scenario would result in an annual average of approximately 75 jobs foregone. The 75 jobs foregone represents less than 0.0006% of total jobs in the region.

Figure 2: Projected Regional Job Impact, 2023-2043



Competitiveness

The additional cost brought on by PAR 1405 would increase the cost of services rendered by the affected industries in the region. The magnitude of the impact depends on the size, diversification, and infrastructure in a local economy as well as interactions among industries. A large, diversified, and resourceful economy would absorb the impact described above with relative ease.

Changes in production/service costs would affect prices of goods produced locally. The relative delivered price of a good is based on its production cost and the transportation cost of delivering the good to where it is consumed or used. The average price of a good at the place of use reflects prices of the good produced locally and imported elsewhere.

According to the REMI Model, PAR 1405 is projected to have a maximum single-year increase in the cost of production for the miscellaneous manufacturing industry by 0.015% and electromedical and electrotherapeutic apparatus manufacturing by 0.002% in the South Coast AQMD jurisdiction. The maximum increase in delivered prices for these sectors are projected to be 0.012% and 0.002%, respectively. The single-year maximum cost and price increases are expected to take place in 2026.

Overall, PAR 1405 is not expected to have a significant impact on the competitiveness of the affected industries in the region as these industries are regional businesses and could pass the costs to their end users. For example, due to the inelastic nature of demand for sterilized health products, the compliance cost incurred by sterilization facilities could potentially be passed on from sterilization facilities to downstream customers of medical and surgical supplies and to hospitals and end-use consumers.

Public Health Effects from Exposure to Ethylene Oxide

U.S. EPA recently published the Regulatory Impact Analysis (RIA) for the Proposed National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Commercial Sterilization and Fumigation Operations (published in March 2023). According to this RIA report, the Department of Health and Human Services and the International Agency for Research on Cancer have classified EtO as a known human carcinogen. The U.S. EPA has also concluded that EtO is carcinogenic to humans by the inhalation route of exposure.

According to this report, the exposure to EtO increases the risk of lymphoid cancer (including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia) and, for females, breast cancer (U.S. EPA 2016). Noncancer health effects from chronic exposure to EtO could include irritation of the eyes, skin, nose, throat, and lungs, and damage to the brain and nervous system.

In addition, there is some evidence linking EtO exposure to reproductive effects (U.S. EPA 2018). EtO has been considered as a mutagen, meaning that it acts directly on DNA and causes chromosome damage. Children may be particularly susceptible to the harmful effects of mutagenic substances (U.S. EPA 2005).

Overall, PAR 1405 is expected to reduce EtO concentrations, and therefore the adverse public health impacts described in this section will be reduced.

REFERENCES

Regional Economic Modeling Inc. (REMI). Policy Insight® for the South Coast Area (70-sector model). Version 3, 2023.

South Coast Air Quality Management District (SCAQMD). Preliminary Draft Staff Report for Proposed Amended Rule 1405. March 2023.

U.S. Environmental Protection Agency (EPA). Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. May 2005.

U.S. EPA. Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide (CASRN 75-21-8) In Support of Summary Information on the Integrated Risk Information System 7-4 (IRIS). 2016.

U.S. EPA. Ethylene Oxide : Health Effects Notebook for Hazardous Air Pollutants. July 2018.

U.S. EPA. Regulatory Impact Analysis for the Proposed National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Commercial Sterilization and Fumigation Operations. April 2023.

U.S. Small Business Administration. Table of Small Business Size Standards Matched to North America Industry Classification System Codes. February 2016.

ATTACHMENT I



**South Coast
Air Quality Management District**

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

SUBJECT: NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

PROJECT TITLE: PROPOSED AMENDED RULE 1405 – CONTROL OF ETHYLENE OXIDE EMISSIONS FROM STERILIZATION AND RELATED OPERATIONS

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (South Coast AQMD), as Lead Agency, has prepared a Notice of Exemption pursuant to CEQA Guidelines Section 15062 – Notice of Exemption for the project identified above.

If the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino Counties. The Notice of Exemption will also be electronically filed with the State Clearinghouse of the Governor's Office of Planning and Research for posting on their CEQAnet Web Portal which may be accessed via the following weblink: <https://ceqanet.opr.ca.gov/search/recent>. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: <http://www.aqmd.gov/nav/about/public-notices/ceqa-notices/notices-of-exemption/noe---year-2023>.

**NOTICE OF EXEMPTION FROM THE
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

To: County Clerks for the Counties of Los Angeles, Orange, Riverside and San Bernardino; and Governor’s Office of Planning and Research – State Clearinghouse	From: South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765
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Project Title: Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Project Location: The proposed project is located within the South Coast Air Quality Management District’s (South Coast AQMD) jurisdiction, which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project: Proposed Amended Rule (PAR) 1405 seeks to further reduce stack and fugitive emissions of ethylene oxide (EtO) and gather information from: 1) facilities that conduct sterilization and related operations; 2) facilities that receive materials that have been sterilized with EtO in another facility; and 3) warehouses receiving materials sterilized with EtO. PAR 1405 contains: 1) enhanced performance standards for stack emissions; 2) new emission limits based on achieved-in-practice levels observed at EtO sterilization facilities; 3) improved control efficiency requirements to further reduce stack emissions; 4) provisions to prevent, detect, and capture any potential EtO emissions; 5) new requirements which rely on permanent total enclosures (PTEs) for equipment and areas with known EtO emissions to prevent fugitive emissions from leaving facilities by containing and controlling any EtO gases inside the PTE; and 6) enhanced leak detection and repair. PAR 1405 also includes: 1) a new definition for large facilities subject to the most stringent requirements that reduces the throughput from 4,000 to 2,000 pounds per year of EtO; 2) interim fence-line air monitoring requirements for Tier I warehouses for one year and large facilities until certified Continuous Emission Monitoring Systems or Semi-Continuous Monitoring Systems are in place; 3) requirements to monitor stack and fugitive emissions; 4) interim mobile monitoring requirements for large sterilization facilities; 5) requirements for certain large warehouses to provide records and emissions data; 6) curtailment provisions to reduce EtO fence-line levels when trigger thresholds are exceeded as determined by fence-line air monitoring; 7) requirements to conduct continuous monitoring of key parameters and reporting; 8) requirements to label equipment and provide facility diagrams for all types of sterilization facilities and Post-Aeration Storage facilities; 9) new and modified definitions, recordkeeping and source testing requirements, and prohibitions; and 10) other clarifications for continuity and consistency throughout the rule. The benefits of reducing stack and fugitive emissions of EtO from sterilization and related operations will reduce the risk of EtO exposure to nearby receptors through enforceable rule terms and permit conditions.

Public Agency Approving Project:
South Coast Air Quality Management District

Agency Carrying Out Project:
South Coast Air Quality Management District

Exempt Status:

CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption

NOTICE OF EXEMPTION FROM CEQA (concluded)

Reasons why project is exempt: South Coast AQMD, as Lead Agency, has reviewed the proposed project (PAR 1405) pursuant to: 1) CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA; and 2) CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA. Of the various provisions included in PAR 1405 aimed at further reducing stack and fugitive EtO emissions from sterilization operations, the potential installation of monitoring equipment and PTEs at a few facilities are the only activities which would involve physical modifications, if any, which may be achieved via minimal construction equipment. Thus, it can be seen with certainty that implementing the proposed project would not cause a significant adverse effect on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption.

Date When Project Will Be Considered for Approval (subject to change):

South Coast AQMD Governing Board Public Hearing: December 1, 2023

CEQA Contact Person: Farzaneh Khalaj, Ph.D.	Phone Number: (909) 396-3022	Email: fkhalaj@aqmd.gov	Fax: (909) 396-3982
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PAR 1405 Contact Person: Areio Soltani	Phone Number: (909) 396-3318	Email: asoltani2@aqmd.gov	Fax: (909) 396-3982
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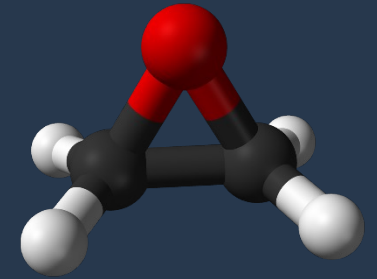
Date Received for Filing: _____ **Signature:** *(Signed and Dated Upon Board Approval)*

Kevin Ni
Acting Program Supervisor, CEQA
Planning, Rule Development, and
Implementation

ATTACHMENT J

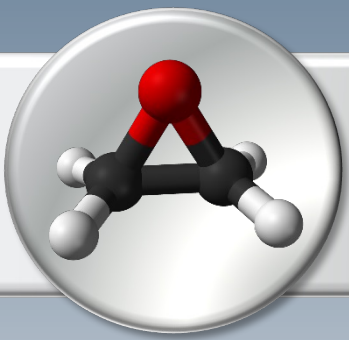


Proposed Amended Rule 1405



Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Board Meeting
December 1, 2023



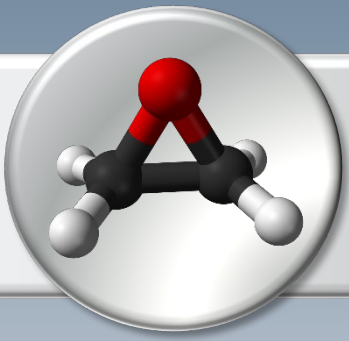
Background

Sterilization Facilities and Regulations

- South Coast AQMD Rule 1405, adopted 1990, controls ethylene oxide (EtO) emissions from sterilization or fumigation processes
- State Air Toxic Control Measure (ATCM)
- Federal National Emission Standards for Hazardous Air Pollutants (NESHAP)

South Coast AQMD Investigations

- Monitoring efforts beginning early 2022 identified elevated ambient EtO levels downwind of stack and fugitive emission sources
- Investigations identified potential sources of fugitive emissions at sterilization facilities



Overview of Commercial Sterilization Process



Validation Protocol

- Developed prior to routine sterilization
- Approved by U.S. FDA

Pre-conditioning

- Products preconditioned at certain relative humidity and temperature

Sterilization

- Products exposed to EtO
- Vented to control equipment

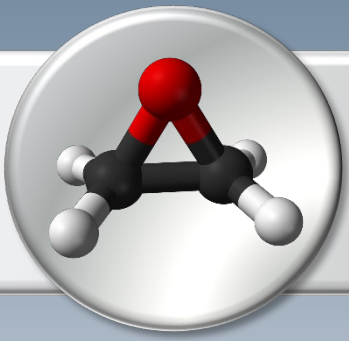
Aeration

- Residual EtO off-gasses to meet allowable limits
- Vented to control equipment

Post-Aeration

- Sterilized products continue to off-gas
- Typically not vented to control equipment

Potential sources of EtO emissions



PAR 1405 - Applicability



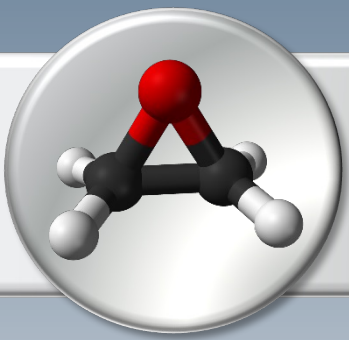
Sterilization Facilities

- Large - 7 facilities
- Medium - 3 facilities
- Small - 2 facilities
- Others - 3 facilities



Storage Only Facilities

- Post-Aeration Storage - 1 facility
- Warehouse - 27 facilities



Updated Risk Assessments of EtO

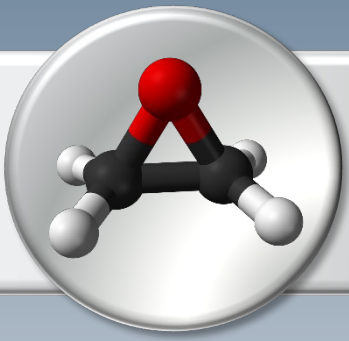
EtO is used to sterilize approximately 50% of all medical devices in the U.S

Key Health Effects

- Carcinogenic
- Reproductive harm
- Mutagenic

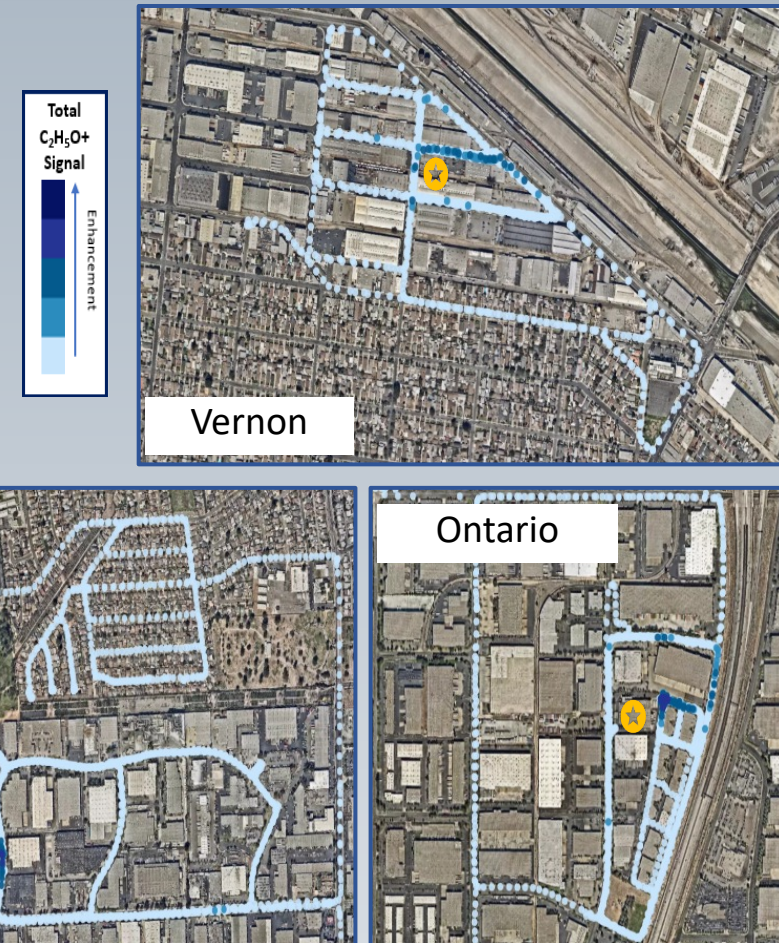
Updated Risk Assessments of EtO

- In 2016, U.S. EPA revised the inhalation cancer risk for EtO to be 30 to 50 times more toxic higher than previously known (confirmed in 2022)
- In April 2023, California OEHHA released draft updated risk factors, which are similar to U.S. EPA revised factors



EtO Investigation Findings

- South Coast AQMD initiated ambient monitoring in August 2022
 - Collected and analyzed over 900 samples near 3 sterilization facilities (fenceline and in nearby communities)
- Two facilities (Ontario and Vernon) have curtailment thresholds in an Early Action Reduction Plan
 - 3 curtailment events have occurred with no reported shortages
 - Since the last curtailment, average EtO measurements:
 - Ontario – 2 ppb
 - Vernon – 3 ppb



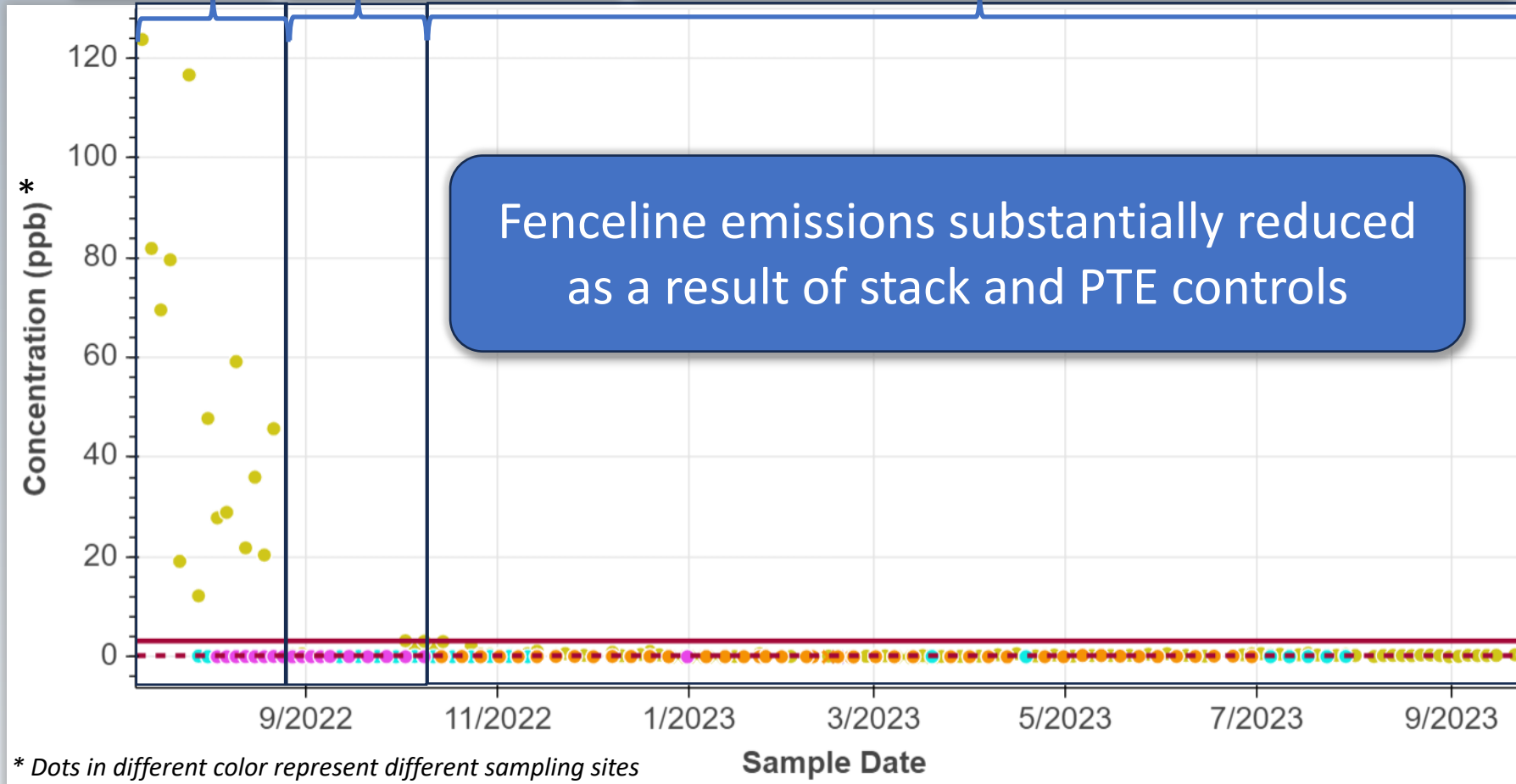


Fenceline Air Monitoring Results For Carson Facility

Prior To Upgrades

Voluntary Facility Shutdown

After Implementation of Upgrades Consistent With PAR 1405

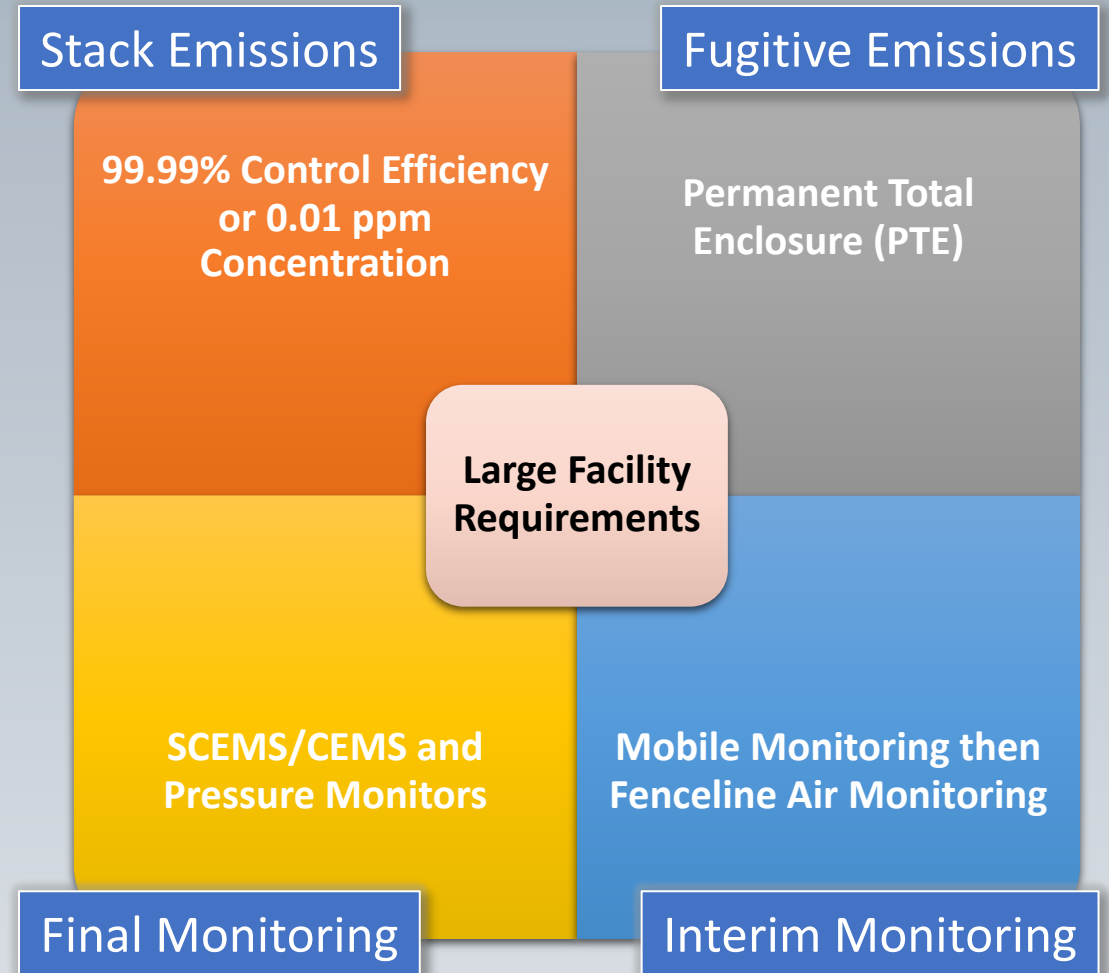




PAR 1405 – Key Elements for Large Facilities

By September 2025, enhanced fugitive and stack emission controls

- Permanent total enclosure (PTE) vented to pollution controls, consistent with U.S. EPA's Draft NESHAP for EtO
 - Negative pressure with continuous monitoring
 - Periodic measurement of in-ward face velocity
- By 2026/2027, continuous stack emission monitoring





PAR 1405 – Curtailment Provisions for Interim Monitoring

Purpose

- Alert operator and South Coast AQMD to elevated fenceline concentrations of EtO
- Quickly address elevated fenceline EtO concentrations

Key Requirements

- Based on 24-hour EtO fenceline monitoring*
- Percent of curtailment is based on sliding scale of EtO
- Final curtailment threshold of 3.0 ppb is effective **after** facility upgrades are implemented

Safeguards

- Exempt from curtailment if medical device determined to be reasonably likely to be in shortage by any of the following:
 - Public health authorities; or
 - California hospitals; or
 - California medical centers

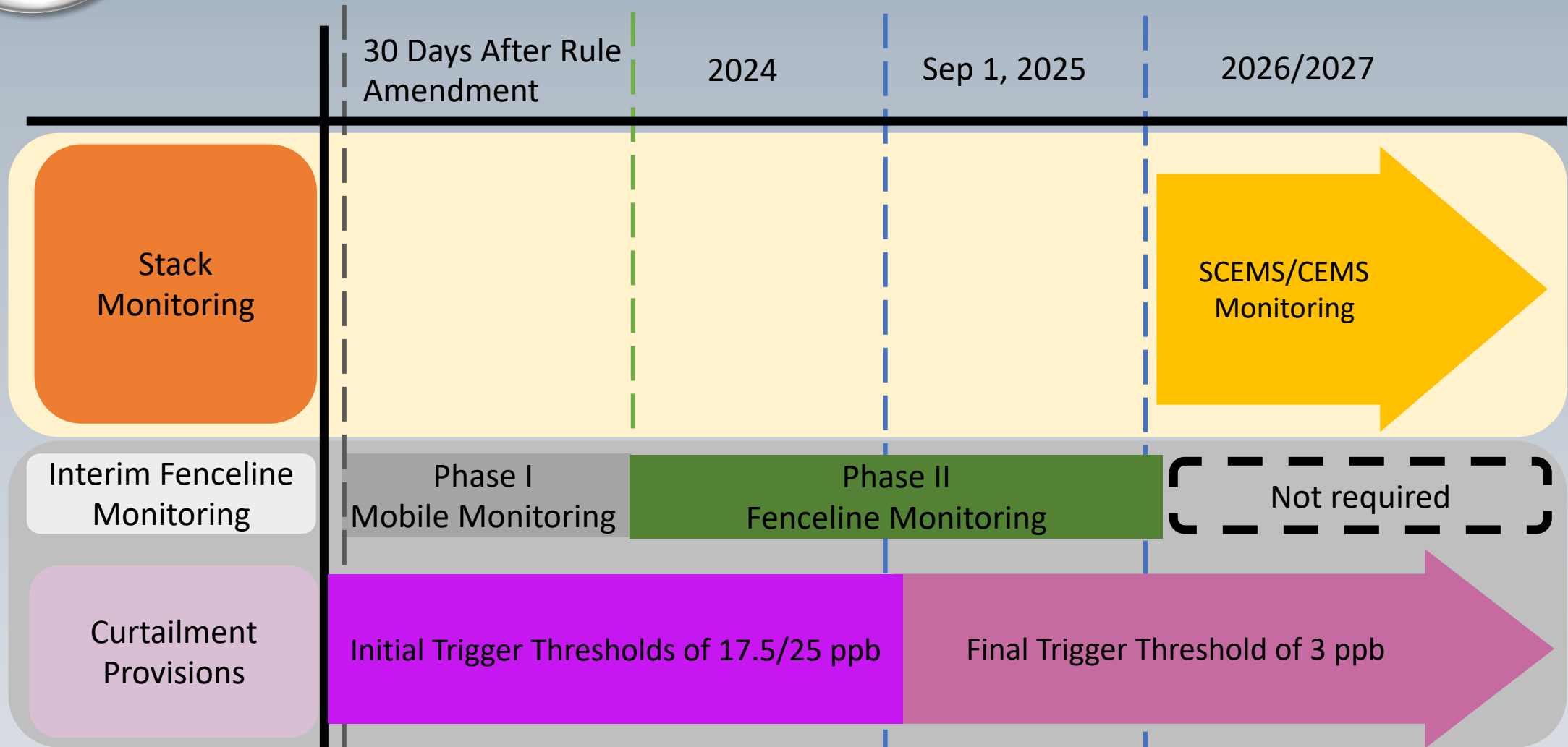
Curtailment Schedule

Trigger Threshold	1st Result	2nd Result	3rd Result
Initial 17.5-25.0 ppb	20%	50%	100%
Initial > 25.0 ppb	50%	100%	100%
Final 3.0 ppb	50%	100%	100%

*Curtailment based exclusively on real-time monitoring would only occur if it is an approved method and approved in the fenceline air monitoring plan



PAR 1405 Monitoring and Curtailment Timeline





Key Requirements for Warehouses

Purpose

- Collect Information to better understand EtO emissions from warehouses
- Assess EtO emissions for larger warehouses

Applicability

- Warehouse registered with U.S. FDA and receives EtO-sterilized product

Requirements

- Warehouse \geq 100,000 square feet
 - Record and report amount of sterilized product received for one year
- Warehouse \geq 250,000 square feet
- Assess EtO emissions by one of the following
 - i. Conduct fenceline monitoring for one year, unless emissions are demonstrated to be less than 4 lbs per year (existing exemption threshold)
 - ii. Fund a demonstration program for South Coast AQMD to conduct real-time monitoring



Key Remaining Issue – Fenceline Air Monitoring

Stakeholder comments

- Fenceline air monitoring data is unreliable and should not be used for enforcement purposes

Staff response

- Fenceline air monitoring has been effectively used to monitor EtO concentration
 - Prior to the investigation and during the investigation, South Coast AQMD has been using an approved U.S. EPA protocol to quantify EtO levels
 - Over 900 samples were collected at 11 sampling sites during investigation
- PAR 1405 requires the use of fenceline air monitoring only temporarily until the permanent SCEMS/CEMS are operating
- After installation and proper operation of stack and fugitive emission controls, exceedance is not anticipated (as demonstrated by current monitoring results at Carson Facility)
- If an exceedance is observed, facility can provide evidence to Executive Officer that they were not the source of the exceedance





Key Concern – Background EtO Levels

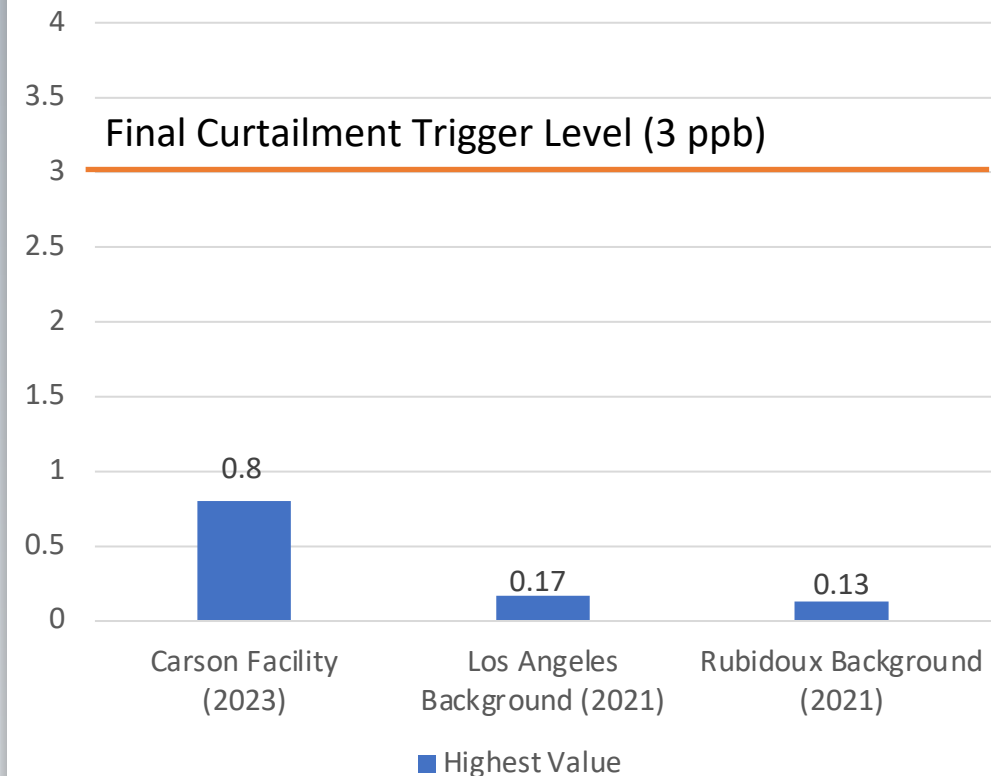
Stakeholder comments

- Background EtO and other sources of EtO are not considered and may contribute to fenceline levels

Staff response

- Background levels of EtO are present and detectable, but *much* lower than fenceline air concentrations near some sterilization facilities
- Background levels are well below the interim (17.5/25.0 ppb) & final (3.0 ppb) curtailment thresholds
- Carson Facility, after PTE and controls is below 1.0 ppb for 2023
- Background EtO investigation is ongoing and independent of PAR 1405 rulemaking

Comparison of Ambient EtO Concentrations (ppb)





Key Concern – Impacts to Supply Chain

Stakeholder comments

- Curtailment could lead to shortages of medical devices critical to patient care

Staff response

- Initial curtailment trigger levels consistent with current provisions in the Early Action Reduction Plans
- Curtailment should not occur after implementation of requirements as current observed levels are significantly lower than final curtailment trigger levels
- PAR 1405 provides an exemption from curtailment for critical products in low supply based on determination from health authorities, or hospitals or medical centers in California





Key Concern – Permanent Total Enclosure (PTE)

Stakeholder comments

- A 15-minute averaging time to maintain negative pressure for a PTE is too short, particularly during high wind events

Staff response

- Updated averaging time to 1-hour
 - Provides additional compliance margin while ensuring fugitive emissions are captured in the enclosure through a PTE
- Added provision when winds exceed 20 miles per hour
 - Except for times of high winds, operator will need to maintain negative pressure to ensure fugitive emissions do not escape enclosure
 - Accounts for potential feasibility concerns during extreme weather events

Public Process

Extensive public process

- Multiple meetings with a variety of stakeholders
- Eight working group meetings
- Five Stationary Source Committee meetings
- Five versions of rule language released



Socioeconomic Impacts

Socioeconomic Impacts

- A Socioeconomic Impact Assessment has been prepared which shows increased costs to the affected facilities from 2023 to 2043
 - Average annual compliance cost of \$4.56 million to \$4.73 million, with assumed real interest rate of 1% and 4%, respectively
 - Average annual of 54 net jobs foregone (job losses and future jobs not created) which represents less than 0.0005% of total annual jobs in the four-county area

California Environmental Quality Act (CEQA)

Environmental Impacts

- Installation of monitoring equipment and PTE at a few facilities will require minimal construction
- No significant adverse environmental impacts are expected
- A Notice of Exemption from CEQA has been prepared



Staff Recommendations

- Adopt resolution:
 - Determining that Proposed Amended Rule 1405 is exempt from the requirements of the CEQA
 - Amending Rule 1405

