South Coast AQMD

2022 AIR QUALITY MANAGEMENT PLAN

Comments and Responses to Comments

Volume II

2022 AQMP
COMMENTS AND RESPONSES TO COMMENTS

ADOPTED DECEMBER 2, 2022

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CONTRIBUTORS

South Coast Air Quality Management District
(South Coast AQMD)

Wayne Nastri
Executive Officer

Susan Nakamura
Chief Operating Officer

Sarah L. Rees, Ph.D.
Deputy Executive Officer
Planning, Rule Development, and Implementation

Ian MacMillan
Assistant Deputy Executive Officer
Planning, Rule Development, and Implementation

Michael Krause
Assistant Deputy Executive Officer
Planning, Rule Development, and Implementation

Sang-Mi Lee, Ph.D.
Planning and Rules Manager
Planning, Rule Development, and Implementation

Michael Morris
Planning and Rules Manager
Planning, Rule Development, and Implementation

Authors

Elham Baranizadeh, Ph.D. – Air Quality Specialist
Laurence Brown – Air Quality Specialist
Brian Choe – Program Supervisor
Ranil Dhammapala, Ph.D. – Senior Meteorologist
Heather Farr – Planning and Rules Manager
Britney Gallivan – Air Quality Specialist
Lane Garcia – Program Supervisor
Maryam Hajbabaei – Program Supervisor
Kayla Jordan – Assistant Air Quality Specialist
Sarady Ka – Program Supervisor
Aaron Katzenstein, Ph.D. – Deputy Executive Officer
Michael Laybourn – Program Supervisor
Jong Hoon Lee, Ph.D. – Air Quality Specialist
Charlene Nguyen, Ph.D. – Program Supervisor
Kevin Ni – Air Quality Specialist
David Ono – Senior Air Quality Engineering Manager
Yunnie Osias – Air Quality Specialist
Eric Praske, Ph.D. – Air Quality Specialist
Barbara Radlein – Program Supervisor
I. Elaine Shen, Ph.D. – Planning and Rules Manager
Walter Shen – Planning and Rules Manager
Marc Carreras Sospedra, Ph.D. – Air Quality Specialist
Diana Thai – Program Supervisor
Uyen-Uyen Vo – Planning and Rules Manager
Mei Wang – Planning and Rules Manager
Shawn Wang – Program Supervisor
Vicki White – Planning and Rules Manager
Emily Yen – Assistant Air Quality Specialist
Rui Zhang, Ph.D. – Air Quality Specialist
Yanrong Zhu – Program Supervisor

Reviewers

Barbara Baird, J.D. – Chief Deputy Counsel
Daphne Hsu, J.D. – Principal Deputy District Counsel
Kathryn Roberts, J.D. – Deputy District Counsel II

Production

Rosalee Mason – Administrative Assistant I
Alex Jimenez – Graphics Arts Illustrator II
South Coast AQMD Print Shop

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Preface

A total of one hundred six (106) written comments and numerous verbal comments have been received on the 2022 AQMP since May 2022, including eighty (80) addressing the Draft 2022 AQMP main document and Appendix II through VI of the Draft 2022 AQMP, six (6) addressing the Appendix I (Health Effects) of the Draft 2022 AQMP, and twenty (20) addressing the Revised Draft 2022 AQMP and accompanying appendices. Throughout the development of the AQMP, various meetings such as working group meetings, advisory council meetings, advisory group meetings, control measures workshop, regional public workshops, and regional public hearings were held to solicit public participation and feedback. Those comments were reflected in the AQMP to the extent possible, and the comments raised during the regional public hearings are included in Section III of Responses to Comments Volume II. This is because public hearings are intended to solicit public comments to be heard by the South Coast AQMD's Governing Board, and staff did not provide responses during those hearings. In addition to staff responses to the public comments, the regional hearings were transcribed and will be included in the final public hearing's package for the South Coast AQMD's Governing Board consideration.

This 'Responses to Comments' document consists of two volumes. Volume I includes general responses to similar comments that were raised by multiple letters. The general responses are followed by Section I which covers responses to individual comments on the Draft 2022 AQMP.

Volume II consists of two sections. Section II includes twenty (20) comments received on the Revised Draft 2022 AQMP and accompanying Appendices II–VII that were released on September 2, 2022. Section III includes numerous verbal comments received on the Revised Draft 2022 AQMP at the Regional Public Hearings that were held on October 12–20, 2022.

Six (6) comments (Comment number 81–86) that were received on Appendix I of the Draft 2022 AQMP are published separately in the Comments and Responses to Comments on Appendix I – Health Effects.

TABLE 1

NUMBER OF COMMENTS RECEIVED ON THE 2022 AQMP

Volume	Section	Comments Received on	Release Date	Comment Close Date	Number of Comments	Comment Number
Volume I	Section I	Draft 2022 AQMP main document and Appendix IV-A	May 6, 2022	July 5, 2022	76	1 – 76
	Section I	Remaining appendices of Draft 2022 AQMP	June 1, 2022	July 22, 2022	4	77 – 80
Volume II	Section II	Revised Draft 2022 AQMP main document and Appendices II–VII	September 2, 2022	October 18, 2022	20	87 – 106
	Section III	Verbal Comments Raised during Regional Public Hearings	October 12 – 20, 2022		16	1 – 16

For some comments, similar remarks have been made in other comments so the response may indicate where the reader can locate the appropriate previous response(s). Modifications have been made in the various sections of the AQMP and/or Appendices in response to key comments received.

VOLUME II

COMMENTS AND RESPONSES TO COMMENTS ON THE REVISED DRAFT 2022 AQMP

SECTION II

COMMENTS AND RESPONSES TO COMMENTS ON THE REVISED DRAFT 2022 AQMP AND APPENDICES

Comments and Staff Responses

This section includes the following 20 comment letters from 27 entities received during the public comment period from September 2, 2022 to October 18, 2022, addressing the Revised Draft 2022 AQMP main document and accompanying Appendices II–VII.

- Private Individuals 2
- Environmental Organizations 15
- Business Association 3
- Industry 7

TABLE 3

COMMENT LETTERS ON THE REVISED DRAFT 2022 AQMP

Comment Letter	Commentor Name	Representing	Date Received	Time Received
87	Ronald Stein	PTS Advance	9/3/2022	7:21
88	Adrian Martinez, Ana Gonzalez, Jesse N. Marquez, Tayler Thomas, Andrea Vidaurre, Peter Warren, Yassi Kavezade, Theral Golden	Earthjustice, Center for Community Action and Environmental Justice, Coalition for A Safe Environment, East Yard Communities for Environmental Justice, People's Collective for Environmental Justice, San Pedro & Peninsular Homeowners Coalition, Sierra Club, West Long Beach Association	10/6/2022	14:05
89	Michael McCarthy	Robert Redford Conservancy and Radical Research	10/17/2022	16:33
90	Joshua C. Greene	A. O. Smith Corporation	10/18/2022	15:21
91	Teresa Bui	Pacific Environment	10/18/2022	15:43
92	Dawn Anaiscourt	Southern California Edison	10/18/2022	15:46
93	Katherine Rubin	Los Angeles Department of Water & Power	10/18/2022	15:56
94	Brissa Sotelo-Vargas, David Fleming, Tracy Hernandez, and David Englin	Los Angeles County Business Federation (BizFed)	10/18/2022	16:02
95	Sara Fitzsimon	California Hydrogen Business Council	10/18/2022	16:05
96	Jawaad Malik	SoCalGas	10/18/2022	16:14
97	Rita Loof	RadTech International	10/18/2022	16:47
98	Bill Quinn	California Council for Environmental and Economic Balance (CCEEB)	10/18/2022	16:49
99	Michael J. Carroll	Latham & Watkins, LLP	10/18/2022	17:00
100	Christopher Chavez	Coalition for Clean Air	10/18/2022	18:13
101	Ramine Cromartie	Western States Petroleum Association	10/18/2022	20:27
102	Duncan McKee	Self	10/18/2022	22:00
103	Fernando Gaytan, Adrian Martinez	Earthjustice	10/18/2022	22:15
104	James E. Enstrom	Scientific Integrity Institute	10/18/2022	23:59
105	Nihal Shrinath, Fernando Gaytan, Leah Louis-Prescott, and David Diaz	Sierra Club, Earthjustice, RMI, and Active San Gabriel Valley	10/19/2022	9:45
106	Brad Levi	Tesoro Refining and Marketing Company, LLC	10/7/2022	13:43

Comment Letter #87

From: Ronald Stein <Ronald.Stein@PTSadvance.com>
Sent: 9/3/2022 7:21 AM
To: AQMPTeam <AQMPteam@aqmd.gov>
Subject: Public Comments on the Revised Draft 2022 AQMP

As requested, Public comments on the Revised Draft 2022 AQMP should be submitted by Tuesday, October 18, 2022 at AQMPteam@aqmd.gov, my comments are as follows

> America, with four percent of the world's population (330 million vs 8 billion) professes to be the leader of everything but tightening the National Ambient Air Quality Standard (NAAQS) for particulate matter is ludicrous when China, India, Indonesia, Japan, Africa, and Vietnam are sending are building new coal power plants that will emit even.
>
> China (1.4 billion), India (1.36 billion), Indonesia (270 million), Japan (126 million) and Vietnam (80 million) plan to build more than 600 coal power units.
>
> African countries (1.2 billion) are planning to build more than 1,250 new coal and gas-fired power plants by 2030.
>
> Two questions for the AQMD:
>
> 1. Why is the AQMD supportive of imposing additional costs onto Americans to further clean up, the cleanest country on the planet, when America only represents four percent of the world's population?
>
> 2, Does the AQMD believe its morally, ethically, and socially responsible to impose on the American public more expenses while other countries like China, India, Indonesia, Africa, Japan, and Vietnam are continuing to increase their emissions into the same air that everyone is breathing?
>
> Is there anyone that will address my 2 questions?

Comment 87-1

Ronald Stein
Co-author of the Pulitzer Prize nominated book "Clean Energy Exploitations"
Policy advisor on energy literacy for The Heartland Institute, and The Committee for a Constructive Tomorrow, and National TV Commentator- Energy & Infrastructure with Rick Amato.
http://www.energyliteracy.net/

Ronald Stein, P.E.
Founder and Ambassador for Energy & Infrastructure
949-268-4023
Ronald.Stein@PTSadvance.com
PTSadvance.com

Response to Comment 87-1: South Coast Air Basin is classified as extreme nonattainment for the 2015 8-hour ozone standard. There is only one other extreme nonattainment for the 2015 ozone standard, which is San Joaquin Valley, CA. The federal Clean Air Act requires South Coast AQMD to develop the AQMP, which serves as the State Implementation Plan (SIP) for the South Coast Air Basin and Coachella Valley. An AQMP/SIP requires that a state/local air authority take all feasible measures to reduce emissions and ensure that the region is able to meet the National Ambient Air Quality Standards. While U.S. EPA is currently evaluating a revision to fine particulate standards, the 2022 AQMP is focused on attaining the 2015 8-hour ozone standard by the 2037 deadline set by U.S. EPA. Failure to meet the standard or comply with Clean Air Act requirements results in the possibility of sanctions by the federal government and other consequences such as increased emission fees, stricter permit conditions for new projects, the loss of federal highway funds and draconian federal measures. Failure to meet the standard also means that residents in the Basin will continue to breathe levels of air pollution that cause adverse health impacts such as respiratory diseases and asthma.

In addition to meeting legal obligations under the federal Clean Air Act, meeting the ozone standard will result in substantial public health benefits. South Coast AQMD estimates that the 2022 AQMP would result in approximately $134.3 billion of health benefits from 2025 to 2037 in the four-county region when fully implemented.[1] These benefits include about 1,600 annual premature deaths avoided by 2032, and about 3,000 annual premature deaths avoided by 2037. On average, between 2025 and 2037, about 1,500 premature annual deaths would be avoided due to improved air quality as a result of implementing the Revised Draft 2022 AQMP control measures.

[1] South Coast AQMP, Draft Socioeconomic Report, 2022 Air Quality Management Plan, October 2022. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

Comment Letter #88

October 6, 2022

VIA EMAIL
Chair Benoit and Members of the Board
Governing Board
South Coast Air Quality Management District ("SCAQMD")
Cob@aqmd.gov

Re: Item 22- 2022 AQMP, Socioeconomic Report, and CARB State Strategy for the SIP

Dear Chair Benoit and Members of the Board:

On behalf of the undersigned organizations, we comment on the Revised Draft 2022 AQMP (Draft Plan). As this Board is aware, this is the most important air plan in the history of the agency. Critically, the draft plan recognizes what our organizations have said for a long time – "the only way to achieve the required NOx reductions is through extensive use of zero emission technologies across **all stationary and mobile sources**."[1] We don't have time to waste pursuing incrementally cleaner combustion strategies because, like all the past ozone strategy failures, it will not work. In light of this zero-emissions North Star for regional air planning, we remain concerned that the plan as drafted remains far too weak.

Comment 88-1

ACTIONABLE ITEMS FOR THE BOARD

The following provide actionable items for the Board to direct staff to improve the plan.

Strengthen Measures for Commercial and Large Combustion Sources.

In critiques on the lack of a commitment to more aggressive measures in the Large Combustion and Commercial Combustion space, staff points to the rules adopted as part of the transition from RECLAIM— claiming that these measures are achieving 13 tpd in NOx reductions. The District further claims that when combined with these RECLAIM achievements, the total emissions reduction percentage from combustion stemming from proposed measures in the Draft 2022 AQMP will be closer to 64.7 percent. This response misses the point. On the very first page of the Air Plan, the staff says we must get to zero-emissions for stationary sources. Yet, the control

Comment 88-2

[1] Revised Draft AQMP, at Executive Summary.

strategy leaves so many emissions reductions on the table and pursues the plain, vanilla combustion-centric approach of the past.

We recognize the District's talking point that it could reduce all stationary source emissions to zero, and the region would still not attain. This mantra often is used as a shield to actual self-reflection over whether the agency is doing everything it can. For example, the last air plan was anchored on a strategy to clean up stationary sources that operated under a broken pollution trading system —RECLAIM — that resulted in half of all equipment in the program not meeting Best Available Retrofit Control Technology (BARCT). For years, the Air District operated under a rubric that its sources "were the most well controlled in the country" when that was not likely the case at many facilities like refineries. Deflecting from additional needs in emissions reductions at stationary sources also fails to recognize where these sources are so often concentrated – low-income communities of color.

Comment 88-2 Con't

A better approach is to examine the commitments and have the agency ask, can we afford to leave remaining emission reductions on the table instead of adopting zero-emissions oriented BARCT regulations? For example, in the L-CMB-02 control measure covering Boilers and Process Heaters, the staff is proposing **zero** additional emission reductions by 2031 and only 0.45 tpd NOx reductions by 2037. In 2037, this category will emit 2.36 tpd of NOx, so the plan proposes a measly 19% reduction in NOx. The appropriate question is, rather, can we afford to forego the 1.9 tpd of NOx reductions as the plan currently proposes by 2037? We believe the answer is no.

To fix this problem, the Board should direct staff to commit to achieving .45 tpd by 2031, in addition to an overall commitment of 1.75 tpd by 2037. The shift would look like the below:

Current Plan Commitment:

Number	Title	Emissions Reduction (tons per day) (2031/2037)
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0 / 0.45

Strengthened and More Health Protective Plan Commitment:

Number	Title	Emissions Reduction
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0.45 / 1.75

In Appendix A of this letter, we have proposed modifications to the commitments for all the Commercial and Large Combustion Sources for consideration.

Comment 88-2 Con't

Fix the South Coast's Broken Cost Effectiveness Approach, which Deters Staff from Requiring Pollution Controls.

We appreciate willingness to revise the 2022 AQMP in a way that shifts gatekeeping for strategies based solely on the costs – ignoring many key factors required under the Health & Safety Code like the health benefits of rules. Stated bluntly, the Air District's cost effectiveness thresholds make the agency's rulemaking process not work. In some rules, staff has not explored strategies that go above the arbitrary thresholds set in the 2016 AQMP.

Comment 88-3

Regarding the proposal in the Draft AQMP to set a $325,000 threshold, this is a step in the right direction, but it too misses the mark. First, this $325,000 number must be higher; the AQMD concedes that this number is lower than the $342,000 per ton benefits from the 2016 AQMP. Why would we have a lower threshold than the prior AQMP? At a minimum, the cost effectiveness should be $342,000 in 2021 dollars indexed to inflation, or $386,121.23[2]. We still think the cost effectiveness threshold is not needed per existing law, but if the plan includes a threshold, Option 1 would continue to be a disaster, and Option 2 is preferable with the fix mentioned above.

Direct Staff to Hasten Work in Cleaning Up Deadly Diesel Magnets and Bring Rules to the Board by Dates Certain with No Delays.

Late last week, the Ports of Los Angeles and Long Beach released their 2021 Emissions Inventory.[3] The analysis is not pretty. The Ports dosed residents and the region with unconscionably high levels of pollution last year. While the Ports will try to claim this was an anomaly given ship back-ups, they fail to recognize that record volumes have continued to rise and levels prior to the pandemic were too high, and we will continue to see these high levels. The report also shows the Ports are not likely to meet the NOx reduction goals set in the 2017 Clean Air Action Plan Update by 2023. This shows the voluntary approach is not working.

Comment 88-4

Yet, despite over a decade of the South Coast AQMD debating the creation of more accountability, the Board has failed to deliver. Even if the Board does not feel comfortable identifying emissions reductions associated with deadly port sources, railyards, and other sources, we ask the Board to provide clear direction that it expects strong indirect source rules by dates certain next year. The time for delay is over, and voluntary approaches do not work.

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[2] Based on CPI Inflation Calculator; available at https://www.officialdata.org/us/inflation/2020?endYear=2021&amount=130000. (Last visited October 4, 2022).
[3] Port of Long Beach. (October, 2022). *Air Emissions Inventory-2021*. Retrieved from: https://polb.com/port-info/news-and-press/annual-inventory-reflects-unprecedented-pandemic-congestion-supply-chain-disruptions-increased-emissions-in-2021-10-03-2022/; Port of Los Angeles (September 2022). *Inventory of Air Emissions 2021-Technical Report*. Retrieved from: https://kentico.portoflosangeles.org/getmedia/f26839cd-54cd-4da9-92b7-a34094ee75a8/2021_Air_Emissions_Inventory.

CONCLUSION

We need all our agencies to step up if we want to tackle deadly smog pollution. We are asking the Environmental Protection Agency to do more, as well as the California Air Resources Board. But, we need the Air District to do more. It is not too late to provide the clear direction needed to make vital changes to the 2022 AQMP.

Sincerely,

Adrian L. Martinez

Adrian Martinez
Fernando Gaytan
Earthjustice

Ana Gonzalez
Center for Community Action and Environmental Justice (CCAEJ)

Jesse N. Marquez
Coalition for A Safe Environment (CFASE)

Taylor Thomas
East Yard Communities for Environmental Justice (EYCEJ)

Andrea Vidaurre
People's Collective for Environmental Justice (PC4EJ)

Peter Warren
San Pedro & Peninsula Homeowners Coalition (SPPHC)

Yassi Kavezade
Sierra Club

Theral Golden
West Long Beach Association (WLBA)

CC:
Ben Benoit, Chair; Email:bbenoit@aqmd.gov;
Gideon Kracov, Chair- Mobile Source Committee; Email:gkracov@aqmd.gov

Related to Comment 88-2

Appendix A – Control Measures in Plan

The current plan looks like this:

Control Measure	Description of Control Measure	2031 Emissions Reductions / 2037 emissions reduction **(Total Source Tonnage in 2037 / Percentage Reduction Commitment by 2037)**
C-CMB-01	Emission Reductions from Replacement with Zero Emissions or Low NOx Appliances – Commercial Water Heating	0.04 / 0.25 tpd **(0.42 tpd in 2037 / 60% emissions reduction)**
C-CMB-02	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Commercial Space Heating [NOx]	0.04 / 0.21 tpd **(0.34 tpd in 2037 / 62% emissions reduction)**
C-CMB-03	Emission Reductions from Commercial Cooking Devices [NOx]	0.21 / 0.64 tpd **(0.98 tpd in 2037 / 65% emissions reduction commitment)**
C-CMB-04	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted)	0 / 2.25 tpd **(3.47 tpd in 2037 / 65% emissions reductions commitment)**
C-CMB-05	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted) [NOx]	0 / 5.14 tpd **(7.05 tpd in 2037 / 73% emission reduction commitment)**
	Total Commercial Combustion	**0.29 / 8.49 tpd** **(12.3 tpd in 2037 / 69% emissions reduction commitment)**
L-CMB-01	NOx Reductions from RECLAIM Facilities	0 / 0.31 tpd

		(0.69 tpd in 2037 / 45% emissions reduction commitment)
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0 / 0.45 tpd **(2.36 tpd in 2037 / 19% emissions reduction commitment))**
L-CMB-03	NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]	0 / 0.34 tpd **(1.03 tpd in 2037 / 33% emission reduction commitment)**
L-CMB-04	Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]	0 / 2.04 tpd **(4.54 tpd in 2037 / 45% emission reduction commitment)**
L-CMB-05	NOx Emission Reductions from Large Turbines [NOx]	0 / 0.07 tpd **(0.26 tpd in 2037 / 27% emissions reduction commitment)**
L-CMB-06	NOx Emission Reductions from Electricity Generating Facilities [NOx]	.09 / 0.91 tpd **(2.14 tpd in 2037 / 43% emissions reduction commitment)**
L-CMB-07	Emission Reductions from Petroleum Refineries [NOx]	0 / 0.89 tpd **(4.44 tpd in 2037 / 20% emissions reduction commitment)**
L-CMB-08	NOx Emission Reductions from Combustion Equipment at Landfills and Publicly Owned Treatment Works [NOx]	0 / 0.33 tpd **(1.31 tpd in 2037 / 25% emission reduction commitment)**
L-CMB-09	NOx Reductions from Incinerators [NOx]	0 / 0.90 tpd **(1.20 tpd in 2037 / 75% emission reduction commitment)**

Related to Comment 88-2 Con't

L-CMB-10	NOx Reductions from Miscellaneous Permitted Equipment [NOx]	0 / 1.01 tpd **(1.27 tpd in 2037 / 80% emission reduction commitment)**
	Total	**.09 / 7.25 tpd** **(19.2 tpd 2037 / 38% emission reduction commitment)**

Strengthened Control Measure Proposal (strike-throughs equal numbers changes and red numbers are new suggested commitments).

Control Measure	**Description of Control Measure**	**2031 Reductions / 2037 emissions reduction**
C-CMB-01	Emission Reductions from Replacement with Zero Emissions or Low NOx Appliances – Commercial Water Heating	0.04 / 0.25 tpd
C-CMB-02	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Commercial Space Heating [NOx]	.04 / 0.21 tpd
C-CMB-03	Emission Reductions from Commercial Cooking Devices [NOx]	0.21 / ~~0.64~~ .85 tpd
C-CMB-04	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted)	0 / ~~2.25~~ 3.25 tpd
C-CMB-05	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted) [NOx]	0 / ~~5.14~~ 6.25 tpd
	Total Commercial Combustion	**0.29 / ~~8.49~~ 10.81tpd**
L-CMB-01	NOx Reductions from RECLAIM Facilities	0 / ~~0.31~~ 0.65 tpd

Related to Comment 88-2 Con't

L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	~~0~~ 0.45 / ~~0.45~~ 1.75 tpd
L-CMB-03	NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]	0 / ~~0.34~~ 0.8 tpd
L-CMB-04	Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]	~~0~~1.5 / ~~2.04~~ 3.54 tpd
L-CMB-05	NOx Emission Reductions from Large Turbines [NOx]	0 / 0.07 tpd
L-CMB-06	NOx Emission Reductions from Electricity Generating Facilities [NOx]	.09 / ~~0.91~~ 1.7 tpd
L-CMB-07	Emission Reductions from Petroleum Refineries [NOx]	~~0~~ 1.5 / ~~0.89~~ 3.00 tpd
L-CMB-08	NOx Emission Reductions from Combustion Equipment at Landfills and Publicly Owned Treatment Works [NOx]	0 / 0.33 tpd
L-CMB-09	NOx Reductions from Incinerators [NOx]	0 / 0.90 tpd
L-CMB-10	NOx Reductions from Miscellaneous Permitted Equipment [NOx]	0 / 1.01 tpd
	Total	~~.09~~ 3.54/ ~~7.28~~ 13.75[4]

Related to Comment 88-2 Con't

[4] We recognize that additional reductions in 2031 may impact 2037 numbers, but just produced a straight addition exercise for the two new commitments.

Response to Comment 88-1: South Coast AQMD staff appreciates your comment on the Revised Draft 2022 AQMP. We recognize the substantial challenge involved in meeting the 2015 ozone standard, and the dramatic emission reductions needed. As a result, the 2022 AQMP control strategy calls for aggressive NOx emission reductions via the deployment of zero emission technologies across all sectors where *feasible.* However, zero emission technologies are not feasible in some applications at this point.

Response to Comment 88-2: Thank you for your comments and recommendations regarding measures for commercial and large combustion sources.

Zero emission technologies play a critical role and the South Coast AQMD will push to establish the lowest emissions standard with the goal of zero emission standards wherever those technologies are *feasible*. Feasibility is a critical consideration for defined measures in this plan. The defined measures represent South Coast AQMD's legal commitment to U.S. EPA that the emission reductions associated with those measures will be achieved. Evaluation of feasibility includes technical considerations, such as applications for which zero emission technologies do not yet exist (e.g., applications that require high temperature combustion, process emissions that are not associated with combustion, etc.), as well as practical considerations (e.g., the substantial costs associated with zero emission technologies, the availability of fueling infrastructure and grid stability, etc.). South Coast AQMD's proposed control measures strive to strike the balance between pushing aggressive adoption of zero emission technologies and technical and practical considerations.

Staff recognizes that there will be many advanced technologies that will come online and become feasible during the lifetime of the 2022 AQMP. To the extent that the plan pushes and relies on zero emission technology that may become feasible in the future – that is addressed by measures covered by Section 182(e)(5) of the Clean Air Act, which allows reliance on future deployment of advanced technology.

Staff also believes that low NOx technologies must play a role to maximize emission reductions in the near-term. It is not appropriate to wait until zero emission technologies are mature and commercially available to take action to reduce emissions when viable technologies that result in cleaner air are available today.

We disagree with the characterization that the 2022 AQMP lacks a commitment to more aggressive measures for large combustion sources. L-CMB-02 includes zero emission technologies where available and feasible. Industrial heat pumps or other emerging technologies may be commercially available for large boilers and process heaters in the future but were not incorporated in the control measure due to lack of information demonstrating that those technologies will be available for at scale deployment in near future. However, that does not mean that staff will not pursue the adoption of additional zero emission technologies in the rulemaking to implement the control measure. At that point, staff will reevaluate the commercial status of equipment, and given the expected rapid acceleration of availability of advanced technologies, staff believes there may be additional opportunities.

During the rulemaking process, South Coast AQMD is committed to look at all technologies during the BARCT assessment to maximize emission reductions, including emerging zero-emission technologies. As staff is conducting the BARCT assessment, technology forcing limits will be considered. Technology forcing limits can be based on zero-emission technologies that are emerging, provided the NOx limit is achievable by the compliance date. This approach recognizes that although the technology is not fully commercialized or is not widely used, it is anticipated to be technically feasible at the time of rule

compliance. As part of the BARCT analysis, staff also considers the class and category of equipment in the technology assessment. This further allows maximizing emission reductions and seeking any and all categories of equipment where a zero-emission standard can be established.

Due to rapid technological innovation, control measures contained in AQMPs often exceed their committed emission reductions. For example, CMB-05 in the 2016 AQMP committed 5 tons per day NOx emission reductions, but as implemented has been able to achieve total NOx emission reductions of 13.38 tons per day from RECLAIM facilities through NOx landing rules, noting that some NOx reductions may be attributed to the 2015 RECLAIM shave. Similarly, L-CMB-02 and other control measures listed in the table can also result in different emission reductions during rule development as advanced technologies are further deployed.

Staff disagrees with the comment that L-CMB-02 achieves a "measly 19% reduction in NOx." Tremendous NOx reductions have been achieved for this sector – a reduction of 79 percent over the past 14 years due to the implementation of the most stringent regulatory controls for NOx in the country. This is not a "shield" to excuse further emission reductions in this area as commenters allege. Instead, it is to provide perspective that we have and will continue to aggressively pursue all feasible measures for these and other stationary sources. When a source category has already been reduced 79 percent, there are not as many opportunities for further reductions. The constraints of feasibility and availability of advanced technologies for this category of sources must be considered, and that as legally binding commitments to U.S. EPA, the control measures in the plan must be based on the current knowledge of technologies. To the extent we can rely on future advanced technologies that can provide zero emission solutions for large combustion sources, those measures are contained in the Section 182(e)(5) "black box" - the provision of the CAA designed to capture the deployment of future technology over time and can be considered during the rulemaking process. Any advancements in zero emission technologies during the rulemaking process will be considered during the BARCT assessment.

Staff appreciates the Strengthened Control Measure Proposal provided by the commenters. However, commenters have not provided any basis to justify how the additional emission reductions they propose would be achieved – no additional zero emission technologies that are commercially available and feasible have been identified. The control measures in the AQMP must define the path as to how the emission reductions will be achieved. Based on our evaluation of the current technologies available and feasibility constraints, the South Coast AQMD proposed control measures will achieve a 40-70 percent reduction in NOx emissions in stationary sources, above and beyond emissions reduction achieved by the already-stringent regulations in place.

Staff recognizes that there will be advances in technology over time, and fully expects that there will be more options available for feasible zero emission technology deployment through 2037. We further recognize that the South Coast AQMD can play a role in accelerating the deployment of these technologies for stationary sources through demonstration projects, much in the way we have led development of advanced technologies for mobile sources. Staff will work to assess potential opportunities for future demonstration projects for zero emission stationary source technology, as well as potential avenues for funding such projects.

Response to Comment 88-3: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 88-4: Staff acknowledges the substantial pollution burden associated with the ports, as well from the processes associated with the goods movement at large. While the South Coast AQMD lacks direct authority to regulate mobile source emissions, we are committed to leveraging the limited authority provided under California and Federal law to address mobile sources through indirect source authority.

Staff aims to bring Proposed Rule 2306 - New Intermodal Railyard Indirect Source Rule (PR 2306) and Proposed Rule 2304 - Marine Port Indirect Source Rule (PR 2304) to public hearing in 2023. Initiation of rule development for Proposed Rule 2306.1 - Existing Intermodal Railyard Indirect Source Rule (PR 2306.1) will also commence in 2023. PR 2304 will look at how to reduce emissions from all port sources, including ships, locomotives, trucks, harbor craft, and cargo handling equipment. As part of the PR 2304 rulemaking process, staff is identifying opportunities for emission reductions from ocean-going vessels and long-term solutions to address potential future events that increase emissions (e.g., port congestion, public safety power shutoffs, etc.). Staff also recognizes that Ports ISR alone will not be sufficient to achieve the magnitude of emission reductions required. The proposed rule needs to work in conjunction with regulatory and incentive measures that can be feasibly taken by federal and state agencies, and the ports based on their respective authorities. For example, federal and state grant funding for port infrastructure and supply chain efficiency must also prioritize facilitating the cleanest technologies including zero emissions where feasible.

Comment Letter #89

October 17, 2022

Dear Air Quality Management Plan Team,

On behalf of the Redford Conservancy at Pitzer College and Radical Research LLC, we appreciate your comments on our letter. We thank you for the opportunity to comment on the Revised Draft 2022 Air Quality Management Plan (AQMP). We are extremely concerned with lack of air quality attainment now and into the future, and we are particularly concerned with the goods movement in contributing to this lack of attainment and to significant environmental injustices, especially in the Inland region. Below, we outline several important issues that point to the critical role that the AQMP can play in helping our region reach air quality attainment.

Comment 89-1

Goods movement is the single most impactful industry that is undermining the region's ability to reach air quality attainment.

In the Inland Empire, the rise of e-commerce since the Covid-19 pandemic has brought warehouse growth, air quality, and health inequities into sharp focus. The distinctive bowl shape of Inland geographies, combined with the Inland Empire's role as a global logistics hub, has led to increased rates of cardiac, respiratory, and reproductive health impacts, and (as your MATES tool demonstrates) cancers related to truck emissions.

- The American Lung Association in 2022 has ranked the Inland Empire as being the worst region in the nation for Ozone pollution and is ranked in the 99th percentile for particulate matter (PM) pollutants in the state of California. San Bernardino County is the worst in the nation, followed by Riverside County as second worst.
- Diesel exhaust is responsible for about 70 percent of the total cancer risk from air pollution in MATES V; cancer risk is in the 95th percentile near the Ontario warehouse gigacluster–equaling 624 people per million, which is 95% higher than the rest of the basin. The two Inland Empire measurement sites had the highest DPM concentrations in MATES V.
- UCLA data collected in 2020 indicate that roughly **70% of children under the age of 10** in San Bernardino County have asthma. The asthma-related hospitalization rates in San Bernardino County for children between the ages of 0 – 14 years is 16.7 percent or about 76,000 children.

Comment 89-2

Despite the widespread knowledge of these issues, warehouse projects continue to be approved at an rate over five times the rate of population growth, inducing more goods movement emission activity in the form of trucks, ocean-going vessels, locomotives, and cargo plane flights. Ultimately these all degrade air quality and increase greenhouse gas emissions.

Due to the severity of the problems our region is facing, we request that the AQMP be revised to highlight the role of local agencies and their impacts on emissions demand management, and their role in helping to meet the AQMP.

The Air Quality Management District (AQMD) is the Lead Agency responsible for developing the AQMP, which is the most significant guidance for air quality attainment into the future. As noted in its AQMP, multiple regulatory agencies are partners in efforts to improve air quality. Emissions controls on individual

source types are split amongst the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the AQMD. This is well documented throughout the report. However, there is no attribution of responsibility for emissions activity rates.

As noted in our previous letter, there are two pieces to every emissions inventory.

1. Emissions rates – where cleaner technology emits lower rates of pollution per unit
2. Emissions activity – the number of units of a thing emitting pollution, e.g., truck vehicle miles traveled or ocean-going vessels. More emissions activity emits more pollution, less activity emits less.

Comment 89-2 Con't

The AQMP emissions control measures almost exclusively focus on the technology options to reduce the emissions rate portion of the emission inventory and is negligent in its discussion of the demand management options for reducing emissions activity. **We argue that the most cost-effective method to address future emissions is to reduce emissions activity growth rates.** We also argue that the AQMP has an important role to play in the reduction of emissions activity through its leadership role.

First, we suggest that the AQMP create a graphic that identifies key agencies that are required regulatorily to coordinate as part of the AQMP and highlight their role in in emissions control authority or emissions demand management authority. A potential graphic might look something like **Figure 1**:

Figure 1. Illustration of complicated network of local, state, and federal agencies regulatorily required to coordinate on the AQMP and their authority over emissions control technology and/or emissions demand management.

AQMD coordinates with the U.S. EPA and CARB to control emissions sources. Similarly, the AQMD must also coordinate with the Southern California Association of Governments (SCAG) and local land-use authorities such as cities and counties for regional and local transportation planning activities. As quoted to us, "SCAG is responsible for transportation planning and, under state law, for preparing the portion of

the SIP that addresses transportation control measures, land use, and growth projections." We agree that the SCAG has regulatory authority over transportation planning, land use, and growth projections.

Considering this complicated regulatory landscape, we ask the AQMD to explicitly state how regulatory authority will be coordinated between SCAG, local municipalities, and the AQMD to coordinate the underlying growth in emissions activity. As a local authority, SCAG could play a much more significant role in the AQMP through more sustainable emissions activity growth scenarios. Local governments under SCAG, such as the Cities of Los Angeles and City of Long Beach which control the ports of LA and Long Beach; the City of Ontario, which is more than doubling the rate of cargo planes flying in and out of Ontario airport; and the collective actions of dozens of other local land use municipalities are contributing to emissions activity growth in all sectors of the goods movement industry. We ask that these local land-use authorities inducing emissions activity growth be identified and asked to meaningfully contribute/coordinate to the success of air quality planning in the region.

Comment 89-2 Con't

The AQMP needs to strengthen the accountability of local land-use and transportation planning authorities that are directly undermining the air quality planning process through unsustainable emissions activity growth scenarios. Their collective actions need to be identified in this report, so that the 2024 Regional Transportation Plan can be modified to reduce the current growth rates in all aspects of the goods movement industry.

Comment 89-3

Figure 2 shows the relative annualized activity growth rates for goods movement sectors from 2018-2037 relative to car VMT, population, and GDP projections. The emissions activity growth rate for goods movement sectors are 3x to 5x times the rate of population growth; this is unsustainable and undermines attainment of the ozone standard, AB32 GHG goals, and addressing environment justice issues.

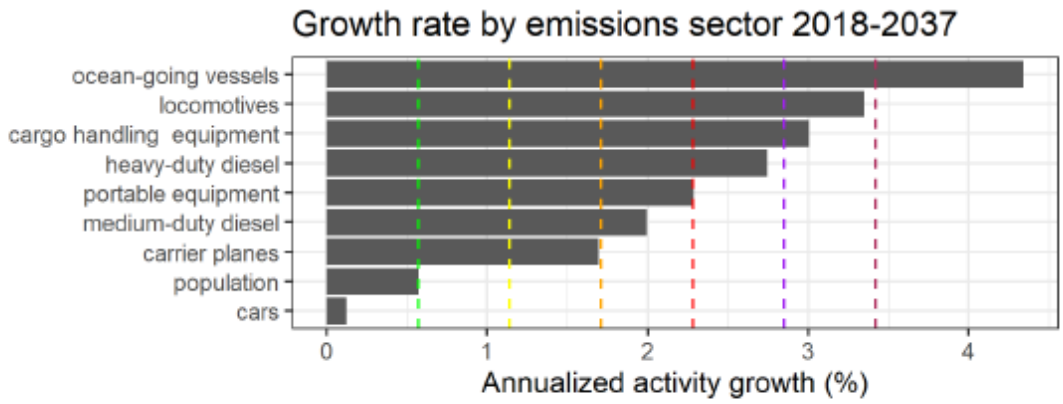


Figure 2. Growth in emissions activity rate by selected emissions sectors based on AQMP footnotes in Chapter 3 of the AQMP. Annualized values are calculated by dividing cumulative growth from 2018-2037 by 20.

Emissions growth projections in all goods movement categories vastly outstrip population growth. Figure 2 shows emissions growth rates in heavy-duty and medium duty- diesel trucks, locomotive activity, commercial planes, ocean-going vessels, non-road sources, and population. This is all based on data from 2018-2037 from the AQMP sources listed in Chapter 3 footnotes of the AQMP. The colored horizontal

lines, intentionally associated with the AQI color scheme, indicate multiples of the population growth rate, yellow = 2x, orange =3x, red = 4x, purple = 5x, and maroon = 6x. We believe these emissions activity growth rates are unhealthy for sensitive groups, unhealthy, very unhealthy, and hazardous and think the AQMP should explicitly label them as harmful given the known health effects of these emissions.

As is clear from this figure, all goods movement sector related emissions activity rates grow faster than population growth by a factor of 3-6X. In contrast, gasoline powered vehicle VMT is growing at a rate slower than population, attributable to the widespread adoption in EVs.

Comment 89-3 Con't

We acknowledge and recognize from AQMD comments to our previous letter that AQMD does not have regulatory authority to control these emissions rates or emissions activity. We acknowledge and recognize that AQMD does not have regulatory authority over the Regional Transportation Plan (RTP) or over local land-use decisions. However, the AQMD is able to characterize and attribute the fraction of emissions that CARB and EPA have authority to regulate, and the AQMP exhorts these non-local partner agencies to do more to reduce emissions rates through their regulatory authority. By analogy, we believe that the AQMD can and should use the AQMP to identify SCAG and local municipality collective actions through their RTP and local land-use planning processes that are inducing unsustainable growth rates in the goods movement sector. While AQMD has no authority to enforce these actions, it can certainly ask these agencies to collectively be accountable to improve the air of their own residents.

We request that the AQMD perform a cost-benefit analysis to assess whether the economic costs of goods movement outweigh the benefits.

Comment 89-4

The underlying assumption is that unsustainable growth scenarios are good for the economy. While warehouses do create jobs, these jobs have been shown to be of very low quality, exploitative, and rife with health and safety issues. The number of jobs doesn't necessarily mean that, on a per job basis, the benefits outweigh the significant negative externalities for workers as well as communities.

We ask that the AQMD calculate

- the cost *per job* of all added emissions
- the cost of *regulation and mitigation* of all these specific pollutants, including fleet electrification and other mitigation measures
- the cost of added *carbon dioxide*
- the cost of added *NOx*
- the cost of *human health* to days lost in work or school to asthma, as well as direct healthcare costs
- the cost to the *environment* in loss of biodiversity, increased heat, lack of water filtration, loss of ability to create carbon sinks through land use.

We view the AQMP as an extremely important opportunity for the AQMD to provide leadership in collective decision making among local municipalities and other regulatory agencies. Collective decision-making in the regional transportation and land-use areas is undermining progress in attaining ozone or in

Comment 89-5

limiting carbon emissions[1]. We want to know how the AQMP will expand the discourse about attainment and whether AQMD will consider stating explicitly in the document that the easiest and cheapest way to limit emissions is through emissions demand management. We urge AQMD to consider that it is well within the scope of the AQMP to carve out a pathway between multiple agencies to consider resetting goods movement growth to sustainable levels more in line with population growth.

The goods movement sector emissions activity growth in the AQMP is an abdication of local municipality accountability for **emissions-demand management**. The AQMD does not regulate or have authority to control this. However, it is accountable to *describe and display* the decisions of local politicians and decision-makers in contributing to failed ozone management policies.

Comment 89-5 Con't

As such, we ask:

- In what ways will you adequately describe in the AQMP the role of collective local decision making in undermining the current air quality in the LA Basin?
- Will the AQMD advocate for collective-action from local decision-makers with regards to land-use and transportation planning?
- Will the AQMD stand-by while the collective decision-making local land-use agencies delay ozone improvements for decades at the cost of human health and suffering?

The same logic applies to carbon emissions, which continue to increase at a critical time in human history—and which also contribute to worsening local pollution. CO_2 continues to grow, as is clear from NOAA data, as demonstrated in **Figure 3**. This rise in CO_2 is linked with the logistics sector growth, which completely undermines our regional decline in gasoline VMT. Thus, the same premises apply to the potential role of the AQMP in address logistics demand with partner agencies in order to meet air quality standards. Increased carbon is a form of increased pollution, meaning that carbon emissions need to be considered as a co-benefit by the AQMP, especially during this time of climate crisis.

Comment 89-6

[1] We have read and appreciate your agency's comment letters on several goods movement projects, including warehouses.

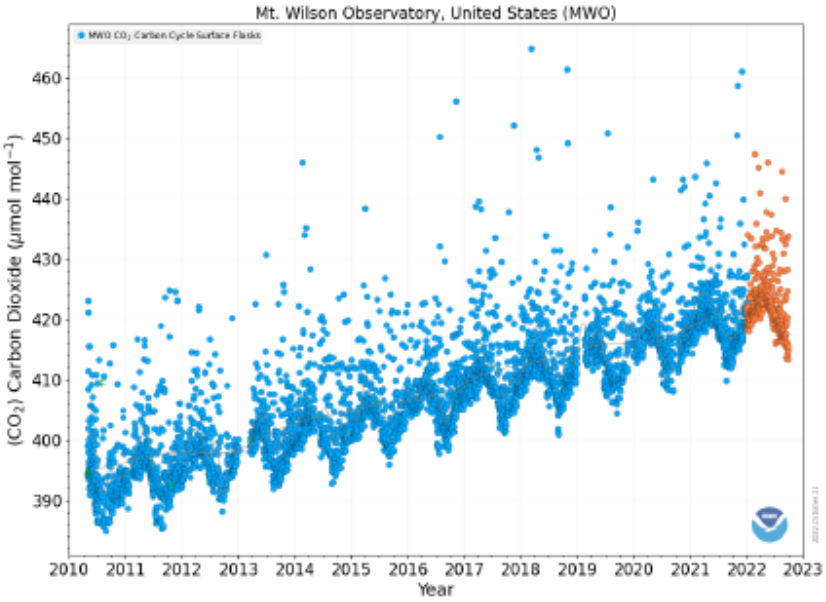


Figure 3. NOAA's global monitoring laboratory demonstrates a steady rise on CO2 at a critical time in human history. https://gml.noaa.gov/dv/iadv/graph.php?code=MWO&program=ccgg&type=ts

In conclusion, the most cost-effective, technology-free way to reduce emissions is to reduce the growth of the logistics sector along with your local-partner agencies. This requires a focus on local actions that can be taken by SCAG and collectively by local municipalities, and that requires AQMD leadership. The AQMD must provide leadership and coordination that will allow the region to limit exponential demand-driven growth that predominantly harms communities alongside goods movement corridors, and that will compromise air quality attainment for the entire region.

Our communities are paying the price with their health.

Sincerely,

Robert Redford CONSERVANCY
for Southern California Sustainability
PITZER COLLEGE

RADICAL RESEARCH LLC

Comment 89-6 Con't

Errata –

- Figure 1-2 is incorrect in its description of the "% annual increase" in the population. The annualized % increase in population over the trend period is ~0.55% per year. It isn't increasing over time. The value shown is merely the cumulative % increase since the baseline year of 2018. Comment 89-7
- P. 1-23 – 'Given the magnitude of emissions reductions required for attainment of the 2015 8-hour ozone standard, the attainment demonstration will have to rely on the deployment of future advanced technologies to achieve the needed emissions reductions.' Again, this is due solely due to the omission of any consideration of potential future emissions demand management strategies that would also be able to yield at least 30 tpd NOx reductions through e.g., no-growth or low-growth emissions strategies for goods movement sectors AT ZERO COST. Comment 89-8
- Figures 2-2, 2-4 – While this figure is important historically, showing ozone exceedance days since 2002 would be much more relevant and allow the reader to see the lack of progress in this metric over five straight generations of AQMP plans. In fact, specifically providing horizontal markers at AQMP plan years (2002, 2007, 2012, 2016) would be helpful to identify when progress stalled.
- Table 2-19 – The concentration values for San Bernardino County are higher than Los Angeles for NO2 in each category. Please correct. Also note the shift in max concentration Inland as a result of increase truck traffic induced by warehouse growth in the IE.
- Table 2-21 – should every near-road NO2 value be bold here? Seems like it should just be the CA-60 NR site and not every site to be consistent with other tables in this section.
- Atypical meteorology in 2020 – Is this assertion de-trending for changing average temperatures in the LA Basin as a result of climate change? This is the new climate change normal, and should not be considered atypical for the next 20 years of the AQMP, especially in the context of understanding future year ozone.
- Same point for Figure 2-19 – while 2020 was extreme with 4.4 M acres burned, 2021 had 2.6M acres burned, second-worst on record. More extreme fire years are predicted in a warmer climate. This should be planned for in the AQMP. Comment 89-9

Response to Comment 89-1: Staff appreciates your comments on the Revised Draft 2022 AQMP. South Coast AQMD is committed to an aggressive control strategy that achieves a 67 percent reduction in NOx emissions by 2037, leading to attainment of the 2015 ozone standard by the 2037 deadline. The 1997 and 2008 8-hour standards are less stringent than the 2015 8-hour standard and have earlier attainment due dates; therefore, the strategy to attain the 2015 standard will provide a path to meet the other ozone standards. Staff recognizes that this is a long timeline, and share your concern regarding long-term nonattainment of ozone standards in the Inland Empire and throughout the region. We further recognize that goods movement is a substantial and growing source of smog-forming emissions in our region. We are committed to taking all actions feasible to address these emissions.

Response to Comment 89-2: South Coast AQMD recognizes that ozone and PM2.5 levels are unacceptably high in the Inland Empire, and that emissions from the movement of goods contribute substantially to air pollution. While levels of diesel PM2.5 have been reduced by over 48 percent between MATES IV (2012-2013 measurements) and MATES V (2018-2019 measurements) at the Inland Valley San Bernardino monitoring station, diesel PM still drives roughly two-thirds of the cancer risk at this location. In addition, air toxics concentrations are typically highest around transportation hubs and corridors according to the MATES modeling analysis.

South Coast AQMD is committed to continuing to work closely with other agencies such as local cities, counties and SCAG, to advocate for better land use planning in consideration of air quality impacts. Under Health and Safety Code Section 40460(b), South Coast AQMD is not able to modify growth projections and must rely on the projections including vehicular and economic activities from SCAG's RTP/SCS, or other published publicly available data. Furthermore, while Health and Safety Code Section 40716 gives South Coast AQMD the authority to develop indirect source control measures to address mobile source emissions associated with facilities, that authority does not extend to land use planning and control decisions which are under the existing authority of counties and cities. Despite these limitations, in our role as commenting agency, South Coast AQMD staff reviews the air quality analysis in California Environmental Quality Act (CEQA) documents prepared by other public agencies for a wide variety of projects, including projects related to goods movement, and provides comments to cities and counties on those CEQA documents. As part of those comments, staff comments on the air quality analysis and health risk assessment to ensure the appropriate emissions quantification methodologies are used and the appropriate air quality thresholds are applied and recommends mitigation measures, where applicable. Letters written by South Coast AQMD staff commenting on the CEQA analysis of proposed projects are available by visiting South Coast AQMD's CEQA webpage at: http://www.aqmd.gov/home/rules-compliance/ceqa/commenting-agency/Comment-Letters2022.

Although South Coast AQMD does not have direct authority to reduce the growth of the logistics sector, South Coast AQMD will continue to partner with local agencies wherever possible during the development of future facility based mobile source measures to reduce emissions from goods movement sources. South Coast AQMD has already leveraged its authority under Health and Safety Code Section 40716 to adopt Rule 2305 – Warehouse Indirect Source Rule and proposed rules for marine ports and intermodal facilities are currently under development. Staff aims to bring Proposed Rule 2306 - New Intermodal Railyard Indirect Source Rule (PR 2306) and Proposed Rule 2304 - Marine Port Indirect Source Rule (PR 2304) to public hearing in 2023. Initiation of rule development for Proposed Rule 2306.1 - Existing Intermodal Railyard Indirect Source Rule (PR 2306.1) will shortly follow. The commenters are encouraged to participate in the public process for these rules.

Response to Comment 89-3: Figure-2 compares the annualized activity growth from 2018 to 2037 for sources related to goods movement. The activity data are based on CARB reports consistent with the data used in the Revised Draft 2022 AQMP and shows that the activity from goods movement is projected to outpace the population growth in the Basin. However, emissions from goods movement are not expected to follow the same trends shown in the figure because there are many regulations already in place that will lower emissions from sources in the goods movement sector. The recently adopted warehouse ISR will also help curtail the emissions from goods movement. Baseline emissions by major source categories can be found in Attachment A and B of Appendix III of the Revised Draft AQMP.

Total emissions from a given source is the product of an emission factor and the source activity. While activity is expected to increase, emission factors for many of those sources are expected to decrease substantially due to already adopted regulations, offsetting the activity growth. With the implementation of regulations on mobile sources already adopted by CARB and the expected improvement of overall engine efficiency for some mobile sources, the baseline NOx emissions over the Basin from the on-road and off-road mobile sources in 2037 were estimated to decrease by 76 percent and 28 percent, respectively, compared with the 2018 emission levels (156 tons per day in 2018 for on-road emissions

compared with 37 tons per day in 2037; 143 tons per day in 2018 for off-road emissions compared with 106 tons per day in 2037). To be more specific, the ocean-going vessel NOx emissions are projected to decrease from 32.2 tons per day in 2018 to 30.7 tons per day in 2037, as a result of the combined effect of increasing activity (depicted in Figure 2 as 4 percent annualized increase by using the growth rate for container vessels over 8000 TEU capacity in CARB's report) and the decrease of emission factors due to newer tier engine and cleaner fuel usage. In conclusion, although activity in the goods movement sector is projected to increase at a higher rate than population, emissions are expected to decline.

Also, staff respectfully disagree with the analogy of the AQI color scheme being used to link activity growth rates from different goods movement to health impacts. As discussed above, Basin-wide NOx emissions are expected to continue decreasing despite the projected growth in activity. Nevertheless, staff recognizes that having a more controlled growth in the goods movement sector could help reduce emissions further and earlier and help improve air quality in the Basin to assist with the attainment of the 2015 ozone standard. South Coast AQMD will continue working with SCAG and other entities with land use planning authorities so that economic growth does not hinder our efforts in attaining the air quality standards.

Response to Comment 89-4: A socioeconomic impact assessment is provided for proposed rules and rule amendments as required by South Coast AQMD Governing Board resolutions and various sections of the California Health and Safety Code. California Health and Safety Code section 40440.8 requires a socioeconomic impact assessment be performed for any proposed rule, rule amendment, or rule repeal which "will significantly affect air quality or emissions limitations." Health and Safety Code section 40728.5 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. This applies to multiple adopted and proposed indirect source rules (ISR) affecting the goods movement industry.

Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program was the first indirect source rule proposed by South Coast AQMD staff and adopted by the South Coast AQMD Governing Board since the 2016 AQMP called for a suite of such measures. The May 7, 2021, Governing Board package for Rule 2305 included the Final Socioeconomic Impact Assessment (SIA) of the proposed rule. The SIA Report did the following:

- Identified affected industries and their characteristics ;
- Identified and described characteristics of communities within which warehouses are located;
- Evaluated the economic impact of Rule 2305 on employment and the regional economy;
- Evaluated the potential impact of Rule 2305 on emissions reduction and health benefits; and
- Evaluated cost-effectiveness of alternatives to Rule 2305.

Given the difficulty of obtaining data directly from firms in the affected industries, the SIA Report relied on a combination of readily available data and proprietary data, a number of working assumptions, well-established, sophisticated economic and health benefit modeling tools, and cost estimates of various technology responses to Rule 2305 to determine the overall socioeconomic impact of the rule on the affected industries, the regional economy, and its residents.

In addition, regarding the request to conduct a cost-benefit analysis on the goods movement sector, the South Coast AQMD does not conduct cost-benefit analyses of particular sectors. During the adoption of Rule 2305 in May 2021, the SIA did contain a detailed analysis of both the costs and benefits associated

with the South Coast AQMD's Warehouse Indirect Source Rule.[2] Detailed costs of control equipment acquisition for various operational aspects of the goods movement sector were included (e.g., solar panels, EV/Low-NOx heavy- and medium-duty trucks, ZE yard tractors, hydrogen fueling stations, etc.) in addition to estimates of the employment impacts on those industries that are directly and indirectly affected by the rule. The economic modeling also accounted for the economy-wide potential impacts of large-scale fuel-switching. The potential annual public health benefits associated with the emission reductions of the rule were also estimated using an incidence-per-ton methodology and are inclusive of benefits of avoided work and school loss days, avoided asthma onsets and incidence, to name a few. Also included in the SIA, is a spatial analysis that estimated the existing environmental risks faced by communities adjacent to existing warehouse facilities. In addition, Chapter 3 of the 2022 AQMP Draft Socioeconomic Report includes a detailed analysis of the health benefits associated with all AQMP and CARB mobile source control strategies, a qualitative discussion on other benefits including improved visibility and avoided damages to crops and buildings, as well as a detailed environmental justice analysis included in Chapter 6.

Socioeconomic impact assessments will be prepared for proposed rules 2304 (ISR for Marine Ports) and 2306 (ISR for New Intermodal Facilities) that are currently in development.

Response to Comment 89-5: Thank you for suggesting revisions to the Draft 2022 AQMP encouraging South Coast AQMD to clarify its role in controlling emissions activity growth. To address your concerns, Figure 1 has been inserted in Chapter 1 and is accompanied by context to explain South Coast AQMD's role. However, as noted previously, South Coast AQMD must operate within the constraints of its legal authority, and we are not the primary agency for demand management. While the Draft Final 2022 AQMP acknowledges the fundamental concept that emissions are determined by the product of emissions activity and emissions factors, South Coast AQMD is committed to continuing to work closely with other agencies such as local governments and SCAG, to advocate for better land use planning in consideration of air quality impacts. According to SCAG, the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) recognizes and proactively addresses the serious environmental and air quality issues of the goods movement system through its goods movement environmental strategy and aggressive technology advancement action plan. SCAG is currently developing the 2024 RTP/SCS and the commenters are referred to SCAG's outreach and engagement webpage[3] and SCAG's technical advisory committees and working groups.[4]

South Coast AQMD will continue to use its authority to pursue emission reductions from the goods movement sector through Rule 2305 and Proposed Rules 2304, 2306, and 2306.1. Please refer to Response to Comment 89-2.

Response to Comment 89-6: Staff acknowledges the concern regarding rising CO2 concentrations. However, greenhouse gas emissions are beyond the scope of the 2022 AQMP which is focused on

[2] www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf.

[3] https://scag.ca.gov/outreach-engagement.

[4] https://scag.ca.gov/meetings-technical-advisory-committees-and-working-groups.

attaining the 2015 ozone standard. Staff will continue to work closely with partner agencies, including SCAG, to advocate for better land use planning in consideration of air quality impacts.

Response to Comment 89-7: Thank you for providing your comment on the description of the population growth in Figure 1-2. Staff corrected this description to read "% cumulative increase."

Response to Comment 89-8: Please refer to Response to Comment 89-2 for discussion on future emissions management strategies for the goods movement sector.

Response to Comment 89-9: Trends in regulatory design values (Figure 2-2) and ozone exceedance days (Figure 2-3) are both important statistics for assessing progress towards clean air goals, and therefore, are both shown in Chapter 2.

The bold text was adjusted in Table 2-19 to highlight the highest values at the CA-60 near road monitoring station. While it is likely that the increased truck traffic from the logistics industry is contributing the high NO2 concentrations along the CA-60 Near Road station, it is imprudent to make this assertion in the AQMP without an accompanying analysis, which is beyond the scope of the chapter.

The bold text was adjusted in Table 2-21 to highlight the highest near road and nearby ambient stations for each year to be consistent with Table 2-20.

The assertion that the meteorology in 2020 was atypically hot and stagnant was not based on a detrending of meteorological factors to account for climate change. This analysis does not attempt to ascribe the cause of the change in meteorology as that analysis is beyond the scope of this chapter. However, 2020 was significantly hotter and more stagnant on the highest ozone days than any of the previous five years (See Figure 2-18), indicating that 2020 was indeed an anomaly when comparing to recent meteorology.

The expected increased frequency of wildfires due to climate change is indeed an area of concern for public health. The South Coast AQMD has several public notification programs to help residents reduce their exposure to wildfire smoke. However, the intermittent and variable nature of wildfire smoke emissions along with the difficulty inherent in quantifying future emissions in response to climate change currently make it impractical to project future emissions in the air quality modeling simulations used in this AQMP.

Comment Letter #90

October 18, 2022

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

RE: A. O. SMITH COMMENTS TO SOUTH COAST REVISED DRAFT 2022 AQMP

A. O. Smith appreciates the opportunity to submit comments to the South Coast Air Quality Management District (SCAQMD) regarding the Revised Draft 2022 AQMP. The Revised Draft 2022 AQMP serves as the blueprint for how the region will meet the 8-hour ozone National Ambient Air Quality Standard (NAAQS) and fulfills U.S. EPA's nonattainment area requirements and includes a variety of strategies relying on NOx emissions reductions through economy-wide transition to zero emission technologies. A. O. Smith's comments focus on the proposed measures for residential and commercial buildings.

Comment 90-1

The Revised Draft 2022 AQMP proposes zero NOx emission standards for space heating, water heating, and cooking appliances for installation in new buildings and replacement at the end of useful life for units in existing buildings. Implementation is projected to begin in 2029 for residential buildings and in 2031 for commercial buildings.

As the State of California and local government agencies develop policies to reduce greenhouse gas (GHG) emissions and move toward building decarbonization, it is imperative that these policies that will be put into place are in alignment. A. O. Smith recommends a stepwise and pragmatic approach to reach decarbonization goals, and we look forward to working with the SCAQMD, other local agencies as well as the State in this regard. Recognizing the various challenges to building decarbonization, A. O. Smith respectfully requests that SCAQMD consider the following:

Comment 90-2

- **Create a Process to Define "Infeasible":** Develop a robust process to determine what it means to be "infeasible" as referenced in the Revised Draft 2022 Measures R-CMB-01 and C-CMB-01.
- **Align Implementation Dates:** Align the effective date for new construction as well as retrofitting existing buildings to 2031.
- **Develop a System of Prioritization for Retrofits**: Create a process by which homes that do not require main panel upgrades can be retrofitted first.

- **Include Electric Storage Resistance Water Heaters as an Eligible Upgrade for Incentive Program:** The Revised Draft 2022 proposes to provide incentives to promote replacement of zero emission appliances. The states of Oregon and Washington include electric storage resistance water heaters with demand response capabilities as well as HPWHs as eligible for decarbonization programs. California and SCAQMD can follow suit.

Comment 90-2 Con't

ABOUT A. O. SMITH

A. O. Smith is a global leader applying innovative technology and energy-efficient solutions to products manufactured and marketed worldwide. Our company is one of the world's leading manufacturers of residential and commercial water heating equipment and boilers, as well as a manufacturer of water treatment and air purification products. Along with its wholly owned subsidiaries, A. O. Smith is the largest manufacturer and seller of residential and commercial water heating equipment, high efficiency residential and commercial boilers, and pool heaters in North America.

As a leading manufacturer of both residential and commercial heat pump water heaters (HPWHs), A. O. Smith has a keen interest in this Revised Draft 2022 AQMP. The path to achieving carbon neutrality will require several changes in California. HPHWs will play a vital role in two key California policy priorities – reducing the carbon footprint of our buildings as the state transitions water heaters from primarily gas-fired to electricity and helping to manage the integration of increasing amounts of renewable energy as HPWHs may shift load and serve as thermal energy storage devices.

Comment 90-3

HPWHs and grid-interactive electric storage water heaters offer the ability to provide thermal storage serving as a battery for assisting the integration of renewable energy into local distribution grids in both residential and commercial applications. Flexible demand [or smart] water heaters, which include demand flexible electric resistance storage water heaters and HPWHs, have additional controls that allow the utility or third-party aggregator to control their energy use (e.g., load shifting) during the course of the day. Within a given local territory, a fleet of water heaters can be controlled to be a flexible energy storage system that can adjust the load on the grid. Given that every home in the state has a water heater, smart water heaters can play a key role in load management and carbon reduction within the built environment.

BUILDING ELECTRIFICATION REQUIRES SIGNIFICANT INVESTMENTS

In California, about 75 percent of homes (or 9.75 million) were built before 1990. Older homes are less likely to have adequately sized electric panels to accommodate all electric appliances.[1] In addition to the cost of the electric appliance, an older home may also require an electric panel upgrade. The

Comment 90-4

[1] California Energy Commission. *California Building Decarbonization Assessment - Final Commission Report*, August 13, 2021, pg 109.

California Energy Commission (CEC) estimates that a panel upgrade can cost between $2,500 - $4,000[2] and would likely be borne by the home or property owner. In a scenario where every house built before 1990 requires an electric panel upgrade, an investment between $25 - $40 billion dollars would be required. Another study on building electrification by the not-for-profit organization, Pecan Street, found that it would cost approximately $100 billion to upgrade electric panels in the residential sector across the country. Regardless of the exact amount, it's important to note that just one component of electrification, updating the main electrical panel of a home, will require a tremendous financial investment. The figures shared here do not even account for the cost of upgrading electric appliances that in many cases are more expensive than their gas counterparts. According to the Building Decarbonization Coalition, the cost to electrify low-to-moderate income (LMI) households in California would require investments in the magnitude of $72 - $150 billion over the next several decades.

Comment 90-4 Con't

A. O. Smith is pleased that the Revised Draft 2022 AQMP Draft also proposes to provide incentives to promote replacement with zero emission appliances in existing buildings with a focus on disadvantaged communities. Consistent and long-term funding for GHG reduction programs and incentives is essential in aiding consumers in making different purchasing decisions and accepting new technologies.

DEVELOPMENT OF PRIORITIZATION FOR REPLACEMENTS IN EXISTING BUILDING STOCK

A. O. Smith recommends a pragmatic approach to reach decarbonization goals, and we look forward to working with SCAQMD and other state agencies in this regard. As noted during the California Air Resources Board (CARB) Scoping Plan Update workshop, the age, and characteristics of some of the existing building stock can prove challenging to completely electrify. In addition to a panel upgrade, space constraints of an older home can make it difficult to install a HPWH. Most gas water heaters are placed inside a small closet, whereas a HPHW requires more space for the appliance to function efficiently and as intended. Given that some homes may lend themselves to a cheaper, faster, and overall easier transition to electrification, A. O. Smith recommends a system of prioritization to help target homes that are immediately ready for replacement while continuing to develop plans for buildings that are harder to electrify. In the State of New York, for example, some local jurisdictions are pursuing a stepwise approach for building electrification by completing energy audits of buildings (residential and commercial) as a first step to identify, tier, and prioritize which buildings can transition to all-electric end-uses ahead of others.

Comment 90-5

Retrofitting existing commercial buildings has similar issues as retrofitting a residential home: type and size of equipment, age of the building, and space constraints. However, the primary challenge in commercial applications is being able to match the customers hot water needs (i.e., load) in converting from a gas-fired product to a HPWH. In certain applications, the economics of the conversion will not be favorable, including the potential to increase the annual operating costs to the business owner or property owner. According to a report on the assessment of building decarbonization by the CEC, small business owners and property owners of small and medium size commercial buildings could incur retrofit costs of

[2] Building Decarbonization Coalition. *Towards an Accessible Financing Solution*. June 2020, pg 14.

up to $40,000.[3] Therefore, ensuring the correct application of the equipment will be critical. A. O. Smith recommends a stepwise approach to reaching decarbonization goals by allowing high efficiency gas condensing equipment to be used in limited cases where there is no viable electric alternative. Using hybrid heat pumps with options for gas/electric back-up may also be necessary for certain space constrained and larger thermal load applications, such as health care facilities, in certain areas of the state.

Comment 90-5 Con't

STREAMLINED PROCESS FOR ELECTRIFYING EXISTING BUILDINGS

Californians need a streamlined, easy-to-use program to assist homeowners and property owners in embracing electrification. Programs developed to incent customers to switch from gas water heaters to electric ones must be easy to use. Inspections of installations are critical to ensure that work was performed to required specifications and that appliances are working efficiently. Nevertheless, in-person inspections can further delay projects. A. O. Smith is encouraged that the City of San Jose has implemented an online permitting and inspection program for HVAC with heat pump technology which includes training for inspectors on heat pump technology installations so that they have the knowledge of what to look for in a quality heat pump installation. An online permitting process and remote inspections through virtual verification through pre and post pictures of installations should be considered as it continues to build out its electrification programs.

Comment 90-6

ADDRESSING THE SHORTAGE OF EXPERIENCED HPWH INSTALLERS

There is currently a shortage in California of plumbing contractors that have HPWH experience because most water heating systems in California are gas-fired. The current pool of trained contractors and installers is limited which keeps the HPWH market from growing a consistent and stable workforce. As such, we recommend that local and state agencies work together to explore barriers to the market, including licensing requirements which can help to address the HPWH contractor shortage that many manufacturers see taking place currently.

Comment 90-7

PROVIDING MANUFACTURERS WITH BUSINESS CERTAINTY

The CEC assumes a turnover rate of 7 percent in water heaters in existing single-family homes and multi-family units, which equates to 861,000 water heaters being replaced annually.[4] To capture even 10 percent of this market means installing 86,000 units per year. The number of HPWH units sold annually across the entire country in 2021 was approximately 112,000.[5] To convert the entire annual California market of water heaters to HPWHs would require a ten-fold increase of HPWH manufacturing capacity. These figures are meant to illustrate that meeting California's demand for HPWHs at even a modest pace would require a significant ramp up of manufacturing and have vast impacts on the supply chain. This sort

Comment 90-8

[3] CEC Draft 2021 Integrated Energy Policy Report Volume I: Energy Efficiency and Building, Industrial, and Agricultural Decarbonization, pg 16.
[4] ibid.
[5] ENERGY STAR® Unit Shipment and Market Penetration Report Calendar Year 2021 Summary, pg 6.

of increase takes time to orchestrate as new manufacturing capacity and production lines must be created. Therefore, having a clear and reliable policy scheme will be necessary to provide manufacturers with the business certainty needed to make the massive investments required to increase manufacturing capacity at this unprecedented scale.

Comment 90-8 Con't

CONCLUSION

The transition away from utilizing natural gas for space and water heating, to electricity exclusively, presents significant challenges from dedicated long-term funding, consumer awareness, physical infrastructure, and electricity grid modernization. A. O. Smith urges the SCAQMD, state and other local agencies to take a pragmatic, clear and reliable approach as they build toward GHG reduction goals.

In addition to having consistent programs that provide incentives and consumer awareness and education on electric water heaters, we recommend that SCAQMD also focus on:

- Streamlining processes for installations;
- Providing manufacturers with the business certainty needed to make the necessary investments required to increase manufacturing capacity; and
- Continuing agency coordination to align federal, state, and local policies and rules to help achieve a smooth transition to reaching carbon neutrality.

Comment 90-9

We appreciate the opportunity to provide comments to the Revised Draft 2022 AQMP. We look forward to continuing the dialogue and working with the SCAQMD to design a program that helps achieve our GHG reduction goals as effectively as possible.

Sincerely,

Joshua C. Greene
Corporate Vice President, Government and Industry Affairs
A. O. Smith Corporation
jcgreene@aosmith.com

Response to Comment 90-1: South Coast AQMD staff appreciates your comments on residential and commercial building measures for the 2022 AQMP.

Response to Comment 90-2: Thank you for your comments and suggestions. The South Coast AQMD is proposing control measures R-CMB-01, C-CMB-01, and others to implement zero emission residential and commercial appliances. During the rulemaking process, staff will conduct a technology assessment that considers all technologies, including emerging technologies, with the overall goal to maximize emission reductions and implement a zero-emission standard where feasible. Staff understands that lower NOx natural gas units might be necessary in some cases, for example where zero emission technology is deemed infeasible for an application, or a particular setting requires a non-zero emission backup. Staff has received comments from the public, including residents and manufacturers, expressing concerns regarding cost and product availability for implementing zero emission appliances. During the rulemaking process, staff will conduct a more in-depth analysis of feasibility including a thorough study of cost, product availability, building stock, appliance profile, etc. Staff is committed to making the effort to develop these rule amendments through a rigorous public process before bringing the proposed rules for the Governing Board's consideration.

In establishing a compliance schedule, there are many factors that are considered including alignment with other state or federal requirements. However, it should also be noted that the South Coast AQMD has an obligation to reduce NOx emissions as early as feasible. Also, during the rulemaking process, considerations such as new versus existing buildings will be addressed recognizing some existing buildings will have different challenges including panel upgrades for some existing residences and buildings. Lastly, regarding your comment for incentives for electric storage resistance water heaters, staff has not yet formulated the details of residential incentives. South Coast AQMD staff encourages AO Smith to continue to participate in future rulemaking efforts and discussions regarding incentive programs. Please refer to the Response to Comment 66-2 for further discussion on comments and suggestions.

Response to Comment 90-3: Thank you for providing background information and staff looks forward to working with A.O. Smith during the rule development.

Response to Comment 90-4: Thank you for your comment. Please refer to the Response to Comment 66-4 for further discussion.

Response to Comment 90-5: Thank you for your comment. Please refer to the Response to Comment 66-5 for further discussion.

Response to Comment 90-6: South Coast AQMD Rules 1121 and 1111 which apply to residential and small commercial water heaters and furnaces, respectively, are applicable to manufacturers, distributors, and installers, and the mandate is focused on unit emission limit. The South Coast AQMD does not require permits for these types of sources. The requirements generally require that the manufacturer certify compliant equipment and establish prohibitions of sale, distribution, or installation of non-compliant equipment. During the rulemaking process it is expected that the applicability for residential and small commercial equipment will continue to be implemented at the manufacturer, distributor and installer level, however, the form of the proposed rules may shift from a unit emission limit to possibly manufacturer averages, depending on the availability of zero emission technologies at the time of rule compliance. The comment is about permit and inspection by cities as part of building codes. The South

Coast AQMD does work closely with the Southern California Association of Governments (SCAG) and local cities and will invite those entities to future working group meetings.

Response to Comment 90-7: Staff understand the demand for licensed contractors will increase with the adoption of zero emission appliances. However, as the heat pump is a mature technology, especially for the residential market, most of the contractors for gas units are also licensed for installing zero emission units such as all electric heat pumps. There are also several aspects of the control measures that would prevent the drastic contractor shortage. First, consistent with the commenter's suggestion, a stepwise and pragmatic approach will be considered for implementing zero emission appliances, which will include a staggered installation schedule. Second, the control measures for appliances in existing buildings, which count for 90 percent of building stocks, are for replacement at the end of unit useful life. Staff does not expect the number of installations or replacements would change significantly at any one timeframe. However, staff agrees with the commentor that the South Coast AQMD and other agencies should work together to ensure contractor shortages do not become an issue during the future implementation. Staff has worked with contractors through the South Coast AQMD Clean Air Furnace Program, which is an incentive program that offers rebates for the installation of heat pumps. Through this program, more than 2,300 heat pumps have been installed and contractors are gaining more experience as the heat pump market grows.

Response to Comment 90-8: Staff understands the concerns for growing demand and the supply chain challenges. Technology continues to evolve to address market barriers and sustain reasonable supply and availability. Additional actions can help build a sustainable market, including increasing affordability and accessibility and increasing consumer education. During the rulemaking process, staff will consider supply chain and manufacturing capacity concerns. For further discussion, please refer to Response to Comment 53-2.

Response to Comment 90-9: Thank you for your comments. The South Coast AQMD will continue to work with other state and local agencies to ensure an equitable transition and implementation process.

Comment Letter #91

PACIFIC ENVIRONMENT

October 17, 2022

Chair Benoit and Members of the Board
Governing Board
South Coast Air Quality Management District ("SCAQMD")
Cob@aqmd.gov

Re: Revised Draft 2022 Air Quality Management Plan (Draft Plan)

Dear Chair Benoit and Members of the Board:

We would like to thank the **South Coast Air Quality Management District (SCAQMD)** for soliciting public comments on the Revised Draft 2022 Air Quality Management Plan (Draft Plan). We remain deeply concerned that the plan as drafted remains far too weak to address our present air pollution and climate crises.

Comment 91-1

Pacific Environment is a California headquartered non-governmental organization that has earned permanent consultative status at the International Maritime Organization (IMO), the United Nations entity that sets international shipping law. We are committed to working on shipping decarbonization in the Pacific Rim, with a focus on the San Pedro Bay Ports. Through our Ship It Zero corporate pressure campaign with Stand.Earth, we led support for the Ship It Zero resolutions in Los Angeles, Long Beach, and Minneapolis, calling on major importers to transition to 100% zero emission ships by 2030.

Thank you to staff for all the hard work they have done on this report. We urge SCAQMD to set a more aggressive target on eliminating climate and air pollution from marine vessels, and to identify specific actions that can rapidly phase out short-lived climate pollutants, which not only will help leverage and accelerate climate mitigation, but which also will have significant health benefits for local populations.

Comment 91-2

As was extremely clear from the recently released Intergovernmental Panel on Climate Change's (IPCC) AR6 report, rapidly reducing short-lived climate pollutants is the only pathway to keep to 1.5°C of global warming by mid-century. Already, we are seeing the catastrophic impacts of climate change around the world. Summer 2021's historic heatwaves in the U.S. Pacific Northwest and British Columbia, causing over 800 deaths, were previously projected to occur less than once in 10,000 years.

This summer 2022, we saw historic flooding in Pakistan, submerging more than one third of the country underwater and killing over 1,700 people. These floods too were an extreme climate event, previously projected to occur less than once in a century. Here in Southern California, our

473 Pine Street, Third Floor • San Francisco, CA 94104
p. 415.399.8850 • www.pacificenvironment.org

region suffered one of the worst smog seasons in decades, and the South Coast Air Basin remains in extreme nonattainment with the federal Clean Air Act.

One of the main culprits contributing to climate change and poor air quality are fossil-fueled ships. Most ships currently burn heavy fuel oil, the cheapest, most dirty and deadly fossil fuel containing asthma and cancer-causing air pollutants, including nitrogen oxide, sulfur oxide, and particulate matter. As a result, port-adjacent neighborhoods, including West Long Beach, experience eight years shorter life expectancy than the Los Angeles County average.

Comment 91-2 Con't

The California Air Resources Board (CARB) conducted an emissions analysis that found that fossil fuel pollution from 2021 cargo ship congestion at San Pedro ports has caused:

- An increase in NOx emissions equivalent to **5.8 million passenger cars in South Coast,** and
- An increase in particulate matter (PM) emissions equivalent to ***100,000 big rig trucks (or "Class diesel trucks") *per day***

Last year, the Port of Long Beach saw record shipping traffic and associated toxic pollution. CO2 increased by 87% from 2020, and diesel particulate matter went up by 77% from 2020[1]. The Port of Los Angeles was even worse, with diesel particulate matter 143% more than 2020 and CO2 increased by 136%[2].

Given the urgent climate and health risks, we are urging SCAQMD to make the following revisions to the Draft Plan:

Set Strong Emissions target for Commercial Marine Ports in alignment with 1.5 degrees
We agree with SCAQMD's statement that "the only viable pathway to achieve the required NOx reductions is through widespread adoption of zero-emission technologies across all stationary and mobile sources."

We urge SCAQMD to set strong emission reductions targets for the Commercial Marine Ports and work with CARB in support of a zero-emissions-by-2040 standard for all vessel categories. In the interim, set clear mandate to allow only Tier 3 main engines visits to San Pedro ports by 2025. For more actions the SCAQMD can take now, we recently released a policy report that lists actions that ports and subnational governments can take to reduce emissions from ships: *Ports Playbook for Zero-Emission Shipping*

There is record funding available for ports to combat transition port infrastructure to zero emissions: in California, there's $1.2 billion for Port and Freight Infrastructure Program under CalSTA, of which 70% is dedicated to San Pedro Ports. At the federal level, there's $3 billion for EPA to reduce air pollution at ports under the Inflation Reduction Act. Funding is available to modernize berths for container ships and for shore power requirements and use it to clean up pollution from the ports.

Accelerate At-Berth Requirements for Tanker Vessels

[1] Port of Long Beach 2021 Air Emissions Inventory Report
[2] Port of Los Angeles 2021 Inventory of Air Emissions

We urge SCAQMD to require an acceleration of the implementation of the tanker vessels at-berth shore-power requirements beyond what is required by CARB, to take effect in 2024, not the 2025 schedule, given the outsize impact it presently has in Long Beach port. We are starting to see the development of zero emission tankers: Asahi Tanker announced that it would build two of the world's first zero-emission electric propulsion tankers[3], that are expected to be completed consecutively from March 2022 to March 2023. As we wait for that market to mature, in the meantime, tankers should be forced to use shore-power by 2024 to achieve earlier health and environmental benefits.

Comment 91-3

Set Zero Emission standards for Commercial Harbor Craft by 2035

Harbor boats are **one of the top three cancer risks** for Californians living near the ports of Los Angeles and Long Beach. CARB adopted the nation's first standard on zero emission ferries this year but other harbor crafts can still remain on diesel engines.

SCAQMD should commit to zero emission harbor craft by 2035. CARB has proposed NOx and ROG emissions reductions for the relevant nonattainment areas in the relevant years, including SCAQMD. One way to achieve Nox and Rog emission reduction is to require commercial harbor craft in those areas be 100% zero emissions by 2035, in line with California Executive Order N-79-20.

Comment 91-4

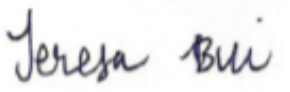
In the face of climate emergency, SCAQMD should not allow an entire new generation of harbor craft vessels to be designed for diesel power. New zero emission technologies are being developed every day:

- e1 Marine | News | World's First Methanol-Fuelled Towboat To Launch In 2023
- New battery hybrid tugboat design developed for U.S. market - Marine Log
- TECO 2030 Is Leading A Project Group That Will Build A Hydrogen-Powered High-Speed Vessel For The Port Of Narvik (fuelcellsworks.com)

Thank you for your consideration of these comments. Future generations will be grateful for your decisive climate action during the 2020's, the most decisive years of world climate history.

Dawny'all Heydari
Climate Campaigner, Clean Ports Southern California
Pacific Environment

[3] The World's First Zero-Emission Electric Tankers In Japan (intelligentliving.co)



Teresa Bui
State Climate Policy Director
Pacific Environment

Response to Comment 91-1: South Coast AQMD staff appreciates your comments and participation in the 2022 AQMP process. Staff also appreciates your commitment to help transition ships to zero emission by 2030.

Response to Comment 91-2: Staff recognizes the significant climate impact of and the need for emission reductions from ocean-going vessels (OGV). However, South Coast AQMD's regulatory authority is strongest for stationary sources, with limited authority to address mobile sources. Due to the South Coast Air Basin being in extreme nonattainment of various federal ozone standards, aggressive control measures targeting NOx emission reductions are the priority. The public health benefits associated with meeting the ozone standards will be substantial (see the 2022 AQMP Draft Socioeconomic Report, Chapter 3). Moreover, significant climate co-benefits are also expected from implementing various NOx control measures included in the 2022 AQMP.

Staff also recognizes the large emissions and significant public health implications due to port congestion that began in late 2020 and did not subside until late 2021. In fact, South Coast AQMD staff discussed concerns regarding congestion with Ports staff as early as March 2021 and shared a preliminary emissions impact assessment due to high numbers of container ships at anchorages.

Although staff agrees that OGVs meeting the Tier III engine emission limits is a potential first step toward emission reductions, the long service life of OGVs and slow turnover of OGV fleets to cleaner engine tiers make accelerating the deployment of newer vessels meeting the Tier III limits a challenge. Retrofitting in-service OGVs with low NOx technologies may offer a faster and more cost-effective way to reduce OGV emissions before zero emissions technologies can be implemented. As a local air agency, the South Coast AQMD has limited authority to regulate emissions associated with mobile sources and can impose neither new engine standards nor in-use emission standards on OGVs. That authority instead rests with the federal government and the International Maritime Organization (IMO) and CARB with authorization from EPA. As part of the proposed Federal Actions, the Revised Draft 2022 AQMP includes a strategy to pursue a clean ship visit regulation by the federal government, where only ships meeting certain clean air requirements can visit some or all U.S. ports. Furthermore, staff is working with CARB to explore state authority to further reduce OGV emissions from transit, maneuvering, and anchoring beyond the At-Berth requirements. Incentive programs and state and federal funding for port infrastructure are important to encourage a transition to cleaner ship technologies including zero emission technologies. As a local air agency, South Coast AQMD has limited authority to regulate emissions from OGVs. However, South Coast AQMD is developing an indirect source rule, Proposed Rule 2304, which is aimed at reducing emissions collectively from all port sources including OGVs. The rule will be designed to work in conjunction with regulatory and incentive measures that can be feasibly taken by federal, state, and the ports based on their respective authorities.

Response to Comment 91-3: As a local air agency, the South Coast AQMD has limited authority to regulate emissions associated with mobile sources including emissions when OGVs are docked at berth; direct authority to regulate OGVs is either through state or federal law. In 2020 CARB amended its At-Berth regulation that requires ships to reduce emissions while they are docked at a berth, either by plugging a ship into the land-based electrical grid (shore power), or by capturing emissions and sending them to control equipment. The amended regulation requires all container, reefer, and cruise vessel visits to reduce emissions at berth by 2023, and roro (roll-on, roll-off) and tanker vessels visiting the San Pedro Bay Ports by 2025. CARB is currently conducting an interim technology assessment to evaluate shore power feasibility for tanker vessels as well as inclusion of bulk and general cargo vessels and requirements for anchorage emissions into the regulation. In the meantime, staff will consider rule concepts that may potentially facilitate at-berth emission reductions from tanker vessels earlier than CARB's implementation schedule and for other vessel types not addressed in the At-Berth regulation as part of the rulemaking process for Proposed Rule 2304. Staff is actively engaging with CARB to identify opportunities for potential additional emission reductions from OGVs that may go above and beyond the At-Berth requirements.

Response to Comment 91-4: As a local air agency, the South Coast AQMD does not have authority to impose emission standards on commercial harbor craft; that authority instead rests with EPA and with CARB as part of their jurisdiction over Regulated California Waters. In 2021, CARB amended its Commercial Harbor Craft (CHC) regulation, which would require new and in-use harbor craft vessels to meet the cleanest Tier engine standards, expand the in-use regulatory requirements to additional vessel types, and accelerate the deployment of zero emission and advanced technologies for new excursion vessels by 2025 and new and in-use short-run ferries by 2026. Based on CARB's assessment of zero emission and advanced technologies for harbor craft accompanying the recent CHC amended regulation,[5] full zero emission (battery electric propulsion) and zero-emission capable hybrid technologies (diesel-electric propulsion with battery energy storage, wind turbines, and solar panels) have been demonstrated for excursion vessels, ship assist/escort tugboats, and passenger ferries. Due to marine battery energy storage technology being more suitable for short-distance routes and hydrogen fuel cell marine technology being in the development stages, diesel engines may still be required for vessel activities that require significant power output (e.g. long distance and/or heavy duty operations). In conjunction with CARB further evaluating zero emission technology capability for other harbor craft vessel types and funding demonstration projects, staff will continue to lead or assist with demonstrating maritime technologies for harbor craft, especially zero emission technologies, and facilitate early adoption of advanced technologies through our incentive programs. Staff will additionally consider in ISR rule concepts to facilitate zero emission technologies including the buildout of the supporting infrastructure as part of the rulemaking process for Proposed Rule 2304.

[5] Appendix E Technical Support Document Assessment of Marine Emission Control Strategies, Zero-Emission, and Advanced Technologies for Commercial Harbor Craft.

Comment Letter #92

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Dawn Anaiscourt
Director, Regulatory Affairs

1201 K Street, Suite 1810
Sacramento, CA 95814
T. 626-302-0905

October 17, 2022

Sarah Rees, Ph.D. Deputy Executive Officer
Planning, Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Dr., Diamond Bar, CA 91765

Submitted Electronically to: AQMPteam@aqmd.gov

SUBJECT: Southern California Edison Company's Comments on South Coast Air Quality Management District's (SCAQMD) Revised Draft 2022 Air Quality Management Plan (AQMP)

Dear Dr. Rees:

Introduction

Southern California Edison (SCE) appreciates the opportunity to comment on the Revised Draft 2022 AQMP to address the attainment of the National Ambient Air Quality Standards (NAAQS) for Ozone in the South Coast Air Basin and the Coachella Valley, in alignment with the 2022 State Implementation Plan.

We want to underscore the significant efforts that the SCAQMD staff has taken in the many months leading up to the Revised Draft AQMP. We recognize the challenges and difficulties inherent in this process and express our continued support for a strategy that addresses federal requirements to attain the 70 parts-per-billion (ppb) standard by 2037, as well as economically feasible compliance approaches. We commend AQMD staff for their hard work, transparency, and communication during the AQMP process, as well as taking our comments on the Draft AQMP into consideration.

Comment 92-1

We would like to take this opportunity to provide additional comments, below.

Transformation to ZE Technology

SCE understands the magnitude of challenges to transition to ZE technology and the path to get there by 2037. It is attainable through advanced forward planning, increased industry coordination, and new collaborative approaches in data-sharing and cooperation between public and private stakeholders. It will require all hands on-deck to make it happen- and we commend the SCAQMD for the formation of a ZE Transportation Infrastructure control measure to study and support ZE infrastructure policymaking and deployment to support the fuel switch. SCE stands ready and willing to support those efforts, as we work with State Energy Agencies to prepare the grid for this transformation.

Comment 92-2

As an electric utility serving a 50,000 square-mile area of central, coastal, and Southern California, SCE is planning for large-scale electrification of the grid in support of emissions reductions to help achieve the State's climate goals. Specifically, SCE is working closely with the State to ensure that the electric vehicle forecast used for grid planning is aligned with where state policies are moving. In addition SCE has commented on the proposed 2022 State SIP to ensure projections appropriately represents the number of ZEVs and chargers needed in 2030. SCE is also conducting scenario planning and working with fleets to assess where additional loads may occur to help improve the utility's planning processes in preparation for this clean energy transformation.

Comment 92-2 Con't

Certain grid infrastructure upgrades will be needed to support the clean energy transformation. SCE has been encouraging fleets within its territory to share their transportation electrification plans, in order to help the utility better understand where specific infrastructure upgrades are needed. SCE appreciates and commends the fleets that have already engaged with SCE to share their prospective plans, as well as AQMD's offer to share information through a public records request. This data will be used to appropriately identify and address necessary infrastructure upgrades required on the horizon.

Cost-Effectiveness

SCE supports SCAQMD's continued evaluation of cost-effectiveness for proposed AQMP control measures with the threshold of $59,000 per ton of NOx reduced, $36,000 per ton of VOCs reduced for stationary sources, and $200,000 per weighted ton for mobile sources. SCE also appreciates the introduction of a health-based cost/benefit screening tool for NOx reduction to compare the potential societal benefits of a regulation against the overall costs. However, SCE is still considering the implications of this option and the proposed threshold of $325,000 per ton of NOX reduced, and may offer additional feedback during the comment period for the Socioeconomic Report.

Comment 92-3

Environmental Justice Communities

SCE appreciates SCAQMD aligning its definition of Environmental Justice (EJ) Communities with the State's Disadvantaged Communities (DAC) definition and updating its charts and calculations for consistency. However, the DAC definition on p. 8-1 is not consistent with the SB 535 (May 2022) definition. SCE suggests the following edits to clarify this language and the basis for the presented calculations and maps.

Comment 92-4

> "While there is no universal definition for what constitutes an EJ community, one that is commonly used is the Senate Bill (SB) 535 definition of disadvantaged communities (DACs). These are defined as:
>
> 1. "Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0 (1,984 tracts);
> 2. Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores (19 tracts);

3. Census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0 (307 tracts); and
4. Lands under the control of federally recognized Tribes."[1]

~~the "25% highest scoring census tracts in CalEnviroScreen" along with "22 census tracts that score in the highest 5% of CalEnviroScreen's Pollution Burden, but do not have an overall CalEnviroScreen score because of unreliable socioeconomic or health data,"~~ All calculations and maps in this section that refer to EJ communities are consistent with this updated definition. The map of disadvantaged communities as defined by SB 535 that are within the Basin and the Coachella Valley is presented in Figure 8-1."

Comment 92-4 Con't

Conclusion

SCE thanks SCAQMD for its consideration of the above comments. We look forward to reviewing the Draft Final AQMP when it is released later this year. If you have any questions or would like to discuss these issues, please contact me (via telephone or at Dawn.Anaiscourt@sce.com) or Bethmarie Quiambao at Bethmarie.Quiambao@sce.com.

Comment 92-5

/s/

Dawn Anaiscourt

Dawn Anaiscourt
Director, Regulatory Affairs
Southern California Edison

Response to Comment 92-1: South Coast AQMD staff appreciates your continued participation and support in the 2022 AQMP public process.

Response to Comment 92-2: The South Coast AQMD looks forward to collaboration with SCE to ensure the success of regional zero emission infrastructure deployments in the region.

Response to Comment 92-3: Please refer to the general response on Cost-Effectiveness Method and Threshold. We welcome further comment and input from SCE on this approach.

Response to Comment 92-4: Staff corrected the definition of disadvantaged communities in Chapter 8 as outlined in SB 535.

Response to Comment 92-5: Staff appreciates the continued dialogue and looks forward to working together in finalizing and implementing the 2022 AQMP.

Comment Letter #93

October 18, 2022

Dr. Sang-Mi Lee
Planning and Rules Manager, Rule Development and Implementation
South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765-0830

Subject: Comments on the Revised 2022 Air Quality Management Plan

Dear Dr. Lee:

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to provide comments on the 2022 South Coast Air Quality Management Plan (AQMP). LADWP recognizes the significant work the South Coast Air Quality Management District (SCAQMD) has invested in development of this AQMP and looks forward to additional refinements to ensure successful attainment of air quality standards in a cost-effective manner.

Comment 93-1

In response to SCAQMD's request for stakeholder input, LADWP offers the following comments on five proposed Control Measures in the Revised Draft 2022 AQMP.

L-CMB-06: NOx Emission Reductions from Electricity Generating Facilities

Electricity generating units must comply with the Rule 1135 NOx emission limits by December 31, 2023. LADWP is currently implementing projects that involve equipment testing and modifications in order to comply with this rule. The draft AQMP's proposal to require further emission reductions would be difficult to achieve for facilities still trying to meet the Rule 1135 requirements. LADWP appreciates SCAQMD's consideration of the potential for stranded assets, and the incorporation of stranded asset costs as part of the cost-effectiveness calculations, noting that the cost-effectiveness for measure L-CMB-06 is already considerable at $722,000 per ton of nitrogen oxides (NOx) reduced.

LADWP requests clarification whether the combustion of hydrogen-blended natural gas fuel in electricity generating units fits under control measure L-CMB-06, or whether a separate category of emerging technologies needs to be explored for the use of hydrogen fuel.

Comment 93-2

The Los Angeles 100% Renewable Energy Study (LA100) explored pathways for LADWP to achieve a 100% renewable and carbon-free electricity supply as early as 2035. The LA100 scenarios recognize the need for dispatchable combustion-based electricity generating units located within the Los Angeles Basin to meet the last 10 to 20 percent (%) of electricity demand that is not feasible to supply from wind, solar, and batteries. All LA100 scenarios rely on the emerging technology of hydrogen combustion to generate electricity by 2045, making hydrogen a crucial aspect in maintaining grid reliability. The use of hydrogen is necessary to reduce

111 N. Hope Street, Los Angeles, California 90012-2607 Mailing Address: PO Box 51111, Los Angeles, CA 90051-5700
Telephone (213) 367-4211 ladwp.com

greenhouse gas emissions to achieve the goals of the California Air Resources Board's (CARB) AB 32 Climate Change Scoping Plan, which lays out a path to achieve carbon neutrality no later than 2045. By 2045, LADWP is planning to have sufficient carbon-free generation to serve its load, as well as, hydrogen-fueled local generating capacity to ensure a reliable electricity supply during all hours of the year including periods of high electricity demand and emergency situations.

Combustion turbines fueled with green hydrogen will not generate greenhouse gas (GHG) emissions because the hydrogen is produced from electrolysis of water powered by renewable electricity, and combustion of hydrogen does not result in carbon dioxide emissions. Studies are being conducted to monitor NOx emissions from combustion of hydrogen blended with natural gas. A preliminary study with General Electric (GE) shows positive results for NOx emissions not significantly increasing during steady-state operations relative to normal natural gas-fired operations. The New York Power Authority (NYPA), Electric Power Research Institute (EPRI), and GE led a pilot project[1] focused on hydrogen-fueled power generation by operating a combustion turbine on hydrogen blended with natural gas, ranging from 5% to 44% hydrogen. By increasing water injection rates, GE was able to maintain NOx levels at a constant level as hydrogen fuel increased to greater than 35% by volume. In addition, as the hydrogen fuel percentage increased with steady water injection, the NO2/NOx levels decreased by up to 61%, which benefits turbine turndown capability.

While the pilot project was done with wet combustion, LADWP plans to use dry combustion for its hydrogen/natural gas fueled combustion turbines. NOx emissions will be controlled by installing additional selective catalytic reduction catalyst and other controls such as low NOx combustors and ammonia reagent. LADWP expects the hydrogen-fueled combustion turbines will maintain the SCAQMD permit limits that govern operations during startup, shutdown, and normal operations. In addition, a new method for measuring NOx emissions will be used to accurately quantify emissions when combusting hydrogen; this new method will be discussed at the upcoming Air & Waste Management Association West Coast Section Annual Conference on October 20, 2022.

Having a reliable electricity supply is essential to support electrification, which is a key strategy to reduce emissions in other sectors of the economy. SCAQMD has stated that electric technology options will be required for residential and commercial water heating, space heating, cooking devices, non-emergency internal combustion engines, large turbines, and petroleum refineries. As vehicles, homes and businesses transition from other fuels to electricity, the demand for electricity is expected to grow 59%-84% statewide according to CARB's scoping plan modeling data. To serve the expected increase in electricity demand, electric utilities must plan for adequate generating capacity and resiliency to ensure a reliable electricity supply. The pressing need for utilities to "keep the lights on" has become even more pronounced in light of the recent heat wave and the Governor's emergency proclamation. Hydrogen will provide a

Comment 93-2 Con't

[1] 1. Martz T, Steele T (2022) Hydrogen Cofiring Demonstration at New York Power Authority's Brentwood Site: GE LM6000 Gas Turbine. EPRI Report 000000003002025167, EPRI. Available at https://www.epri.com/research/products/000000003002025167 [Verified 13 October 2022].

reliable and carbon-free path forward to ensure a reliable electricity supply, and is a resource that should be embraced on the path to achieving attainment. LADWP would be happy to provide more information about the research conducted and hydrogen options explored by LADWP, as well as, the LA100 study which highlights hydrogen as a crucial element in the de-carbonized future electricity supply for Los Angeles. At the time of the LA100 study, hydrogen is the only known technology that can provide dispatchable generating capacity at the scale needed within the Los Angeles basin, to achieve the Los Angeles City Council goal of a carbon-free electricity supply by 2035. However, achieving this goal depends on hydrogen fuel being delivered to our Los Angeles Basin generating stations.

Comment 93-2 Con't

L-CMB-04: Emission Reductions from Emergency Standby Engines

LADWP requests clarification of the emissions inventory estimates on which the proposed emission reductions are based, and the cost of the emergency engine replacement strategy.

Table L-CMB-04-A shows Total NOx emissions from diesel emergency internal combustion engines (ICEs) to be 2.6 tons per day. This value appears rather high; LADWP's emergency engines typically operate (on average) 20 to 30 hours per year. When estimating the emission inventory, if SCAQMD assumed 200 hours of operation per year which is the permitted maximum, this assumption would over-estimate actual emissions because emergency engines typically operate only a fraction of the permitted hours. If SCAQMD applied the default NOx emissions factor of 469 lbs/1000 gallons diesel to all engines, that also would over-estimate actual emissions. LADWP recommends utilizing engine-specific emission data when available, such as engine-specific emission data that was gathered for the Rule 1470 compliance plan and manufacturer emission data for certified engines. In addition, Annual Emission Reports (AER) for each diesel ICE will be submitted in March 2023 under the CARB Regulation for the Reporting of Criteria Air Pollutants and Toxic Air Contaminants, so SCAQMD will soon have a more accurate emission inventory for the diesel ICEs. If NOx emissions from diesel ICEs are over-stated, then the expected emission reductions from this control measure may not be real. LADWP recommends that SCAQMD recalculate the expected emission reductions for Control Measure L-CMB-04 using the 2022 AER data, then re-evaluate whether replacement of existing emergency engines is worthwhile.

Comment 93-3

In addition, LADWP encourages SCAQMD to consider the cost effectiveness of requiring replacement of emergency engines that have low annual usage (e.g., 20-30 hours per year). With regards to replacement of CARB Ultra Low Sulfur Diesel fuel with renewable diesel for emergency engines with low annual usage, LADWP asks SCAQMD to specifically address and verify that renewable diesel fuel is stable enough to be stored in the emergency engine's fuel tank for an extended time (several years) without turnover and still remain viable. LADWP has experienced firsthand the challenges of trying to operate our emergency engines on biodiesel, which created serious reliability issues and in some cases the biodiesel clogged the fuel lines and made the emergency engines inoperable. While we recognize that renewable diesel is different than biodiesel, LADWP is concerned that renewable diesel has not been proven effective for use in emergency engines with low fuel turnover.

Reliability of emergency engines is important to operate our critical back-up generators and pumps when called upon to maintain pressure in the water distribution system for firefighting purposes and delivery of safe treated drinking water in the event of an emergency such as a power outage, breakdown of electric water pumps/treatment equipment, or natural disaster such as an earthquake. Therefore, the feasibility study for use of renewable diesel should evaluate scenarios where the emergency engines have low usage, as well as older engines that specifically require diesel fuel only, and determine if there are any impacts with respect to low fuel turnover, long term fuel storage, use, and emergency operation of engines. Moreover, the feasibility study for replacement of water utility emergency standby engines should carefully assess reliability, fast response capability, and operation for an extended period of time to ensure continued supply of safe drinking water and for critical firefighting purposes. LADWP also recommends including a technical infeasibility exemption from the engine replacement requirement, similar to other rules such as SCAQMD Rule 1196 (for clean on-road heavy-duty public fleet vehicles).

Comment 93-3 Con't

C-CMB-02: Emission Reductions from Replacement with Zero Emission or Low NOx Appliances – Commercial Space Heating

On behalf of our business customers, LADWP thanks SCAQMD for acknowledging that the commercial market for heat pumps is not as mature as the residential market, and therefore implementation of the zero NOx emission standard for commercial space heating and cooling would start later than those for residential buildings.

LADWP continues to recommend against imposing a mitigation fee for low NOx appliances. Since there are few zero emission appliances currently available in the market, this mitigation fee will be an unnecessary financial burden for our customers.

Comment 93-4

CTS-01: Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants

LADWP appreciates SCAQMD considering the needs of public service utilities to use denatured alcohol for cleaning specific types of equipment used in the electric grid and drinking water treatment systems. Denatured alcohol is specified in the original equipment manufacturer (OEM) instructions for cleaning of Sulfur Hexafluoride (SF6) gas-insulated electrical circuit breakers (used in the electric grid) and ozone generators (for the treatment of potable water). Denatured alcohol dries quickly and does not leave a residue which is a key consideration for cleaning sensitive equipment, since residue provides a pathway for conducting electricity which could have catastrophic results. If the equipment is not properly maintained per the OEM's instructions, the equipment's warranty could be declared void, compelling equipment owners/operators to use denatured alcohol to ensure continued warranty coverage. The California Air Resources Board recognized utilities' need to use denatured alcohol per the OEM's instructions, so in the recent amendments to the Consumer Products Regulation, CARB specifically excluded from the definition of "Multi-purpose Solvent" denatured alcohol products sold to a public utility and used to maintain electrical equipment that is owned by a "Public Utility", and where the equipment manufacturer states that maintenance can only be performed with denatured alcohol.

Comment 93-5

In response to SCAQMD's suggestion to use semi-conductor grade acetone as a substitute for denatured alcohol, LADWP reached out to SF6 gas-insulated circuit breaker manufacturers to inquire if semi-conductor grade acetone could be used. The response was that acetone could be used to clean surfaces **external** to the gas space, but only denatured alcohol is approved to clean the O-rings, interrupter components and solid support insulators **internal** to the gas compartment. In addition, use of acetone is not recommended to clean composite hollow core insulators (Bushing insulators) to guard against possible degradation of the hydrophobic effect of the silicone sheds. LADWP also reached out to the manufacturer of the ozone generators and was informed that acetone is not approved for maintenance, therefore they do not recommend its use.

LADWP requests the Rule 1171 exemption (g)(4) be modified to include liquid as well as aerosol products. Since the previous supplier that packaged denatured alcohol in aerosol cans went out of business, it has been difficult to find another supplier willing to "can" the product. In addition, utilities prefer to use denatured alcohol in liquid rather than aerosol form, because liquid is safer to use around electrical equipment (from a flammability perspective), avoids atomization of the product, provides better transfer efficiency for wipe cleaning, has no propellant, generates no aerosol can waste, and has a lower cost. For maintenance of ozone generators, a specific exemption will be needed since a larger quantity of denatured alcohol is needed to do the job, but the emissions impact is small since the recommended cleaning frequency is once every five to fifteen years.

Comment 93-5 Con't

FUG-02: Emission Reductions from Industrial Cooling Towers

As SCAQMD considers a technology assessment to evaluate controls and practices to reduce VOC emissions from industrial cooling towers and potential cooling tower rule development, LADWP requests that SCAQMD consider land availability and the potential for reduction in efficiency. Monitoring and control equipment will potentially require additional land for which space considerations must be evaluated. In addition, cooling towers are operated to maximize the heat transfer from the working fluid. Installing monitoring and control equipment and mandating certain ways of operation may interfere with the current, optimized cooling tower operations.

Comment 93-6

In closing, your consideration of these comments on the Revised Draft 2022 AQMP is appreciated. If you have any questions or would like additional information, please contact Ms. Andrea Villarin, of my staff, at (213) 367-0409 or Ms. Tejasree Ganapa, of my staff, at (213) 367-6332.

Sincerely,

Katherine Rubin Digitally signed by Katherine Rubin
Date: 2022.10.18 14:07:57 -07'00'

Katherine Rubin
Director of Environmental Affairs

TG:cy
Enclosures
c/enc: Ms. Andrea Villarin
Ms. Tejasree Ganapa

Response to Comment 93-1: South Coast AQMD staff appreciates your comments on the 2022 AQMP.

Response to Comment 93-2: Staff acknowledges the considerable costs associated with Control Measure L-CMB-06 due to relatively low emissions in comparison to large equipment costs including potential stranded assets. Staff also acknowledges that many of the control measures rely on electrification which will lead to significant additional demand for electricity.

Combustion of hydrogen-blended natural gas is considered in measure L-CMB-06 as near-zero emissions technology and staff understands the need for dispatchable electricity generation to supplement renewable energy. Staff is following research and testing the impacts on NOx formation from the use of hydrogen-blended natural gas and is encouraged to hear near-zero permit limits will be maintained. The LA 100 study conducted in March 2021 reflects the state of technology at that time. Staff will continue to explore zero emission technologies that could provide power during periods of high demand and emergency situations. As staff enters into rulemaking, the BARCT analysis will include a technology assessment that includes any advancement in technology since the development of the 2022 AQMP. The technology assessment will evaluate zero-emission technologies that are commercially available during the rule development process as well as emerging zero-emission technologies that can be implemented at a later date to ensure the maximum emission reductions can be achieved.

Response to Comment 93-3: The emissions inventory for L-CMB-04 was determined using both reported emissions data and estimated emissions. There are over 11,000 diesel emergency ICEs in operation in the South Coast AQMD. Reported AER emissions data was used for the approximately 10% of diesel emergency ICEs with AER-reported emissions. For the remaining diesel emergency ICEs without reported emissions, staff calculated emissions using the emission factors in the South Coast AQMD permitting database, which are derived from information submitted with the permit application, and with an assumption of annual runtimes of 20 to 30 hours for each ICE. Calculations were based on year 2018 data, which is the base year used in this AQMP's emissions inventory. The emissions inventory will be further refined in future rulemaking activities.

L-CMB-04 is an important measure in the suite of control strategies in the 2022 AQMP. Staff acknowledged that emergency ICEs may have low annual usage. The cost effectiveness of requiring replacement of emergency ICEs that have low annual usage will be evaluated in future rulemaking activities.

CARB has conducted a renewable diesel multimedia analysis (available at https://ww2.arb.ca.gov/resources/documents/biodiesel-and-renewable-diesel-multimedia-evaluations) and verified that renewable diesel has the same chemical composition as conventional diesel fuel and meets the same American Society for Test and Materials (ASTM) International standard specification (ASTM D975-12a). CARB also issued a statement that renewable diesel should be treated the same as conventional diesel for all purposes, and can be used with existing diesel ICE infrastructure. Future rulemaking activities will assess the viability of requiring the best available retrofit control technology, zero-emission technology, the use of renewable diesel in emergency diesel ICEs, including potentially, the feasibility of long-term storage.

Response to Comment 93-4: Staff understands the cost concern for consumers. Staff encourages you to participate in the rulemaking process where BARCT analyses will be conducted, including a technology assessment and cost-effectiveness analysis when establishing the BARCT emission standard. Mitigation fees can provide manufacturers more time to develop and commercialize emerging technologies while

still providing a clear signal of the emission limit requirement. However, staff also understands that mitigation fees can be passed through to the consumer. During the rulemaking process, staff will evaluate a variety of different implementation approaches, and encourages LADWP to participate in the process.

Response to Comment 93-5: Staff appreciates the follow-up information collected on the use of acetone as a possible alternative as posited in Response to Comment 59-21. The determination as to whether an exemption for denatured alcohol for cleaning high-voltage electrical equipment and water treatment equipment will be conducted through the rule development process for Rule 1171 - Solvent Cleaning Operations. Amendments to Rule 1171 will be conducted through a public process which will include a working group that includes all stakeholders.

Response to Comment 93-6: Staff appreciates the additional information provided about cooling towers. As described in FUG-02, the initial phase of the technology assessment will be an evaluation of the need for additional controls and practices based on a review of technically feasible monitoring equipment, as well as an updated emissions inventory. Based on the findings of the initial assessment, a final technology and economic feasibility analysis will be conducted in conjunction with the rule development process which will address issues such as land availability and potential impacts to efficiency.

Comment Letter #94

Los Angeles County Business Federation
Strengthening the Voice of Business Since 2008

10.18.22

Mr. Ian MacMillan
Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Via email

Re: BizFed Comments on the SCAQMD Revised Draft 2022 Air Quality Management Plan

Dear Mr. MacMillan:

We are contacting you on behalf of BizFed, the Los Angeles County Business Federation. We are an alliance of over 220 business organizations who represent over 410,000 employers in Los Angeles County, including large and small businesses from a wide range of industries throughout the South Coast Air Basin (SCAB). We are writing to comment on the appendices to the South Coast Air Quality Management District (SCAQMD or District) Draft 2022 Air Quality Management Plan (AQMP or Plan). Many of the businesses we represent have or will be writing their own individual comment letters that specifically address the impacts to their industries. Our comments address the impacts to the business community as a whole and include overarching concerns of our diverse membership.

Comment 94-1

We would like to thank the District for its tireless work improving air quality in the SCAB. Like you, we desire to see continued emissions reduction while maintaining the region's economic vitality. We appreciate the staff and Board's diligence in bringing diverse groups to the table to map out the most effective AQMP as possible.

The 2022 AQMP is a regional blueprint for achieving the 2015 national ambient air quality standards (NAAQS) for ground level ozone of 70 parts per billion (ppb).[1] The District faces unique challenges in achieving the 2015 NAAQS for ground level ozone, including unique topography and meteorology, as well as sources of significant ozone pollution for which the District has limited control authority, such as mobile source emissions. Additionally, climate change is playing a significant role in ozone production. Higher temperatures produce more biogenic and evaporative VOC emissions and result in greater risk of wildfire emissions that contribute to ozone formation. Additionally, climate change is resulting in higher temperatures in spring and fall, resulting in longer ozone formation seasons. The 2022 AQMP projected emissions must consider the increased ozone resulting from climate change.

Comment 94-2

On September 2, 2022, the District released the Revised Draft 2022 AQMP.[2] The Draft Socioeconomic Report for the Revised Draft AQMP (Socioeconomic Report) was subsequently released on October 1, 2022.[3] The 2022 AQMP relies on a significant transition to zero emission (ZE) technologies. BizFed notes that historically, SCAQMD has remained neutral on fuel and technology in rulemakings to allow compliance flexibility and achievement of emission reductions at a more reasonable cost. BizFed strongly recommends that the 2022 AQMP include a technology and fuel neutral policy.

[1] 2015 Revision to 2008 Ozone NAAQS. Available at: https://www.federalregister.gov/documents/2015/10/26/2015-26594/national-ambient-air-quality-standards-for-ozone.
[2] 2022 Revised Draft AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp.pdf?sfvrsn=4.
[3] 2022 Draft AQMP Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

Los Angeles County Business Federation / 6055 E. Washington Blvd. #1005, Commerce, California 90040 / T: 323.889.4348 / www.bizfed.org

BizFed offers the following comments on the Revised Draft 2022 AQMP.

1. **SCAQMD is proposing a number of control measures which require electrification of equipment. SCAQMD must evaluate whether the electrical grid will have the infrastructure and grid capacity needed to support this widespread electrification proposal.**

The focus of the majority of the 2022 AQMP control measures is on deployment of ZE technologies, most of which would involve electrification.[4] Given this policy dependence on electrification, stakeholders expect that policy makers will have some basis for anticipating that widespread electrification will be a viable pathway. But neither SCAQMD or the California Air Resources Board (CARB) has actually considered whether our electric grid will have sufficient generation, transmission or distribution infrastructure to support the numerous proposed control measures which would depend on ready and abundant access to electricity.

Over the past few years, California has experienced multiple electricity outages. In the Preliminary Root Cause Analysis on the electricity outages caused by the 2020 heatwave, the California Independent System Operator (CAISO), California Public Utilities Commission (CPUC), and the California Energy Commission (CEC) concluded…[5]

In transitioning to a reliable, clean, and affordable resource mix resource planning targets have not kept pace to lead to sufficient resources that can meet demand.

The 2021 Proclamation of a State of Emergency ordered that all energy agencies act immediately to achieve energy stability, including accelerated plans for construction, procurement, and deployment of new clean energy and storage projects to mitigate the risk of capacity shortages.[6] The proclamation stated:

…there is insufficient time or supply to install new energy storage or zero-carbon energy projects to address the immediate shortfall of up to 3,500 megawatts during extreme weather events that is now projected for this summer… it is already too late, under normal procedures, to bring additional sources of energy online in time to address the previously unforeseen shortfall of up to 5,000 megawatts that is now projected for the summer of 2022.

As discussed in our letter dated July 22, 2022, California energy officials now estimate a continuing gap between energy demand and supply as follows:

Comment 94-3

[4] SCAQMD 2022 Revised Draft AQMP, Appendix IV, Stationary and Mobile Source Control Measures. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-appendix-iv-a.pdf?sfvrsn=6.
[5] CAISO, CPUC, CEC Preliminary Root Cause Analysis, Mid-August 2020 Heat Storm. Available at: http://www.caiso.com/Documents/Preliminary-Root-Cause-Analysis-Rotating-Outages-August-2020.pdf.
[6] State of California Proclamation of A State of Emergency, July 30, 2021. Available at: https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf.

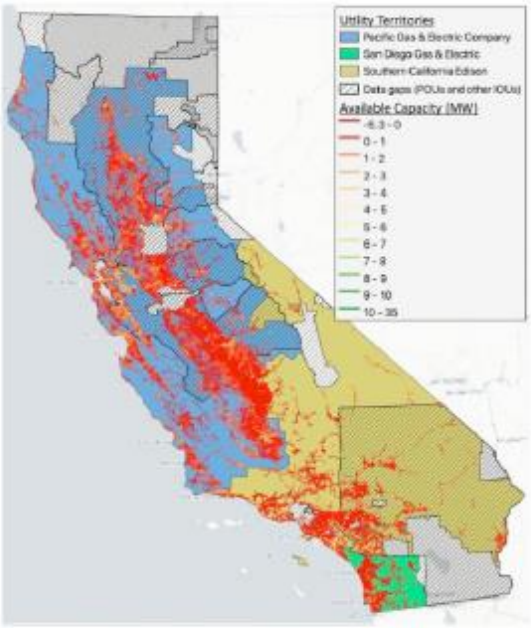
Table 1. Potential Energy Shortfall [7]

Year	California Potential Energy Shortfall (MW)
2022	3,500
2023	600
2024	2,700
2025	3,300

Along with generation capacity, the transmission and distribution infrastructure must also be considered. The CEC recently produced an analysis of locations in need of infrastructure upgrade based on capacity deficit as shown in Figure 1.[8,9]

Comment 94-3 Con't

Figure 1. Capacity Analysis from CEC's EDGE Tool (note: dark red indicates no available additional capacity)

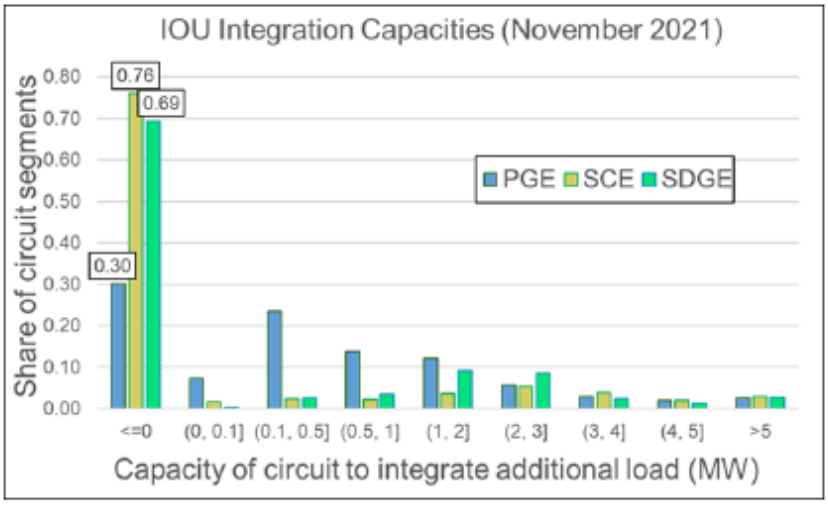


As shown in Figure 1, the California grid seemingly has little to no capacity to add electrical load on most circuits at this time.[10] CARB recently presented similar data suggesting that

[7] California Faces Summer Blackouts from Climate Extremes, Scientific American, May 23, 2022. Available at: https://www.scientificamerican.com/article/california-faces-summer-blackouts-from-climate-extremes/.
[8] CARB Advanced Clean Cars II Draft Environmental Analysis. Available at: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/appe1.pdf.
[9] Ibid.
[10] Ibid.

30% to 76% of circuit segments for the investor owned utilities (IOUs) have no capacity to integrate additional load (Figure 2).[11]

Figure 2: Additional Load Integration Capacity



SCAQMD has noted that the estimates of statewide ZE infrastructure needs developed by the CEC and CARB are…[12]

… largely based on a transition to ZE vehicles for on-road transportation sources, and ***do not fully address the adoption of ZE technologies by other sources, such as stationary, locomotives, and off-road equipment****. These preliminary estimates will need to be further developed to include the ZE infrastructure needs of all sources and address the unique needs of the South Coast and Coachella Valley Air Basins.* [Emphasis Added]

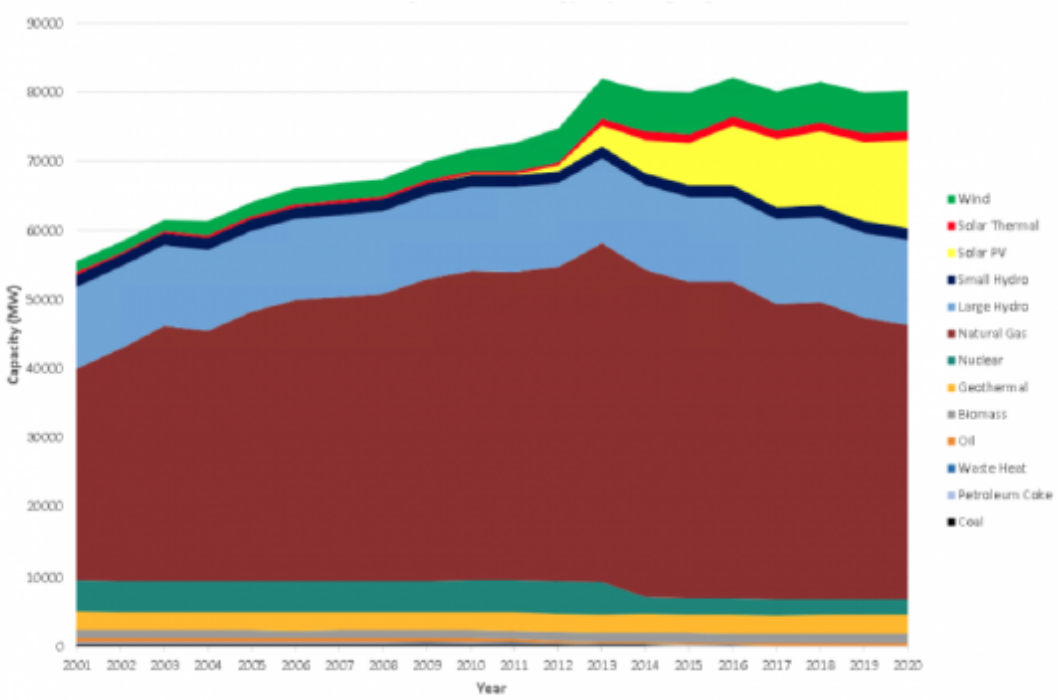
While SCAQMD has noted this important data gap, the 2022 Revised Draft AQMP makes no attempt to fill it even though senior executives have acknowledged the scale of these grid challenges. SCAQMD Executive Officer Wayne Nastri has recently noted that California will need to build 7 giga-watts (GW) of power per year for the next 40 years to meet projected demand.[13] To date, California has struggled to add much more than 1.2 GW in a year. Meanwhile, installed in-state electric generation capacity stopped growing over the past few years.

Figure 3 shows the installed in-state electric generation capacity by fuel type.[14] In-state electric generation capacity actually decreased between 2016 and 2020.

Comment 94-3 Con't

[11] CARB Virtual Medium and Heavy-Duty Infrastructure Workgroup Meeting - 01/12/22. Available at: https://www.youtube.com/watch?v=_mr0TmwxGZQ.
[12] SCAQMD 2022 AQMP Policy Brief, Infrastructure – Energy Outlook. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combined-infrastructure---energy-outlook.pdf?sfvrsn=8.
[13] SCAQMD Legislative Committee Meeting, September 9, 2022. Meeting recording available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=1jo6esFRYug.
[14] California Energy Commission Electric Generation Capacity and Energy. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-generation-capacity-and-energy.

Figure 3. Installed In-state Electric Generation Capacity by Fuel Type



Given these recent trends, how is it possible that the grid will accommodate significantly greater transmission and distribution needs? Where and how soon will the additional generation capacity be developed? SCAQMD simply must consider electrical grid impacts prior to advancing an AQMP that depends on a wide-scale electrification of residences, industry, and businesses. To help address the gap between the availability of widescale ZE infrastructure and expected needs, SCAQMD must work with state agencies to enable more expeditious planning and build-out of grid infrastructure.

Comment 94-3 Con't

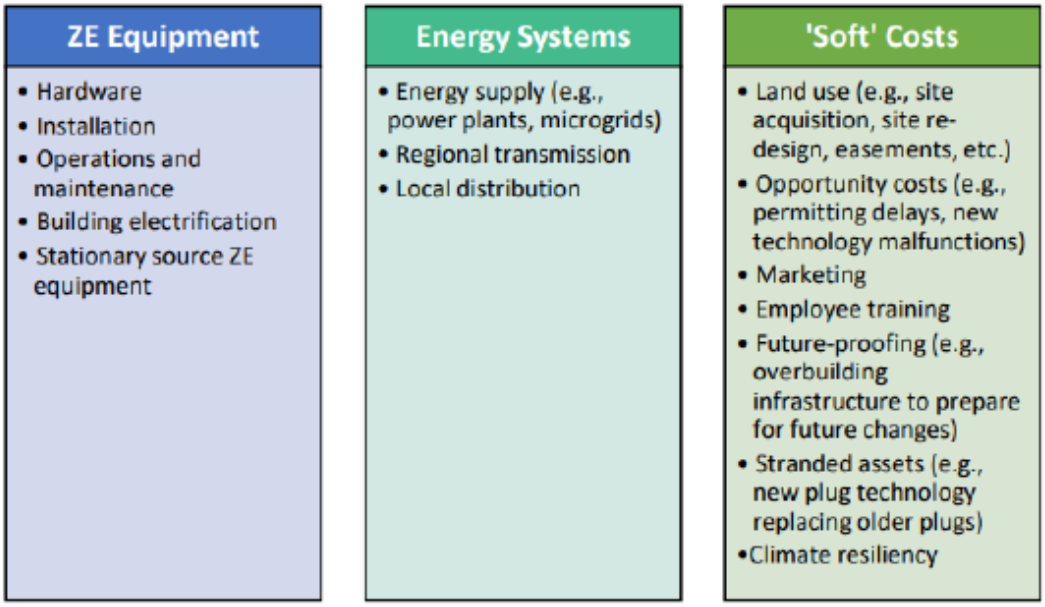
2. **The Socioeconomic Report omits costs related to installation of ZE infrastructure, especially those costs related to the electric grid. Planning level costs should be included so that the Socioeconomic Report analysis presents a more complete view of the implementation costs for the 2022 AQMP.**

Comment 94-4

The Socioeconomic Report outlines following three categories of expenditures related to installation of future ZE infrastructure[15]:

[15] 2022 Draft AQMP Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

Figure 4: Three Categories of Costs for Zero Emission Infrastructure



Comment 94-4 Con't

The Socioeconomic Report notes the challenges in quantifying the costs for ZE infrastructure, noting uncertainty in scale and distribution, with the lowest level of uncertainty for ZE Equipment and the highest level for 'soft' costs. Due to the uncertainty in costs, SCAQMD does not include 'soft' costs in the Socioeconomic Report analysis of costs related to implementation of the 2022 AQMP, stating[16]:

...further research is needed to determine how these costs for each project can be considered broadly when zero emission technologies are deployed at the scale needed to meet air quality standards.

But the AQMP is a planning document, and it is reasonable for stakeholders to expect at least planning-level estimates to have been conducted. Economy-wide electrification costs for infrastructure will be enormous. One estimate for a statewide on-road ZE fleet in California estimated cost to be $2.1 to $3.3 trillion between 2020-2050.[17] This estimate was related solely to on-road fleet transition and did not include electrical infrastructure costs related to stationary and off-road equipment. Just the same, it gives a sense of the scale for these types of infrastructure costs.

By completely omitting electrical infrastructure costs, the 2022 vastly understates the cost of the 2022 AQMP. Governing Board Member Carlos Rodriguez recently said as much when he expressed concern that the Socioeconomic Report excludes these grid infrastructure

[16] Ibid.
[17] Transportation Electrification Infrastructure Costs in California: A Meta-Study of Published Literature. Available at: https://www.arb.ca.gov/lists/com-attach/80-sp22-concepts-ws-AmNWJVA2VFgEM1Bn.pdf.

costs.[18] SCAQMD should use all available data to incorporate planning level estimates of infrastructure development costs in the 2022 AQMP.

3. The cost to implement the 2022 AQMP is considerable, even in comparison to the 2016 AQMP. SCAQMD should consider the burden these costs place on business owners and residents who will be forced to shoulder the costs.

The Socioeconomic Report presents the total incremental costs and quantified public health benefits of the control measures presented in the 2022 AQMP.[19] The Socioeconomic Report also presents estimates of impacts to jobs. The 2022 AQMP is significantly more costly than the 2016 AQMP and is projected to cause a staggering number of Jobs Foregone, where Jobs Foregone is defined as follows:

Comment 94-5

Jobs Foregone = Loss of Existing Jobs + Forecasted Jobs Not Created

Table 2 presents a cost and jobs foregone comparison between the 2016 and 2022 AQMPs[20, 21].

Table 2: 2022 AQMP Comparison to 2016 AQMP

	2016 AQMP Socioeconomic Report	**2022 AQMP Socioeconomic Report**
Total Incremental Cost	$15.7 billion	$34.3 billion
Average Annual Incremental Cost	$0.85 billion	$2.85 billion
Contribution to Total Annualized Cost - Stationary and Area Sources	36%	43.5%
Contribution to Total Annualized Cost - Mobile Sources	64%	56.5%
Incentives	93% of total incremental cost	10% of annual incremental cost
Jobs Impact - Best-Case Scenario	**29,000 jobs gained**	17,000 jobs foregone
Jobs Impact - Worst-Case Scenario	9,000 jobs foregone	**29,000 jobs foregone**

[18] SCAQMD Governing Board Meeting, October 7, 2022. Available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=mQOlxYZ-Cm4.
[19] 2022 Draft AQMP Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.
[20] Ibid.
[21] 2016 Final Socieconomic Report, 2016 AQMP. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf?sfvrsn=2.

And as stated above, this is not even a complete assessment. The costs presented in Table 2 do not include costs related to expansion of grid infrastructure, which could easily dwarf the costs that were included. The job impacts in the Socioeconomic Report are likely overly optimistic. SCAQMD should include costs of electric grid development in the Socioeconomic Report, as these costs will be borne both by the stationary sources and the population of the South Coast Air Basin.

Comment 94-5 Con't

4. SCAQMD must derive reasonable cost-effectiveness thresholds.

SCAQMD has proposed two options for cost-effectiveness thresholds in the 2022 revised Draft AQMP. The first option reflects the approach used in previous AQMPs and adjusting for inflation. This option results in a cost effectiveness threshold of $59,000 per ton of NOx reduced. The second option is a health benefit cost-effectiveness threshold of 325,000/ton derived from a two-part analysis. SCAQMD staff first used EPA's "Estimating the Benefit per Ton of Reducing Directly-Emitted PM2.5, PM2.5 Precursors, and Ozone Precursors from 21 Sectors", which uses the Benefits Mapping and Analysis Program Community Edition (BenMAP-CE v.1.5) to derive a cost effectiveness of $307,636/ton NOx reduced. Staff further used the 2016 socioeconomic report, which relies on the same BenMAP model and resulted in a cost-effectiveness of 342,000 per ton of NOx reduced. SCAQMD averaged these two results to arrive at the proposed cost-effectiveness threshold of $325,000/ton.

Comment 94-6

If SCAQMD wants to include all the societal benefit in estimating cost-effectiveness, then it should also include all the societal costs. Other economic costs, such as stranded assets, job losses, and consumer prices should also be factored in. SCAQMD Governing Board Member Carlos Rodriguez recently agreed, stating that in evaluating cost-effectiveness thresholds, SCAQMD should not only rely on health benefits, but also include other economic costs. [22] SCAQMD must consider what is reasonable to ensure that facilities are able to continue conducting business in the south coast air basin.

Conclusion

The District has made significant strides in air reductions during the past 30 years, despite a significant population increase, and it should be proud of its accomplishments. Those reductions were accomplished in collaboration with many stakeholders, in particular the business community. We respect that SCAQMD is placed in a uniquely challenging situation to demonstrate attainment of the 2015 ozone NAAQS, and the business community stands ready to help the District achieve all practicable reductions as soon as possible.

Comment 94-7

We look forward to continuing our work with the District to see progress made in a way that is equitable and lasting.

Thank you for your consideration of our letter. If you have any questions, please contact BizFed's Director of Policy and Advocacy Sarah Wiltfong at sarah.wiltfong@bizfed.org.

Brissa Sotelo-Vargas
BizFed Chair

David Fleming
BizFed Founding Chair

Tracy Hernandez
BizFed Founding CEO

David Englin
BizFed President

[22] SCAQMD Mobile Source Committee Meeting, September 16, 2022. Available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=zSMKn4miXuk

BizFed Association Members

7-11 Franchise Owners Association for SoCal
Action Apartment Association
Alhambra Chamber
American Beverage Association
Antelope Valley Chamber formerly Lancaster Chamber of Commerce
Apartment Association of Greater Los Angeles
Apartment Association, CA Southern Cities, Inc .
Arcadia Association of Realtors
AREAA North Los Angeles SFV SCV
Armenian Trade & Labor Association
Arts District Los Angeles
Associated Builders & Contractors SoCal (ABC SoCal)
Association of Club Executives
Association of Independent Commercial Producers
AV Edge California
Azusa Chamber
Beverly Hills Bar Association
Beverly Hills Chamber
BioCom
Black Business Association
BNI4SUCCESS
Bowling Centers of SoCal
Boyle Heights Chamber of Commerce
Building Industry Association - LA/Ventura Counties
Building Industry Association of Southern California
Building Industry Association- Baldyview
Building Owners & Managers Association of Greater Los Angeles
Burbank Association of Realtors
Burbank Chamber of Commerce
Business and Industry Council for Emergency Planning and Preparedness
Business Resource Group
CABIA California Business and Industrial Alliance
Calabasas Chamber of Commerce
CalAsian Chamber
CalChamber
California Apartment Association- Los Angeles
California Asphalt Pavement Association
California Bankers Association
California Business Properties
California Business Roundtable
California Cannabis Industry Association
California Cleaners Association
California Contract Cities Association
California Fashion Association
California Gaming Association
California Grocers Association
California Hispanic Chamber
California Hotel & Lodging Association
California Independent Oil Marketers Association (CIOMA)
California Independent Petroleum Association
California Life Sciences Association
California Manufacturers & Technology Association
California Metals Coalition
California Natural Gas Producers Association
California Restaurant Association
California Retailers Association
California Self Storage Association
California Small Business Alliance
California Society of CPAs - Los Angeles Chapter
California Trucking Association
Carson Chamber of Commerce
Carson Dominguez Employers Alliance
Central City Association
Century City Chamber of Commerce
Cerritos Regional Chamber of Commerce
Chatsworth Porter Ranch Chamber of Commerce
Citrus Valley Association of Realtors
Claremont Chamber of Commerce
Commercial Industrial Council/Chamber of Commerce
Compton Chamber of Commerce
Construction Industry Air Quality Coalition
Construction Industry Coalition on Water Quality
Council on Infill Builders
Covina Chamber
Crenshaw Chamber of Commerce
Culver City Chamber of Commerce
Downey Association of REALTORS
Downey Chamber of Commerce
Downtown Alhambra Business Association
Downtown Center Business Improvement District
Downtown Long Beach Alliance
El Monte/South El Monte Chamber
El Segundo Chamber of Commerce
Employers Group
Encino Chamber of Commerce
Energy Independence Now EIN
Engineering Contractor's Association
EXP Future
FastLink DTLA
Filipino American Chamber of Commerce
Friends of Hollywood Central Park
FuturePorts
Gardena Valley Chamber
Gateway to LA
Glendale Association of Realtors
Glendale Chamber
Glendora Chamber
Greater Antelope Valley AOR
Greater Bakersfield Chamber of Commerce
Greater Lakewood Chamber of Commerce
Greater Leimert Park Crenshaw Corridor BID
Greater Los Angeles African American Chamber
Greater Los Angeles Association of Realtors
Greater Los Angeles New Car Dealers Association
Greater San Fernando Valley Chamber
Harbor Association of Industry and Commerce
Harbor Trucking Association
Historic Core BID of Downtown Los Angeles
Hollywood Chamber
Hong Kong Trade Development Council
Hospital Association of Southern California
Hotel Association of Los Angeles
Huntington Park Area Chamber of Commerce
ICBWA- International Cannabis Women Business Association
Independent Cities Association
Industrial Environmental Association
Industry Business Council
Inglewood Board of Real Estate
Inland Empire Economic Partnership
International Franchise Association
Irwindale Chamber of Commerce
La Cañada Flintridge Chamber
LA Coalition
LA Fashion District BID
LA South Chamber of Commerce
Larchmont Boulevard Association
Latin Business Association
Latino Food Industry Association
Latino Restaurant Association
LAX Coastal Area Chamber
League of California Cities
Long Beach Area Chamber
Long Beach Economic Partnership
Los Angeles Area Chamber
Los Angeles County Board of Real Estate
Los Angeles County Waste Management Association
Los Angeles Economic Development Center
Los Angeles Gateway Chamber of Commerce
Los Angeles LGBTQ Chamber of Commerce
Los Angeles Latino Chamber
Los Angeles Parking Association
Los Angeles World Affairs Council/Town Hall Los Angeles
MADIA
Malibu Chamber of Commerce
Manhattan Beach Chamber of Commerce
Marketplace Industry Association
Monrovia Chamber
Motion Picture Association of America, Inc.
MoveLA
MultiCultural Business Alliance
NAIOP Southern California Chapter
NAREIT
National Association of Minority Contractors
National Association of Tobacco Outlets
National Association of Women Business Owners
National Association of Women Business Owners - LA
National Association of Women Business Owners- California
National Federation of Independent Business Owners California
National Hookah
National Latina Business Women's Association
Orange County Business Council
Orange County Hispanic Chamber of Commerce
Pacific Merchant Shipping Association
Panorama City Chamber of Commerce
Paramount Chamber of Commerce
Pasadena Chamber
Pasadena Foothills Association of Realtors
PGA
PhRMA
Pico Rivera Chamber of Commerce
Planned Parenthood Affiliates of California
Pomona Chamber
Rancho Southeast REALTORS
ReadyNation California
Recording Industry Association of America
Regional CAL Black Chamber, SVF
Regional Hispanic Chambers
San Dimas Chamber of Commerce
San Gabriel Chamber of Commerce
San Gabriel Valley Economic Partnership
San Pedro Peninsula Chamber
Santa Clarita Valley Chamber
Santa Clarita Valley Economic Development Corp.
Santa Monica Chamber of Commerce
Sherman Oaks Chamber
South Bay Association of Chambers
South Bay Association of Realtors
South Gate Chamber of Commerce
South Pasadena Chamber of Commerce
Southern California Contractors Association
Southern California Golf Association
Southern California Grantmakers
Southern California Leadership Council
Southern California Minority Suppliers Development Council Inc.
Southern California Water Coalition
Southland Regional Association of Realtors
Sportfishing Association of California
Sunland/Tujunga Chamber
Sunset Strip Business Improvement District
Torrance Area Chamber
Tri-Counties Association of Realtors
United Cannabis Business Association
United Chambers – San Fernando Valley & Region
United States-Mexico Chamber
Unmanned Autonomous Vehicle Systems Association
US Green Building Council
US Resiliency Council
Valley Economic Alliance, The
Valley Industry & Commerce Association
Venice Chamber of Commerce
Vermont Slauson Economic Development Corporation
Vietnamese American Chamber
Warner Center Association
West Hollywood Chamber
West Hollywood Design District
West Los Angeles Chamber
West San Gabriel Valley Association of Realtors
West Valley/Warner Center Chamber
Western Electrical Contractors Association
Western Manufactured Housing Association
Western States Petroleum Association
Westside Council of Chambers
Whittier Chamber of Commerce
Wilmington Chamber
Women's Business Enterprise Council
World Trade Center

Response to Comment 94-1: South Coast AQMD staff appreciates your participation in the development of the 2022 AQMP.

Response to Comment 94-2: In recognition of the magnitude of emission reductions needed to attain the standard, the 2022 AQMP seeks broad adoption of zero emission technology where feasible and low NOx technologies when zero emission technologies are not yet feasible. South Coast AQMD remains technology and fuel neutral and recognizes that low NOx combustion technologies are still needed in some cases where zero emission technology is not yet commercially available. The technology and fuel neutral policy is stated in Chapter 4: "Air quality regulatory agencies have traditionally set policies and requirements that are performance-based. Such standards do not prescribe specific technologies or fuel usage provided the required level of emission control is achieved. This is a policy that the South Coast AQMD intends to continue."

Response to Comment 94-3: The South Coast AQMD appreciates your comments on the challenges associated with grid capacity and reliability, and acknowledges the difficulty in assuring grid infrastructure will be ready in time for zero emission vehicle/equipment deployments. The uncertainties described are what the South Coast AQMD hopes to address through inclusion of MOB-15 in the AQMP. With implementation of MOB-15, the South Coast AQMD will collaborate with all associated agencies and stakeholders to assure zero emission infrastructure assessments fully address the expected demand, share information and data needed to expedite planning efforts, and support accelerated deployments of zero emission infrastructure in advance of the need, wherever feasible.

Response to Comment 94-4: Please refer to the Response to Comments for the Draft Socioeconomic Report.

Response to Comment 94-5: Please refer to the Response to Comments for the Draft Socioeconomic Report.

Response to Comment 94-6: Please refer to the general response on Cost-Effectiveness Method and Threshold. Please also note that during the rulemaking to implement a given control measure all costs associated with the rule – including impacts on jobs, evaluation of stranded assets, etc., will be evaluated and considered as part of the socioeconomic report for the rule. The revised approach to cost-effectiveness does not result in fewer compliance costs being considered, but instead compares these costs to the monetized benefits associated with the emissions being reduced.

Response to Comment 94-7: Significant strides in improving the region's air quality have been made through collaboration with many stakeholders, including BizFed. Staff looks forward to continuing to work collaboratively with BizFed to attain the 2015 8-hour ozone standard.

Comment Letter #95

CALIFORNIA HYDROGEN BUSINESS COUNCIL
Hydrogen Means Business in California!

18847 Via Sereno
Yorba Linda, CA 92886
Phone: (310) 455-6095 | Fax: (202) 223-5537
info@californiahydrogen.org | www.californiahydrogen.org

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

October 18, 2022

RE: Revised Draft 2022 AQMP

I. INTRODUCTION

The California Hydrogen Business Council (CHBC), a trade association representing over 135 member organizations, working to commercialize hydrogen and supporting hydrogen technologies across the economy, appreciates the opportunity to submit comments to the Revised Draft 2022 Air Quality Management Plan. Summarily, our comments address how fuel cell systems and fuel cell electric vehicles (FCEVs) should be the preferred resources for electric generation and air pollutant reduction in the stationary and mobile source categories.

These comments will address the following control measures:

- L-CMB-03: NOx Reductions from permitted Non-Emergency Internal Combustion Engines
- L-CMB-04: Emission Reductions from Emergency Standby Engines
- MOB-05: Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles
- MOB-06: Accelerated Retirement of Older On-Road Heavy-Duty Vehicles
- MOB-15: Zero Emission Infrastructure for Mobile Sources

Comment 95-1

II. COMMENTS

A. L-CMB-03: NOx Reductions from permitted Non-Emergency Internal Combustion Engines

The CHBC respectfully recommends the inclusion of fuel cells as a part of the proposed method of control to transition older and higher-emitting engines in the RECLAIM program. Fuel cell systems that run on hydrogen are zero-emission and have been successfully commercially deployed for the last twenty years.

Comment 95-2

CALIFORNIA HYDROGEN BUSINESS COUNCIL
Hydrogen Means Business in California!

18847 Via Sereno
Yorba Linda, CA 92886
Phone: (310) 455-6095 | Fax: (202) 223-5537
info@californiahydrogen.org | www.californiahydrogen.org

CHBC members, Plug Power[1] and Bloom Energy[2], for example, have been providing backup and firm power for material handling, data centers and telecommunications, in lieu of internal combustion engines.

Comment 95-2 Con't

B. L-CMB-04: Emission Reductions from Emergency Standby Engines

The CHBC supports the inclusion of zero and near-zero emission fuel cell systems in the proposed method of control as a replacement for emergency standby engines and an immediate reduction in NOx and VOCs. We agree that fuel cell systems have been successful as backup power resources for small-scale uses like powering stoplights during power outages. However, we would like to note that fuel cell systems can provide large-scale, multi-MW backup power and have done so commercially outside of California.[3] We encourage the addition of fuel cell systems as part of the scalable power sources that would replace diesel-fueled emergency standby engines.

Comment 95-3

C. MOB-05: Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles

The CHBC supports the continuation of the Clean Cars 4 All program, which assists eligible low and moderate-income residents living in disadvantaged communities (DAC) with purchasing a like-new or new clean vehicle. Clean Cars 4 All includes FCEVs as a part of its program. Providing residents in DACs access to FCEVs will have an immediate impact on the air quality of that community and serve as an education tool for others in the community to become familiar with the growing technology.

In response to the proposed methods of control, the CHBC is supportive of retiring up to 2,000 light-and medium-duty vehicles per year through the Replace Your Ride Program, as well as including a $2,000 voucher for hydrogen fueling, to reflect the $2,000 voucher proposed for the installation of charging equipment.

Comment 95-4

[1] Plug Power. April 19, 2022. Available at: https://www.ir.plugpower.com/press-releases/news-details/2022/Plug-Supplies-Walmart-with-Green-Hydrogen-to-Fuel-Retailers-Fleet-of-Material-Handling-Lift-Trucks/default.aspx. Accessed October 6, 2022.
[2] Bloom Energy. Available at: https://www.bloomenergy.com/technology/. Accessed October 6, 2022.
[3] H2 View, George Heynes, "New 78.96 MW hydrogen fuel cell power plant opens in South Korea," November 3, 2021. Available at: New 78.96MW hydrogen fuel cell power plant opens in South Korea (h2-view.com). Accessed October 6, 2022.

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info@californiahydrogen.org | www.californiahydrogen.org

D. MOB-06: Accelerated Retirement of Older On-Road Heavy-Duty Vehicles

Although fuel cell trucks are considered a viable option upon the successful deployment of the proposed Trade Up Program for On-Road Heavy-Duty Vehicles, the CHBC proposes the inclusion of fuel cell trucks in the pilot from the start. Fuel cell trucks are currently being piloted at the Port of Oakland through CHBC member, Hyundai[4], and are being offered in a bundled lease program by CHBC member, Nikola[5], that includes hydrogen fueling and maintenance. The fuel cell truck market is ready for deployment and the CHBC encourages the addition of fuel cells in the rollout of the Trade Up Program.

Comment 95-5

E. MOB-15: Zero Emission Infrastructure for Mobile Sources

The Strategies in the Proposed South Coast AQMD Workplan for Zero Emissions Fueling/Charging Infrastructure is correct in stating the need to understand the FCEV fueling demand, funding needs, stakeholder collaboration, public education, and statewide alignment across state entities. The CHBC supports incorporating FCEV manufacturers, hydrogen fuel producers, distributors, and station developers in the zero-emission infrastructure section of the Workplan. There are currently over 50 publicly accessible hydrogen fueling stations and the state has the funds to meet the 200-station[6] target. However, as of 2020, there were over 6.5 million drivers in the greater Los Angeles region alone, meaning the South Coast Air Quality Management District (SCAQMD) will need far more than 200 hydrogen fueling stations shared throughout the state to meet the air quality targets set out in this Draft plan. The CHBC encourages this draft plan to advocate for the state to set higher hydrogen fueling station targets so the SCAQMD will receive sufficient funding and coordination from the state in deploying a sustainable zero-emission infrastructure network for the region.

Comment 95-6

[4] Hyundai. "Hyundai Motor Details Plans to Expand into Market with Hydrogen-powered XCIENT Fuel Cells at ACT Expo," May 9, 2022. Available at: https://www.hyundai.com/worldwide/en/company/newsroom/hyundai-motor-details-plans-to-expand-into-u.s.-market-with-hydrogen-powered-xcient-fuel-cells-at-act-expo-0000016825. Accessed October 6, 2022.
[5] Nikola. Available at: https://nikolamotor.com/two-fcev. Accessed October 6, 2022.
[6] "Governor Brown Takes Action to Increase Zero-Emission Vehicles, Fund New Climate Investments. January 26, 2018. Available at: https://www.ca.gov/archive/gov39/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/index.html. Accessed October 6, 2022.

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info@californiahydrogen.org | www.californiahydrogen.org

III. CONCLUSION

The CHBC supports the Revised Draft 2022 Air Quality Management Plan and respectfully requests consideration of the aforementioned recommendations. We look forward to collaborating further. Thank you for the opportunity to comment.

Comment 95-7

Respectfully Submitted,

Sara Fitzsimon, J.D.

Policy Director
California Hydrogen Business Council

Response to Comment 95-1: South Coast AQMD staff appreciates your comments on the Revised Draft 2022 AQMP. Please see the following responses to comments on individual control measures.

Response to Comment 95-2: When staff conducted its evaluation of technologies as part of a proposed method of control to transition older and higher-emitting engines in the RECLAIM program to a command-and-control regulatory structure, fuel cells were not considered at the time to be commercially available due to cost and required installation footprint for comparable engine replacements. It is anticipated that staff will be conducting future amendments to Rule 1110.2 – *Emissions from Gaseous- and Liquid-Fueled Engines*. During these future rulemaking efforts, near-zero and zero emission technologies, as with other commercially available technologies, will be assessed for potential engine replacement options.

Response to Comment 95-3: South Coast AQMD staff appreciates the support for the use of fuel cells as alternative backup power sources, as well as for the information related to a hydrogen fuel cell power plant. As described in the control measure, a feasibility assessment will be conducted in conjunction with rule development and the analysis will include a review of fuel cells as a backup power source including analysis on costs, performance, and reliability.

Response to Comment 95-4: South Coast AQMD staff will investigate potential ways and approaches to incorporate comparable incentives for fuel cell electric vehicles (FCEV) fueling needs in collaboration with CARB.

Response to Comment 95-5: Although the pilot program is now closed, South Coast AQMD staff considers FCEVs as one of the viable zero emission technologies for heavy duty vehicles and will consider including them in future incentive programs.

Response to Comment 95-6: The South Coast AQMD looks forward to ongoing collaboration with all stakeholders to ensure the success of zero emission infrastructure deployments, including hydrogen fueling stations.

Response to Comment 95-7: Staff looks forward to collaborating with CHBC to implement the 2022 AQMP.

Comment Letter #96

Jawaad Malik
Vice President & Chief Environmental Officer
Strategy, Sustainability, and Environmental
555 West 5th Street
Los Angeles, CA 90013
Tel: (213) 200-4084
Jawaad.Malik@socalgas.com

October 18, 2022

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Subject: Comments on the Revised Draft 2022 Air Quality Management Plan (AQMP)

Dear Mr. Nastri:

Southern California Gas Company (SoCalGas) appreciates the opportunity to comment on the Revised Draft 2022 AQMP. Below SoCalGas recommends an alternative option regarding the proposed public meeting that would be convened during the rulemaking process, should an emission standard's cost-effectiveness exceed the proposed South Coast AQMD cost-effectiveness screening threshold. This alternative proposal would provide all stakeholders an opportunity to obtain a deeper understanding of the multiple emission standard options, benefits, and costs, as well as provide an opportunity for stakeholders to present valuable feedback to South Coast AQMD rulemaking staff. This would create added benefit to the Governing Board as it would also see the bigger picture regarding options available along with costs and benefits.

Comment 96-1

Proposal for Triggering Cost-Effectiveness Public Meeting for Future Rulemakings

For the first time, the AQMP seeks use of zero-emission technologies in proposed control measures as the primary element for reaching attainment of the 2037 ozone National Ambient Air Quality Standard. Many of the control measures in the AQMP rely upon a tiered approach where zero emission technologies are considered for control options prior to moving to near-zero technologies and then to low-NOx technologies. Additional firsts include a new cost-effectiveness screening threshold of $325,000/ton NOx reduced which incorporates the monetized health benefits of reducing pollution, and a new public process to be utilized during rulemaking when the proposed emission standard's cost-effectiveness exceeds the cost-effectiveness screening threshold.

Comment 96-2

Current Proposal in AQMP regarding Cost-Effectiveness

The AQMP provides a discussion regarding how cost-effectiveness is used and what the cost-effectiveness requirements are for the AQMP and the Best Available Retrofit Control Technology (BARCT) rule development process.

As part of these discussions, the South Coast AQMD presents a new cost-effectiveness screening threshold of $325,000/ton NOx reduced to address the impacts of pollution on the public as well as address the expected higher costs of zero emission control strategies. Additionally, a new public process is presented which will be utilized during rulemaking when the proposed emission standard's cost-effectiveness exceeds the cost-effectiveness screening level threshold:

> *During the rulemaking process, if a proposed BARCT emission standard has a cost-effectiveness that is above the threshold, staff will hold a public meeting to discuss other emission standards with a cost-effectiveness at or below the proposed screening threshold and/or compliance or implementation options to address an emission standard that is above the proposed screening threshold. At the public hearing for the adoption or amendment of the emission standard, staff must present the options to the emission standard if the cost effectiveness is above the threshold, highlighting the potential emission reductions associated with each option.*[1]

SoCalGas believes that this new public process, specifically the convening of a public meeting to review emission standards that exceed the cost-effectiveness screening threshold, will be a critical element of the rulemaking process. Hence, SoCalGas makes the following recommendation regarding this public meeting.

Recommended Change

SoCalGas proposes that the trigger for convening this public meeting should be set at 50% of the cost-effectiveness screening threshold rather than the current proposed trigger where the cost-effectiveness of the proposed emission standard, developed during the rulemaking, must exceed the value of the cost-effectiveness screening threshold.

As this AQMP proposes significant changes as compared to plans of the past (e.g., its focus on zero-emissions control measures), triggering the special workshop sooner provides surety that a rulemaking is thoroughly analyzing all available options and technologies, and their associated cost effectiveness. This alternative proposal would provide all stakeholders an opportunity to obtain a deeper understanding of the multiple emission standard options, benefits, and costs, as well as provide an opportunity for stakeholders to present valuable feedback to South Coast AQMD rulemaking staff. This would create added benefit to the Governing Board as it would also see the bigger picture regarding options available along with costs and benefits.

Comment 96-2 Con't

[1] *See* Revised Draft 2022 AQMP, Chapter 4, at 4-92, available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-chapter-4.pdf?sfvrsn=4

Conclusion

SoCalGas appreciates the opportunity to participate in this extremely valuable air quality discussion. We hope for continued and fruitful engagement with the South Coast AQMD and stakeholders, so we may collectively advance the next generation of air quality management approaches that promote equity, clean air, and public health. Thank you for your consideration of our comments.

Comment 96-3

Respectfully,

/s/ Jawaad Malik

Jawaad Malik
Vice President
Strategy and Sustainability & Chief Environmental Officer

CC:
Sarah Rees, PhD
Veronica Padilla-Campos
Aaron Katzenstein
Michael Krause
Ian MacMillan
Chairman Ben Benoit
Vice-Chair Vanessa Delgado
Supervisor Andrew Do
Gideon Kracov
Supervisor Sheila Kuehl
Mayor Larry McCallon
Supervisor V. Manuel Perez
Councilmember Nithya Raman
Vice Mayor Rex Richardson
Council Member Carlos Rodriguez
Supervisor Janice Rutherford
Council Member Michael Cacciotti

Response to Comment 96-1: South Coast AQMD staff appreciates your input on the proposed cost-effectiveness thresholds. Staff will conduct more in-depth cost-effectiveness analyses during the rulemaking process with respect to emission standard cost-effectiveness versus the proposed cost-effectiveness threshold. Stakeholders will be given ample opportunity to provide comments and suggestions at public meetings.

Response to Comment 96-2: Please refer to the general response on Cost-Effectiveness Method and Threshold. Staff appreciates your suggestion to decrease the threshold by 50%. However, there is insufficient justification for this modification. Staff recommends using $325,000 per ton as the threshold to trigger a public meeting during rulemaking since it is consistent with CARB and U.S. EPA approaches. Regardless of the threshold, South Coast AQMD commits to pursue the most cost-effective approach to reduce emissions during rulemaking. Furthermore, South Coast AQMD will follow Health and Safety Code Section 40920.6 during BARCT rulemaking.

Response to Comment 96-3: Staff encourages SoCalGas and other stakeholders to continue participation in future rulemakings and staff looks forward to this engagement.

Comment Letter #97

October 18th , 2022

Michael Krause
Assistant Deputy Executive Officer
South Coast Air Quality Management District
AQMPteam@aqmd.gov

Re: Public Comments on Revised Draft 2022 Air Quality Management Plan (AQMP)

RadTech International is the premier trade association in North America for Ultraviolet/Electron Beam/Light Emitting Diode (UV/EB/LED) technology. We speak on behalf of our over 800 members who are involved in a myriad of industry sectors ranging from printing and packaging to nail polish. RadTech has been participating in the AQMP development, serving as a member of the advisory committee for over a decade. In that capacity, we have made comments on the Draft 2022 AQMP and accompanying Policy Briefs and are pleased to provide additional comments on the Revised Draft. We appreciate the responses to our previous comments, provided by staff, especially the additional information included about UV/EB/LED processes in Control Measure CTS-01.

Comment 97-1

CTS-O1 --Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants [VOCs] / FLX-02 Stationary Source VOC Incentives [VOCs]

We appreciate the district's consideration of UV/EB/LED technology as one of the potential ways to achieve VOC reductions and are strongly support the proposal to incentivize the use of zero and near-zero VOC materials. To that end, we appreciate the commitment to amend the district's permit exemption rule (Rule 219) to remove regulatory barriers to implementation of low VOC (less than 50 grams/liter in VOC content) materials. Most UV/EB/LED materials emit little to no VOCs or Hazardous Air Pollutants without relying on toxic materials. Since the materials do not "dry" (cure) unless exposed to energy, there is less clean- up. UV/EB users enjoy an increase in up-time and productivity due to the nature of the chemistry (doesn't skin over in applicator, not clean up between shifts/weekends, faster start-ups).

Comment 97-2

Removing overly prescriptive permitting and recordkeeping requirements would help the district achieve its incentives goals under Control Measure FLX-02. While we wholeheartedly agree with the incentives concept, we are concerned with how it would be implemented by requiring facilities to "accept permit conditions". Embroiling facilities in the permitting system and

demanding acceptance of permit conditions, would defeat the purpose of an incentives program as facilities will not see costly permit modifications as an incentive. We very much support the provision of incentive funding to facilitate the adoption of clean, low VOC emission technologies from stationary sources and believe that eliminating permit fees via permit exemptions would indeed be an incentive.

Comment 97-2 Con't

STATE & FEDERAL CONTROL MEASURES [Ch.4; p.34]

RadTech urges the district to play an active role in supporting the State Implementation Strategy previously adopted by the Environmental Protection Agency. Our Association was disheartened to learn of the Environmental Protection Agency's (EPA) proposed disapproval of Rule 1106 (Marine Coatings) and Rule 1107 (Metal Coatings). This proposed action damages the district's efforts to expand the use of low Volatile Organic Compound (VOC) materials by introducing greater uncertainty. We urge the district to support past decisions of it Governing Board and oppose EPA's proposed disapproval of Rule 1106 and Rule 1107.

Comment 97-3

RULE COMPLIANCE AND TEST METHODS [APPENDIX IV-A-167]

Decades ago, both the EPA and the SCAQMD acknowledged that EPA Method 24 – used for solvent borne materials—was not suitable for thin film energy curable materials. The emissions from energy curable materials were so miniscule that the standard method used for conventional coatings could not accurately measure the emissions of Volatile Organic Compounds (VOCs). The agencies approached our industry and requested that we develop a test method. We received assurances from SCAQMD that an ASTM test method would be acceptable. We then embarked on an effort which, lasted over thirty years, to develop ASTM D7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them." The method was included in the district's Graphic Arts Rule (Rule 1130); approved by the California Air Resources Board (CARB) and ultimately approved by the EPA.

EPA has not proposed any alternative test method to our industry or explained a proposed limited disapproval of SCAQMD's rules on the basis that ASTM D7767-11 is not enforceable because it is not EPA approved. The proposed action would be detrimental to our industry and leave businesses in regulatory limbo as we would not have a method to verify the VOC content of our materials thereby undermining the district's efforts to obtain "quantifiable emission reductions" as outlined in the Revised Draft [Ch. 4.; p. 79]. Furthermore, this action undermines the goal of the Clean Air Act as it puts hurdles in the way of a super-compliant all electric technology only because its emissions are too low to measure by conventional test methods. The proposed action also further hamstrings the SCAQMD as it attempts to attain federal Ozone standards.

Comment 97-4

SCAQMD staff routinely informs their Governing Board ant the public that EPA has not done its fair share of regulating mobile sources and points to that failure as one of the main reasons the South Coast Basin is not in attainment. We ask the district to support our efforts to obtain EPA approval of ASTM D7767-11.

Comment 97-4 Con't

We appreciate the opportunity to serve on the AQMP Advisory Committee and the consideration of our comments. RadTech looks forward to the development of the AQMP.

Comment 97-5

Sincerely,

Rita M. Loof
Director, Environmental Affairs

Cc: Wayne Nastri, Sarah Reese, SCAQMD Board

Response to Comment 97-1: Thank you for your comments. Staff appreciates the participation of RadTech International in the development of the 2022 AQMP.

Response to Comment 97-2: UV/EB/LED technologies already qualify for permit exemptions in Rule 219. Staff is currently amending Rule 219 to include further permit exemptions for facilities who add UV/EB/LED technology, or other drying or curing technologies, in Rule 219. Please see Responses to comments 67-1 through 67-6 for more details.

Response to Comment 97-3: On August 22, 2022, U.S. EPA proposed a limited disapproval of Rule 1106 - Marine and Pleasure Craft Coatings and Rule 1107 - Coating of Metal Parts and Products due to the inclusion of ASTM Test Method D7767-11 (ASTM D7767). ASTM D7767 is not an U.S. EPA approved test method and therefore cannot be used to enforce a SIP-approved rule. U.S. EPA deemed that ASTM D7767 did not satisfy the requirements of section 110 and part D of the Clean Air Act and thus prevented full approval of the rules. If U.S. EPA issues a final SIP disapproval, the South Coast AQMD faces the possibility of sanctions by the federal government and other consequences under the federal CAA. Offset sanctions would be triggered 18 months after the effective date of a final disapproval, and the highway funding sanction would be triggered six months after the offset sanction is imposed. Staff proposes to simultaneously amend both rules to address the deficiency for the disapproval and incorporate U.S. EPA comments. The removal of this test method will not create any barriers or deter the use of UV/EB/LED products. For UV/EB/LED products such as Energy Curable Thin Film products, formulation data can be used to determine VOC content for the purposes of qualifying for the proposed exemption for coatings that have a VOC content of 50 g/L or less. Manufacturers can, and often do, rely on formulation data to calculate the VOC of UV/EB/LED products such as Energy Curable Thin Film products. Using formulation data to calculate the VOC content of products is an easier and cheaper approach for manufacturers to determine if their products will comply with rule limits.

Response to Comment 97-4: The South Coast AQMD has a long history with this test method. The South Coast AQMD Laboratory staff met with ASTM D7767 developer (3M, Minneapolis, MN) as discussed during the May 2019 amendment for Rule 1106 and confirmed that this method is not applicable for compliance verification purposes. Nevertheless, staff had included a reference to this test method in Rule 1106 based on a request to do so by the commenter. Staff further officially requested that EPA provide guidance regarding appropriate test methods for UV/EB/LED products. While EPA originally proposed to approve Rule 1106, they have subsequently proposed a limited disapproval of the rule as it has now been brought to their attention that ASTM D7767 is not a U.S. EPA-approved test method. Staff discussed this issue with the U.S. EPA regarding the proposed disapproval and shares the U.S. EPA's concerns about the enforceability of this test method.

The removal of this test method will not create any barriers or deter the use of UV/EB/LED products. Manufacturers can, and often do, rely on the formulation data to calculate the VOC of their products. Regulatory agencies must rely on test methods to determine the VOC content of regulated products. Using formulation data to calculate the VOC content of products is an easier and less expensive approach for manufacturers to determine if their products will comply with rule limits. The South Coast AQMD developed a Test Method Guidance Document for Rule 1168 that states that formulation data is the appropriate tool for manufacturers to verify compliance for thin film UV/EB/LED curable products. Staff does not anticipate any adverse impact to the UV/EB/LED industry based on this proposed change to Rule 1168.

Response to Comment 97-5: Staff appreciates the participation of RadTech International in the development of the 2022 AQMP.

Comment Letter #98

California Council for Environmental and Economic Balance
101 Mission Street, Suite 1440, San Francisco, California 94105
415-512-7890 phone, 415-512-7897 fax, www.cceeb.org

~~October 18, 2022~~ Revised November 2, 2022

Sang-Mi Lee, Ph.D.
Planning and Rules Manager
Planning, Rule Development and Implementation
South Coast Air Quality Management District

Submitted Electronically to: AQMPteam@aqmd.gov

RE: Comments on the Revised Draft 2022 Air Quality Management Plan (AQMP)

Dear Dr. Lee,

The California Council for Environmental and Economic Balance (CCEEB) represents numerous organizations with facilities and operations in the South Coast Air Quality Management District. We are closely following the development of the 2022 Air Quality Management Plan (AQMP). CCEEB submitted extensive comments on the draft plan on July 5, 2022. We continue to stand by our comments with a particular interest in recognizing that the District will not be able to achieve attainment without extensive efforts by EPA and the federal government.

Comment 98-1

CCEEB request that staff provide the board and all stakeholders with additional information on how the proposed change to the cost-effectiveness threshold would impact the cost to fully implement the AQMP. Our understanding is that the alternate cost-effectiveness threshold would assess indirect avoided costs from improved public health outcomes in addition to direct costs of pollution controls. We note that staff released a draft of the socioeconomic impact report for the AQMP on October 1, 2022. We request that the final version of this document take into account the new cost-effectiveness threshold and subsequent potential costs of implementing the rules.

Comment 98-2

CCEEB understands that staff is proposing the following process should an emission standard exceed the proposed alternative cost-effectiveness threshold:

- Holding a public meeting to discuss other emission standards with a cost-effectiveness at or below the proposed screening threshold and/or compliance or implementation options to address an emission standard that is above the proposed screening threshold; and

- At the public hearing for the adoption or amendment of the emission standard, staff must present the options to the emission standard if the cost-effectiveness is above the threshold, highlighting the potential emission reductions associated with each option.

We believe these are important actions to ensure the District's compliance with CA Health & Safety Code § 40920.6 (2013) which states that the District must:

(1) Identify one or more potential control options which achieves the emission reduction objectives for the regulation.

(2) Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, cost-effectiveness means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option.

(3) Calculate the incremental cost-effectiveness for the potential control options identified in paragraph (1). To determine the incremental cost-effectiveness under this paragraph, the district shall calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.

In the draft AQMP, staff proposed a cost-effectiveness threshold of $59,000 per ton of NOx reduced. Under the revised proposal, that increases to $325,000 per ton. We suggest applying the process outlined above to all measures and proposed rules that exceed a cost-effectiveness threshold of $162,500 (50 percent of the proposed cost-effectiveness threshold) to ensure continued transparency.

Comment 98-2 Con't

We thank staff for considering our comments. Should you wish to follow up with me, please contact me at (925) 997-9077 or billq@cceeb.org.

Sincerely,

Bill Quinn
CCEEB Consultant

cc: Wayne Nastri
Sarah Rees, PhD
Michael Krause
Ian MacMillan
Tim Carmichael
Christine Wolfe
Jason Henderson
Members, CCEEB's South Coast Air Project

Response to Comment 98-1: Thank you for participating in the development of the 2022 AQMP and for recognizing the critical role of the federal government in reducing emissions in our region.

Response to Comment 98-2: Please refer to the general response on Cost-Effectiveness Method and Threshold. South Coast AQMD staff does not believe that the revised cost-effectiveness threshold impacts or changes the overall socioeconomic analysis for the AQMP; the costs associated with the underlying control measures were not developed with a particular cost-effectiveness threshold in mind. Instead these were developed according to the amount of emission reductions targeted for each measure. Staff appreciates your suggestion to decrease the threshold by 50%. However, there is insufficient justification for this modification. Staff recommends using $325,000 per ton as the threshold to trigger a public meeting during rulemaking since it is consistent with CARB and U.S. EPA approaches. Regardless of the threshold, South Coast AQMD commits to pursue the most cost-effective approach to reduce emissions during rulemaking. Furthermore, South Coast AQMD will follow Health and Safety Code Section 40920.6 during BARCT rulemaking.

Comment Letter #99

Michael Carroll
1.714.755.8105
Michael.Carroll@lw.com

650 Town Center Drive, 20th Floor
Costa Mesa, California 92626-1925
Tel: +1.714.540.1235 Fax: +1.714.755.8290
www.lw.com

LATHAM & WATKINS LLP

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October 18, 2022

Via email

Sarah Rees, Ph.D.
Deputy Executive Officer
Planning, Rule Development, and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Regulatory Flexibility Group ("RFG") Comments on South Coast Air Quality Management District ("SCAQMD") 2022 Draft Air Quality Management Plan

Dear Dr. Rees:

Thank you for the opportunity to submit these comments on the revised 2022 draft of the South Coast Air Quality Management District's Air Quality Management Plan (the "2022 Draft AQMP") on behalf of the RFG, a coalition of California entities whose operations are subject to regulation under the Clean Air Act and corresponding state and regional air quality programs. RFG members include manufacturers, natural gas utilities, oil and chemical companies, and other regulated entities. We appreciate SCAQMD staff's careful review and responses to our July comments, and the reflection of many of our comments in the 2022 Draft AQMP.

We particularly appreciate the District's acknowledgment that subsequent rule developments arising from the 2022 AQMP will evaluate technological feasibility, cost-effectiveness, and incremental cost-effectiveness, pursuant to Health and Safety Code Section 40920.6, when establishing BARCT emission limits, and the reflection of the same in applicable control measure language.

Comment 99-1

We also appreciate your recognition of the District's long-standing policy of technology and fuel neutrality. We encourage the District to continue this policy in support of meeting the challenges the region will face as it moves towards attainment. As we continue to move towards attainment, it is critical that policies and rules recognize the incredible efforts the regulated community has undertaken over the last 30 years to control emissions and the risk that, without appropriate policies and recognition, our region could face significant economic impacts without correspondingly meaningful advancements towards attainment.

Thank you also for the acknowledgement of the subsequent challenges regarding grid reliability and the widespread transition to zero emission technologies. As with many in the region, RFG is extremely concerned with the costs and timing for bringing the needed generation and

incremental cost-effectiveness, pursuant to Health and Safety Code Section 40920.6, when establishing BARCT emission limits.

However, the proposed "health benefit based threshold" for stationary sources would severely undercut the potential effectiveness and Health and Safety Code-required analytical rigor for technological feasibility, cost-effectiveness, and incremental cost-effectiveness going forward. The tiered cost-effectiveness analysis based on control measure costs has been a staple in District rulemakings since 2003, and it has helped to ensure that rulemakings comply with the Health & Safety Code requirements. It has also advanced rulemaking outcomes that have seen a significant reduction of emissions from stationary sources over the last 20 years without, for the most part, driving technologically infeasible and economically devastating outcomes.

By considering the shift to this untested and unvetted health benefit based threshold this late in the AQMP cycle, the District is placing the regulated community in the extremely difficult position of facing significant uncertainty in future rulemaking. The alternative approach will establish a screening threshold approximately ***6.5 times*** the screening threshold when compared to the 2016 AQMP and ***25 times*** the screening threshold when compared to the 2003 AQMP. In practice, ***this approach will effectively remove tiered analysis for stationary source control measures that the regulated community has relied on for the last two decades***.

Comment 99-2

Without the benefit of an AQMP-established tiered cost-effectiveness analysis at a reasonable per ton cost, ***we expect future rulemakings will impose technically infeasible and economically untenable control limits on stationary sources in violation of Health & Safety Code §§ 40406 (economic impacts should be taken into account) and 40920.6 (setting forth specific requirements for cost-effectiveness and incremental cost-effectiveness analyses).***

In particular, Health & Safety Code § 40920.6 is a critical element of the BARCT determination process. In establishing BARCT, the District must, among other things:[2]

1) Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, "cost-effectiveness" means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option.
2) Calculate the incremental cost-effectiveness for the potential control options. To determine the incremental cost-effectiveness under this paragraph, the district shall calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.
3) And consider the effectiveness of the proposed control option, the cost-effectiveness of each potential control option, and the incremental cost-effectiveness between the potential control options.

[2] Health & Safety Code § 40920.6.

Again, while we appreciate the District's acknowledging it will continue to comply with § 40920.6, we are concerned that the rigor of the analysis without the tiered approach for stationary sources will fail to satisfy the critical safeguards set forth directly above.

We reiterate our request that the District adopt hard caps based on control measure costs. However, if the District is not inclined to do so, we strongly encourage the District to, at a minimum, retain the control measure-based cost-effectiveness threshold approach for stationary sources, which are already heavily controlled and where there is significant risk that, without a rigorous cost-effectiveness analysis, the rulemaking would have significant impacts on the economy and potentially run afoul of the Health & Safety Code. Looking specifically at large combustion measures, if the District will not adopt hard caps, we would encourage *all* stationary source rulemakings to include a tiered analysis. While we recognize this will place an increased burden on District resources during rulemakings, we believe it is a critical component for future rulemakings affecting highly regulated sources that have and continue to make significant investments in emission controls.

Comment 99-2 Con't

The Proposed Shift in Cost-Effectiveness Thresholds Conflict with the CEQA-Identified Project Objectives

We are also concerned that there has been no substantive assessment of the environmental impacts (under CEQA or otherwise) or socioeconomic impacts of what such a fundamental shift in tiered cost-effectiveness analysis would mean for the regulated community. We also view the potential change in approach as directly conflicting with the Draft Program Environmental Impact Report's "Project Objectives" to:

- Continue to work closely with businesses and industry groups to identify the most cost-effective and efficient path to meeting clean air goals while being sensitive to economic concerns.
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels.
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.[3]

Comment 99-3

We anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.

The Health & Safety Code and CEQA Require Additional Assessment of the Cost-Effectiveness and Technological Feasibility of Select Control Measures

Health & Safety Code § 40922 requires the AQMP to include an "assessment of the cost-effectiveness of available and proposed control measures" and to consider factors such as technological feasibility when developing an implementation schedule for specific control

Comment 99-4

[3] *See* Draft Program Environmental Impact Report for Proposed 2022 Air Quality Management Plan at 2-12 (September 2022).

measures. While we have appreciated the District's efforts, it has not yet conducted an appropriately rigorous and legally supportable analysis of the cost-effectiveness and technological feasibility of proposed Control Measure L-CMB-07 and L-CMB-03, L-CMB-04, and L-CMB-05.

Comment 99-4 Con't

- *L-CMB-07 (Emission Reductions from Petroleum Refineries [NOx])*

L-CMB-07 contemplates development of a rule "requiring a lower NOx concentration of 2 ppm" for large refinery heaters and boilers and identifies three approaches: ultra-low NOx burners, advanced SCR, and transition to zero emission technology.[4] The 2022 Draft AQMP identifies certain next-generation ultra-low NOx burners ("ULNB"), indicating they can potentially "alleviate some of the challenges of conventional ULNBs and achieve a NOx concentration of 9 ppmv or less using refinery fuel gas."[5] The 2022 Draft AQMP does not, however, adequately analyze the cost-effectiveness or technical feasibility of these next-generation ULNBs.[6] As you know, safe and effective operation of ULNBs for refinery heaters requires very careful design considerations. These design considerations (such as flame impingement and boiler geometry) will drive cost-effectiveness challenges, and this has not been meaningfully analyzed in the 2022 Draft AQMP.

Further, the next-generation ULNBs identified in the 2022 Draft AQMP have not been widely deployed, and we believe District has not appropriately analyzed the technical feasibility of such deployment for equipment rated at greater than or equal to 40 MMBtu/hr in the document . Passing references to "projects in the works"[7] does not satisfy the District's obligations under Health & Safety Code § 40922. We note that during the consideration of Rule 1109.1 (Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations), the District identified a single "demonstration project" implementing one of the next-generation ULNBs referenced in the 2022 Draft AQMP.[8] At that time, the unit was reported to achieve "around 29.3 ppmv" on a less than 40 MMBtu/hr process heater.[9] Less than a year later, and without meaningful additional technical analysis, the 2022 Draft AQMP now concludes that this technology "may be feasible for a wide range of process heaters at petroleum refineries in the future," including for boilers and process heaters greater than or equal to 40 MMBtu/hr.[10]

Comment 99-5

Importantly, the District adopted Rule 1109.1 for petroleum refineries and related equipment in November 2021, with approximate industry costs of $2.3-2.9 billion and

[4] 2022 Draft AQMP at 4:-21:22.

[5] *Id.* at IV-A-118.

[6] While our comments focus on next generation ULNBs, RFG also has concerns with the sufficiency of the cost-effectiveness and technical feasibility analysis of advanced SCR and transition to zero emission technology contained in the 2022 Draft AQMP. As opposed to moving forward with this control measure, as described herein, we encourage the District to allow for the implementation of the Rule 1109.1 (Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations).

[7] *See* Comments and Responses to Comments on the 2022 AQMP at 388 (September 2022).

[8] *See* Proposed Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations and Proposed Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries, Final Staff Report (referred to herein as the "PR 1109.1 Final Staff Report") at 2-13.

[9] *Id.*

[10] *See* 2022 Draft AQMP at IV-A-118.

implementation timelines that extend to 2036.[11] The Rule is estimated to deliver 7.7-7.9 tons per day in NOx reductions once fully implemented.[12] ULNB technologies described in L-CMB-07 were found to not be technically feasible or cost-effective for refinery installations in the Rule 1109.1 BARCT analysis and supported in findings by third-party consultants Norton Engineering and Fossil Energy Research Corporation (FERCo), largely due to commercial availability and refinery physical space constraints.[13]

Vendors of UNLB technology presented on its development during the Rule 1109.1 rulemaking; however, there was a limited number of projects that were able to achieve emission limits below 7 ppm NOx, with no projects using refinery fuel gas or being demonstrated outside of a test facility.[14] If staff intends to commence rulemaking for L-CMB-07 in the next several years, the maturity of ULNB technologies in terms of commercial availability and technical feasibility will likely not have a significant change from the analysis of Rule 1109.1, due to no existence of projects being commercially implemented at a refinery.

Comment 99-5

Further, the Draft Program Environmental Impact Report does not sufficiently analyze the potential environmental impacts of the deployment of the identified technologies in L-CMB-07. These impacts could not only come in the form of stranded assets (given the adoption of Rule 1109.1 in 2021 and the ongoing implementation of the same), but also in the potential impacts associated with SCR performance (and associated uncertainty of the same), the ability for refiners to retrofit the broad universe of process heaters and the physical implications of the same, etc.[15]

Ultimately, the 2022 Draft AQMP's analysis in support of L-CMB-07 does not meet Health & Safety Code requirements and leaves the AQMP lacking as an appropriately vetted planning document. Given this, we strongly encourage the District to remove proposed L-CMB-07 from the AQMP and instead acknowledge the significant anticipated emission reductions associated with the implementation of Rule 1109.1. RFG believes it represents the most comprehensive and stringent air quality regulation in the nation. It calls for billions of dollars of investment for southern California refineries and will result in dramatic reductions in NOx emissions. Implementation will require a monumental effort to engineer, permit, procure, and construct new emission control equipment, and this monumental effort should not be derailed by new rulemakings driven by L-CMB-07.

[11] *See* Final Socioeconomic Impact Assessment For Proposed Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations *et al*. at ES-5 (November 2021).

[12] *See* PR 1109.1 Final Staff Report at 4-4.

[13] *See generally*, PR 1109.1 Final Staff Report, BARCT Assessment at 2-1 *et seq*.

[14] *See* SCAQMD Proposed Rule 1109.1 WGM #17, ClearSign Technologies Presentation (available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/clearsign-update-for-scaqmd---pr-1109-1.pdf?sfvrsn=6).

[15] Again, we anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.

- *L-CMB-03 (NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]), L-CMB-04 (Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]), and L-CMB-05 (NOx Emission Reductions from Large Turbines [NOx])*

We are also concerned with sufficiency of the analysis of cost-effectiveness and technological feasibility of Control Measures L-CMB-03, L-CMB-04, and L-CMB-05. As currently analyzed, the AQMP does not appropriately take into consideration the considerable stranded asset costs associated with the Control Measures and the potential reduction in reliability of energy delivery, which, of course, could have significant safety and economic impacts. The Draft Program Environmental Impact Report also does not sufficiently analyze the potential environmental impacts of these rules. Additional analysis of the potential impacts associated with the potential inability to reliably deliver energy in times of PSPS events and wildfire risks is needed to understand the full effects of these Control Measures.[16]

Comment 99-6

Conclusion

Again, thank you for all of the dialogue to date, and thank for considering and implementing a number of the RFG comments to date. We also thank you for the opportunity to submit these comments, and we look forward to further discussions with the SCAQMD staff and other stakeholders in advance of the Governing Board's consideration of the final AQMP.

Comment 99-7

Sincerely,

s/ Michael J. Carroll

Michael J. Carroll
of LATHAM & WATKINS LLP

[16] Again, we anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.

Response to Comment 99-1: Thank you for your continued engagement in the 2022 AQMP public process. Staff appreciates the recognition of the responses provided to your previous comments.

Response to Comment 99-2: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 99-3: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 99-4: The 2022 AQMP includes technological feasibility and cost-effectiveness assessments for each control measure. A more rigorous assessment will be conducted during rule development process. Please see Response to Comment 71-3.

Response to Comment 99-5: South Coast AQMD agrees that Rule 1109.1 represents one of the most comprehensive rules for refinery combustion equipment in the nation. South Coast AQMD has an obligation under state and federal law to continue to seek the most technologically feasible emission reductions, considering cost, to achieve state and federal air quality standards. BARCT is an evolving process and as technologies advance it is important that the emission standards reflect these advances. Similar to the process that was conducted during the development of Rule 1109.1, staff will conduct a BARCT analysis which includes a technology assessment, and cost- and incremental cost-effectiveness analysis when establishing new BARCT emission standards. The cost-effectiveness analysis during the rulemaking process is much more detailed than the AQMP and will include all technologies that are being considered for the proposed NOx standards.

Next generation ULNBs are currently available and being considered by some petroleum refineries as potential NOx control options in their compliance plans for Rule 1109.1, which is an indication of the emergence of the next generation ULNB. Much like any new technology, improvements and advancements of next generation ULNBs occur over time. L-CMB-07 considers next generation ULNBs as one pathway to achieve further reductions for boilers and process heaters greater than or equal to 40 MMBtu/hour, but it is not the sole means for further reduction. Since the adoption of Rule 1109.1, staff became aware of the Rondo Heat Battery technology which is a promising zero emission option for refinery boilers. Staff will consider all technologies to achieve further emission reductions at refineries beyond just upgrading burner technology.

Please also see responses to comment letter 41, 43, 71, and 72.

Response to Comment 99-6: Staff recognizes the potential concern for stranded assets if there were a requirement imposing a replacement technology for a source that still has not met its useful life. Rule development to implement control measures from the 2022 AQMP will consider stranded asset costs, if applicable, as part of the socioeconomic analysis when establishing future BARCT standards. The South Coast AQMD also recognizes the concern regarding grid reliability and other hurdles in supporting widespread transition to zero emission technologies. These concerns are the reason why the South Coast AQMD developed MOB-15. This control measure is a commitment to engage with stakeholders involved in every aspect of the transition to zero emission fueling with the goal of identifying potential shortfalls in technologies and/or energy availability while assisting in a collaborative effort to address these concerns. For discussion on electricity infrastructure and supply, please refer to the general response to Zero Emissions Infrastructure, Zero Emission Building Measures and Electricity Supply and Demand. Please see

Responses to Comments 5-1, 13-4, 18-1, 32-1, 43-4, 43-7, 58-1 through 3, 59-12, 59-18, 59-20, 68-7, and 80-9.

It is important to note that control measures L-CMB-03, L-CMB-04, and L-CMB-03 are not yet rules, but will undergo future rule development efforts. Regarding wildfire risks, control measure MCS-02 is designed to prevent wildfires. The environmental impacts of these control measures were analyzed in Chapter 4 of the Program EIR. In addition, impacts from wildfires were previously concluded in the Notice of Preparation/Initial Study (NOP/IS) as having less than significant impacts and no comments were received that disputed this conclusion. See Chapter 4, Section 4.8.12 of the Program EIR and Appendix A of the Program EIR (NOP/IS), Section XVIII for the wildfire analysis.

This comment also suggests that the analysis of increased usage of emergency back-up engines associated with Public Safety Power Shutoff (PSPS) events needs to be included in the Program EIR. It is outside the scope of the Program EIR to evaluate the effects of increased usage of emergency back-up engines that are associated with PSPS events. The 2022 AQMP includes control measures to reduce emissions from emergency standby engines, and the Program EIR appropriately evaluates these control measures. On October 1, 2021, the Governing Board adopted Rule 118.1 which was developed to allow critical service facilities operating emergency standby engines to exclude operating hours during a PSPS event and activities associated with a PSPS event from counting towards an annual operating limit of up to 200 hours. Rule 118.1 also contains notification and summary report requirements for facilities that elect to exclude engine operating hours due to a PSPS event. Since Rule 118.1 was comprised of specific actions to prevent or mitigate an emergency where a critical service facility could not operate an emergency standby engine during a PSPS event, the Governing Board determined that Rule 118.1 was statutorily exempt from CEQA pursuant to CEQA Guidelines Section 15269(c) – Emergency Projects. Because the environmental effects associated with implementing Rule 118.1 are separate and pre-date the development of the 2022 AQMP, the Program EIR does not contain an analysis of PSPS events.

In addition, Control Measure L-CMB-04 – Emission Reductions From Emergency Standby Engines is included in the 2022 AQMP and is aimed at addressing the concerns raised in this comment letter. Specifically, Control Measure L-CMB-04 seeks reductions of NOx emissions from emergency standby engines rated over 50 brake horsepower. The control measure also includes an education and outreach program to encourage the transition to zero-emission technologies. Regulatory strategies include replacing older, higher emitting engines with cleaner engines or with alternative technologies, requiring the use of lower emission fuels, and a future prohibition on the use of Internal Combustion Engines for emergency backup power. As alternative technologies mature and new technologies emerge, the South Coast AQMD plans on undertaking rulemaking to maximize emission reductions utilizing zero emission equipment where cost-effective and feasible, and low NOx emission equipment in all other applications. Staff estimates that Control Measure L-CMB-04 would reduce NOx emissions by an estimated two tons per day. Control Measures L-CMB-05 and L-CMB-06 are both aimed at reducing NOx emissions from large turbines and electricity generating facilities, which would improve air quality, including during extreme weather events.

Staff acknowledges the potential emissions from the use of emergency diesel engines during PSPS or extreme heat events. Future rulemaking activities would further refine the emissions inventory based on best available information on methodology and emissions data

Response to Comment 99-7: Staff appreciates the dialogue and looks forward to further discussion with RFG regarding the 2022 AQMP.

Comment Letter #100

COALITION FOR CLEAN AIR

October 18, 2022

Sang-Mi Lee, Ph.D.
Planning & Rules Manager
South Coast Air Quality Management District (SCAQMD)
21865 Copley Drive
Diamond Bar, CA 91765

RE: Comments on the Revised Draft 2022 SCAQMD Air Quality Management Plan (AQMP)

Dear Dr. Lee,

Coalition for Clean Air (CCA) submits the following comments in response to SCAQMD's Revised Draft 2022 AQMP. We also wish to acknowledge and express appreciation for the staff responses to the questions and comments posed in our July 5, 2022 letter on the initial Draft 2022 AQMP document. We understand developing the AQMP, conducting the public process and responding to submitted comments is a challenging task.

Comment 100-1

We remain concerned about the Revised Draft 2022 AQMP's ability to ensure the South Coast Air Basin (Basin) meets federal and state clean air standards by the required deadlines. Prior SCAQMD AQMPs relied on "black box" reductions; and yet, there is no viable pathway to meeting the 2023 ozone standard. If past is prologue, the Revised Draft 2022 AQMP's continued reliance on "black box" reductions does not bode well for meeting the 2031 and 2037 standards.

Our additional comments and questions on the Revised Draft 2022 AQMP are included below:

- **Additional federal action is needed, but SCAQMD must also achieve every ounce of emission reductions possible as well as address longstanding environmental justice concerns:** It is clear strong federal actions are needed to reduce air pollution in the Basin. Chief among these actions include developing and requiring new, cleaner engine emission standards, stronger rules and enforcement and greater support for state and local regulatory and incentive efforts. Yet, at the same time, SCAQMD must use every tool available to achieve emission reductions from the sources it can influence. This includes removing barriers to achieving emission reductions, such as artificially low cost-effectiveness thresholds. Further, SCAQMD must refrain from delaying rule development and adoption, as well as expedite implementation of newly passed rules. It should not have taken over three years to develop Rule 1109.1, and even longer to begin developing the Indirect Source Rule for the San Pedro Bay Ports.

Comment 100-2

SCAQMD also has an important responsibility in advancing environmental justice. Millions of residents of the Basin live in disadvantaged communities. As a result, these residents are exposed to higher levels of pollution,[1] resulting in worse health outcomes and shorter lifespans. We appreciate SCAQMD's work with the Assembly Bill 617 (AB 617) communities. Yet, SCAQMD's timeline for the deployment of Best Available Retrofit Control Technologies (BARCT), as required by AB 617, will go far beyond the statutory December 31, 2023 deadline. Further, it is important to recognize that environmental justice issues exist beyond the currently designated AB 617 communities. As such, SCAQMD must also address the longstanding environmental justice challenges in other vulnerable communities not currently under the Community Air Protection program.

Comment 100-2 Con't

- **SCAQMD must prioritize the development, passage and implementation of Indirect Source Review Rules (Proposed Rules 2304, 2306 and 2306.1):** The respective indirect source rules for ports and railyards are among the most important efforts currently underway at SCAQMD. As such, the district must prioritize these rules and ensure their expedient development, passage and implementation. Failure to pass these rules in a timely manner would undermine SCAQMD's stated commitments to environmental justice, as well as violate prior AQMPs and multiple AB 617 Community Emission Reduction Plans. Expedient passage of Proposed Rule 2306, relating to new intermodal railyard facilities, is of particular importance due to the proposed Southern California International Gateway (SCIG) and Colton railyards.

  Additionally, the indirect source rules must achieve meaningful and real emission reductions. As such, we have significant concerns about credit trading systems or any method that would allow "paper compliance" with the rules. The Warehouse Indirect Source Rule (Rule 2305), which requires warehouses to obtain points through implementing specified emission mitigation strategies, created a strong precedent in requiring actions that will result in emission reductions while also providing some flexibility to both SCAQMD and regulated entities. Lastly, in developing the indirect source rule for railyards, SCAQMD must consider new rail activity in the areas surrounding the Basin, such as the proposed Barstow railyard and any proposed "inland ports." While these facilities are outside of SCAQMD's jurisdiction, they will ultimately bring in more vehicles and pollution to the Basin, affecting local air quality.

Comment 100-3

[1] SCAQMD should also clarify the following passage on Page 8-3: "As further described in this chapter, environmental justice communities typically experience similar or even ***lower*** *(emphasis added)* levels of ozone than other areas in the South Coast Air Basin…This is because they are mostly located upwind of areas where we see peak levels of ozone formation." Readers could wrongly interpret this as saying environmental justice communities are less polluted than the basin average. While page 8-19 notes most AB 617 communities experience somewhat lower ozone concentrations, the San Bernardino/Muscoy AB 617 community experiences higher ozone concentrations than the basin average. Further, the point that almost all AB 617 communities experience similar or higher particulate matter concentrations than the basin average, as well as higher concentrations of toxic air contaminants and greater socioeconomic vulnerabilities, cannot be lost.

- **State budget volatility could jeopardize SCAQMD's incentive programs, which are a major component of the AQMP:** The AQMP anticipates SCAQMD's incentive programs will require at least $200 million annually through 2037. While the Revised Draft 2022 AQMP rightly points out that this funding is not guaranteed, it only commits to identifying other sources of revenue should state funding diminish. If SCAQMD is not able to identify other sources of revenue, however, what other options does the district have in ensuring the AQMP achieves its projected emission reductions?

  It is important to recognize that California's State Budget is notoriously volatile and highly dependent on economic conditions. For most of the past decade, California's climate incentives have almost entirely been funded by Greenhouse Gas Reduction Fund (GGRF) revenues. Even during periods of strong economic growth, GGRF-funded programs often face underfunding and oversubscription. Meanwhile, a major economic downturn (which appears to occur once a decade) such as the recession in 2020 could completely obliterate GGRF funding. While the last two State Budgets have supplemented GGRF funds with significant General Fund appropriations towards climate programs, state leaders have repeatedly warned future budget years will not be as flush. Additionally, an economic downturn affecting high-income earners (such as the 2001 and 2007-2009 recessions) could result in a significant decline in General Fund revenues, leading to large scale budget cuts (as what occurred during the 2007-2009 recessions.)

Comment 100-4

- **Further clarification regarding unfulfilled commitments in previous AQMPs is needed:** We thank you for the response to our question regarding unfulfilled commitments from prior AQMPs. According to the staff response, "…sources addressed in previous AQMPs are included in subsequent AQMPs since newer technologies with lower emission rates become available and further emission reductions become feasible." Yet, page 1-17 of the Revised Draft 2022 AQMP states "The new control strategy and attainment demonstrations in the 2022 AQMP are expected to supersede any previous commitments not achieved and not to be re-introduced in the proposed control strategy." Are there any unfulfilled control strategies from the 2016 (or prior) AQMPs which are not being re-introduced in the 2022 AQMP? While we recognize that control strategies, pollution sources and regulatory capacity change over time, SCAQMD should provide a clear understanding as to if certain prior AQMP commitments may not be fulfilled.

Comment 100-5

- **Effective, equitable building decarbonization will be an important strategy in reducing ozone pollution within the Basin:** We appreciate and support SCAQMD committing to residential and commercial building decarbonization as part of the AQMP's control strategies. Moving away from carbon-intensive water and space heating, appliances and other uses will not only help reduce climate-damaging emissions, but also reduce smog-forming pollutants. Though treated separately from building decarbonization, we also support transitioning backup generators, where feasible, to zero-emissions technologies. In addition to emitting climate and criteria air pollutants, diesel-powered generators also emit carcinogenic diesel particulate matter.

Comment 100-6

We also appreciate SCAQMD agreeing with the need to prioritize environmental justice communities in its response to Comment 70-3 on the previous draft 2022 AQMP. We echo the call to increase the amount of incentive funding dedicated specifically for low-income and disadvantaged communities. These communities are the most susceptible to the impacts of the climate crisis and poor air quality. Yet, they also face the highest burdens to clean alternatives.

Comment 100-6 Con't

Lastly, SCAQMD's response to our July 5, 2022 comments on electrical supply (Comment 60-13) was omitted in the response document.[2] As such, we repeat our comment that SCAQMD should consider emissions from electricity generation in California and work with other agencies and utilities to maximize renewable sources of electricity. Though renewables have become a significant source of California's energy, non-renewable sources still generate the bulk of the state's power. Ensuring clean electricity is powering clean buildings and vehicles is vital in maximizing emission reductions.

- **Hydrogen deployment in the Basin should include genuine engagement with environmental and environmental justice stakeholders, as well as commit to a ramp up of "green" hydrogen sources. Further, we are concerned about the usage of hydrogen as a combustion fuel:** Considering recent federal investments in hydrogen technology, SCAQMD must consider how to ensure this emerging technology addresses both longstanding air quality and environmental justice issues. While hydrogen fuel cell technology presents a significant opportunity to improve air quality, engagement with environmental and environmental justice stakeholders is key to successful deployment. Further, there must be a commitment to ramping up renewable sources of hydrogen, such as electrolytic hydrogen, as the technology matures. Lastly, we have concerns about the use of hydrogen as replacement fuel for thermal power plants. Studies have shown hydrogen combustion creates NOx, which is a precursor to ozone. Further, hydrogen can act as a precursor to greenhouse gases; as such, preventing leakage will need to be prioritized both to protect climate and community safety.

Comment 100-7

Thank you for your consideration of our comments.

Sincerely,

Christopher Chavez
Deputy Policy Director

[2] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6 (as of October 18, 2022.)

Response to Comment 100-1: South Coast AQMD staff appreciates your comments on the Revised Draft 2022 AQMP and recognizes your concern with black box measures. However, a plan without the black box would not be approvable by U.S. EPA as South Coast AQMD would not be able to demonstrate the emission reductions needed to achieve the carrying capacity. Further, the overwhelming majority of the black box reductions are associated with emission sources subject to federal regulatory authority. South Coast AQMD has been and will continue working with CARB and U.S. EPA to develop a strategy to address federally regulated sources.

Response to Comment 100-2: Under the Clean Air Act, South Coast AQMD is required to consider all feasible options to reach attainment. The 2022 AQMP calls for aggressive economy-wide transition to zero emission technologies where feasible and emissions reductions from all sources under South Coast AQMD's authority including stationary and mobile sources. South Coast AQMD will use every tool available to achieve emission reductions, and supporting state and local funding and incentive efforts.

Community outreach programs are a critical component of the 2022 AQMP to ensure the equitable implementation of control measures. South Coast AQMD staff recognizes that environmental justice issues exist beyond the six currently designated AB 617 communities and will continue to work with vulnerable communities to prioritize incentive funding.

Please refer to the Response to Comment 60-11 regarding concerns associated with the timeline to implement BARCT.

Response to Comment 100-3: South Coast AQMD is currently developing Proposed Rule 2306 and Proposed Rule 2304 which are scheduled for public hearing in 2023. Rule concepts would seek to reduce emissions from these indirect sources, including through approaches that would facilitate the implementation of the cleanest available ocean-going vessels, on-road heavy duty trucks, cargo-handling equipment, locomotives, and harbor craft, and the necessary infrastructure to support zero emission technologies where feasible. These measures are specific facility actions that will result in real, quantifiable emission reductions or accelerate the penetration of zero emission equipment beyond existing regulation requirements. Staff is evaluating potential freight movement changes and associated emissions impacts from the proposed Barstow International Gateway (BIG) as part of the Proposed Rule 2306 rulemaking process. Details on the projected amount of emissions expected from the new intermodal facilities within the South Coast Air Basin and the timeline for achieving emission reductions are being determined through the rulemaking processes for the proposed rules currently underway.

Response to Comment 100-4: Impacts to incentive funding from economic downturns are a concern on how they might impact incentive funding programs relying upon GGRF. South Coast AQMD has several incentive programs that do not rely upon GGRF funding such as Carl Moyer which relies upon vehicle registration fees and consequently, is a relatively stable source of funding during economic downturns. As new incentive programs are established, to the extent possible, the economic volatility upon the programs will be considered to help ensure stability with incentive funding. Yearly volatility with incentive funding amounts also makes it difficult to implement the incentive programs and having mixed sources of incentive funding helps reduce the volatility in achieving emission reductions through incentive programs during economic downturns.

Response to Comment 100-5: The 2022 AQMP proposes additional emissions reductions that are beyond and above any previous commitments proposed but not achieved in the 2016 AQMP. Table 1-2 of the

Revised Draft 2022 AQMP shows emission reductions achieved through adopted measures from the 2016 AQMP. Several control measures in the 2016 AQMP were adopted into rules and most of the remaining measures were reintroduced in the 2022 AQMP, except for three control measures (BCM-01, BCM-04, and BCM-10) which were primarily particulate matter measures. The BCM-10 – Emission Reductions from Greenwaste Composting had corresponding VOC reductions. Staff will revisit the BCM measures during the development of future PM2.5 plans.

Response to Comment 100-6: Staff appreciates the comments and support for zero emission measures for buildings. The South Coast AQMD mission is to improve air quality and public health with a focus on disadvantaged communities and to ensure that socioeconomic status or other factors will not pose obstacles for the equitable protection from air pollution. Incentives will continue to be a critical component in implementing the control strategies in the 2022 AQMP as they would not only promote more participation in zero emission buildings, but also provide an opportunity to improve some of the inequities. South Coast AQMD will continue to identify more funding sources for future building incentive programs and ensure that EJ/disadvantaged communities are able to access advanced technologies and benefit from the transition to zero emission technologies. Please refer to the general response to Impact of Zero Emission Technology on Inequity for further discussion on equity for disadvantaged communities.

Please refer to the Response to Comment 60-13 which has been incorporated into the Response to Comments Volume I.

Response to Comment 100-7: South Coast AQMD has been actively investing and partnering with Original Equipment Manufacturers (OEMs), research centers, and national laboratories to demonstrate the fuel cell vehicles and supporting infrastructure. Over the last decade, the fuel cell Technology Readiness Level (TRL) has improved, and this technology is progressing toward commercialization for heavy duty vehicles. We agree that it is critical to engage with environmental justice stakeholders regarding deployment of zero-emission technologies and will continue to do so as more and more ZE technologies are deployed. As more funding for the expansion of hydrogen infrastructure and hydrogen production and advancement of fuel cell technologies at the state and federal level become available (such as the recent Department of Energy (DOE) announcement for Hydrogen Hubs), the scale up production of hydrogen will move from reformation to zero and low carbon processes using renewable power and electrolysis. South Coast AQMD staff agrees that any potential NOx increases with certain hydrogen combustion technologies needs to be controlled. We are actively engaged in studies to evaluate impacts on NOx emissions from different hydrogen combustion processes. Lastly, specific South Coast AQMD rules and regulations, such as Rules 1109.1 and 1110.2, will continue to limit the NOx emissions from combustion equipment that operate within the South Coast Air Basin.

Comment Letter #101

Ramine Cromartie
Senior Manager, Southern California Region

October 18, 2022

Dr. Sang-Mi Lee
Planning & Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Via e-mail at: AQMPteam@aqmd.gov

Re: WSPA Comments on SCAQMD Revised Draft 2022 Air Quality Management Plan

Dear Dr. Lee,

Western States Petroleum Association (WSPA) appreciates the opportunity to participate in the working group and workshops for the South Coast Air Quality Management District's (SCAQMD or District) 2022 Air Quality Management Plan (AQMP or Plan). The AQMP is a regional blueprint for achieving the national ambient air quality standards (NAAQS). On October 1, 2015, the U.S. Environmental Protection Agency (EPA) strengthened the National Ambient Air Quality Standards (NAAQS) for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb).[1] The 2022 AQMP is being developed to address the requirements for meeting this standard through proposed control measures.

WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport, and market petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies in five western states including California. WSPA has been an active participant in air quality planning issues for over 30 years. WSPA-member companies operate petroleum refineries and other facilities in the South Coast Air Basin (SCAB) that are regulated by the SCAQMD and will be impacted by the 2022 AQMP.

Comment 101-1

We understand the challenges that the District faces in attaining the NAAQS. The region's unique topography and meteorology combined with mobile source emissions continues to produce significant ozone pollution for which the District has limited control authority. And as cost-effective controls have been implemented, it has become increasingly difficult to identify and implement additional control measures that are cost-effective. On September 2, 2022, SCAQMD released the Revised Draft 2022 AQMP.[2] On October 1, 2022, SCAQMD released the Draft Socioeconomic Report for the Revised Draft 2022 AQMP.[3] WSPA offers the following comments.

[1] 2015 Revision to 2008 Ozone NAAQS. Available at: https://www.federalregister.gov/documents/2015/10/26/2015-26594/national-ambient-air-quality-standards-for-ozone.
[2] 2022 Revised Draft AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp.pdf?sfvrsn=4.
[3] 2022 Draft AQMP Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

1. **SCAQMD should reaffirm their commitment to a technology and fuel neutral policy consistent with historical air quality management plan and rulemaking development.**

   In previous AQMPs and rulemakings, SCAQMD has taken a position of technology and fuel neutrality. In the 2016 AQMP, SCAQMD stated:[4]

   > *Air quality regulatory agencies have traditionally set policies and requirements that are performance-based, and thus technology- and fuel-neutral.* ***This is a policy that the SCAQMD intends to continue.*** *[Emphasis added]*

   To realize the emission reductions required by the 2022 AQMP, SCAQMD has stated that widespread deployment of zero emission (ZE) technology must be implemented over all sectors. The 2022 AQMP Policy Brief on Infrastructure and Energy Outlook states[5]:

   > *The only pathway to attainment requires widespread deployment of ZE technologies* at scale.

   However, by shifting to a singular technology/fuel approach, SCAQMD would limit the flexibility of industries and technology manufacturers to develop emission reduction strategies at lower costs. SCAQMD's objectives for air quality improvement would be further advanced by allowing competition among more technologies and fuels. SCAQMD's long-held technology neutral policy should be applied to the 2022 AQMP.

Comment 101-2

2. **The 2022 Draft AQMP includes numerous control measures which would require electrification of different types of equipment. California's electric grid infrastructure is already strained, and SCAQMD representatives have acknowledged the infrastructure will take years to develop. Yet the Draft AQMP does not consider the time or cost constraints electrification would impose. Before advancing such measures, SCAQMD should consider whether (or when) the region will be able to accommodate additional electric grid demands.**

   In the 2022 AQMP, electric technology options have been proposed for residential and commercial water heating, space heating, and cooking devices, as well as for non-emergency internal combustion engines, large turbines, electrical generation facilities, and petroleum refineries.[6] SCAQMD staff have acknowledged that the existing infrastructure is not sufficient for widespread adoption of ZE technologies and will take many years to develop.[7,8] SCAQMD also notes that the preliminary estimates of statewide ZE infrastructure needs developed by the California Energy Commission (CEC) and California Air Resources Board (CARB) "are largely based on a transition to ZE vehicles for on-road transportation sources, and do not fully address the adoption of ZE technologies by other emission sources, including stationary, locomotives, and off-road equipment."[9]

Comment 101-3

[4] SCAQMD Final 2016 AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.
[5] 2022 AQMP Policy Brief on Infrastructure – Energy Outlook. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combined-infrastructure---energy-outlook.pdf?sfvrsn=8.
[6] 2022 AQMP Control Measures Workshop, Agenda Item 5, South Coast AQMDs Proposed Draft VOC Stationary Source and Other Measures, Slides 7-34. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/am-pres-agenda-item-5-nox-measures-110621.pdf?sfvrsn=6.
[7] 2022 AQMP Control Measures Workshop, Agenda Item 3, South Coast AQMDs Proposed Draft VOC Stationary Source and Other Measures, Slide 13. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/am-pres-agenda-item-3-zero-emission-technology-110621.pdf?sfvrsn=6
[8] August 2, 2021 letter to environmental organizations from Wayne Nastri, SCAQMD Executive Officer.
[9] SCAQMD 2022 AQMP Policy Brief, Infrastructure – Energy Outlook. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combined-infrastructure---energy-outlook.pdf?sfvrsn=8.

During a recent SCAQMD Legislative Committee meeting, Mayor Michael Cacciotti, Committee Chair and SCAQMD Governing Board Member, questioned whether the region in general, and certain utilities in particular, will be able to accommodate the new electric demands, and whether there is money being put into the updated grid.[10] In response, Wayne Nastri, SCAQMD Executive Officer, stated that California will need to build 7 gigawatts (GW) of power per year for the next 40 years to meet projected demand, and the most power California has built in a year thus far has been 1.2 GW. He stated that the question on everyone's mind is: If we have never met that level of increase in power, what makes us think we are going to be able to get the needed increases? Mr. Nastri continued, stating that it is going to be very difficult to get the required infrastructure we need to deploy to a fully zero-emission society.[11]

Comment 101-3 Con't

California faces significant and unresolved grid infrastructure and reliability concerns that would only be exacerbated by the electrification requirements in the proposed AQMP control measures. SCAQMD has not considered or analyzed any of the generation, transmission, or distribution constraints in its proposals. SCAQMD notes repeatedly in their responses to comments that control measure MOB-15, ZE Infrastructure for mobile sources, is a commitment to engage with stakeholders involved with the transition to ZE fueling with the goal of identifying potential shortfalls in technologies and energy availability while assisting in an effort to address these concerns.[12] However, assistance in planning does not provide a guarantee that the infrastructure will be in place to support the transition to ZE and near ZE technologies. SCAQMD must consider electrical infrastructure development and availability of reliable electrical power in the rulemaking process.

3. **The 2022 AQMP Draft Socioeconomic Report omits expenditures related to ZE infrastructure, making it an incomplete analysis of the impacts to residents in the South Coast Air Basin.**

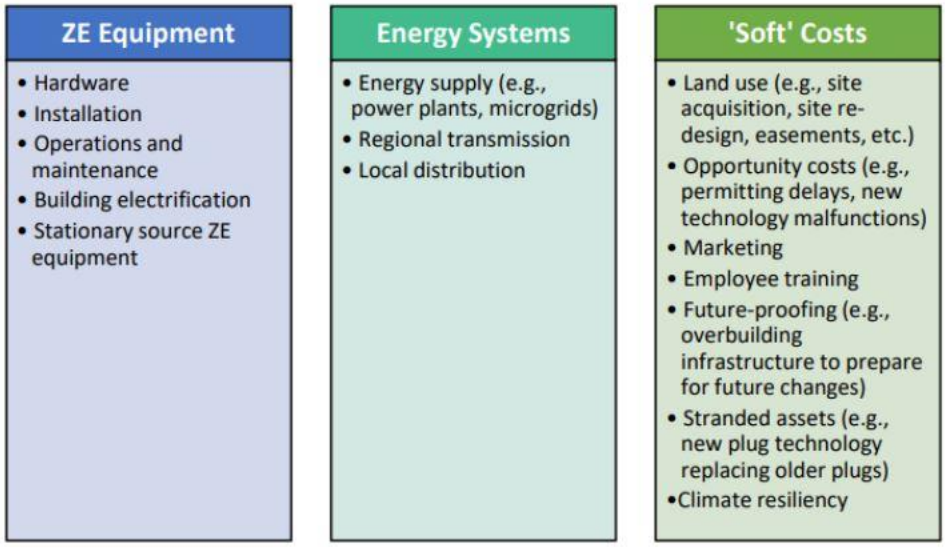
The 2022 AQMP Draft Socioeconomic Report (Socioeconomic Report) states that the impact of implementing ZE and fuel-cell technologies on the existing infrastructure "presents challenges in quantifying cost and determining the level of uncertainty in scale and distribution."[13]

Comment 101-4

SCAQMD has stated that three categories of expenditures are expected for installation of future ZE infrastructure, as presented in Figure 1.[14]

[10] SCAQMD Legislative Committee Meeting, September 9, 2022. Meeting recording available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=1jo6esFRYug.
[11] Ibid.
[12] 2022 Revised Draft AQMP Comments and Responses to Comments. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6.
[13] 2022 AQMP Draft Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.
[14] SCAQMD 2022 AQMP Draft Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

Figure 1: Three Categories of Costs for Zero Emissions Infrastructure.



The Socioeconomic Report notes the uncertainties in each of the above categories, stating that the level of uncertainty is the least for ZE equipment, and highest for soft costs, noting that:

> *…further research is needed to determine how these costs for each project can be considered broadly when zero emission technologies are deployed at the scale needed to meet air quality standards.*

SCAQMD further states that "'soft' costs are generally not included in current estimates." Additionally, the Socioeconomic Report states, "Due to high uncertainty, these speculative future energy system costs are not considered in the socioeconomic analysis…." But in fact, the scale of these costs is not impossible to estimate.

For example, a 2021 study of published literature on transportation electrification infrastructure costs in California estimated the cumulative costs from 2020-2050 for generation, transmission, distribution, maintenance, and electric vehicle chargers to achieve a statewide on-road zero emission vehicle (ZEV) fleet to be $2.1 to $3.3 trillion.[15] This cost estimate did not include:

- Infrastructure upgrade costs for generation, transmission, and supply of renewable hydrogen that is needed for operating fuel cell electric vehicles;
- Additional costs associated with upgrades to the electric grid to address grid reliability issues that could arise from increased use of renewables, public safety power shutoffs (PSPS) to avoid wildfires, and/or aging infrastructure;
- Potential stranded asset costs, if any, arising from policies implemented to achieve a statewide on-road ZEV fleet and zero-carbon electricity supply in 2050.

Comment 101-4 Con't

[15] Transportation Electrification Infrastructure Costs in California: A Meta-Study of Published Literature. Available at: https://www.arb.ca.gov/lists/com-attach/80-sp22-concepts-ws-AmNWJVA2VFgEM1Bn.pdf.

The above estimate was solely considering transportation electrification impacts and would not include costs for upgrading the grid for residential electrical use or other stationary source control measures as proposed in the 2022 Revised Draft AQMP. But this example suggests that those costs would be quite considerable. By failing to provide even planning-level costs for electrical infrastructure costs, the Socioeconomic Report vastly understates the cost of the Revised Draft AQMP.

SCAQMD should revise the cost analysis to include cost estimates for electrical infrastructure development and include them in the Socioeconomic Report.

Comment 101-4 Con't

4. **Implementation of the 2022 AQMP will be considerably more costly compared to the 2016 AQMP. This cost will be largely carried by residents of the SCAB. In addition, there are considerable job losses expected from implementation of the 2022 AQMP. As the District's costs and job loss estimates do not account for electrical infrastructure costs, those estimates are almost certainly understated.**

The 2016 AQMP proposed NOx reductions at an amortized cost of $0.85 billion, with over 90% of that cost attributed to publicly funded incentive programs.[16] Additionally, the net job impacts in the 2016 AQMP were between 9,000 jobs lost for a worst-case scenario and 29,000 jobs gained in a best-case scenario.

The Draft 2022 AQMP Socioeconomic Report states that the Revised Draft 2022 AQMP would be projected to result in an amortized cost of $2.85 billion more than business-as-usual (BAU); a cost that is 3.3 times higher than the 2016 AQMP. Costs are divided as follows:[17]

> *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.*

Comment 101-5

The Socioeconomic Report states that only 10% of the total incremental cost is attributed to incentive programs that can be used to offset the purchase of cleaner technologies. The large reduction in available incentives will likely result in costs being passed on to consumers.

The 2022 AQMP will also impact employment. The Socioeconomic Report defines Jobs Foregone as follows:

> *Jobs Foregone = Loss of Existing Jobs + Forecasted Jobs Not Created*

The Socioeconomic Report estimates between 17,000 - 29,000 jobs foregone annually, or a staggering 238,800 – 406,000 jobs foregone between 2023 and 2037.

As significant as that sounds, it is incomplete because the Socioeconomic Report does not consider costs related to necessary expansion of grid infrastructure. Governing Board

[16] SCAQMD 2016 AQMP Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf?sfvrsn=2.
[17] SCAQMD 2022 AQMP Draft Socioeconomic Report. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/draft-socioeconomic-report.pdf?sfvrsn=4.

Member Carlos Rodriguez recently noted that it is concerning that we do not have at least a planning level estimate for grid infrastructure development costs.[18]

Both the cost and job loss estimates presented in the Socioeconomic Report are incomplete and significantly understated. Even with these omissions, the cost and projected job loss figures are dramatically higher than the 2016 AQMP.

Comment 101-5 Con't

5. **The Revised Draft AQMP includes a health-based cost effectiveness threshold. The basis for this proposal is incomplete, and many of the assumptions are not well documented. Any threshold to consider societal health costs must also include all of the associated economic costs. This would need to include job losses, stranded asset costs, and any higher consumer prices.**

In the Revised Draft AQMP, SCAQMD has introduced a health-benefit cost-effectiveness threshold of $325,000/ton NOx-reduced. SCAQMD's analysis is based first on EPA's "Estimating the Benefit per Ton of Reducing Directly-Emitted $PM_{2.5}$, $PM_{2.5}$ Precursors, and Ozone Precursors from 21 Sectors".[19] This analysis relies on the Benefits Mapping and Analysis Program Community Edition (BenMAP-CE v.1.5) model to estimate the potential health impacts and economic values of impacts associated with the attributable ambient concentrations of primary $PM_{2.5}$, sulfate and nitrate $PM_{2.5}$, and ozone resulting from VOC or summer season NOx.[20] SCAQMD used the state level analysis for three industrial sectors to arrive at a benefits per ton of NOx estimates in California.[21]

Comment 101-6

Table 1: 2035 Benefits-Per-Ton of NOx Estimates in California (2021 Dollars)

Sector Name	NOx (tpy)	Short Term O_3 Exposure	Long Term O_3 Exposure	$PM_{2.5}$	Total
Boilers	5,706	$14,793	$119,972	$57,074	$191,839
ICE	4,121	$22,946	$180,540	$88,057	$291,543
EGU	9,403	$40,767	$313,325	$30,867	$384,959
				Benefits-per-ton (weighted by tons reduced)	**$307,636**

[18] SCAQMD Governing Board Meeting, October 7, 2022. Available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=mQOlxYZ-Cm4.
[19] Estimating the Benefit per Ton of Reducing Directly-Emitted PM2.5, PM2.5 Precursors, and Ozone Precursors from 21 Sectors. Available at: https://www.epa.gov/system/files/documents/2021-10/source-apportionment-tsd-oct-2021_0.pdf.
[20] BenMAP-CE. Available at: https://www.epa.gov/benmap.
[21] 2022 Revised Draft AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp.pdf?sfvrsn=4.

SCAQMD states[22]:

> *As an additional check on this estimate based on EPA analysis, a comparison can be made with estimates from the 2016 AQMP and its associated Socioeconomic Impact Assessment… Based on these analyses, Option 2 would use a screening threshold of $325,000 per ton (2021 dollars) when evaluating the cost-effectiveness of proposed rules ($325,00 is the mid-point between the estimates from the 2016 AQMP and Table 4-16).*

The 2016 Socioeconomic Report also used BenMAP to assess health benefits associated with reductions in exposure to criteria pollutants. Therefore, the use of the 2016 Socioeconomic Report results really does not provide a true "check" on the EPA document, as the model used in the evaluation is the same.

Within this analysis the cost valuation of health effects prevented relies on willingness-to-pay (WTP) methodologies, however WTP estimates (current or historical) are not available for all included health endpoints. For that reason, the AQMP employs a mixed-methods approach which utilizes WTP estimates for some health endpoints, and cost-of-illness (COI) estimates for others – or occasionally both.

WTP and COI values are derived using very different techniques – WTP being based on querying of individuals on how much they would pay to avoid experiencing (or having their family members experience) given symptoms or illnesses. As such, WTP is dependent upon a wide variety of economic and behavioral individual perspectives and is adjusted in this analysis for income elasticity. In contrast, COI is measured by summing the costs incurred by the payer (typically an insurance company) for treating the given condition, including emergency room (ER) visits, in-patient hospital stays, outpatient hospital visits, prescriptions, etc. For some conditions, these quantities are summed over multiple years (e.g., Alzheimer's disease), whereas for other conditions the cost represents a single short-term health event (e.g., bronchitis).

In other locations within the documentation of the Revised Draft AQMP, COI is alternately defined as "lost work time due to absences from work to recover or take care of ill dependents."[23] Whereas the first definition for COI above represents direct costs, this second definition represents only *indirect* costs associated with productivity lost. But these two interpretations of COI are not interchangeable. Health economic analyses can be performed from the payer perspective (including direct costs only) and/or the societal perspective (including both direct and indirect costs). For the SCAQMD analysis, it is unclear which perspective is being presented for analysis.

Valuation functions for various health endpoints are provided in the Revised Draft AQMP documents, however it is not specified which are WTP valuations and which are COI. The documentation suggests that WTP is mainly utilized for mortality endpoints and COI for morbidity, but also acknowledges that for some morbidity endpoints WTP are used.[24] While WTP estimates are not available for every health effect of interest to this analysis, combining WTP and COI methodologies introduces significant uncertainties to the results.

Appendix 3-B includes a table (Table 3B-1) with a column for "Valuation Function" in which the monetary values range broadly (e.g., $0.35 per inhaler use, $9.2 million for respiratory

Comment 101-6 Con't

[22] 2022 Revised Draft AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp.pdf?sfvrsn=4.
[23] 2022 AQMP Draft Socioeconomic Report Appendices. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/2022-aqmp-socioeconomic-report/draft-socioeconomic-report-appendices.pdf?sfvrsn=2
[24] Ibid.

mortality, etc.). Additional details on how these numbers were incorporated into the total estimate provided are lacking and should be provided.

SCAQMD states[25]:

> *The morbidity-related health benefits were valued by a combination of COI and WTP. The directly avoided COI or the WTP for reduced risk of various morbidity symptoms were modeled as reduced consumer spending on healthcare-related goods and services and a corresponding reallocation of consumer spending from healthcare to other goods, services, and savings. The indirectly avoided COI, which was valued by the lost work time due to absences from work to recover or take care of ill dependents, were assumed to increase labor productivity for all industries.*

The health-based cost-effectiveness threshold analysis discusses how changes in the local economy resulting from avoided health costs may increase migration of new workers into the region, and provides calculations associated with economic migration.[26] The number of assumptions made in these analyses appears to be high; this in turn significantly affects uncertainty associated with the final model outcome. While it appears that outside bodies may have reviewed the methods and performed some sensitivity analyses to explore uncertainty associated with a small number of parameters, these results are also not provided in the SCAQMD's report.

Finally, if societal health costs are to be factored into cost effectiveness thresholds, they must include all the associated economic costs including but not limited to stranded assets, job losses, and possible higher consumer prices. As noted previously, these have not been factored.[27]

Comment 101-6 Con't

6. The 2022 State Strategy for the State Implementation Plan acknowledged a NOx emission reduction shortfall for SCAB. That shortfall could be addressed in part through use of low-emitting internal combustion engine technologies and fuels.

As stated in WSPA's comment letter dated July 5, 2022, CARB acknowledged in the Draft 2022 State Strategy for the State Implementation Plan an emission reduction shortfall necessary for attainment in the SCAB.[28] The State SIP strategy is therefore insufficient to attain the 70 ppb federal 8-hour ozone standard by 2037. Additionally, the State SIP Strategy and the 2022 AQMP do not address the federal Clean Air Act obligations to attain earlier ozone standards. WSPA noted that CARB is ignoring potential near term emission reductions by dismissing broader use of lower-emitting internal combustion technologies, resulting in delayed attainment in the SCAB.

Comment 101-7

In response to this comment, SCAQMD states[29]:

> *South Coast AQMD concurs that low NOx combustion technologies are critical to achieving NOx reductions in the near-term, which assists with attainment of ozone and PM2.5 standards with earlier attainment dates. Staff continues to advocate for the*

[25] Ibid.
[26] Ibid.
[27] SCAQMD Mobile Source Committee Meeting, September 16, 2022. Available at: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=zSMKn4miXuk.
[28] CARB Draft 2022 State Strategy for State Implementation Plan, January 31, 2022. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-01/Draft_2022_State_SIP_Strategy.pdf.
[29] SCAQMD Revised Draft AQMP Comments and Responses to Comments. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6.

deployment of low NOx technologies in the absence of readily available zero emission technologies.

WSPA appreciates SCAQMD Staff's acknowledgement that attaining NOx reductions in the near term via low NOx technologies is critical to meeting attainment deadlines. WSPA encourages SCAQMD to consider rapid deployment of low NOx technology in the short term to achieve the necessary attainment goals not currently met through previous AQMPs.

Comment 101-7 Con't

7. **The District has proposed control measures addressing both VOC and NOx reductions. However, the District's attainment strategy has not demonstrated a need for VOC control measures.**

As discussed in WSPA's comment letter dated July 5, 2022, the District has proposed control measures addressing both VOC and NOx reductions, without showing that VOC reductions are necessary to meet ozone standards. The District's modeling provides isopleths which provide guidance for the formulation of future control strategies. The isopleths approximate the expected ozone design value for a given level of NOx and VOC emissions. As described by SCAQMD[30]:

> *With VOC emissions greater than 300 tons per day, the corresponding NOx emissions along the white contour are approximately 60-70 tons per day at GLEN and 70-80 tons per day at CRES. The isopleth further demonstrates that VOC reductions alone are insufficient to demonstrate attainment;* ***NOx reductions are the only pathway to attainment****. [emphasis added]*

Comment 101-8

SCAQMD responded to this comment, stating that VOC reductions are necessary due to the "NOx disbenefit," which is an atmospheric phenomenon whereby decreases in NOx can lead to increases in ozone.[31] However, SCAQMD did not provide any documentation showing that the NOx disbenefit is not already accounted for in the modeling analysis. We respectfully request that SCAQMD provide that technical basis.

8. **In order to demonstrate attainment by the 2037 deadline, the next generation ultra-low NOx burners proposed by control measure L-CMB-07 must be developed and commercially available on a timeline that allows for rulemaking and facility engineering to be complete.**

Proposed Control Measure L-CMB-07 addresses NOx emissions at petroleum refineries, and specifically calls out refinery boilers and process heaters. The District suggests a transition of such equipment to ZE, near ZE, or "other technologies."

Comment 101-9

SCAQMD Rule 1109.1, Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, was developed as a result of the 2016 AQMP control measure CMB-05, which required a transition from RECLAIM to a command and control regulatory structure requiring Best Available Retrofit Control Technology (BARCT) level controls as soon as practicable.[32,33] As discussed in WSPA's comment letter dated July 5, 2022, the final permit actions required under R1109.1 are not due until January 1, 2031, with compliance required no later than 36 months after Permit to Construct (PTC) issuance.

[30] SCAQMD Draft 2022 AQMP, Appendix V. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combined-appendix-v.pdf?sfvrsn=8.
[31] SCAQMD Revised Draft AQMP Comments and Responses to Comments. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6.
[32] SCAQMD Rule 1109.1. Available at: https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1109-1.pdf?sfvrsn=8.
[33] SCAQMD 2016 AQMP. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.

Depending on permit application processing time, final compliance with Rule 1109.1 requirements for some equipment could be as late as 2034-2036.

In their response to this comment, SCAQMD acknowledged that there are a small number of units that will be subject to the above stated schedule but noted that the majority of the NOx control projects would be implemented by 2031.[34] While that may be true, adding a new refinery equipment rule while the current one (i.e., R1109.1) is still being implemented could cause capital project planning problems and potentially stranded assets.

Implementation of control measures under this AQMP would need to be in place by 2035 to be useful for the 2037 attainment demonstration. Refinery capital projects are complex affairs, requiring significant planning, engineering, and then sequencing construction with unit turnaround schedules. These projects would need to begin by 2028 in order to support this AQMP's attainment demonstration. SCAQMD has proposed to initiate rule development for L-CMB-07 between 2025 and 2027 to achieve emission reductions by 2037.[35] The SCAQMD response to WSPA comments in the July 5, 2022 letter acknowledges that the rule development process for Rule 1109.1 took approximately 3.5 years and a similar timeframe will be needed for rule development related to L-CMB-07.[36] Using that math, L-CMB-07 rulemaking would start in approximately 2025.

Comment 101-9 Con't

Additional controls and proposed reductions in L-CMB-07 are focused primarily on boilers and process heaters with a maximum rated heat input of 40 MMBtu/hr or larger. SCAQMD is proposing that all of the emission reductions for the control measure can be achieved using next generation ultra-low NOx burner technology (ULNB).[37] These technologies are still under development and are not commercially available. In order to be incorporated into the rulemaking timeline listed above, these ULNB technologies would now need to be fully developed and proven by ~2025.

At Proposed Rule 1109.1 (PR1109.1) Working Group Meeting (WGM) #17, one vendor provided a presentation on development of their core process burner. The presentation cited < 7 ppm NOx emissions for a limited number of projects involving equipment rated at 39 MMBtu/hr or less.[38] However, it was unclear if any of the projects were able to demonstrate the lower emission rate when burning refinery fuel gas, or whether any of the projects involved equipment rated at ≥40 MMBtu/hr input, as suggested in the proposed L-CMB-07 measure. SCAQMD provided information on a different burner technology at PR1109.1 WGM #12, noting that the burner system requires heat releases between 1 and 20 MMBtu/hr, and has been demonstrated to achieve approximately 5 ppm NOx using natural gas at a test facility. That vendor noted that refinery fuel gas may result in higher emissions.[39] Due to the expectation of higher emissions when burning refinery fuel gas, SCAQMD evaluated the cost-effectiveness of a 9 ppm BARCT endpoint for NOx for

[34] SCAQMD Revised Draft 2022 AQMP, Comments and Responses to Comments. Response to Comment 72-2. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6.
[35] SCAQMD Revised Draft AQMP, Appendix IV. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-appendix-iv-a.pdf?sfvrsn=6.
[36] SCAQMD Revised Draft 2022 AQMP, Comments and Responses to Comments. Response to Comment 72-2. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6.
[37] SCAQMD Revised Draft AQMP, Appendix IV. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-appendix-iv-a.pdf?sfvrsn=6.
[38] SCAQMD Proposed Rule 1109.1 WGM #17. ClearSign Technologies Presentation. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/clearsign-update-for-scaqmd---pr-1109-1.pdf?sfvrsn=6.
[39] SCAQMD PR1109.1 WGM #9 Presentation. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/pr1109-1-wgm_9_final.pdf?sfvrsn=12.

equipment burning refinery fuel gas. These technologies must be developed by 2025, with demonstration showing that the technology can result in desired NOx emission rates when burning refinery fuel gas.

In addition to commercial demonstrations, the equipment for the emerging technologies must be able to fit into the existing boiler or process heater footprint so as not to require complete replacement of the equipment. As noted by the November 2020 Fossil Energy Research Corporation (FERCo) report, the physical spaces around refinery heater units are typically very congested.[40] Cost considerations associated with dimensional constraints must be considered during the rulemaking process and associated cost-effectiveness analysis. These is no reason to expect that these factors/constraints have changed since R1109.1 was adopted.

Comment 101-9 Con't

9. **The District needs to provide an explanation for the change in the proposed emission reductions for L-CMB-07.**

The Revised Draft 2022 AQMP included a new value for L-CMB-07 emissions reductions at 0.88 tons per day, increased from 0.77 tons per day provided in the Draft 2022 AQMP, a 14% increase. Given that the proposed control technologies under this measure have not changed, SCAQMD should provide further information on this change and its technical feasibility.

Comment 101-10

WSPA appreciates the opportunity to provide these comments related to the 2022 AQMP. We look forward to continued discussion of this important Plan development. If you have any questions, please contact me at (310) 808-2146 or via e-mail at rcromartie@wspa.org.

Comment 101-11

Sincerely,

Ramiro Comate

Cc:
Wayne Nastri, SCAQMD
Sarah Rees, SCAQMD
Ian MacMillan, SCAQMD
Sang-Mi Lee, SCAQMD
Elaine Shen, SCAQMD
Patty Senecal, WSPA

[40] FERCo South Coast Air Quality Management District Rule 1109.1 Study Final Report (FERCo Report), page 5-3, November 2020. Available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/ferco-report.pdf?sfvrsn=6.

Response to Comment 101-1: South Coast AQMD staff appreciates your active participation in air quality planning issues in the South Coast Air Basin for the past decades and thanks for your comments on the 2022 AQMP.

Response to Comment 101-2: Please see Response to Comment 94-2.

Response to Comment 101-3: The South Coast AQMD has included MOB-15 into the 2022 AQMP as a means of addressing the concerns and challenges related to zero emission infrastructure. The state of California is committed to a historic shift to ZE fueling for transportation sources, and the South Coast AQMD aims to support this shift regionally through information sharing, policy measures, and funding support where appropriate. The uncertainties associated with this transition provide an opportunity for collaboration that South Coast AQMD hopes to foster through control measure MOB-15.

Response to Comment 101-4: Please refer to the Response to Comments for the Draft Socioeconomic Report.

Response to Comment 101-5: Please refer to the Response to Comments for the Draft Socioeconomic Report.

Response to Comment 101-6: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 101-7: The emission reduction shortfall in the Draft 2022 State SIP Strategy was caused by a discrepancy in the emissions inventory used in the Draft State SIP Strategy and the Draft 2022 AQMP, and subsequently rectified in the adopted 2022 State SIP Strategy by harmonizing baseline emissions. The emissions reductions in CARB's adopted 2022 State SIP Strategy are consistent with CARB's strategy included in the Revised Draft 2022 AQMP. All emission reductions needed to achieve the 60 tons per day carrying capacity are identified. South Coast AQMD remains committed to the deployment of low NOx technologies in the absence of feasible zero emission solutions.

Response to Comment 101-8: NOx disbenefit is evident in both modeling - Attachment 4 of Appendix V - and measurements, as seen during the early stage of COVID pandemic when NOx emissions were significantly lower than usual due to reduced human activities.[1] The plots below show examples of isopleth plots for Glendora (GLEN), Azusa (AZUS) and Pasadena (PASA) and their corresponding line plots showing three emission control trajectories: (1) NOx-only reductions shown by the blue line which follows the blue arrow in the isopleth plot, (2) VOC-only reductions shown by the red line and red arrow, and (3) concurrent NOx and VOC reductions shown by the orange line and orange arrow. Note that the isopleths plots are updated using the Revised Draft 2022 AQMP emissions inventory and the modeling structure used for attainment demonstration.

[1] Interpreting recent trends in ozone and its precursors in the South Coast Air Basin, Jeremy Avise, California Air Resources Board. Presentation at the Mobile Source Committee Meeting, April 15, 2022. Available at: http://www.aqmd.gov/docs/default-source/Agendas/Mobile-Source/msc-agenda-041522.pdf

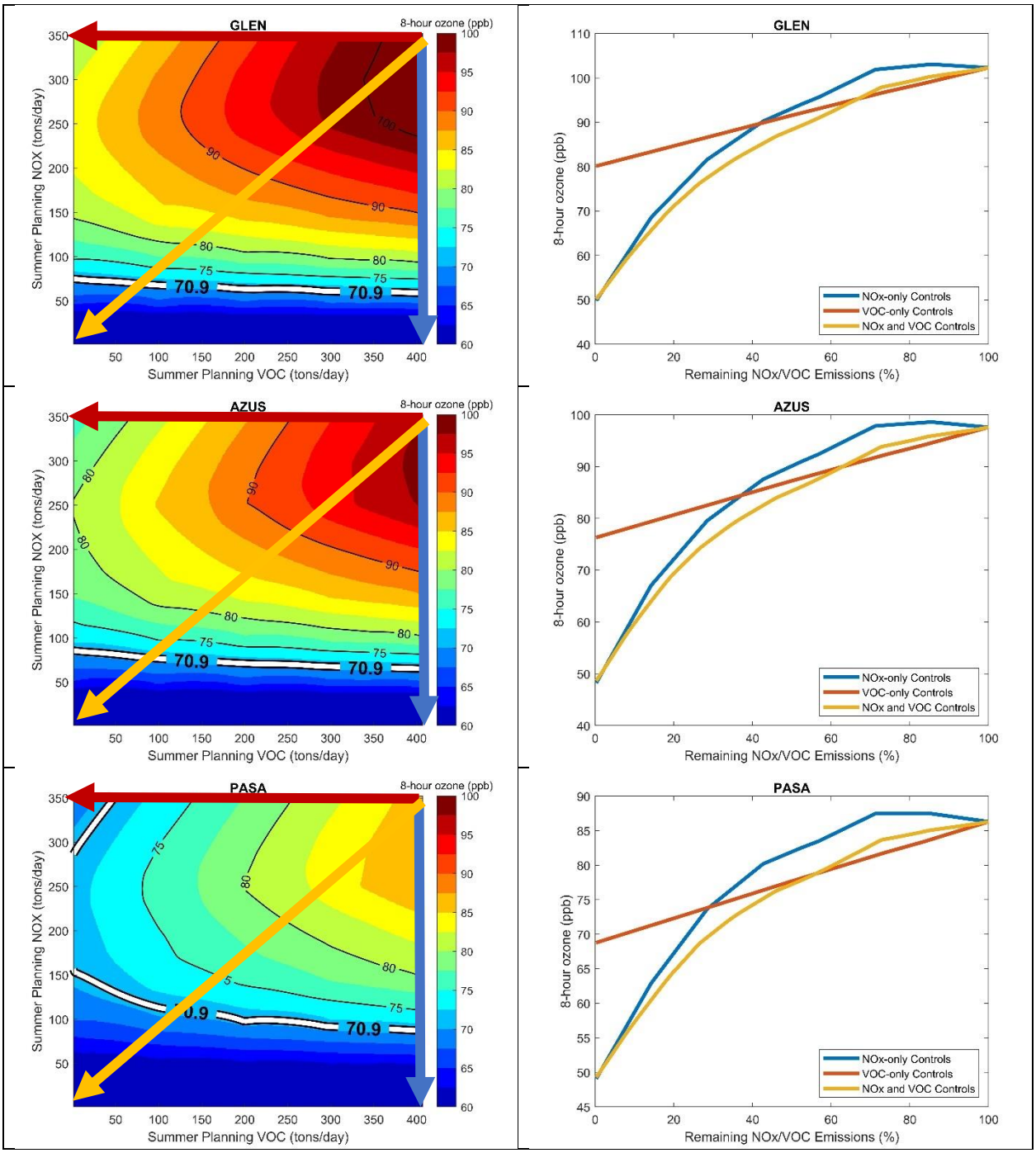


Figure 1: Isopleth plots (left), and corresponding line plots showing ozone concentration as a functions of emission reductions (right): NOx-only reductions shown by the blue line which follows the blue arrow in the isopleth plot, VOC-only reductions shown by the red line and red arrow, and concurrent NOx and VOC reductions shown by the orange line and orange arrow.

Following the trajectory of NOx-only controls depicted by the blue arrow, initial NOx reductions lead to slight increases in ozone for all three stations. When NOx emissions are reduced sufficiently, the so-called "NOx disbenefit" phenomenon – lower NOx leading to higher ozone – disappears and eventually lower NOx leads to lower ozone and attainment. Following the trajectory of VOC-only controls depicted by the

red arrow, VOC reductions show immediate reductions in ozone. However, as shown in plots for Glendora and Azusa, it is not possible to attain the standard by reducing only VOC. Finally, following the trajectory of combined NOX and VOC controls depicted by the orange arrow, emission reductions lead to immediate ozone reductions due to the combination of both NOX and VOC controls, with VOC controls offsetting the NOx disbenefits in the early stages of NOx controls. While it is not possible to attain the standard by reducing only VOC, and for some stations like Glendora, ozone is insensitive to VOC changes in emissions near the attainment line (the 70.9 line for GLEN is almost flat), early actions to reduce VOC emissions will assist to alleviate the temporary NOx increases along the path to attainment.

Response to Comment 101-9: Staff understands concerns regarding the timing of the proposed rule development and acknowledges that the petroleum refining industry is currently in the process of designing and installing equipment to meet the requirements of Rule 1109.1. As previously stated, staff does not believe there will be overlap between Rule 1109.1 implementation and L-CMB-07 because the facilities committed to achieving most of the emission reduction by 2027. As staff enters into rule development to implement L-CMB-07, a BARCT analysis will be conducted that will include a technology assessment and cost- and incremental cost-effectiveness analysis. During the rulemaking process, a detailed assessment of each class and category of equipment under Rule 1109.1 will be conducted to assess the potential for additional emission reductions. Staff will consider any stranded assets in the cost effectiveness assessment conducted during the rule development.

Please also see responses to comment letter 41, 43, 71, 72, and 99-5.

Response to Comment 101-10: The Revised Draft 2022 AQMP included an update in emission reductions due to L-CMB-07 from 0.77 tons per day in the Draft 2022 AQMP to 0.88 tons per day. The estimated 0.11 tons per day increase of emissions reductions is due to the update of the 2037 baseline NO_x emission between the Draft 2022 AQMP and the Revised Draft 2022 AQMP. As shown in the Revised Draft 2022 AQMP redlined version of appendix IV, page IV-A-115, the 2037 baseline annual average NOx emissions for sources included in L-CMB-07 were changed from 3.82 tons per day to 4.42 tons per day. The update in the 2037 baseline emissions reflects the best available projection data for petroleum refinery emissions over the South Coast Air Basin and Rule 1109.1 implementation after the sunset of the RECLAIM program. Measure L-CMB-07 targets an additional 20% overall reduction in NOx by 2037 from petroleum refinery emissions, with proposed control technologies that include utilizing next generation ULNBs, advanced SCR design, as well as electrification when feasible. With the increase of 2037 baseline emissions, the estimated benefit by implementing L-CMB-07 is increased accordingly.

Response to Comment 101-11: Staff appreciates your comments and looks forward to WSPA's continued engagement through the 2022 AQMP public process.

Comment Letter #102

10/18/2022

Duncan McKee
738 S. 3rd Avenue
Avocado Heights, CA 91746
Tele: (626) 330-5123

SCAQMD
Kevin Ni (c/o CEQA)
21865 Copley Drive
Diamond Bar, CA 91765

Dear SCAQMD Staff:

On behalf of the residents and business owners in Avocado Heights, Bassett, City of Industry, Hacienda Heights, La Puente and North Whittier, thank you for the opportunity to provide comments on the AQMP. We formally request that a proposal be included in the AQMP to work with private industry to build hazardous waste disposal facilities that recycle lead acid and other types of batteries and that they be constructed outside of the South Coast Basin. It is irresponsible to rely on one company, Quemetco/RSR/Ecobat, to process batteries from the entire western United States and batteries and other lead bearing hazardous waste imported from all over the world. This is currently occurring in close proximity to numerous schools, parks, residences and businesses. SCAQMD has documented serious health issues potentially attributable to this facility for years. SCAQMD has no plan to deal with this hazardous waste if the critical emission control equipment blows up and burns or if the facility is forced to cease operation for months because the roof over the 8 refining kettles is so corroded that it is in danger of collapse. This occurred in the recent past and SCAQMD has no contingency plan.
The fact that Wayne Nastri who is the current Executive Officer, worked for Quemetco when he was with Environmental Mediation, E4 Strategic Solutions and other companies should not be a reason for SCAQMD as the leading Air District (perhaps in the world) to give Quemetco/RSR/ Ecobat and their owners, special consideration when approving a Federal Title V Permit modification with as many serious unresolved impacts as there are. Thomas Lohff and I served many years ago on the SCAQMD Pilot Environmental Justice Council spearheaded by Dr. William Burke and Barry Wallerstein. In 2010 to 2016 we served on the working group along with Susan Nakamura, Michael Morris, Philip Fine Ph.D. and Ian MacMillan to write and implement Rule 1420.1 and PAR 1420.1. Wayne Nastri and his partner Howard Berman attended the meetings and worked very hard developing the strategy that former Governing Board Member, the Honorable Mayor Yates, described as "the nail in Exide's coffin". Dr. Wallerstein cautioned to be careful that the batteries processed at Exide did not come to Quemetco. We served in good faith and never in our wildest dreams could have envisioned the day when the very person whose company along with Quemetco's attorneys, developed the strategy and delivered the SCAQMD connections to position Quemetco/RSR/Ecobat and their owners to corner the market on the processing of lead acid batteries, would be the Executive Officer of SCAQMD. Mr. Nastri should do the right thing and work with his friends and former employers at Ecobat/Quemetco/RSR to facilitate the construction of additional

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facilities in a less populated location to process these batteries coming in from all over the world. A five year plan should be included in this AQMP that outlines a phasing out of the current City of Industry location so that the inevitable cleanup of the documented contaminated in the community and environment can commence.
I have included with this input submissions on the 2003 AQMP documenting outrageous practices facilitated and permitted by SCAQMD. SCAQMD has still not adequately addressed the issues raised so we are hoping that they will take the opportunity to do so in their response and stop protecting this big polluter.
Thank you.
Duncan McKee

Critical emission control equipment on fire at Quemetco that forced the extended closure of the hazardous waste disposal site.

Comment 102-1 Con't

Duncan McKee
738 S. 3rd Avenue
Avocado Heights, Ca. 91746

5/22/03

Mr. Michael Krause c/o
CEQA Section,
Planning, Rules Development and
Area Sources
21865 E. Copley Drive,
Diamond Bar CA. 91765-4182

Dear Mr. Michael Kruse:

Comment 102-1 Con't

This letter is to voice comments and ask questions on behalf of residents of Avocado Heights, La Puente, North Whittier, Bassett, Hacienda Heights and employees and business owners in the City of Industry, concerning the Draft Program Environmental Impact Report titled the Proposed Draft Air Quality Plan recently released by SCAQMD. SCAQMD staff has done an excellent job compiling data, developing models and patting themselves on the back; however we are extremely concerned regarding shortfalls, oversights and fundamental problems in the EIR. We find it hard to swallow that many of the most important issues are not addressed as well as the fact that some of the proposals will exacerbate air quality problems in these and surrounding communities.

For example, SCAQMD is proposing the replacement of many propane-powered forklifts with battery-powered forklifts. Does SCAQMD propose that the additional batteries that will be required end up at Quemetco/RSR Inc. in the City of Industry for "recycling" of the lead and disposal of hazardous waste into the local community through the process of incineration and wastewater discharge to LACOSD? I have included with this response a previous letter to your department that contains information regarding this outrageous practice and SCAQMD involvement in it. To avoid duplication please answer the unanswered questions as part of this document as well. We expect that you will need to include a solution to this problem in your long-term plan to attempt to come close to meeting Federal Clean Air Standards. Both SCAQMD and CARB have not tackled some of the most important issues that must be taken seriously to address the task of improving air quality in this region. When major projects such as the recent granting of the Conditional Use Permit for the Puente Hills Landfill are based on false sworn testimony before the LACO Planning Commission regarding the permits issued by SCAQMD we have major problems that SCAQMD needs to confront and not hide from.

The Draft EIR fails to address the fact that permits issued by SCAQMD currently stand in the way of long term goals of groundwater, surface water and soil cleanup in various areas of the basin. For example DTSC has identified that soil and groundwater underlying the area in and around Quemetco/RSR in the City of Industry contain unsafe levels of various contaminants. DTSC reports "**Lead, selenium, barium, chromium,**

cadmium, copper, iron, and mercury concentrations in groundwater samples exceeded Maximum Contaminant Levels (MCLs)."[1]

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The fact of the matter is that it would be irresponsible to not immediately institute cleanup of the toxicity that exists beneath this site. It would be careless to overlook this problem. In the DTSC report it indicates that lower contaminant concentrations that Quemetco claims, are likely a result of contamination moving offsite and into the local aquifers when ground water fluctuations occur. According to DTSC scientists "The agencies have attributed this shift from relatively high lead concentrations in the first year of monitoring to progressively lower lead levels to contaminant plume migration. Based on the above-mentioned trends, it is likely that a plume of contaminated ground water has moved from the WMA [Waste Management Area] toward downgradient points."[2]

In addition, "Highly elevated lead contamination from soil samples has been reported from within the boring for MW-10 (**1800 mg/kg at 69 ft. bgs**[3]**).** In the DTSC Internal Memorandum, June 7, 1989, prepared by David Schwartzbart (GSU) to Willie Ndubuizu, it was noted that of all the soil samples taken to that point in time, only soil samples from MW-8 were not found to contain lead and that in some of the borings, lead was encountered to the full vertical extent of the borings."[4] DTSC additionally reports that "previous boring logs indicate that the soils around this "background" monitoring well are reported to be contaminated to depths of up to 68 feet bgs with up to 1800 mg/kg of lead."[5]

Surface water appears to be threatened as well as DTSC reports that contaminated groundwater underlying this facility is potentially entering the surface waters of the San Jose Creek at a estimated rate of 3 cubic feet per second which is 22.441 gallons per second or over **80,789 gallons per hour!**

"Some of the following findings are of significance with regard to Quemetco, Inc.

> " ... EPA has identified the San Jose Creek (channel and subdrain structure) as a potential contaminant pathway to downstream areas. Between 1980 and 1988, potentiometric contours appear to intersect the lined San Jose Creek channel along a reach in the City of Industry. Between 1980 and 1984, average groundwater discharge to the creek was estimated to be approximately 3 cubic feet per second (cfs) (EPA, 1992).

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[1] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 16

[2] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966, Page 98

[3] -Environmental Strategies Corporation, July 9, 1991, Supplemental Soil and Groundwater Investigations, Quemetco, Inc. Facility, City of Industry, California. Page 115

[4] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 42

[5] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 56

Surface and subdrain discharge water sampling results have indicated the presence of VOCs."

"Surface water samplings previously performed for the Quemetco Facility investigation, have not included sampling of the subdrain structure beneath San Jose Creek. This structure has the potential to have been or still being a major contaminant pathway from this site since it has an influence on ground water chemistry and since lead contaminate wastes had been routinely discharged to the creek by Quemetco for almost two decades.
In order to meet this criteria for "clean closure" there has to be a determination that no releases that have affected ground water have occurred or are continuing to occur and that the Facility once "closed" will not be a threat to ground water. Such a determination is unlikely, based on the following facts and previous determinations to the contrary."
The closure plan did not satisfactorily consider that ground water beneath the Facility has already been determined to be contaminated by lead, cadmium, mercury, and chromium as supported by groundwater monitoring analytical data from 1982-1987 (monitoring wells MW-1, MW-2, MW-3 and MW-4). These data indicate that lead and other metals had, at that time, contaminated ground water across the entire boundaries monitored at the site. Those concentrations appear to have decreased over time, possibly due to lead contamination in ground water precipitating out and/or sorbing to aquifer materials as stable lead compounds which are not soluble under non-acidic conditions, or most probably due to migration of lead contamination off-site and downgradient. The latter hypothesis for the fate of previously detected contamination is proposed since detection of lead contamination has been irregular in recent years of groundwater monitoring results and Quemetco has never performed off-site investigation to determine what was happening with the earlier detected contamination.

Quemetco has failed to determined specifically which regulated unit or solid waste management unit or combinations of these was responsible for the reported lead contamination. Without such a determination it must be taken that the surface impoundment contributed to groundwater contamination. This is made likely by the fact that: it was the collection point for all contaminated fluids generated from the drainage of batteries, run-on and run-off from the waste piles containing scrap lead, plastic and hard rubber battery case chips; and contained a significant depth of liquid to generate a hydraulic head to support downward migration. The following facts further support a determination that Quemetco's regulated unit has contributed to groundwater contamination:

! Historic and contemporary concentrations at this site of sulfate compounds (1200 - 250 mg/l) from five to twenty times the Puente Basin water quality goals (50 mg/l), probably indicate that a release of sulfuric acid occurred and may be continuing to impact groundwater quality.

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- Historical records indicate the surface impoundment held extremely high concentrations of lead compounds in sulfuric acid solutions with pH as low as 0 to 4. Samples from the surface impoundment liner contained concentrations of total **lead exceeding 10,000 mg/kg."**[6]

Quemetco themselves admit that "**Non-Compliance with established water quality standards for groundwater resulting from continued operations at the Quemetco Facility is considered a significant impact. Impacts remain significant and unavoidable."**[7]

I have included the above referenced report so that you will have an idea as to the extent of this problem and as a guide to development of plans to assist with the relocation of this facility so that the inevitable clean up of this mess can commence. This report indicates that Quemetco is also using rubber and plastic as "fuel" and/or "reducing agents" in their reverberatory furnace.[8]
Will SCAQMD please explain how facilitating this company's continued expansion of operations will expedite the clean up of this site? I have also included several examples of hundreds of reports to SCAQMD regarding adverse effects from the toxic plumes from this facility. Why has SCAQMD ignored these and similar reports to them and continued to permit this company to increase production? Why would SCAQMD not consider that the Best Available Control Technology (BACT) is to not feed hazardous waste rubber and plastic to the furnace in the first place? I have provided you with several petitions, with hundreds of signatures, formally requesting revocation of the current permit that permits this company to burn plastic and rubber. We request that Quemetco submit a plan of corrective action that includes separating out any and all rubber and plastic from their furnace feeds and shipping it off site for proper disposal or recycling in a responsible manner. SCAQMD current plans for risk reduction at this facility are entirely inadequate. Will SCAQMD require Quemetco to replace contaminated soil prior to paving over it?

[6] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966, Page 93-94
[7] Chambers Group, Inc. Draft Environmental Impact Report for the Hazardous Waste Management Operation and Post Closure Permit for Quemetco, Inc. June 2001, page 1-2
[8] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966, Page 17& 86

Duncan McKee
738 S. 3rd Avenue
Avocado Heights, Ca. 91746

3/27/03
Zorik Pirveysian
Planning and Rules Manager
SCAQMD
21865 E. Copley Dr., Diamond Bar, Ca.

91765-4182

Dear Zorik Pirveysian and SCAQMD personnel:

Comment 102-1 Con't

This letter is to voice public input concerning SCAQMDs AQMP on behalf of residents and businesses in the Avocado Heights, La Puente, North Whittier, Bassett, Hacienda Heights and City of Industry areas. We are concerned that both CARB and SCAQMD have not addressed some of the most important issues concerning this region. The facts are that the air quality in these areas has decreased significantly over the past 10 years due to the loss of nearly all landfills in Los Angeles County except for Puente Hills and one other, the increase in industrial emissions from new development and new activities of existing companies in the City of Industry.

In 1993 when SCAQMD was devising plans to attempt to comply with federal clean air standards SCAQMD issued a permit that permitted Quemetco/RSR Inc. to engage in the practice of charging over 12,000 lbs./day of plastic and rubber to their furnaces where it is incinerated. This occurred in spite of repeated reports of adverse health effects resulting from exposure to toxic fumes discharged from this facility. In 1997 to reward local residents and businesses for their repeated reports of headaches, nausea, sore throats and even more serious problems after exposure to noxious plumes from this facility, SCAQMD issued a permit that permitted this company to increase the quantity of previously separated plastic and rubber charged to the furnace, to 25,200 lbs./day. Additionally, DTSC reports that rubber is "used as fuel in the reverberatory furnaces. These materials were contaminated with acid or lead particulates". [9] Could SCAQMD please explain to us how allowing a company to incinerate hazardous waste that previously was required to either be recycled or land filled at a certified hazardous waste landfill, fits in to the long-term plan for improving the air quality in the Greater Los Angeles Region? Why would SCAQMD ignore hundreds of reports of adverse effects from this disposal method and the fact that under the terms and conditions of Quemetco's TSDF (Interim Status) DTSC prohibits them from engaging in disposal practices, and permit this company to incinerate hazardous waste rather than dealing with it in a responsible manner? Is using plastic and rubber as fuel and "reducing agents" in a

[9] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 86

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manufacturing process a responsible practice in the South Coast Basin? [10] I have included a recent letter to DTSC that contains information regarding the quantities of plastic and rubber incinerated in the Quemetco furnace and it appears the amount may total over **27,594,000 lbs. each year**. Please review this information for accuracy to determine whether it would be prudent to immediately address this "little problem".

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In addition, the documented inaccurate information provided to both the public and elected officials by SCAQMD Compliance personnel regarding this matter is overwhelming. Recently a LACOSD representative gave sworn testimony before the LACO Planning Commission, based on less than accurate information (provided by SCAQMD and/or Quemetco), that SCAQMD did not permit Quemetco to incinerate 25,000 lbs. of plastic and rubber/day. She testified that the plastic miraculously "passes thru the furnace and is recycled". It is imperative that the facts be known so that decisions can be based on accurate information when planning major projects such as the Puente Hills Landfill. We find it extremely hard to believe that SCAQMD Engineering and Compliance Division for over a decade has been unable to definitively track the burning plastic-like plumes back to their source. Children in this area less than 10 years old, using the exact same techniques as SCAQMD inspectors, have eliminated other potential sources and determined the source of the elusive noxious plumes. 85-year-old dear little old ladies know where the terrible clouds originate so we are suggesting that enforcement in this case leaves much room for improvement. The fact that to this day SCAQMD has never taken a sample for analysis let alone walked around and experienced the burning plastic-like smelling plumes firsthand prior to issuance of this permit is inexcusable. In this case it appears that SCAQMD issued a permit to engage in practices that they are either unwilling or unable to regulate. Why was this facility not required to re-permit as a "new facility" after the "loss of interim status" and "an U.S. EPA Cessation of Operations and Corrective Action Compliance Order, "?[11]

We hope that SCAQMD will seriously plan to enlist the assistance from numerous sources to aid in the relocation of this facility rather than facilitate Quemetco's publicly stated plan to remain in operation for 20+ years at this location. This will allow the inevitable decontamination of the site to commence avoiding further damage to ground and surface water in the area. Common sense tells us that it is not good planning to bake McDonalds buns within hundreds of feet of a facility that admits to having released 7121 lbs. of lead from it's stacks and fugitive dust emissions between 1995 and 1999.[12] That's an average of 11.12 lbs./acre in 1 square mile around that facility. We think that most people will agree that the large quantities of arsenic, chromium 6, cadmium, mercury, benzene, 1,3-butadiene, etc. released by this company into the community are probably not a good idea either. USEPA lists this company as the number one releaser of toxic chemicals into the environment in California in 1997 ahead of Exxon/Mobile and Chevron refineries at 2.6 million lbs. released.[13] Certainly this is not a

[10] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 17
[11] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 78
[12] http://www.Envirofacts%20TRI%20Report.htm page 5
[13] http://www.lfr.com/news/regupdate/regupdate009.htm

good idea with numerous large food-manufacturing facilities in such close proximity and schools with thousands of children affected. We urge SCAQMD planners to rectify past blunders such as this which have undoubtedly added to the so called "black box" that represents emissions that need to be cut; but we do not have a current plan to do so.

Another area where we must take serious action is the "little matter" of emission test smart chips in diesel trucks. The Department of Justice and USEPA are derelict in their duty to allow the responsible parties off the hook with no criminal convictions and immediate corrective action in this matter. I urge both SCAQMD and the Air Resource Board to enlist support from lawmakers to require the manufacture to immediately re-chip these trucks as a requirement for licensing. This dirty trick has set this region back decades in the effort to reduce diesel emissions. Our particular area is severely impacted by this foul up as colossal numbers of trucks pass through on the 605 and 60 freeways as well as travel in and out of City of Industry and the Puente Hills Landfill. In addition, several large trucking companies such as Viking Freight are located in this vicinity.

We are also concerned that we are not adequately considering the rate of development and the potential for increases in emissions in relation to the projected decreases. For example, City of Industry is considering building a power generating facility in close proximity to neighborhoods in Hacienda Heights. City of Industry also currently has extensive plans for future "redevelopment" and new additions. If this occurs it will be an additional major source of air emissions in an already overburdened semi-closed basin. Will SCAQMD permit City of Industry to burn Quemetco's excess plastic and rubber as fuel in furnaces?

Thank you for the opportunity to participate.

Duncan McKee

Comment 102-1 Con't

Duncan McKee
738 S. 3rd Ave.
Avocado Heights, Ca. 91746
Tele: (626) 330-5123

3/23/03

Regional Records Office
Attention: Jamshid Shahi,
Project Manager Southern California Permitting Branch
1011 N. Grandview Avenue
Glendale, California 91201

Dear Mr. Jamshid Shahi and DTSC Personnel:

It has come to our attention that SCAQMD has granted a permit that according to the engineer (Marco Polo) who actually wrote it permits our self-proclaimed "good neighbors" in the City of Industry (Quemetco/RSR Inc.) to "incinerate hazardous waste".[14] It is my understanding that under the terms and conditions of Quemetco's TSDF, DTSC strictly prohibits Quemetco from engaging in disposal processes. DTSC themselves state "Quemetco is both a hazardous waste treatment Facility and a generator of hazardous waste, **but it is not permitted to serve as a disposal site**." [15] It appears that SCAQMD may have overstepped its bounds and usurped DTSC authority in this matter. We formally request that as the Lead Agency you exercise your influence to halt this outrageous practice. I have provided you with a copy of the 1997 permit that was issued despite repeated reports of adverse health effects from these toxic plumes to DTSC, SCAQMD, LACODHS and Quemetco in 1996. SCAQMD has to this day, never sampled and analyzed air to determine MCGL (Maximum Concentration at Ground Level) during times when large quantities (tractor scoops full) of plastic and rubber are fed to the furnace. MCGL has only been calculated based on annual averages that have a tendency to mask high concentrations during periods of peak production and outdated wind data from a weather station located on the opposite side of the Puente Hills. I have provided you with a document (Figure 3) that documents SCAQMD inability to regulate the furnace feeds and therefore the true and accurate cancer risk resulting from combustion of this material. It appears (Figure 1) that according to "confidential" SCAQMD documents the quantity of "additional plastic and rubber" is over 25,200 lbs./day. Do the math. This is **9,198,000 lbs./year!** I have provided a copy of two documents so that you can verify this. You will need to combine information from the two documents (Figure 1&2) and do a little simple math (34,080 lbs./day-8, 880 lbs calcined carbon coke/day=25,200 lbs. plastic and rubber/day) to arrive at the quantity of "additional plastic and rubber" that is according to "confidential" SCAQMD documents, initially separated, transported by screw conveyor to what would normally be considered a "hazardous waste" pile and then charged back into the furnace by the tractor scoop full.

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[14] December meeting with Senior Engineer, Tom Liebel and Marco Polo, Air Quality Engineer II. At SCAQMD 21865 E. Copley Dr. Diamond Bar, Ca. 91765
[15] Comprehensive Ground Water Monitoring Evaluation Report, Quemetco Inc., RSR Corporation, City of Industry, Ca. March 8, 1996 EPA ID No. CADO66233966 page 5

Keep in mind that acid; lead other substances contaminate this material. Even SCAQMD Engineering and Compliance personnel indicate that there are serious problems with this method of "weighing" as the document below indicates (Figure 3). In addition to the 25,200 lbs./day of plastic and rubber SCAQMD engineer, Marco Polo, stated to us that "2/3 of the rubber and plastic cannot be separated" using Quemetco's outdated system and is therefore fed to the furnace.[16] This would be an additional 50,400 lbs./day or an additional 18,396,000-lbs./yr. that condition 5 permits Quemetco to feed directly to the furnace where it is incinerated. This is not counting the amount that may or may not be land filled or recycled. Below is a simplification of the math:

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34,080 lbs./day calcined carbon coke and "additional plastic and rubber"- 8,880 lbs./day calcined carbon coke= 25,880 lbs./day "additional plastic and rubber" charged to the furnace. Then we must add the 50,400 lbs./day plastic and rubber that is not separated during the crushing process (covered in condition 5) which brings us to a total of 75,600 lbs./day or 27,594,000 lbs./yr. plastic and rubber permitted to be potentially incinerated, burned, combusted, cremated, disposed of or however you want to say it, in the Quemetco furnace. Keep in mind that we still have not taken into account the plastic that is recycled or the rubber that may or may not be land filled and factored it into the equation. For example, if the figure is 80,000 lbs./mo. then that would add an additional 640,000 lbs./yr. plastic and/or rubber that is incinerated. Please call Marco Polo Air Quality Engineer II, who actually wrote this permit, so that you can verify this information. His number is (909) 396-2633.

In addition, it appears that the waste water permits issued by LACOSD may have been issued prior to commencement of the practice of disposing of hazardous waste rubber and plastic by incineration and the substances tested do not appear to include the long list of VOCs and aromatic compounds associated with this practice. For example, if Quemetco's scrubbers are 99+% effective and they release 6.9 lbs/day of 1,3-butadiene, this would mean that nearly 100 Xs that amount is contained in the scrubber water. This applies to benzene and all VOCs and other aromatic compounds that might be escaping detection both onsite and also between Quemetco's discharge to the sewer and LACOSDs ultimate disposition of the water. It appears that SCAQMD exempts the wastewater treatment facility as a closed system despite compelling evidence that the system may not be a "closed system". If this is true, huge amounts of toxic chemicals are not taken into account in the HHRA or reported to USEPA.

Dr. Barry Wallerstein, Executive Director SCAQMD, indicated he would not be opposed to interdepartmental cooperation to coordinate simultaneous testing by LACOSD and/or DTSC of wastewater during up coming air stack source testing. This will help to determine whether this company can actually operate according to permit limitations and if their permit needs to be modified to include chemicals not presently required to be tested for. We urge that DTSC take advantage of this unprecedented

[16] December meeting with Senior Engineer, Tom Liebel and Marco Polo, Air Quality Engineer II. At SCAQMD 21865 E. Copley Dr. Diamond Bar, Ca. 91765

opportunity and require this to occur. His phone number is (909) 396-2100 so that you can make the arrangements.

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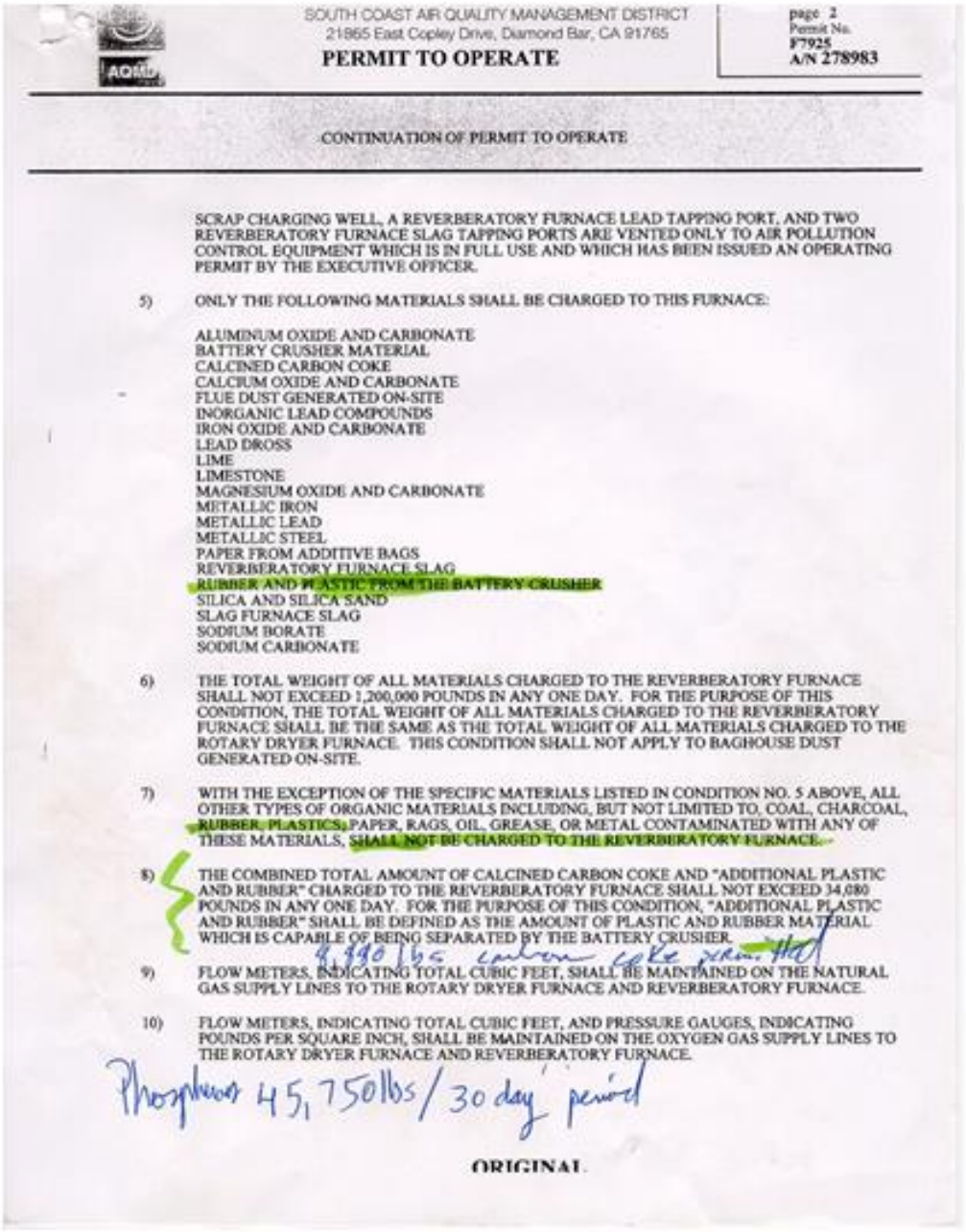
You mentioned that you were meeting with CEQA people and we would like you to point out to them that this particular site is located adjacent to the San Jose Creek, a tributary to the San Gabriel River, is within the Conservancy and subject to CEQA guidelines. In addition, I have provided a copy of two of many CEQA 400 forms submitted by Quemetco that contain inaccurate information and effectively allow them to circumvent normal CEQA guidelines. This is unheard of in a case of this magnitude and we request that DTSC give this immediate attention or enlist the appropriate authorities to do so.

Quemetco's claim to grand fathered rights in this matter is absurd and does not apply as this is a "new" practice and until 1992 this material was either recycled or sent offsite to a certified hazardous waste landfill. In addition, Quemetco's claim that grand fathered rights allows them to construct new facilities, engage in new processes, increase production and do whatever they so choose is a misuse and a perversion of the "grandfather principle".

We hope that DTSC will exercise its authority and initiate immediate corrective action that would include new technologies to separate out this material so it can be dealt with in a responsible manner and the cessation of the practice of adding back to the furnace, material that has already been separated. We realize that this will cost Quemetco more for cleaner fuel in their furnaces such as natural gas and fees to transport and landfill the hazardous waste. We are certain that the cost to the community if your immediate action in this matter does not occur by far out weighs any financial burden that this might incur to Quemetco. Please feel free to contact me if you require additional information and/or if any of the information that I have provided you is not accurate, so that I can remain informed in this case.

Thank you for your immediate action in this matter.

Duncan McKee



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

PERMIT TO OPERATE

page 2
Permit No. F7925
A/N 278983

CONTINUATION OF PERMIT TO OPERATE

SCRAP CHARGING WELL, A REVERBERATORY FURNACE LEAD TAPPING PORT, AND TWO REVERBERATORY FURNACE SLAG TAPPING PORTS ARE VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE EXECUTIVE OFFICER.

5) ONLY THE FOLLOWING MATERIALS SHALL BE CHARGED TO THIS FURNACE:

ALUMINUM OXIDE AND CARBONATE
BATTERY CRUSHER MATERIAL
CALCINED CARBON COKE
CALCIUM OXIDE AND CARBONATE
FLUE DUST GENERATED ON-SITE
INORGANIC LEAD COMPOUNDS
IRON OXIDE AND CARBONATE
LEAD DROSS
LIME
LIMESTONE
MAGNESIUM OXIDE AND CARBONATE
METALLIC IRON
METALLIC LEAD
METALLIC STEEL
PAPER FROM ADDITIVE BAGS
REVERBERATORY FURNACE SLAG
RUBBER AND PLASTIC FROM THE BATTERY CRUSHER
SILICA AND SILICA SAND
SLAG FURNACE SLAG
SODIUM BORATE
SODIUM CARBONATE

6) THE TOTAL WEIGHT OF ALL MATERIALS CHARGED TO THE REVERBERATORY FURNACE SHALL NOT EXCEED 1,200,000 POUNDS IN ANY ONE DAY. FOR THE PURPOSE OF THIS CONDITION, THE TOTAL WEIGHT OF ALL MATERIALS CHARGED TO THE REVERBERATORY FURNACE SHALL BE THE SAME AS THE TOTAL WEIGHT OF ALL MATERIALS CHARGED TO THE ROTARY DRYER FURNACE. THIS CONDITION SHALL NOT APPLY TO BAGHOUSE DUST GENERATED ON-SITE.

7) WITH THE EXCEPTION OF THE SPECIFIC MATERIALS LISTED IN CONDITION NO. 5 ABOVE, ALL OTHER TYPES OF ORGANIC MATERIALS INCLUDING, BUT NOT LIMITED TO, COAL, CHARCOAL, RUBBER, PLASTICS, PAPER, RAGS, OIL, GREASE, OR METAL CONTAMINATED WITH ANY OF THESE MATERIALS, SHALL NOT BE CHARGED TO THE REVERBERATORY FURNACE.

8) THE COMBINED TOTAL AMOUNT OF CALCINED CARBON COKE AND "ADDITIONAL PLASTIC AND RUBBER" CHARGED TO THE REVERBERATORY FURNACE SHALL NOT EXCEED 34,080 POUNDS IN ANY ONE DAY. FOR THE PURPOSE OF THIS CONDITION, "ADDITIONAL PLASTIC AND RUBBER" SHALL BE DEFINED AS THE AMOUNT OF PLASTIC AND RUBBER MATERIAL WHICH IS CAPABLE OF BEING SEPARATED BY THE BATTERY CRUSHER.

8,990 lbs carbon coke max. HOT

9) FLOW METERS, INDICATING TOTAL CUBIC FEET, SHALL BE MAINTAINED ON THE NATURAL GAS SUPPLY LINES TO THE ROTARY DRYER FURNACE AND REVERBERATORY FURNACE.

10) FLOW METERS, INDICATING TOTAL CUBIC FEET, AND PRESSURE GAUGES, INDICATING POUNDS PER SQUARE INCH, SHALL BE MAINTAINED ON THE OXYGEN GAS SUPPLY LINES TO THE ROTARY DRYER FURNACE AND REVERBERATORY FURNACE.

Phosphorus 45,750lbs/30 day period

ORIGINAL

Figure 1 This and the following SCAQMD documents took over 90 days of wrestling between AQMD and Quemetco attorneys to release. Quemetco representatives made 2 trips to AQMD to attempt to stop the release. Condition 5 permits Quemetco to feed to the furnace "some" rubber and plastic from the battery crusher that is not easily separated. According to Marco Polo from SCAQMD 2/3 (50,400+ lbs) cannot be separated because of outdated technology and is fed to the furnace where it is incinerated. In addition to condition 5 (50,400 lbs/day), condition 8 appears to permit Quemetco to charge an additional 25,200 lbs./day of rubber and plastic that is capable of being separated to the furnace, where it burns, combusts, incinerates, is cremated or however you want to say it!

Comment 102-1 Con't

Comment 102-1 Con't

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

MEMORANDUM

DATE: April 4, 1997

TO: File

FROM: Marco A. Polo, Air Quality Engineer II

SUBJECT: T/C

4-2-97, approximately 7:30 am to 8:00 am, T/C to Steve Reynolds
214-583-0244

I outlined the proposed permit conditions that I have been able to complete so far. I mentioned that the following limits will apply:

1,200,000 lbs/day total reverb feed limit

feed composition record keeping requirement

8,880 lbs/day carbon coke limit

56 % minimum O_2 enrichment in reverb

82 % maximum O_2 enrichment in reverb

7.77×10^5 SCF/day natural gas limit in reverb

2.29×10^5 SCF/day natural gas limit in dryer

8,510 gallons/day propane limit in reverb

2,500 gallons/day propane limit in dryer

average minimum lead temp limit of 1,300 ^oF in reverb

measure lead temp every two hours

For record keeping cycle definition, the applicant should talk to the facility inspector.

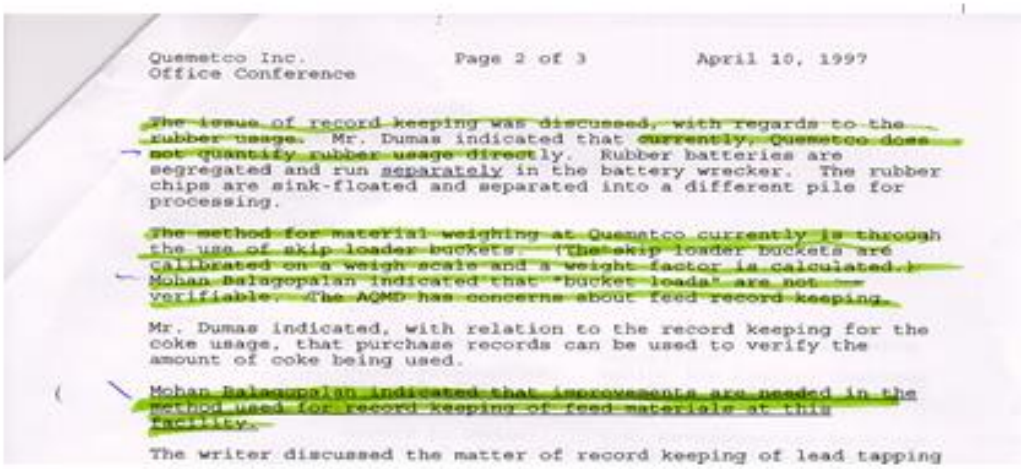
4-4-97, 1:14 PM, T/C from Steve Reynolds

I discussed the status of the current permit evaluation. I indicated that the Toxics group had met with the RECLAIM Administration group and that resolution on existing policy issues was not fully achieved in this initial meeting. It was clear that more discussion, probably at the management level, would be required to fully resolve all outstanding issues. Some of the options that were discussed were converting NOx sources to "Major"

(cont. next page)

Figure 2 Calcined Carbon Coke limitation. The 8,880 lbs. calcined carbon coke must be subtracted from the 34,080 lbs. in condition 8 of the permit above to arrive at the 25,200 lbs./day "additional plastic and rubber".

Comment 102-1 Con't



Quemetco Inc. Page 2 of 3 April 10, 1997
Office Conference

The issue of record keeping was discussed, with regards to the rubber usage. Mr. Dumas indicated that currently, Quemetco does not quantify rubber usage directly. Rubber batteries are segregated and run separately in the battery wrecker. The rubber chips are sink-floated and separated into a different pile for processing.

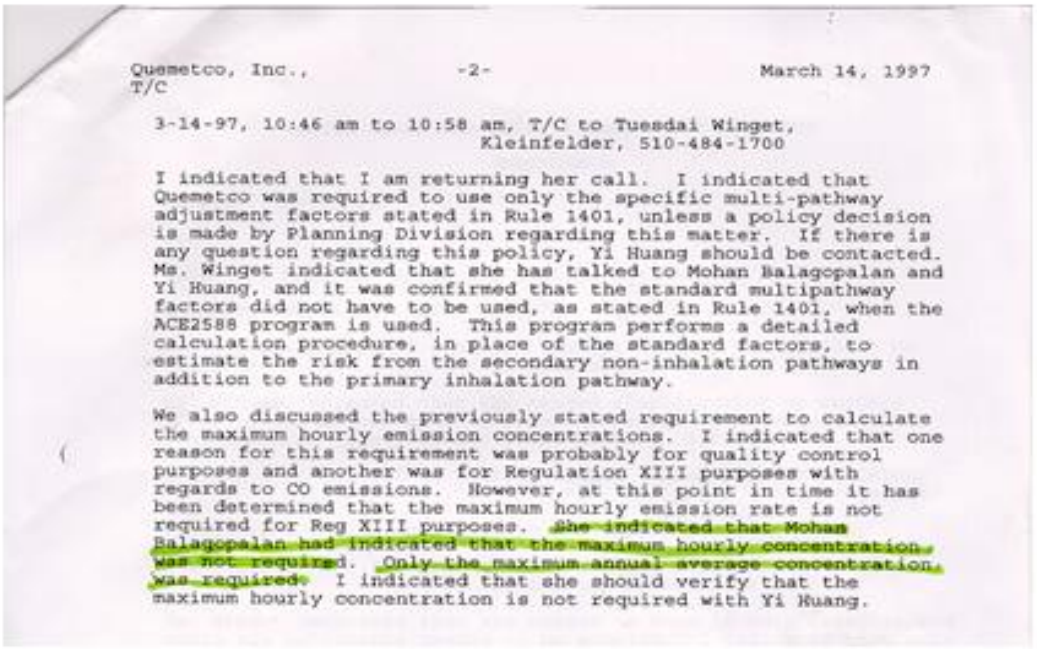
The method for material weighing at Quemetco currently is through the use of skip loader buckets. (The skip loader buckets are calibrated on a weigh scale and a weight factor is calculated.) Mohan Balagopalan indicated that "bucket loads" are not verifiable. The AQMD has concerns about feed record keeping.

Mr. Dumas indicated, with relation to the record keeping for the coke usage, that purchase records can be used to verify the amount of coke being used.

Mohan Balagopalan indicated that improvements are needed in the method used for record keeping of feed materials at this facility.

The writer discussed the matter of record keeping of lead tapping

Figure 3 This documents SCAQMD concerns with the practice of feeding tractor scoops of material to the furnace and would explain the concentrated bursts that we are currently subjected to. SCAQMD has never sampled or analyzed these toxic plumes despite over 100 complaints to them of this last year alone.



Quemetco, Inc., -2- March 14, 1997
T/C

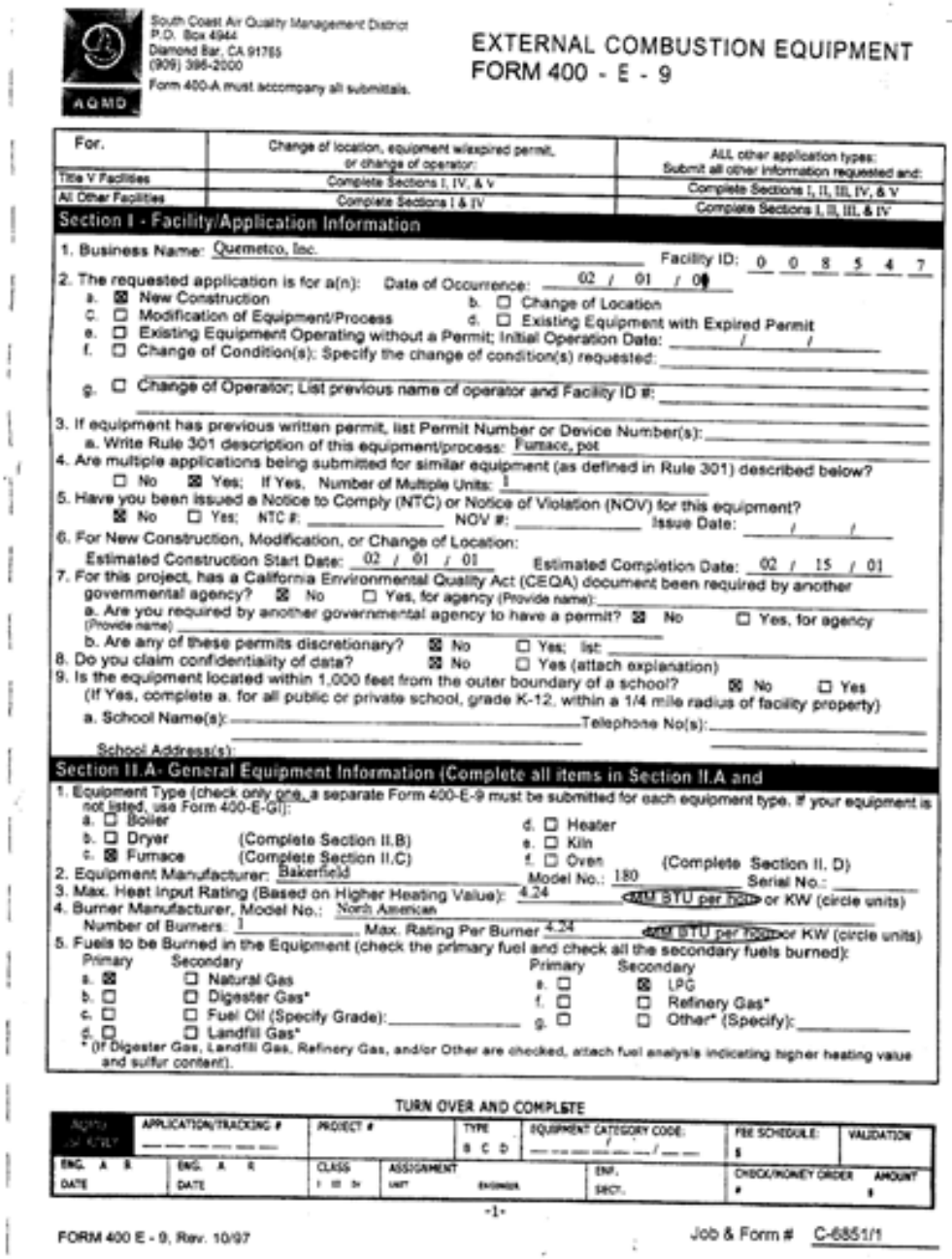
3-14-97, 10:46 am to 10:58 am, T/C to Tuesdai Winget, Kleinfelder, 510-484-1700

I indicated that I am returning her call. I indicated that Quemetco was required to use only the specific multi-pathway adjustment factors stated in Rule 1401, unless a policy decision is made by Planning Division regarding this matter. If there is any question regarding this policy, Yi Huang should be contacted. Ms. Winget indicated that she has talked to Mohan Balagopalan and Yi Huang, and it was confirmed that the standard multipathway factors did not have to be used, as stated in Rule 1401, when the ACE2588 program is used. This program performs a detailed calculation procedure, in place of the standard factors, to estimate the risk from the secondary non-inhalation pathways in addition to the primary inhalation pathway.

We also discussed the previously stated requirement to calculate the maximum hourly emission concentrations. I indicated that one reason for this requirement was probably for quality control purposes and another was for Regulation XIII purposes with regards to CO emissions. However, at this point in time it has been determined that the maximum hourly emission rate is not required for Reg XIII purposes. She indicated that Mohan Balagopalan had indicated that the maximum hourly concentration was not required. Only the maximum annual average concentration was required. I indicated that she should verify that the maximum hourly concentration is not required with Yi Huang.

Figure 4 This appears to document verbal permission to use average annual concentrations rather than the normal maximum hourly concentration. In addition the first paragraph appears to document some sort of "policy decision" made by planning division to allow Quemetco to use factors other than those required by Rule 1401.

Comment 102-1 Con't



South Coast Air Quality Management District
P.O. Box 4944
Diamond Bar, CA 91765
(909) 396-2000
Form 400-A must accompany all submittals.

AQMD

EXTERNAL COMBUSTION EQUIPMENT
FORM 400 - E - 9

For:	Change of location, equipment w/expired permit, or change of operator:	ALL other application types: Submit all other information requested and:
Title V Facilities	Complete Sections I, IV, & V	Complete Sections I, II, III, IV, & V
All Other Facilities	Complete Sections I & IV	Complete Sections I, II, III, & IV

Section I - Facility/Application Information

1. Business Name: Quemetco, Inc. Facility ID: 0 0 8 5 4 7
2. The requested application is for a(n): Date of Occurrence: 02 / 01 / 0[illegible]
   a. ☒ New Construction b. ☐ Change of Location
   c. ☐ Modification of Equipment/Process d. ☐ Existing Equipment with Expired Permit
   e. ☐ Existing Equipment Operating without a Permit; Initial Operation Date: / /
   f. ☐ Change of Condition(s): Specify the change of condition(s) requested:
   g. ☐ Change of Operator; List previous name of operator and Facility ID #:
3. If equipment has previous written permit, list Permit Number or Device Number(s):
   a. Write Rule 301 description of this equipment/process: Furnace, pot
4. Are multiple applications being submitted for similar equipment (as defined in Rule 301) described below?
   ☐ No ☒ Yes; If Yes, Number of Multiple Units: 1
5. Have you been issued a Notice to Comply (NTC) or Notice of Violation (NOV) for this equipment?
   ☒ No ☐ Yes; NTC #: NOV #: Issue Date: / /
6. For New Construction, Modification, or Change of Location:
   Estimated Construction Start Date: 02 / 01 / 01 Estimated Completion Date: 02 / 15 / 01
7. For this project, has a California Environmental Quality Act (CEQA) document been required by another governmental agency? ☒ No ☐ Yes, for agency (Provide name):
   a. Are you required by another governmental agency to have a permit? ☒ No ☐ Yes, for agency (Provide name)
   b. Are any of these permits discretionary? ☒ No ☐ Yes; list:
8. Do you claim confidentiality of data? ☒ No ☐ Yes (attach explanation)
9. Is the equipment located within 1,000 feet from the outer boundary of a school? ☒ No ☐ Yes
   (If Yes, complete a. for all public or private school, grade K-12, within a 1/4 mile radius of facility property)
   a. School Name(s): Telephone No(s):
   School Address(s):

Section II.A- General Equipment Information (Complete all items in Section II.A and

1. Equipment Type (check only one, a separate Form 400-E-9 must be submitted for each equipment type. If your equipment is not listed, use Form 400-E-GI):
   a. ☐ Boiler d. ☐ Heater
   b. ☐ Dryer (Complete Section II.B) e. ☐ Kiln
   c. ☒ Furnace (Complete Section II.C) f. ☐ Oven (Complete Section II. D)
2. Equipment Manufacturer: Bakerfield Model No.: 180 Serial No.:
3. Max. Heat Input Rating (Based on Higher Heating Value): 4.24 MM BTU per hour or KW (circle units)
4. Burner Manufacturer, Model No.: North American
   Number of Burners: 1 Max. Rating Per Burner 4.24 MM BTU per hour or KW (circle units)
5. Fuels to be Burned in the Equipment (check the primary fuel and check all the secondary fuels burned):

	Primary	Secondary		Primary	Secondary
a.	☒	☐ Natural Gas	e.	☐	☒ LPG
b.	☐	☐ Digester Gas*	f.	☐	☐ Refinery Gas*
c.	☐	☐ Fuel Oil (Specify Grade):	g.	☐	☐ Other* (Specify):
d.	☐	☐ Landfill Gas*			

* (If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content).

TURN OVER AND COMPLETE

Agency Use Only	APPLICATION/TRACKING #	PROJECT #	TYPE	EQUIPMENT CATEGORY CODE	FEE SCHEDULE	VALIDATION
			B C D	/	$	

ENG. A R DATE	ENG. A R DATE	CLASS I II IV	ASSIGNMENT UNIT ENGINEER	ENF. SECT.	CHECK/MONEY ORDER #	AMOUNT $

-1-

FORM 400 E - 9, Rev. 10/97 Job & Form # C-6851/1

Figure 5 This is one of many CEQA 400 forms submitted by Quemetco and approved by SCAQMD that contains false and misleading information. Notice that 2a is checked new construction. On this particular form Quemetco erroneously claims that no claim to confidentiality of data is made. This is patently false as every source test and interpretation of that data for all furnaces and the rotary dryer are confidential as the one example (Figure7) of hundreds that I have provided below

documents. In addition the fact that Quemetco is using these materials as fuel in furnaces and does not list that fact in Section IIA #5 is dangerously deceptive and must be corrected.

Comment 102-1 Con't

South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765
(909) 396- 2000

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) APPLICABILITY FORM 400 - CEQA

The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines §15060(a)].[2] Refer to the attached instructions for guidance in completing this form.[3] For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project, only one 400-CEQA form is necessary for the entire project. If you need assistance completing this form, contact Lori Inga at (909) 396-3109.

FACILITY INFORMATION

Facility Name: Quemetco, Inc. **Facility ID** (6-Digit): 008547

Project Description: Permit two new refinery pots and modify the refinery baghouse.

REVIEW FOR EXEMPTION FROM FURTHER CEQA ACTION

Check "Yes" or "No" as applicable

	Yes	No	
A.	☐	☒	**A request for a change of permittee only (without equipment modifications)?**
B.	☐	☒	**Equipment certification or equipment registration?**
C.	☐	☒	**A CEQA and/or NEPA document previously or currently prepared that specifically evaluates this project?** If yes, a permit cannot be issued until a Final CEQA document and Notice of Determination is submitted.
D.	☐	☒	**Equipment damaged as a result of a disaster during state of emergency?**
E.	☐	☒	**A Title V permit renewal (without equipment modifications)?**
F.	☐	☒	**A Title V administrative permit revision?**
G.	☐	☒	**The conversion of an existing permit into an initial Title V permit?**
H.	☐	☒	**A functionally identical permit unit replacement with no increase in rating or emissions?**
I.	☐	☒	**A change of daily VOC permit limit to a monthly VOC permit limit?**

If "Yes" is checked for any question above, your application does not require additional evaluation for CEQA applicability. Skip to page 2, "SIGNATURES" and sign and date this form.

REVIEW OF IMPACTS WHICH MAY TRIGGER CEQA

Complete Sections I-V by checking "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	☐	☒	**Has this project generated any known public controversy regarding potential adverse impacts that may be generated by the project?** Controversy may be construed as concerns raised by local groups at public meetings; adverse media attention such as negative articles in newspapers or other periodical publications, local news programs, environmental justice issues, etc.
2.	☐	☒	**Is this project part of a larger project?**
3.	☐	☒	**Will there be any demolition, excavating, and/or grading construction activities that encompass an area exceeding 20,000 square feet?**
[redacted]	☐	☒	**Does this project include the open outdoor storage of dry bulk solid materials that could generate dust?** If Yes, include a plot plan with the application package.

1. A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry-cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.
2. To download the CEQA guidelines, visit http://ceres.ca.gov/ceqa/ (website.html).
3. To download this form and the instructions, visit http://www.aqmd.gov/ceqa.

Figure 6 Another CEQA 400 form for new construction containing inaccurate statements (1.) by Quemetco that was approved by SCAQMD. The effect is that the regulatory agencies have allowed Quemetco to circumvent normal CEQA review. Could SCAQMD please explain why these gross errors escaped detection when they reviewed and approved these documents?

Comment 102-1 Con't

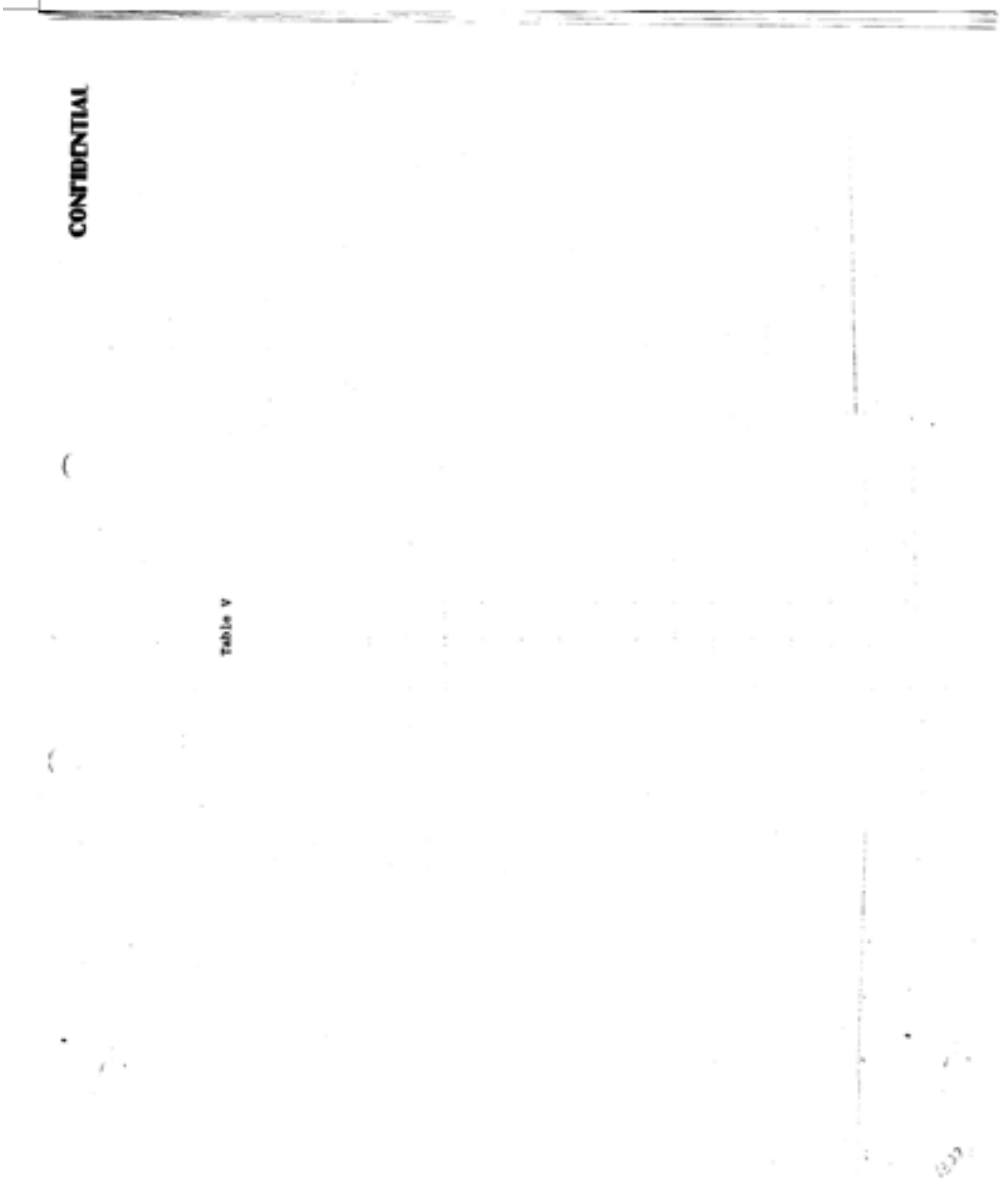


Figure 7 One example of hundreds of pages of confidential data that directly pertains to the Health Risk Assessment.

Response to Comment 102-1: Thank you for your comment. Please see Final Program EIR Appendix C, Responses to Comment Letter #3.

Comment Letter #103

EARTHJUSTICE

October 18, 2022

VIA EMAIL
Air Quality Management Plan (AQMP) Team
South Coast Air Quality Management District ("SCAQMD")
AQMPteam@aqmd.gov

Re: Revised Draft AQMP

Dear AQMP Team:

We comment on the Revised Draft 2022 AQMP (Draft Plan). As this agency is aware, this is the most important air plan in the history of the agency. Critically, the draft plan recognizes what our organizations have said for a long time – "the only way to achieve the required NOx reductions is through extensive use of zero emission technologies across **all stationary and mobile sources**."[1] We don't have time to waste pursuing incrementally cleaner combustion strategies because, like all the past ozone strategy failures, it will not work. In light of this zero-emissions North Star for regional air planning, we remain concerned that the plan as drafted remains far too weak. The following provide concrete suggestions for improving the plan.

Comment 103-1

Strengthen Measures for Commercial and Large Combustion Sources.

In critiques on the lack of a commitment to more aggressive measures in the Large Combustion and Commercial Combustion space, staff points to the rules adopted as part of the transition from RECLAIM— claiming that these measures are achieving 13 tpd in NOx reductions. The District further claims that when combined with these RECLAIM achievements, the total emissions reduction percentage from combustion stemming from proposed measures in the Draft 2022 AQMP will be closer to 64.7 percent. This response misses the point. On the very first page of the Air Plan, the staff says we must get to zero-emissions for stationary sources. Yet, the control strategy leaves so many emissions reductions on the table and pursues the plain, vanilla combustion-centric approach of the past.

Comment 103-2

We recognize the District's talking point that it could reduce all stationary source emissions to zero, and the region would still not attain. This mantra often is used as a shield to actual self-reflection over whether the agency is doing everything it can. For example, the last air plan was anchored on a strategy to clean up stationary sources that operated under a broken pollution trading system —RECLAIM — that resulted in half of all equipment in the program not meeting Best Available Retrofit Control Technology (BARCT). For years, the Air District operated under a rubric that its sources "were the most well controlled in the country" when that was not likely the case at many facilities like refineries. Deflecting from additional needs in emissions

[1] Revised Draft AQMP, at Executive Summary.

CALIFORNIA OFFICE 707 WILSHIRE BLVD., SUITE 4300 LOS ANGELES, CA 90017

T: 213.766.1059 F: 213.403.4822 CAOFFICE@EARTHJUSTICE.ORG WWW.EARTHJUSTICE.ORG

reductions at stationary sources also fails to recognize where these sources are so often concentrated – low-income communities of color.

A better approach is to examine the commitments and have the agency ask, can we afford to leave remaining emission reductions on the table instead of adopting zero-emissions oriented BARCT regulations? For example, in the L-CMB-02 control measure covering Boilers and Process Heaters, the staff is proposing **zero** additional emission reductions by 2031 and only 0.45 tpd NOx reductions by 2037. In 2037, this category will emit 2.36 tpd of NOx, so the plan proposes a measly 19% reduction in NOx. The appropriate question is, rather, can we afford to forego the 1.9 tpd of NOx reductions as the plan currently proposes by 2037? We believe the answer is no.

To fix this problem, the Board should direct staff to commit to achieving .45 tpd by 2031, in addition to an overall commitment of 1.75 tpd by 2037. The shift would look like the below:

Comment 103-2 Con't

Current Plan Commitment:

Number	Title	Emissions Reduction (tons per day) (2031/2037)
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0 / 0.45

Strengthened and More Health Protective Plan Commitment:

Number	Title	Emissions Reduction (tons per day) (2031/2037)
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0.45 / 1.75

In Appendix A of this letter, we have proposed modifications to the commitments for all the Commercial and Large Combustion Sources for consideration.

Fix the South Coast's Broken Cost Effectiveness Approach, which Deters Staff from Requiring Pollution Controls.

Comment 103-3

We appreciate willingness to revise the 2022 AQMP in a way that shifts gatekeeping for strategies based solely on the costs – ignoring many key factors required under the Health & Safety Code like the health benefits of rules. Stated bluntly, the Air District's cost effectiveness thresholds make the agency's rulemaking process not work. In some rules, staff has not explored strategies that go above the arbitrary thresholds set in the 2016 AQMP.

Regarding the proposal in the Draft AQMP to set a $325,000 threshold, this is a step in the right direction, but it too misses the mark. First, this $325,000 number must be higher; the AQMD concedes that this number is lower than the $342,000 per ton benefits from the 2016 AQMP. Why would we have a lower threshold than the prior AQMP? At a minimum, the cost effectiveness should be $342,000 in 2021 dollars indexed to inflation, or $386,121.23[2]. We still think the cost effectiveness threshold is not needed per existing law, but if the plan includes a threshold, Option 1 would continue to be a disaster, and Option 2 is preferable with the fix mentioned above. Instead of additional process outside the Board, the approach should simply be to mark a box on the front page of the final rulemaking package if a rule exceeds whatever new cost threshold is determined. This will put the decision back to where it needs to be, which is the Governing Board.

Comment 103-3 Con't

Direct Staff to Hasten Work in Cleaning Up Deadly Diesel Magnets and Bring Rules to the Board by Dates Certain with No Delays.

This month, the Ports of Los Angeles and Long Beach released their 2021 Emissions Inventory.[3] The analysis is not pretty. The Ports dosed residents and the region with unconscionably high levels of pollution last year. While the Ports will try to claim this was an anomaly given ship back-ups, they fail to recognize that record volumes have continued to rise and levels prior to the pandemic were too high, and we will continue to see these high levels. The report also shows the Ports are not likely to meet the NOx reduction goals set in the 2017 Clean Air Action Plan Update by 2023. This shows the voluntary approach is not working.

Comment 103-4

Yet, despite over a decade of the South Coast AQMD debating the creation of more accountability, the Board has failed to deliver. Even if the Board does not feel comfortable identifying emissions reductions associated with deadly port sources, railyards, and other sources, we ask the Board to provide clear direction that it expects strong indirect source rules by dates certain next year. The time for delay is over, and voluntary approaches do not work.

Reliance on Section 182(e)(5)- the Black Box- Will Continue to Fail the Region

There is no single example of how the "Black Box" has actually served to improve air quality and reduce emissions in the region. Still, the District is doubling down on its commitment to use this stop gap measure that the region cannot afford. Reliance on Black Box measures has led to significant gaps in emissions reduction just as the District continues propping up combustion-

Comment 103-5

[2] Based on CPI Inflation Calculator; available at https://www.officialdata.org/us/inflation/2020?endYear=2021&amount=130000. (Last visited October 4, 2022).

[3] Port of Long Beach. (October, 2022). *Air Emissions Inventory-2021*. Retrieved from: https://polb.com/port-info/news-and-press/annual-inventory-reflects-unprecedented-pandemic-congestion-supply-chain-disruptions-increased-emissions-in-2021-10-03-2022/; Port of Los Angeles (September 2022). *Inventory of Air Emissions 2021-Technical Report*. Retrieved from: https://kentico.portoflosangeles.org/getmedia/f26839cd-54cd-4da9-92b7-a34094ee75a8/2021_Air_Emissions_Inventory.

based technology while avoiding a stronger push towards zero-emissions. To address the emission reduction gap the Black Box has caused, the District should focus on redirecting regulations and incentive programs so that the strongest possible support for zero-emissions solutions happens today.

The District rightly recognizes that deployment of zero-emissions across all sectors is required to achieve the emissions reductions necessary to improve the air in the region. We call on the District to carefully examine each of its programs—whether in the form of regulations or incentives— and eliminate those that continue to hamper its ability to bring the region to zero-emission sooner. This means eliminating unnecessary subsidies for technology with emissions and prioritize those that have none.

Comment 103-5 Con't

We fear that another "Black Box" will just mean the "federal sources" that the Air District complains about lacking regulatory control over (e.g. Ships, Airplanes, Locomotives, etc) will just be expanded through developments at ports, railyards, airports, etc based on the farce we have a real clean air plan. This is what has happened for decades with the "Black Box," and at a minimum, the Air District needs to explain how having a plan that claims attainment will not just unlock this expanded development that continues to make the region's air dirty.

CONCLUSION

We need all our agencies to step up if we want to tackle deadly smog pollution. We are asking the Environmental Protection Agency to do more, as well as the California Air Resources Board. But, we need the Air District to do more. It is not too late to provide the clear direction needed to make vital changes to the 2022 AQMP.

Comment 103-6

Sincerely,

Fernando Gaytan
Adrian Martinez
Earthjustice

Appendix A – Control Measures in Plan

The current plan looks like this:

Control Measure	Description of Control Measure	2031 Emissions Reductions / 2037 emissions reduction **(Total Source Tonnage in 2037 / Percentage Reduction Commitment by 2037)**
C-CMB-01	Emission Reductions from Replacement with Zero Emissions or Low NOx Appliances – Commercial Water Heating	0.04 / 0.25 tpd **(0.42 tpd in 2037 / 60% emissions reduction)**
C-CMB-02	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Commercial Space Heating [NOx]	0.04 / 0.21 tpd **(0.34 tpd in 2037 / 62% emissions reduction)**
C-CMB-03	Emission Reductions from Commercial Cooking Devices [NOx]	0.21 / 0.64 tpd **(0.98 tpd in 2037 / 65% emissions reduction commitment)**
C-CMB-04	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted)	0 / 2.25 tpd **(3.47 tpd in 2037 / 65% emissions reductions commitment)**
C-CMB-05	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted) [NOx]	0 / 5.14 tpd **(7.05 tpd in 2037 / 73% emission reduction commitment)**
	Total Commercial Combustion	**0.29 / 8.49 tpd** **(12.3 tpd in 2037 / 69% emissions reduction commitment)**
L-CMB-01	NOx Reductions from RECLAIM Facilities	0 / 0.31 tpd

Related to Comment 103-2

		(0.69 tpd in 2037 / 45% emissions reduction commitment)
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	0 / 0.45 tpd **(2.36 tpd in 2037 / 19% emissions reduction commitment))**
L-CMB-03	NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]	0 / 0.34 tpd **(1.03 tpd in 2037 / 33% emission reduction commitment)**
L-CMB-04	Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]	0 / 2.04 tpd **(4.54 tpd in 2037 / 45% emission reduction commitment)**
L-CMB-05	NOx Emission Reductions from Large Turbines [NOx]	0 / 0.07 tpd **(0.26 tpd in 2037 / 27% emissions reduction commitment)**
L-CMB-06	NOx Emission Reductions from Electricity Generating Facilities [NOx]	.09 / 0.91 tpd **(2.14 tpd in 2037 / 43% emissions reduction commitment)**
L-CMB-07	Emission Reductions from Petroleum Refineries [NOx]	0 / 0.89 tpd **(4.44 tpd in 2037 / 20% emissions reduction commitment)**
L-CMB-08	NOx Emission Reductions from Combustion Equipment at Landfills and Publicly Owned Treatment Works [NOx]	0 / 0.33 tpd **(1.31 tpd in 2037 / 25% emission reduction commitment)**
L-CMB-09	NOx Reductions from Incinerators [NOx]	0 / 0.90 tpd **(1.20 tpd in 2037 / 75% emission reduction commitment)**

Related to Comment 103-2 Con't

L-CMB-10	NOx Reductions from Miscellaneous Permitted Equipment [NOx]	0 / 1.01 tpd **(1.27 tpd in 2037 / 80% emission reduction commitment)**
	Total	**.09 / 7.25 tpd** **(19.2 tpd 2037 / 38% emission reduction commitment)**

Strengthened Control Measure Proposal (strike-throughs equal numbers changes and red numbers are new suggested commitments).

Control Measure	**Description of Control Measure**	**2031 Reductions / 2037 emissions reduction**
C-CMB-01	Emission Reductions from Replacement with Zero Emissions or Low NOx Appliances – Commercial Water Heating	0.04 / 0.25 tpd
C-CMB-02	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Commercial Space Heating [NOx]	.04 / 0.21 tpd
C-CMB-03	Emission Reductions from Commercial Cooking Devices [NOx]	0.21 / ~~0.64~~ .85 tpd
C-CMB-04	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted)	0 / ~~2.25~~ 3.25 tpd
C-CMB-05	NOx Reductions from Small Miscellaneous Commercial Combustion Equipment (Non-Permitted) [NOx]	0 / ~~5.14~~ 6.25 tpd
	Total Commercial Combustion	**0.29 / ~~8.49~~ 10.81tpd**

Related to Comment 103-2 Con't

L-CMB-01	NOx Reductions from RECLAIM Facilities	0 / ~~0.31~~ 0.65 tpd
L-CMB-02	Reduction from Boiler and Process Heaters (Permitted) [NOx]	~~0~~ 0.45 / ~~0.45~~ 1.75 tpd
L-CMB-03	NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]	0 / ~~0.34~~ 0.8 tpd
L-CMB-04	Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]	~~0~~1.5 / ~~2.04~~ 3.54 tpd
L-CMB-05	NOx Emission Reductions from Large Turbines [NOx]	0 / 0.07 tpd
L-CMB-06	NOx Emission Reductions from Electricity Generating Facilities [NOx]	.09 / ~~0.91~~ 1.7 tpd
L-CMB-07	Emission Reductions from Petroleum Refineries [NOx]	~~0~~ 1.5 / ~~0.89~~ 3.00 tpd
L-CMB-08	NOx Emission Reductions from Combustion Equipment at Landfills and Publicly Owned Treatment Works [NOx]	0 / 0.33 tpd
L-CMB-09	NOx Reductions from Incinerators [NOx]	0 / 0.90 tpd
L-CMB-10	NOx Reductions from Miscellaneous Permitted Equipment [NOx]	0 / 1.01 tpd
	Total	~~.09~~ 3.54/ ~~7.28~~ 13.75[4]

Related to Comment 103-2 Con't

[4] We recognize that additional reductions in 2031 may impact 2037 numbers, but just produced a straight addition exercise for the two new commitments.

Response to Comment 103-1: South Coast AQMD staff appreciates your comments on the Revised Draft 2022 AQMP. The 2022 AQMP control strategy calls for aggressive NOx emission reductions via the deployment of zero emission technologies across all sectors where feasible, and the cleanest possible technologies where zero emission technology is not feasible. Achieving near-term emission reductions from low NOx technologies is critical to reduce exposure to harmful air pollution during the course of attainment due in 2037 and to meet standards with approaching deadlines (e.g., PM2.5 standards and the 2008 ozone standard). South Coast AQMD staff is committed to aggressively pursuing emission reductions as soon as possible.

Response to Comment 103-2: Please see Response to Comment 88-2.

Response to Comment 103-3: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 103-4: See Response to Comment 88-4.

Response to Comment 103-5: Staff recognizes your concern regarding black box measures. However, a plan without the black box would not be approvable by U.S. EPA as South Coast AQMD would not be able to demonstrate attainment due the due date. Further, the overwhelming majority of the black box reductions are associated with emission sources subject to federal regulatory authority. The commenter is correct that reliance on black box measures in earlier plans has not resulted in attainment. This has largely been due to a lack of action by the federal government to address heavy-duty mobile source emissions over a lack of actions by South Coast AQMD. However, unlike prior AQMPs, this AQMP and the State SIP Strategy provided approaches on how emissions reductions from the sectors subject to Federal authorities can be achieved. The federal measures included in the 2022 AQMP black box are described in detail in CARB's 2022 State SIP Strategy.[1] In addition, we continue our best effort to engage federal governments including the White House, Congress, Department of Energy, Department of Transportation, U.S. EPA and many other agencies to achieve all reductions associated with federal sources in the black box. Please see Response to Comment 60-3 for more information.

Response to Comment 103-6: Staff appreciates the comments from Earthjustice and looks forward to further discussion regarding the 2022 AQMP.

[1] https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf.

Comment Letter #104

August 29, 2022

US EPA CASAC Ozone Review Panel Regarding Ozone NAAQS Reconsideration
https://casac.epa.gov/ords/sab/f?p=113:19:17031850757072:::RP,19:P19_ID:976
https://youtu.be/UkmVujyGsq0 (minutes 18-24)
http://scientificintegrityinstitute.org/OzonePanel082922.pdf

Comment 104-1

Dr. James Enstrom's Verbal Comment to EPA CASAC Ozone Review Panel

I am Dr. James Enstrom. I have had a long career as an epidemiologist at UCLA and I have made significant contributions to air pollution epidemiology, particularly regarding the importance of transparency and reproducibility. I have made oral public comments to CASAC on November 17, 2021 (http://scientificintegrityinstitute.org/PMpanel121021.pdf), February 25, 2022 (http://scientificintegrityinstitute.org/PMpanel022522.pdf), and June 8, 2022 (http://scientificintegrityinstitute.org/Ozonepanel060822.pdf) and I have submitted detailed written criticism based on these comments. My criticism is highly relevant to the PM2.5 and Ozone NAAQS. Thus far, the criticism by me and numerous other public speakers has been totally ignored by CASAC. This lack of response represents disrespect for objective science by CASAC.

I described this disrespect in my August 16, 2022 DDP talk "Politicized EPA Promotes Anti-American Pseudoscience" (https://rumble.com/v1gvnuf-politicized-epa-promotes-anti-american-pseudoscience.html). I pointed out that the January 20, 2021 Presidential Order Protecting Public Health directed immediate review and action to "address the promulgation of Federal regulations and other actions during the last 4 years" (https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/). This order challenged the validity of all Federal regulations during the Trump Administration and lead to the unjustified creation of the current CASAC. This order is a prime example of how regulatory science in America has become highly politicized. An ongoing Federal Lawsuit makes a strong case that the current CASAC is illegally constituted because it violates the Federal Advisory Committee Act requirements of viewpoint diversity and no conflicts of interest (https://junkscience.com/2021/10/former-casac-chair-added-as-plaintiff-in-young-v-epa/).

In addition, CASAC refuses to address the evidence that current average levels of human exposure to PM2.5 and ozone in the US are below the levels of known human health effects. In my office in the supposedly polluted city of Los Angeles, my ozone monitor reads about 10 parts per billion (ppb) and my PM2.5 monitor reads about 3 $\mu g/m^3$. These levels are far below the current NAAQS (https://www.epa.gov/criteria-air-pollutants/naaqs-table).

Also, CASAC refuses to acknowledge the extreme publication bias against null air pollution health effects findings that I documented in my earlier comments. The 2021 EPA Policy Assessment for PM2.5 ignored at least 60 authors, including me, who have published null findings or criticized the PM2.5 NAAQS (http://scientificintegrityinstitute.org/PMpanel121021.pdf). Similar publication bias exists regarding the Ozone NAAQS, but even with this bias the April 2022 EPA Ozone Policy Assessment Reconsideration recommended leaving the Ozone NAAQS unchanged (draft 2022 policy assessment).

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Also, CASAC refuses to support the fundamental principle of the scientific method that air pollution health effects must be based on findings that are transparent and reproducible. My 2017 and 2018 reanalysis of the ACS CPS II cohort found serious flaws in the seminal Pope 1995 article and the 2000 HEI Reanalysis and demonstrated the importance of access to underlying data (http://scientificintegrityinstitute.org/DRPM25JEEPope052918.pdf). However, on April 18 *Science* Editor-in-Chief Holden Thorp reinforced his strong bias against EPA transparency by personally writing to me that he will not publish any article, letter, or electronic letter that I submit to *Science* that supports "Strengthening Transparency in Regulatory Science" (http://scientificintegrityinstitute.org/ThorpJEE041822.pdf).

As my final evidence of anti-science bias, CASAC Member Christina Fuller gave a misleading presentation in the June 26 HEI Webinar "Setting Ambient Air Quality Standards—What's Science Got to Do With It?" (https://www.youtube.com/watch?v=XAcrlTxeiXA). Furthermore, she has not addressed my June 30 evidence that science has nothing to do with the current NAAQS (http://scientificintegrityinstitute.org/JEEFuller081822.pdf). Even worse, the HEI Board of Directors Chair Richard Meserve rejected my June 30 request to initiate an independent investigation of misconduct by HEI and my July 6 request to arrange a debate on whether particulates cause premature death (http://scientificintegrityinstitute.org/JEEMeserve072222.pdf). These developments challenge the scientific integrity of HEI.

In conclusion, CASAC must address the extensive evidence that Americans are not being harmed by their current personal exposure to PM2.5 and ozone, but are being harmed by the regulations that are due to scientifically flawed PM2.5 and ozone NAAQS. However, regardless of what CASAC does, this evidence is being presented to the American people.

Thank you very much.

James E. Enstrom, PhD, MPH, FFACE
Retired UCLA Research Professor (Epidemiology)
President, Scientific Integrity Institute
http://scientificintegrityinstitute.org/
jenstrom@ucla.edu
(310) 472-4274

February 25, 2022
US EPA CASAC PM Panel Webcast re PM2.5 NAAQS based on 2021 PM ISA Supp & PM PA
(https://www.youtube.com/watch?v=ZkMsBXwyenw)
(https://casac.epa.gov/ords/sab/f?p=113:19:22380851460992:::RP,19:P19_ID:966)

Dr. James Enstrom's Verbal Comment to EPA CASAC PM Panel re PM2.5 NAAQS

I have 50 years of experience in conducting epidemiologic cohort studies and I have published important peer-reviewed PM2.5 death findings based on ACS CPS I and CPS II cohort data. The February 4 PM Panel letters do not address the detailed public criticism of the 2021 PM ISA Supplement and PM PA. The EPA staff has made NO changes in these documents in response to this criticism. In particular, they ignored Richard Smith's evidence of NO PM2.5 deaths below 12 µg/m³ and my 36 pages of evidence that PM2.5 DOES NOT *cause* premature deaths in the US (http://scientificintegrityinstitute.org/pmpanel121021.pdf).

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The recommendations of the PM Panel and EPA staff to tighten the PM2.5 NAAQS are based on a deliberately falsified research record regarding PM2.5-related deaths. Falsification is serious scientific misconduct as defined in the January 11 White House OSTP Scientific Integrity Task Force Report. Thus, I request that Jennifer Peel, with a PhD in Epidemiology, confirm that the PM PA is "a robust and comprehensive evaluation of the epidemiologic literature" and that public comments like mine do not alter her evaluation.

There is NO scientific or public health justification for tightening the PM2.5 NAAQS because there is no etiologic mechanism by which inhaling about 100 µg of PM2.5 per day can cause death and the US already has a very low average PM2.5 level of 7 µg/m³ whereas our competitor China has a very high level of 48 µg/m³. Indeed, there are adverse public health, welfare, social, economic, and energy effects associated with tightening the PM2.5 NAAQS. This tightening will hurt America at a time when it is facing military and economic dangers from Russia and China, as well as rapidly increasing energy costs. Finally, I strongly support the ongoing Young and Cox v. EPA lawsuit because the Biden CASAC and its PM Panel are illegally constituted and in gross violation of the Federal Advisory Committee Act. The current misguided effort to tighten the PM2.5 NAAQS must be stopped.

Thank you.

James E. Enstrom, PhD, MPH, FFACE
Retired UCLA Research Professor (Epidemiology)
President, Scientific Integrity Institute
http://scientificintegrityinstitute.org/
jenstrom@ucla.edu
(310) 472-4274

January 30, 2017

Jo Kay Chan Ghosh, Ph.D.
Health Effects Officer
South Coast Air Quality Management District
jghosh@aqmd.gov

Dear Dr. Ghosh,

I am writing to express my extreme disappointment with your December 8, 2016 Final Draft 2016 AQMP Appendix I Health Effects. Your January 3, 2017 198-page document, Responses to Comments on Appendix I, DOES NOT address the numerous critical comments that I submitted to you on January 11, 2016 and July 26, 2016 and August 15, 2016. Below I describe six major problems with the final version of Appendix I.

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1. Appendix I DOES NOT comply with California Health and Safety Code Section 40471 (b). Instead of satisfying the requirement "the south coast district board, in conjunction with a public health organization or agency, shall prepare a report on the health impacts of particulate matter air pollution in the South Coast Air Basin," you stated on page 188 of your Responses document "it is not the intention of this Appendix to assess whether there is or is not an effect of a specific air pollutant on any particular health endpoint . . . ." Instead of satisfying the requirement to prepare Appendix I "in conjunction with a public health organization or agency," you instead prepared it in conjunction with two aggressive regulatory agencies within CalEPA: OEHHA and CARB. Instead of satisfying the requirement that the "south coast district board shall hold public hearings concerning the report and the peer review," you held four November 2016 public hearings which were conducted without the SCAQMD Board Members

2. Appendix I and your Responses document DO NOT describe the overwhelming evidence of NO relationship [relative risk (RR) = 1.00] between $PM_{2.5}$ and total mortality in California. The weighted average of the most recent results from six different California cohorts show RR = 0.999 (0.988-1.010), which means there are NO premature deaths caused by $PM_{2.5}$ in California. An appended table shows this null California evidence. This table, which is page 5 of my August 15, 2016 comments, was deliberately omitted from your Responses document.

3. Appendix I and your Responses document completely ignore this statement in my August 15, 2016 comments: "I have now submitted for publication a manuscript with null findings that invalidate the positive nationwide relationship between $PM_{2.5}$ and total mortality published in the seminal Pope 1995 paper, which is based on the American Cancer Society Cancer Prevention Study II (CPS II) cohort. My null CPS II cohort findings raise serious doubts about validity of the positive CPS II cohort findings in Jerrett 2005, Jerrett 2009, and Jerrett 2013, which have been used as the basis for the $PM_{2.5}$ premature death claims in the PPTs of Drs. Oliver and Shen." My manuscript, entitled "Fine Particulate Matter and Total Mortality in Cancer Prevention Study II Reanalysis," is now in press in a PubMed recognized scientific journal and should appear online in February 2017. This paper provides important new evidence that $PM_{2.5}$ does not cause premature deaths anywhere in the United States, including California.

4. Appendix I and the 2016 AQMP SES Report rely heavily the $PM_{2.5}$-mortality publications by Dr. Michael Jerrett and his co-authors. You have co-authored with Jerrett seven air pollution related publications during 2011-2016. This co-authorship raises serious doubts about your objectivity, particularly since you have ignored null $PM_{2.5}$-mortality results and have ignored my challenges to the validity of the Jerrett publications. On November 11, 2016 I made a US Office of Research Integrity allegation that Jerrett 2013 falsified and exaggerated the relationship between $PM_{2.5}$ and total mortality in California. An ORI Investigator agreed that the Jerrett 2013 results "do not provide evidence that air pollution is directly responsible for mortality." My US ORI allegation and a table showing NO $PM_{2.5}$-mortality relationship in California are appended.

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5. Appendix I does not describe the ACTUAL human exposures to $PM_{2.5}$, ozone, and NOx in the SCAB. The human exposures to these pollutants are much lower than the ambient levels recorded at SCAQMD monitors and the average human exposures are well below the level of measurable health effects for these air pollutants. SCAQMD Board Members and SCAB residents must be informed of their actual exposures to pollutants. Furthermore, they must be informed that these levels are well below the corresponding US EPA NAAQS.

6. Appendix I provides no context regarding the impact of air pollution and other risk factors on the overall health of SCAB residents. An appended table shows low 2014 age-adjusted death rates from all causes, all cancer, and all respiratory disease in California and the SCAB. These death rates are among the lowest in the United States and the World. This table, which is page 6 of my August 15, 2016 comments, was deliberately omitted from your Responses document.

If the 2016 AQMP is approved by the SCAQMD Board on February 3, 2017, I will make a strong case to the new US EPA Administrator, the US House Science Committee, the US House Energy Committee, and the US Senate Environment Committee that the AQMP should not be implemented because it is NOT justified on a scientific or public health basis. Also, I will make a strong case to business and taxpayer groups in Southern California that the 2016 AQMP is scientifically unjustified and should not be funded. Many concerned scientists like myself are doing everything we can to stop SCAQMD from implementing new unjustified environmental regulations in Southern California, as part of a national effort to reduce unjustified regulations.

Finally, I am sending this email letter to all UCLA School of Public Health faculty members who have been involved with SCAQMD and/or with your 2011 Ph.D. in Epidemiology. I request that these faculty members assess my above comments and inform SCAQMD whether they believe the 2016 AQMP is justified on a public health basis. These faculty members are directly responsible for your training as an environmental epidemiologist and you, as a prominent public health official, are a direct reflection of the values and integrity of the School of Public Health.

Thank you for taking this message seriously, because it is a VERY SERIOUS message.

Sincerely yours,

James E. Enstrom, Ph.D., M.P.H.
UCLA and Scientific Integrity Institute
http://climateconferences.heartland.org/james-enstrom-iccc10-panel-8/
http://climateconferences.heartland.org/iccc-12/
jenstrom@ucla.edu

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cc: UCLA School of Public Health Faculty and Doctoral Graduates
Ghosh Chair Beate R. Ritz <britz@ucla.edu>
Ghosh Prof Onyebuchi A. Arah <arah@ucla.edu>
Ghosh Prof Ninez A. Ponce <nponce@ucla.edu>
Ghosh Prof Joelle M. Brown <joelle.brown@ucsf.edu>
EHS Chair Richard J. Jackson <dickjackson@ucla.edu>
EHS Chair John R. Froines <jfroines@ucla.edu>
EHS Prof Arthur M. Winer <amwiner@ucla.edu>
EHS Prof Yifang Zhu <yifang@ucla.edu>
Assoc Dean Zuo-Feng Zhang <zfzhang@ucla.edu>
Assoc Dean Hilary A. Godwin <hgodwin@ucla.edu>
Dean Jody Heymann <jody.heymann@ph.ucla.edu>
Dean Linda Rosenstock <lindarosenstock@ph.ucla.edu>
EPI 2004 Ph.D. Michelle Wilhelm Turner <greenscreen@cleanproduction.org>
ESE 2009 D.Env. Kathleen H. Kozawa <Kathleen.Kozawa@arb.ca.gov>
ESE 2008 D.Env. Cody G. Livingston <clivings@arb.ca.gov>
ESE 2004 D.Env. Todd P. Sax <tsax@arb.ca.gov>
ESE 2003 D.Env. Scott A. Fruin <fruin@usc.edu>
ESE 1997 D.Env. Michael T. Benjamin <mbenjami@arb.ca.gov>
ESE 1995 D.Env. Pablo Cicero-Fernandez <pcicero@arb.ca.gov>
ESE 1994 D.Env. Mark A. Gold <gold@ioes.ucla.edu>
ESE 1988 D.Env. Barry R. Wallerstein <barry.wallerstein@ucr.edu>
ESE 1987 D.Env. Emily D.P. Nelson <dremilynelson@gmail.com>
ESE 1980 D.Env. Chung S. Liu <cliu@aqmd.gov>
ESE 1976 Dr.P.H. Jean J. Ospital <jospital@aqmd.gov>

cc: UCLA Chancellor's Office
2015 RIO Carol Eggac Goldberg <goldberg@law.ucla.edu>
2016 RIO Ann R. Karagozian <akaragozian@conet.ucla.edu>
Campus Counsel Amy Blum <ablum@conet.ucla.edu>
VC Diversity Jerry Kang <jkang@equity.ucla.edu>
VP Diversity Christine A. Littleton <littletn@law.ucla.edu>

cc: SCAQMD Key Staff
EO Wayne Nastri <wnastri@aqmd.gov>
DEO Philip M. Fine <pfine@aqmd.gov>
SES Elaine Shen <eshen@aqmd.gov>
SES Anthony Oliver <aoliver@aqmd.gov>
SES Shah Dabirian <sdabirian@aqmd.gov>

cc: SCAQMD Board Member
Joseph K. Lyou <joe@ccair.org>
Joseph K. Lyou <marka@enviropolicy.com>
Joseph K. Lyou <nnishimura@ccair.org>
Joseph K. Lyou <erik.neandross@gladstein.org>
Joseph K. Lyou <amartinez@earthjustice.org>
Joseph K. Lyou <dpettit@nrdc.org>

Comment 104-1 Con't

Summary Table. Epidemiologic cohort studies of $PM_{2.5}$ and total mortality in California, 2000-2016
Relative risk of death from all causes (RR and 95% CI) associated with increase of 10 $\mu g/m^3$ in PM2.5
(http://scientificintegrityinstitute.org/NoPMDeaths112215.pdf)

Krewski 2000 & 2010 CA CPS II Cohort N=40,408 RR = 0.872 (0.805-0.944) 1982-1989
(N=[18,000 M + 22,408 F]; 4 MSAs; 1979-1983 PM2.5; 44 covariates)

McDonnell 2000 CA AHSMOG Cohort N~3,800 RR ~ 1.00 (0.95 – 1.05) 1977-1992
(N~[1,347 M + 2,422 F]; SC&SD&SF AB; M RR=1.09(0.98-1.21) & F RR~0.98(0.92-1.03))

Jerrett 2005 CPS II Cohort in LA Basin N=22,905 RR = 1.11 (0.99 - 1.25) 1982-2000
(N=22,905 M & F; 267 zip code areas; 1999-2000 PM2.5; 44 cov + max confounders)

Enstrom 2005 CA CPS I Cohort N=35,783 RR = 1.039 (1.010-1.069) 1973-1982
(N=[15,573 M + 20,210 F]; 11 counties; 1979-1983 PM2.5) RR = 0.997 (0.978-1.016) 1983-2002

Enstrom 2006 CA CPS I Cohort N=35,783 RR = 1.061 (1.017-1.106) 1973-1982
(11 counties; 1979-1983 & 1999-2001 PM2.5) RR = 0.995 (0.968-1.024) 1983-2002

Zeger 2008 MCAPS Cohort "West" N=3,100,000 RR = 0.989 (0.970-1.008) 2000-2005
(N=[1.5 M M + 1.6 M F]; Medicare enrollees in CA+OR+WA (CA=73%); 2000-2005 PM2.5)

Jerrett 2010 CA CPS II Cohort N=77,767 RR ~ 0.994 (0.965-1.025) 1982-2000
(N=[34,367 M + 43,400 F]; 54 counties; 2000 PM2.5; KRG ZIP; 20 ind cov+7 eco var; Slide 12)

Krewski 2010 (2009) CA CPS II Cohort
(4 MSAs; 1979-1983 PM2.5; 44 cov) N=40,408 RR = 0.960 (0.920-1.002) 1982-2000
(7 MSAs; 1999-2000 PM2.5; 44 cov) N=50,930 RR = 0.968 (0.916-1.022) 1982-2000

Jerrett 2011 CA CPS II Cohort N=73,609 RR = 0.994 (0.965-1.024) 1982-2000
(N=[32,509 M + 41,100 F]; 54 counties; 2000 PM2.5; KRG ZIP Model; 20 ind cov+7 eco var; Table 28)

Jerrett 2011 CA CPS II Cohort N=73,609 RR = 1.002 (0.992-1.012) 1982-2000
(N=[32,509 M + 41,100 F]; 54 counties; 2000 PM2.5; Nine Model Ave; 20 ic+7 ev; Fig 22 & Tab 27-32)

Lipsett 2011 CA Teachers Cohort N=73,489 RR = 1.01 (0.95 – 1.09) 2000-2005
(N=[73,489 F]; 2000-2005 PM2.5)

Ostro 2011 CA Teachers Cohort N=43,220 RR = 1.06 (0.96 – 1.16) 2002-2007
(N=[43,220 F]; 2002-2007 PM2.5)

Jerrett 2013 CA CPS II Cohort N=73,711 RR = 1.060 (1.003–1.120) 1982-2000
(N=[~32,550 M + ~41,161 F]; 54 counties; 2000 PM2.5; LUR Conurb Model; 42 ind cov+7 eco var+5 metro; Table 6)

Jerrett 2013 CA CPS II Cohort N=73,711 RR = 1.028 (0.957-1.104) 1982-2000
(same parameters and model as above, except including co-pollutants NO2 and Ozone; Table 5)

Ostro 2015 CA Teachers Cohort N=101,884 RR = 1.01 (0.98 -1.05) 2001-2007
(N=[101,881 F]; 2002-2007 PM2.5) (all natural causes of death)

Thurston 2016 CA NIH-AARP Cohort N=160,209 RR = 1.02 (0.99 -1.04) 2000-2009
(N=[~95,965 M + ~64,245 F]; full baseline model: PM2.5 by zip code; Table 3) (all natural causes of death)

Enstrom 2016 unpub CA NIH-AARP Cohort N=160,368 RR = 1.001 (0.949-1.055) 2000-2009
(N=[~96,059 M + ~64,309 F]; full baseline model: 2000 PM2.5 by county)

Allegation of Research Misconduct by Dr. Michael Jerrett and Co-Authors

James E. Enstrom, Ph.D., M.P.H.
UCLA and Scientific Integrity Institute
jenstrom@ucla.edu

November 11, 2016

Comment 104-1 Con't

I allege research misconduct (falsification) by UCLA Professor Michael Jerrett, Ph.D., and his primary co-authors C. Arden Pope, Ph.D., Daniel Krewski, Ph.D., George Thurston, Sc.D., Richard T. Burnett, Ph.D., Michael J. Thun, M.D., and Susan P. Gapstur, Ph.D., regarding their attached September 1, 2013 *AJRCCM* paper "Spatial Analysis of Air Pollution and Mortality in California" (http://www.atsjournals.org/doi/abs/10.1164/rccm.201303-0609OC). The authors received a portion of their funding for this research from NIEHS and CDC within DHHS. While claiming that fine particulate matter ($PM_{2.5}$) was associated with mortality from all causes (total mortality) in their study, the authors omitted their own null findings and the null findings of others. These omitted findings clearly show NO association. Thus, they have engaged in falsification as defined by DHHS and the Public Health Service: "omitting data or results such that the research is not accurately represented in the research record" (Section 93.103(b) of 42 CFR 93) (http://ori.hhs.gov/sites/default/files/42_cfr_parts_50_and_93_2005.pdf).

The *AJRCCM* paper claims there is a positive relationship between $PM_{2.5}$ and mortality from all causes in California because their "conurbation" land use regression (LUR) model yielded a slightly positive relative risk of RR=1.060 (1.003-1.120), as shown in Table 6. However, complete study results are in the October 28, 2011 Jerrett CARB Final Report "Spatiotemporal Analysis of Air Pollution and Mortality in California Based on the American Cancer Society Cohort: Final Report" (http://www.arb.ca.gov/research/apr/past/06-332.pdf). The eight entirely null models, shown in the attached Report Table 22, were omitted from the paper. The results for all nine models are shown in my Summary Table on the next page. The weighted average relative risk for all nine models is RR=1.002 (0.992-1.012), which means NO relationship.

Furthermore, the *AJRCCM* paper does not cite any of the null California $PM_{2.5}$-mortality results from other papers and reports dating back to 2000, including earlier findings by Dr. Jerrett. These results are shown on the next page, as well as on the attached August 15, 2016 Summary Table that I presented to SCAQMD (http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/Draft2016AQMP/2016-aqmp-appendix-i-comment-letter (letter #7). The weighted average relative risk for the most recent result from each of the six different California cohorts is RR=0.999 (0.988-1.010), which means NO relationship.

I contend that the falsification in the paper was deliberate because it was done after extensive criticism of the June 9, 2011 Draft Report and the October 28, 2011 Final Report. This criticism was presented to the authors via CARB by myself, William M. Briggs, Ph.D., John D. Dunn, M.D., S. Stanley Young, Ph.D., Gordon Fulks, Ph.D., and Frederick W. Lipfert, Ph.D. A compilation of all criticism of the 2011 Report is attached (http://www.scientificintegrityinstitute.org/JerrettCriticism102811.pdf). Detailed criticism of the *AJRCCM* paper, including its misrepresentation of the results contained in the CARB Report, was given by Dr. Briggs in his statistical blogs of August 6, 2013 (http://wmbriggs.com/blog/?p=8720), September 11, 2013 (http://wmbriggs.com/blog/?p=8990), and September 25, 2013 (http://wmbriggs.com/blog/?p=9241).

In conclusion, Dr. Jerrett and his co-authors falsified the relationship between $PM_{2.5}$ and total mortality in California in their *AJRCCM* paper by deliberately omitting their own null evidence and the null evidence of others. This is quite disturbing because $PM_{2.5}$-mortality claims in the paper are being used as public health justification for the very costly SCAQMD 2016 Air Quality Management Plan (http://www.aqmd.gov/).

Comment 104-1 Con't

Summary Table. Epidemiologic cohort studies of $PM_{2.5}$ and total mortality in California, 2000-2016
Relative risk of death from all causes (RR and 95% CI) associated with increase of 10 µg/m³ (IQR=10) in $PM_{2.5}$

Study (Year)	Cohort	RR	95% CI	F-U Years
Jerrett 2013 (*AJRCCM* Table 6 Model)	CA CPS II	1.060	(1.003–1.120)	1982-2000
Jerrett 2011 (CARB Report Figure 22)	CA CPS II			
KRG IND Model (Table 30, IQR=8.52902→10.0)		0.992	(0.965-1.020)	1982-2000
KRG ZIP Model (Table 28, IQR=8.4735→10.0)		0.993	(0.964-1.023)	1982-2000
KRG IND+O3 Model (Figure 22 extrapolated, IQR=10.0)		1.020	(0.980-1.060)	1982-2000
IDW IND Model (Table 29, IQR=8.74→10.0)		1.003	(0.978-1.028)	1982-2000
IDW ZIP Model (Table 27, IQR=9.37→10.0)		0.995	(0.967-1.025)	1982-2000
BME IND Model (Figure 22 extrapolated, IQR=10.0)		1.000	(0.975-1.025)	1982-2000
LUR IND Model (Table 31, IQR=5.35→10.0)		1.009	(0.980-1.039)	1982-2000
LUR IND+5 Metro Model (Abstract Table 1, IQR=10.0) [Jerrett 2013 Model]		1.080	(1.000-1.150)	1982-2000
RS IND Model (Table 32, IQR= 5.39→10.0)		0.998	(0.968-1.029)	1982-2000
Weighted Average of All Nine Models		1.002	(0.992-1.012)	1982-2000
Other Results by Jerrett and Other Investigators				
Krewski Jerrett 2000 (RR for CA 2010)	CA CPS II	0.872	(0.805-0.944)	1982-1989
McDonnell 2000 *	CA AHSMOG	~1.00	(0.95 – 1.05)	1977-1992
Jerrett 2005	CPS II (LA Basin Only)	1.11	(0.99 - 1.25)	1982-2000
Enstrom 2005 *	CA CPS I	0.997	(0.978-1.016)	1983-2002
Zeger 2008 *	MCAPS "West=CA+OR+WA"	0.989	(0.970-1.008)	2000-2005
Jerrett 2010	CA CPS II	~0.994	(0.965-1.025)	1982-2000
Krewski Jerrett 2009 (RR for CA 2010)*	CA CPS II	0.968	(0.916-1.022)	1982-2000
Lipsett Jerrett 2011	CA Teachers	1.01	(0.95 – 1.09)	2000-2005
Ostro 2011	CA Teachers	1.06	(0.96 – 1.16)	2002-2007
Ostro 2015 *	CA Teachers	1.01	(0.98 - 1.05)	2001-2007
Thurston 2016 *	CA NIH-AARP	1.02	(0.99 - 1.04)	2000-2009
Weighted Average of Latest Results (*) from Six California Cohorts		0.999	(0.988-1.010)	

From: Hohmann, Ann (HHS/OASH) <Ann.Hohmann@hhs.gov>
Sent: Wednesday, December 21, 2016 10:46 AM
To: jenstrom@ucla.edu
Cc: Garfinkel, Susan J (HHS/OASH) <Susan.Garfinkel@hhs.gov>; Trenkle, William (OS/OASH) <William.Trenkle@hhs.gov>
Subject: DIO 6351

Dear Dr. Enstrom,

As the ORI expert in biostatistics and public health, Dr. Garfinkel gave me the materials that ORI has regarding your November 7 conversation with Dr. Trenkle about the Jerrett et al. 2013 paper and your emailed materials to AskORI on November 11, 2016. I have read and reviewed all of the materials. I understand your concern about the way the data were presented in the paper and used elsewhere. Though I have no clinical training, it appears that the relative risks reported do not seem to rise to the level of clinical significance and do not provide evidence that air pollution is directly responsible for mortality. Presenting this data as such, may be a question only of bad science.

Comment 104-1 Con't

However, "bad" or sloppy science is not the same as research misconduct. ORI's regulation (42 CFR 93.103) defines research misconduct, as you know, as "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results." While it is true that Dr. Jerrell and colleagues did not cite all the research showing that the relative risk is very, very close to 1 and only emphasized specific numbers, they did not, as far as I can tell, change their data to get a statistically and clinically significant result. The weak results are there for all to see. Thus, there does not appear to be falsification.

To overinterpret one's data is certainly inappropriate, but would be a matter to raise with the reviewers and the journal editors, who apparently did not insist that the authors tone down their conclusions. ORI is aware that the research on the effects of air pollution is certainly not the only area of science where there is open controversy. Just this morning, *The Scientist* ran an article on the controversy regarding the effects of sugar intake (http://www.the-scientist.com/?articles.view/articleNo/47819/title/Industry-Funded-Sugar-Study--Don-t-Trust-Other-Sugar-Studies/&utm_campaign=NEWSLETTER_TS_The-Scientist-Daily_2016&utm_source=hs_email&utm_medium=email&utm_content=39616948&_hsenc=p2ANqtz-8Q5JhLgCWe4CJboPROHvuwP0x1fr3XLwxkrNXixW4tqdO_29UCNh4fj6q1IwpolH0ferca7iYMwC0oyjX7kTTvwmW8mA&_hsmi=39616948). Unfortunately, we all are aware that science loses when research is influenced by special interest groups.

The Public Health Service (PHS) regulation, under which ORI acts, is not meant to be a way to put the brakes on controversial science. The mission of our Office is to protect PHS research funds from researchers who knowingly and intentionally make up data or change them to serve their purposes. In the documents you provided, there does not appear to be evidence that Dr. Jerrell and his colleagues have done that. Without clear evidence of fabrication and/or falsification of data (and not just failing to cite contrary data), ORI is unable to further pursue your allegations. What you do and have been doing for decades – promoting your own research results – in scientific and other venues may be the best way to combat opposing viewpoints. Good luck in the future.

Ann A. Hohmann, Ph.D., MPH
Division of Investigative Oversight
Office of Research Integrity (ORI)
1101 Wootton Parkway, Suite 750
Rockville, MD 20852
Phone: 240 453-8431
Ann.Hohmann@hhs.gov

Comment 104-1 Con't

2014 Age-Adjusted Death Rates by State and County and Ethnicity

Deaths per 1,000 persons (age-adjusted using 2000 U.S. Standard Population) with 95% Confidence Interval shown in parentheses (http://wonder.cdc.gov/ucd-icd10.html)

September 8, 2016

Location	2014 Age-Adjusted Death Rate (95% Confidence Interval)		
	All Causes	All Cancer	All Respiratory
	ICD-10=All Codes	ICD-10=C00-D48	ICD-10=J00-J98
United States (50 States + DC)	7.25 (7.24-7.26)	1.66 (1.65-1.66)	0.71 (0.71-0.71)
California (2nd lowest State)	6.06 (6.03-6.08)	1.48 (1.46-1.49)	0.57 (0.56-0.57)
South Coast Air Basin (SCAB = Los Angeles, Orange, Riverside, and San Bernardino Counties)	5.93	1.46	0.55
Hawaii (Lowest State)	5.89 (5.77-6.00)	1.44 (1.38-1.49)	0.53 (0.50-0.56)
Los Angeles County	5.71 (5.66-5.75)	1.42 (1.40-1.44)	0.53 (0.52-0.55)
Orange County	5.48 (5.40-5.56)	1.38 (1.34-1.42)	0.47 (0.45-0.49)
California Hispanics	5.02 (4.97-5.07)	1.18 (1.16-1.20)	0.39 (0.38-0.41)
SCAB Hispanics	4.96	1.19	0.39

Guest Speaker: James E. Enstrom, Ph.D., M.P.H.

Dr. Enstrom is a native Californian who has lived most of his life in Los Angeles County. In 1965 He graduated co-valedictorian of his class at Harvey Mudd College in Claremont, CA, where he obtained a B.S. in physics. In 1970 Dr. Enstrom obtained his Ph.D. in experimental elementary particle physics at Stanford University from Nobel Laureate Melvin Schwartz. During 1971-1973 he worked as a physicist at the Lawrence Berkeley Laboratory in research group of Nobel Laureate Luis Alvarez. He then came to the UCLA School of Public Health as a postdoctoral fellow in cancer epidemiology and received an M.P.H. and postdoctoral certificate in 1976 from renowned public health epidemiologist Dr. Lester Breslow.

He then joined the UCLA School of Public Health faculty as a Research Professor / Researcher and he held that position for 36 years until June 2012. He currently retains a similar affiliation with UCLA, although he is now drawing retirement. He has been a Fellow of the American College of Epidemiology since 1981, he has been listed in Who's Who in America since 1990, and he has been President of the Scientific Integrity Institute in Los Angeles since 2005.

During his long career, he has explored many important epidemiological issues, particularly focusing on California. A major theme of his research has been identifying healthy lifestyles. He has shown that it is possible to reduce mortality risk from cancer and heart disease by 70% in the middle age range and to increase longevity by as much as 10 years. Examples of healthy populations that he has examined include religiously active California Mormons, California Cancer Prevention Study subjects, California PREVENTION Magazine Readers, and California and national samples of adults adhering to good health practices.

He has also examined the influence of environmental factors on mortality. In December 2005 he published a major paper on fine particulate matter and mortality in California and he has numerous other fm. Since then he has conclusively documented that fine particulate matter does not cause premature death in California. Since 2013, following the lead of the US House Science Committee, he has been involved with efforts to obtain the access to the "secret science" data that EPA has used to justify its fine particulate and ozone air pollution regulations in California and the United States. These efforts include the August 1, 2013 House subpoena of EPA, as well as the Secret Science Reform Acts of 2014 and 2015.

He is currently conducting important new air pollution epidemiology research that is relevant to the EPA, CARB, and SCAQMD regulations. More information can be found at his Scientific Integrity Institute website (http://www.scientificintegrityinstitute.org/).

Comment 104-1 Con't

http://www.dailynews.com/opinion/20170203/in-air-quality-talks-haziest-thing-may-be-the-facts-susan-shelley

Comment 104-1 Con't

Los Angeles Daily News February 5, 2017

In air-quality talks, haziest thing may be the facts: Susan Shelley

A clear-air day in downtown Los Angeles, with snow-capped mountains in the background. (Getty Images)

By Susan Shelley, LA Daily News

Posted: 02/03/17, 2:00 PM PST | Updated: 1 week, 4 days ago

Suppose it was 1650 and you were accused of being a witch. Would you prefer trial by water or hanging?

If you choose trial by water, the people in charge of things will throw you into the nearest lake, river or ocean and wait to see if you sink or float.

If you sink, you're innocent, for all the good that does you.

So you may as well choose hanging. With any luck, it will take a good long time before the people in charge of things can agree on where to build the gallows.

That's exactly the choice the business community in Southern California has faced for the past four years, as the South Coast Air Quality Management District worked up its next four-year plan for air quality management.

Comment 104-1 Con't

In this version of trial by water, businesses are commanded to spend fortunes trying to meet ever-tightening emissions standards, and they are fined to death when they cannot comply.

With hanging, the businesses are offered incentives to walk up the 13 steps and put their own necks in the noose.

The South Coast Air Quality Management District, a powerful regulatory agency with authority over businesses in four counties, held a public meeting Friday to consider its brand new 2016 Air Quality Management Plan, 5,300 pages long.

The plan is part of a complex federal and state regulatory apparatus that's attempting to achieve "attainment" of federal air quality standards. Unfortunately, the standards are so tough that we wouldn't meet them even if every source of emissions regulated by the SCAQMD shut down completely.

Business groups support the 2016 AQMP because it relies on incentives to cut emissions, not "command and control" rule-making from regulators. The money for the incentives would likely come from raising your taxes.

Groups with "environmental justice" in their names joined the Sierra Club at the public hearing to denounce the incentive-based plan. They believe that tougher regulations will save lives but not cost jobs.

Everybody should believe in something.

This is a witch trial because businesses have been judged guilty of killing people with invisible particles, and nobody in government wants to hear from legitimate scientists who have done studies demonstrating that this is not true.

That's because regulations have to meet a standard of cost-effectiveness, and only the value of a human life can justify the crazy-expensive cost of replacing so much equipment over and over again. At Friday's meeting, an AQMD staffer claimed 1,600 lives are lost per year in the South Coast Air Basin to the health effects of air pollution.

But in letters written in response to the air quality management plan's appendix on health effects, reputable and accomplished people in the fields of science, statistics, physics and medicine cite evidence that the number of deaths caused by air pollution in California is zero.

What if they're right?

The 2016 AQMP is wildly expensive. It may lead to higher taxes to pay for incentives to further clean up something that has already been cleaned up. We may see higher prices as a result of higher shipping and energy costs. Even the price of a water heater could shoot up if gas-fired appliances are banned.

Shouldn't we know for certain whether any of that is really necessary for public health?

Maybe the new EPA administrator in Washington would like to hold hearings. It would be a nice change from witch trials.

I

115TH CONGRESS
1ST SESSION

H. R. 861

To terminate the Environmental Protection Agency.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 3, 2017

Mr. GAETZ (for himself, Mr. MASSIE, Mr. PALAZZO, and Mr. LOUDERMILK) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Agriculture, Transportation and Infrastructure, and Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To terminate the Environmental Protection Agency.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. TERMINATION OF THE ENVIRONMENTAL PROTECTION AGENCY.

The Environmental Protection Agency shall terminate on December 31, 2018.

○

Comment 104-1 Con't

Response to Comment 104-1: South Coast AQMD staff acknowledges your comments on the health effects of air pollution exposure. The bulk of your comments pertain to your concerns regarding the establishment of NAAQS and the underlying scientific support for those standards. U.S. EPA is the sole agency responsible for interpreting the scientific consensus regarding health effects when setting the NAAQS.

The 2022 AQMP is not discretionary. The South Coast AQMD is required by federal law to develop a plan to attain the NAAQS. Failure to develop an approvable plan or submit a plan will result in U.S. EPA triggering economic sanctions for the region and the need for a Federal Implementation Plan. Responses to comments on the health effects analysis are provided in a separate document. Please refer to Response to Comment 81 in the Comments and Responses to Comments on Appendix I – Health Effects.

Comment Letter #105

October 18, 2022

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Submitted via email to:AQMPteam@aqmd.gov

RE: Comments on Residential and Commercial Combustion Source Measures in Revised Draft 2022 Air Quality Management Plan (AQMP)

On behalf of the undersigned organizations, we appreciate the opportunity to comment on the residential and commercial combustion source measures in the Revised Draft 2022 AQMP.

General Comments

The South Coast remains in severe nonattainment for ozone, nitrogen oxide (NOx) and PM2.5. As the air regulator of the region, the District has an obligation to set adequate targets for reducing pollution to achieve attainment through the 2022 AQMP. Basin residents suffered more than 100 bad air days in 2022, and the Los Angeles Metro area continues to rank #1 in smog pollution in the country.

Comment 105-1

As the District has itself pointed out, residential and commercial buildings are a major source of NOx emissions. Reductions in this sector by deploying zero-NOx-emission appliances is necessary to attain the 70 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS) under the federal Clean Air Act. We reiterate our request that the 2022 AQMP explicitly call for zero-NOx-emissions technology solutions for residential and commercial building appliances.

With zero-emissions appliances readily available for many residential and commercial sources, the District should end low-emissions standards that only worsen air quality and contribute to ongoing NAAQS violations; instead, the District must focus on deploying zero-NOx-emissions

technology. Zero-NOx-emission standards should also be paired with incentives to help customer adoption for low-income households.

Comment 105-1 Con't

1. Zero-NOx-Emission Rules Should Be A Priority For Residential and Commercial Sources

We were disappointed to learn that the District is already signaling there could be exemptions, even before the new rules are final, for colder and remote areas, and off-ramps that would allow NOx-emitting gas appliances for decades to come. For example, it proposes for residential space heating to "allow low NOx technologies as a transitional alternative when installing a zero emission unit is determined to be infeasible." Additionally, the District stated for both space heaters and waters heaters that "the target of this regulatory approach is to implement zero emission technologies for 50 percent of the applicable sources and implement low NOx emission technologies in conjunction with a mitigation fee at the time of replacement for the rest 50 percent universe by 2037." (See draft 2022 AQMP Appendix IV-A.)

Comment 105-2

The final rules must match the urgency California currently faces. Failing to require all feasible measures to achieve attainment is akin to admitting defeat at the outset.

To allay concerns about costs and feasibility, we echo prior comments that the District should prioritize and channel funding for zero-emissions technologies to environmental justice communities. In the coming years, there will be an influx of state funding for electric appliances, which has already allocated $1.4 billion for equitable building decarbonization in this year's state budget. This funding will be buttressed by tax credits and home appliance rebates from the federal government through the Inflation Reduction Act. The District should coordinate and collaborate with federal, state and local agencies to leverage this funding and finally solve the myriad air quality problems in the basin.

Since the 1970s, the District has failed to achieve attainment year after year. Zero-emissions technology is a fresh opportunity for the District to clean up the basin's foul air quality by expanding its focus beyond traditional stationary facilities such as gas plants and factories.

Last, in response to prior comments, the District asserted that "natural gas units with lower NOx technology would only be allowed when zero emission units are deemed infeasible; such as installations in remote areas or colder climate zones." We encourage the District to examine whether either infeasibility or colder climate zones will actually be an issue in 2029. The AQMP should make clear that it will only rely on low-emissions requirements under the most extreme exceptions, if at all.

2. The Air District Should Not Bifurcate Commercial Space and Water Heating Regulations from Residential Sources when it comes to Rule Development and Implementation

The Revised Draft AQMP, without explanation, would not regulate emissions for commercial appliances until 2031, two years after regulations for residential appliances. And in the AQMP, lower-NOx technologies are even more privileged for commercial space and water heating than they are for residential space and water heating, where they are contemplated as "transitional alternatives." CARB, on the other hand, has committed to a 2030 rule for both residential and commercial space and water heaters, and analysis shows net cost beneficial pathways for commercial buildings in various climates zones today. Without evidence that zero-emissions space and water heaters will be less feasible for commercial than residential buildings, this bifurcation benefits businesses absent explanation by allowing their continued use of gas while California's residents transition to electric. Moreover, despite extreme nonattainment, the District is proposing less ambitious rules on the commercial side than the state's. The District should streamline regulations for space and water heating with a 2029 zero-emissions requirement across residential and commercial sectors, sending a clear market signal to manufacturers that zero-emissions technology in the commercial and residential sectors must be readily available simultaneously.

Comment 105-3

3. The District Must Adopt More Ambitious Compliance Dates

Given the fast approaching attainment deadlines for the South Coast and the specter of sanctions under the Clean Air Act, there is a compelling need to accelerate the timeline on the implementation dates for the space and water heating standards to show that the District is serious about achieving compliance. On September 22, 2022, the California Air Resources Board approved a State Implementation Plan that included a control measure for zero-emissions space and water heaters by 2030. Likewise, BAAQMD is completing its CEQA process to support a 2027 zero-emissions rule. The District, with worse air quality than both the bay area and the state as a whole, has little excuse to not follow suit with ambitious regulations that meet or surpass all other air agencies.

The District can ensure it meets the emissions reductions that it has previously identified in responses to comments by including earlier dates for zero-emissions requirements for new construction. Setting 2024 new construction requirements would follow dozens of municipalities who have passed reach codes requiring all-electric construction, and it would enable the District to sequence emissions reductions in a more accountable manner.

Comment 105-4

4. We Support the District's Emission Reduction Dates For Residential and Commercial Cooking Devices and Other Residential Combustion Sources

Comment 105-5

Cooking appliances and other residential combustion sources have major impacts on indoor air quality, even if space and water heating contribute 95 percent of emissions from residential buildings. Gas stoves contribute to elevated rates of asthma and other respiratory illnesses. Without electrifying the entire home, customers will not feel compelled to cease relying on gas. In so doing, the gas distribution system will continue to leak methane, releasing NOx and PM2.5 into homes and the atmosphere. We applaud the District for proposing zero-emissions rules for cooking and other residential appliances, and we encourage the District to pursue zero-emission technologies and exclude low-NOx cooking options. This policy is consistent with the CEC's Title 24 Building Code, which in 2022 included ventilation requirements for cooking appliances and dryers, and which in 2025 should move to all-electric construction. It also complements dozens of municipal reach codes across the state that are requiring all-electric new construction.

Comment 105-5 Con't

4. Mitigation Fees Should Be Utilized Only If There is Adequate Action for Zero-NOx-Emission Deployment

The AQMP proposed mitigation fees for lower NOx technology applications for other residential combustion sources. Such fees should not follow a pay-to-pollute framework, where continued gas combustion is enabled through permits and nominal fees. The District should first consider adequate action to deploy zero-NOx-emission technologies to meet attainment, and then later consider mitigation fees. Collecting mitigation fees should not come at the expense of weaker regulatory action. Moreover, if mitigation fees are collected, and used to fund electrification efforts, they should be targeted to low-income and environmental justice communities.

Comment 105-6

Mitigation fees could also accompany earlier implementation dates, where they can motivate homeowners and commercial entities to meet later dates when there are more strict zero-emissions requirements. For example, we would be supportive of an earlier zero-emissions requirement, such as in 2025, with a mitigation fee for non-compliance, followed by a more strict 2029 zero-emissions requirement without exceptions.

Conclusion

We encourage the District to act decisively to remedy elevated ozone and NOx pollution levels in the South Coast.

Comment 105-7

Thank you again for the opportunity to comment. We look forward to continuing to collaborate with you on this critical plan.

Sincerely,

Nihal Shrinath
Associate Attorney
Sierra Club

Fernando Gaytan
Senior Attorney
Earthjustice

Leah Louis-Prescott
Manager
RMI

David Diaz, MPH
Executive Director
Active San Gabriel Valley

Response to Comment 105-1: Staff appreciates the comments on the residential and commercial combustion source control measures of the Draft 2022 AQMP. The South Coast AQMD is committed to developing and implementing zero emission rules for residential and commercial sources and addressing inequities such as for low-income households.

Response to Comment 105-2: The South Coast AQMD is proposing control measures R-CMB-01, R-CMB-02, R-CMB-03, R-CMB-03, C-CMB-01, C-CMB-02, and C-CMB-03 to implement zero emission residential and commercial appliances. The overarching strategy is to achieve emission reductions from zero emission technologies, but staff understands that lower NOx natural gas units might be necessary in some cases, for example, where a zero emission technology is deemed infeasible for an application, or a particular setting requires a non-zero emission backup. Staff has received comments from the public, including residents and manufacturers, expressing concerns regarding cost and product availability for implementing zero emission appliances. During the rulemaking process, staff will conduct a more in-depth analysis of feasibility, including a thorough study of cost, product availability, building stock, appliance profile, etc. Staff is committed to making the effort to develop these rule amendments through a rigorous public process for the Governing Board's consideration.

Response to Comment 105-3: The Draft 2022 AQMP calls for a rapid transition to zero emission technologies where feasible, and South Coast AQMD commits to working with manufacturers in determining how to accomplish a transition to zero emission technology for commercial buildings. For existing commercial buildings, heat pumps are the primary zero emission technology used in commercial applications. The building electrification movement and policies in California are sending a strong market signal, giving equipment manufacturers confidence regarding the demand for heat pumps for various building applications. Manufacturers are further expanding the technology profile to address special demands not only in the residential sector but also in the commercial sector. Nevertheless, the heat pump commercial market is not as mature as in the residential market. On this basis, the implementation for a zero NOx emission standard for space heating and cooling in commercial buildings would start later than that for residential buildings. Please refer to the 2022 AQMP policy brief on Residential and Commercial Building Appliances for further discussion. The South Coast AQMD has been meeting with CARB and other air districts to discuss the details of the South Coast AQMD's plans, strategies, and timelines. Further refinement of the implementation schedule will be developed during the rule development process.

Response to Comment 105-4: Thank you for your comment and recommendations. Please refer to Response to Comment 70-4 for staff's response to the suggestions.

Response to Comment 105-5: Thank you for expressing your support for our residential and commercial building measures. While staff prefers a zero emission standard for all appliances, there may be categories, unique applications, or other conditions where a zero emission appliance is infeasible or does not provide equivalent performance. For this reason, the control measures were written to consider low NOx technologies as an alternative. Further refinement and consideration of the appropriate emission standard will be determined through the rulemaking process.

Response to Comment 105-6: Staff will conduct more in-depth analyses during rulemaking for both residential and commercial measures and will evaluate the potential of mitigation fees as an alternative compliance measure during the rule development process. Staff agrees that implementing zero emission requirements should be the priority, and the alternative approach with mitigation fees should not compromise the goal. If mitigation fees are incorporated, special consideration of how mitigation fees are

used would be addressed in the rulemaking. Rules 1111 and 1121 which regulate residential furnaces and water heaters, respectively, have used mitigation fees as an option to bridge the implementation of a technology forcing NOx limit. At final implementation of these two residential combustion rules, manufacturers were required to meet the NOx emission limits. Staff expects future incentive programs to include elements that address inequities such as low-income and environmental justice communities.

Response to Comment 105-7: Staff appreciates the continued dialogue and looks forward to working together in finalizing and implementing the 2022 AQMP.

Comment Letter #106

Tesoro Refining & Marketing Company LLC
A subsidiary of Marathon Petroleum Corporation

Los Angeles Refinery – Carson Operations
2350 E. 223rd Street
Carson, California 90810
310-816-8100

October 7, 2022

VIA Certified Mail and eMail (*wnastri@aqmd.gov*)
Certified Mail No. 7022 0410 0001 4246 1732
Return Receipt Requested

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on SCAQMD 2022 Revised Draft Air Quality Management Plan
Proposed Measure L-CMB-07: Emission Reductions from Petroleum Refineries

Dear Mr. Nastri:

On behalf of Tesoro Refining & Marketing Company LLC, a wholly-owned subsidiary of Marathon Petroleum Corporation (collectively, "MPC"), MPC appreciates this opportunity to provide South Coast Air Quality Management District (SCAQMD or District) with comments on the Proposed Measure L-CMB-07: Emission Reductions from Petroleum Refineries ("Proposed Measure L-CMB-07" or "L-CMB-07") associated with the 2022 Draft Air Quality Management Plan ("Draft AQMP").[1] In September 2022, SCAQMD issued a Revised Draft 2022 AQMP along with comments and District Staff's responses to comments. This set of comments supplements MPC's comments submitted to SCAQMD on June 17, 2022.

Comment 106-1

1. **Next Generation Ultra Low NOx Burners (ULNB) have not been demonstrated to be technically feasible**

Proposed Control Measure L-CMB-07 considers next generation ULNBs as a pathway to achieve further reductions for boilers and process heaters greater than or equal to 40 MMBtu/hour. As previously outlined in our June 17, 2022 comment letter, MPC maintains its serious concerns regarding the technical feasibility of requiring next generation ULNB as Best Available Retrofit Control Technology (BARCT). In SCAQMD's response to comments, the agency claims that next generation ULNBs resolve the inherent limitations of installing or retrofitting "traditional" ULNBs in refinery applications. However, SCAQMD also acknowledges that multiple issues still need to be addressed before requiring next-generation ULNB as BARCT, including the following:

Comment 106-2

[1] Accessed at http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan

- Technical feasibility
- Cost effectiveness and incremental cost effectiveness
- Existing requirements of Rule 1109.1
- Potential safety concerns
- Whether next generation ULNB can be installed safely and in compliance with API safety standards 535 and 560.
- If next-generation ULNB cannot be installed in compliance with API safety standards 535 and 560, then whether it is possible to update API safety standards to address next generation ULNB installations or require installation per an alternatively safe manner.
- Challenges in operating air preheaters with next generation ULNBs

Comment 106-2 Con't

Further, simply pointing out that some pending permit applications for projects where next generation ULNB will be installed will "prove the technology" as the District has done, is not evidence of successful retrofits, or that the technology can safely operate over a wide range of operating conditions that exist within refinery process heaters, or that this technology has been demonstrated to meet the proposed emission limits on a continuous basis. Additionally, it would be premature for SCAQMD to force the adoption of next-generation ULNB before their safety has been fully assessed. Yet, SCAQMD continues to incorrectly conclude that next generation ULNBs are technically feasible.

As MPC has explained previously, the feasibility of retrofits must be evaluated on a unit-by-unit evaluation. It is not possible to make a blanket conclusion regarding the feasibility of retrofits on every unit in the air basin. We ask that SCAQMD withdraw this conclusion until all the factors identified above have been addressed.

2. Installing Selective Catalytic Reduction (SCR) may not be feasible for all units

Despite the District recognizing that SCR is not technically feasible when there is an operational challenge such as space constraints, it is continuing to conclude SCR as a feasible option. (*See* Response to Comment 59-22). MPC has continued to point out, first during Rule 1109.1 rulemaking and again during the Draft 2022 AQMP public comment period, that space constraints and foundational support infrastructure can deem the installation of SCRs on most existing heaters and boilers at a refinery infeasible. Indeed, MPC has preliminarily concluded that SCR cannot be installed on 52% of the existing units already subject to Rule 1109.1 at its Los Angeles Refinery (LAR) due to space constraints in the existing process unit.

Comment 106-3

During Rule 1109.1 development, the District's own third-party engineering consultant, Fossil Energy Research Corporation (FERCO), prepared a report[2] that acknowledges the obstacles space constraints can pose. FERCO states in its report that "The implementation of SCR NOx control on refinery heater systems can be challenging for many reasons. First and foremost, the physical spaces around these heater units are typically very congested. These space constraints can significantly limit the distance available between the AIG and the SCR catalyst itself. As discussed previously, achieving very high levels of SCR NOx removal (90% to 98%) requires exceptionally good mixing of the ammonia into the flue gas stream ahead of the catalyst."

In order to meet the proposed 2 ppmv NOx standard, a combination of SCR and ULNB (next generation or otherwise) would be required at MPC's LAR. Therefore, SCAQMD must evaluate the technical feasibility and cost effectiveness of a pathway that involves using an SCR and next-generation ULNB

[2] Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/ferco-report.pdf?sfvrsn=6

Comment 106-3 Con't

combination and not just a next-generation ULNB installation.

3. A cost effectiveness threshold of $325,000/ton of NOx should not be used

The updated "Cost Effectiveness" subsection of the Revised Draft 2022 AQMP identifies two potential options for thresholds. The first option is based on previous costs of control technology as well as inflation of costs over time. As a result, SCAQMD would adjust the threshold put forward in the 2016 AQMP from $50,000/ton of NOx to $59,000/ton NOx. This option reflects the approach used for recently adopted and amended rules and what was used in previous AQMPs. The second option is a significant divergence from recognized past assessments by solely considering the "potential monetized health benefits of reducing pollution." This health-based option would result in a threshold of $325,000/ton NOx, which is more than six times the $50,000 per ton cost-effectiveness threshold established by the SCAQMD Governing Board in the 2016 AQMP. As we explain further below, this second approach is not a viable alternative and is not the most cost-effective approach.

Comment 106-4

As the District states, the second approach utilizes a benefit-cost analysis as a screening threshold instead of a cost-based approach. The California Health and Safety Code (HSC), however, explicitly requires the District consider costs or economic considerations. HSC Section 40920.6(a) makes it very clear that prior to adopting a rule as BARCT, the District must take into consideration the costs, in dollars, while also taking into consideration the local public health and clean air benefits to the surrounding community.

Establishing an across-the-board threshold of $325,000/ton NOx precludes the BARCT-required analysis of economic achievability and conflicts with the District's response to comment 41-1, which stated that the District would identify "industry-specific affordability issues" during rule development.[3] Further, BARCT is defined as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source." (HSC § 40406). When determining whether a proposed BARCT measure is achievable, SCAQMD must consider the economic impacts by each class or category of source. The proposed threshold assumes that increasingly expensive measures are broadly achievable across all classes and categories of source, which conflicts with both the language of the HSC Section 40406, and the District's historical approach to determining whether a measure is cost effective. As stated in the draft AQMP "[t]he cost-effectiveness thresholds established in previous AQMPs have been developed specifically in consideration of costs that stationary sources are anticipated to face."[4] In order to achieve a threshold of $325,000/ton and assuming a 25-year project life, the District would conclude that investments of over $60 billion to achieve a 22 ton/day reduction from stationary sources are "cost effective". This is in contrast to a $10 billion investment at a threshold of $50,000/ton. This extreme cost would be well beyond the total cost of previous AQMPs and would result in additional socioeconomic impacts. Accordingly, it is not appropriate to use a monetized benefit-per-ton value as an across-the-board threshold to find that a measure is cost effective.

While the District's proposed approach to estimating a dollar value for public health benefit may be considered as part of the cost-effective analysis when determining if a proposed measure is BARCT, it is not the only factor the District is required to assess. The District's current process, identified as Option 1, takes into consideration all of the requisite factors under the HSC and would use a cost-effectiveness threshold of $59,000 per ton, which would still allow the District to adopt measures which exceed the threshold. The District would hold a public meeting to discuss emission standard options with a cost-

[3] Accessed at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-comments-and-responses-to-comments.pdf?sfvrsn=6
[4] Accessed at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/revised-draft-2022-aqmp/revised-draft-2022-aqmp-chapter-4.pdf?sfvrsn=4

effectiveness at or below the threshold, in addition to options above the threshold. This approach ensures a thorough and public process before adopting increasingly expensive measures. MPC respectfully objects to the implementation of a $325,000 per ton NOx cost effectiveness threshold and reserves the right to submit additional comments on this proposal.

Comment 106-4 Con't

Conclusions

Proposed Control Measure L-CMB-07 considers technologies and emission limits that have not been achieved in practice and are not technically feasible. SCAQMD should remove L-CMB-07 from the 2022 AQMP and allow refineries to continue focusing on implementing the significant control technologies already required under Rule 1109.1.

Comment 106-5

Please note that in submitting this letter, MPC reserves the right to supplement its comments as it deems necessary, especially if additional or different information is made available to the public regarding the proposed measure.

Thank you for the opportunity to provide comments. We are glad to discuss this further and look forward to continued dialogue.

Sincerely,

Bradley J Levi

Brad Levi
Vice President – Los Angeles Refinery

cc: ***SCAQMD***
Sarah Rees – Deputy Executive Officer
Susan Nakamura – Chief Operating Officer
Michael Krause – Assistant Deputy Executive Officer

cc: ***SCAQMD Governing Board***
Hon. Ben Benoit – Governing Board Chair
Hon. Michael Cacciotti – Governing Board Member
Hon. Vanessa Delgado – Governing Board Vice-Chair
Hon. Andrew Do – Governing Board Member
Hon. Gideon Kracov – Governing Board Member
Hon. Sheila Kuehl – Governing Board Member
Hon. Larry McCallon – Governing Board Member
Hon. Veronica Padilla-Campos - Governing Board Member
Hon. V. Manuel Perez – Governing Board Member
Hon. Nithya Raman – Governing Board Member
Hon. Rex Richardson – Governing Board Member
Hon. Carlos Rodriguez – Governing Board Member
Hon. Janice Rutherford – Governing Board Member

ecc: 2022-10-07 MPC Comment Letter on 2022 AQMP
Jamie Bartolome, MPC RE
Ruth Cade, MPC RE
Chris Drechsel, MPC RE
Luis Martinez, MPC LAR
Robert Nguyen, MPC LAR
CP Patsatzis, MPC LAR
Robin Schott, MPC LAR
Vanessa Vail, MPC LAW

Response to Comment 106-1: South Coast AQMD staff appreciates your comments on the proposed L-CMB-07 control measure in the Revised Draft 2022 AQMP.

Response to Comment 106-2: Staff maintains that next generation ULNBs are a feasible pathway to achieve further reductions for boilers and process heaters greater than or equal to 40 MMBtu/hour. Staff's statement that next generation ULNB resolve the inherent limitations of installing or retrofitting "traditional" ULNB was in response to Marathon's comment letter submitted on July 27, 2022. Staff wanted to clarify that most of the issues mentioned by Marathon Petroleum are related to "traditional" ULNBs and do not directly correlate to next generation ULNBs. Staff appreciates the time and effort that was invested in the technical analysis study document that was attached as part of the original comment letter (Comment 41) on July 27, 2022, but there is a distinction between "traditional" versus "next generation" ULNBs. For example, Figure 2-1 in the Attachment B document provided by Marathon clearly shows John Zink's CoolStar burner which is considered a "traditional" ULNB and not the "next generation" ULNB offering. John Zink's "next-generation" ULNB burner offering is the SOLEX™ combustion system which has a different design, configuration, and operation. Based on discussions with John Zink, SOLEX™ offers the following advantages over "traditional" ULNBs:

- Compact flame
- No potential of flame interaction
- Single-digit ppm NOx emissions
- Continuous adaptation to prevailing fuel compositions, changing burner heat load, air preheat temperature and firebox temperature to keep emissions with target range

The SOLEX combustion system was designed and developed specifically to help solve the challenges of achieving single-digit NOx emissions when operating a fired process heater in refinery applications. Based on the technical documentation for John Zink's the SOLEX™ burner technology demonstrate that it was developed to address the challenges described in Marathon Petroleum's June 17, 2022, comment letter. However, the comment letter did not state reasons why the "next generation" ULNBs are not feasible. Staff acknowledges that implementing "traditional" ULNBs in a refinery process heater application can potentially encounter the challenges mentioned by Marathon Petroleum, which was acknowledged

during the BARCT assessment for Rule 1109.1. Furthermore, staff's revision to L-CMB-07 also state that "During rule development staff will consider other rules associated with the transition of NOx RECLAIM facilities to a command-and control regulatory structure, include technical feasibility; cost-effectiveness and incremental cost-effectiveness; identify industry-specific affordability issues; and may consider alternative compliance mechanisms."

The American Petroleum Institute (API) standards are "living" documents that are continually revised based on improvements and advancements in technology. API typically holds sessions or meetings a couple times a year and participants are comprised of industrial attendees that include burner technology manufacturers and vendors who all contribute to editing and updating the guidelines in the document. South Coast AQMD has no authority or influence as to whether the guidelines in the document are updated.

Response to Comment 106-3: Staff maintains that single stage SCR technology is technically feasible for refinery process heater applications; SCR technology is a mature technology used throughout the refining industry to control NOx emissions. During the development of Rule 1109.1, the third-party consultants acknowledged there may be space constraint challenges installing SCR technologies but did not conclude that it was infeasible. Technical feasibility, especially for "dual-stage" SCR systems, was a concern for certain units with space constraints. The following statement is included in the control measure to acknowledge this potential limitation, "however, a case-by-case evaluation will be needed to assess the feasibility due to the additional footprint requirements associated with a dual stage arrangement."

As stated in the previous response to comments (Comments 41-8) staff agrees that some SCR installations may require a larger footprint which can pose challenges for certain units resulting in higher associated cost; however, higher cost does not necessarily equate to infeasibility. During the development of Rule 1109.1, staff considered all costs associated with SCR installations for refinery combustion equipment, including foundational support infrastructure and the necessary electrical infrastructure. Staff requested updated costs during the development of Rule 1109.1 to account for concerns with space constraints and other challenges to the existing established refinery property. Staff will use a similar approach for future rule development. As with the development of Rule 1109.1, to support advanced control technology, creative solutions and successful engineering design will need to be considered in achieving further emission reduction goals.

Response to Comment 106-4: Please refer to the general response on Cost-Effectiveness Method and Threshold.

Response to Comment 106-5: Staff appreciates your comments and welcomes continued dialogue.

SECTION III

REGIONAL PUBLIC HEARINGS COMMENTS AND RESPONSES TO VERBAL COMMENTS

Comments and Staff Responses

Five Regional Public Hearings were held on October 12, 18, 19, and 20, 2022, where South Coast AQMD staff received verbal comments from the public on the Revised Draft 2022 AQMP. The regional hearing comments and staff responses to verbal comments are included in this section.

TABLE 4

2022 AQMP REGIONAL PUBLIC HEARINGS[1] COMMENTS ON THE REVISED DRAFT 2022 AQMP

Comment Number	Commentor Name	Representing	Regional Hearing Date	Regional Hearing #
1	Jan Victor	East Yard Communities for Environmental Justice	10/12/2022	#1 – Los Angeles County
2	Fernando Gaytan	Earthjustice	10/12/2022	#1 – Los Angeles County
3	Mark Abramowitz	Community Environmental Services	10/12/2022	#1 – Los Angeles County
4	Paola	Self	10/12/2022	#1 – Los Angeles County
5	John Heinz	Latham and Watkins	10/12/2022	#1 – Los Angeles County
6	Yassi Kavezade	Sierra Club National	10/12/2022	#1 – Los Angeles County
7	Mosses Huerta	Self	10/12/2022	#1 – Los Angeles County
8	Laura Rosenberger	Self	10/12/2022	#1 – Los Angeles County
9	Mark Abramowitz	Community Environmental Services	10/12/2022	#2 – San Bernardino County
10	Robbie Gross	Ontario Airport	10/12/2022	#2 – San Bernardino County
11	Mark Abramowitz	Community Environmental Services	10/18/2022	#3 – Coachella Valley
12	Mark Abramowitz	Community Environmental Services	10/19/2022	#4 – Orange County
13	James Enstrom	Scientific Integrity Institute	10/19/2022	#4 – Orange County
14	Teresa Bui	Pacific Environment	10/19/2022	#4 – Orange County
15	Stan Young	Self	10/20/2022	#5 – Riverside County
16	Mike McCarthy	Radical Research LLC	10/20/2022	#5 – Riverside County

[1] 2022 AQMP Regional Public Hearings were recorded and public comments can be heard at the following links:

- Meeting #1 – Los Angeles County: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=zvBPwQyTvDs.
- Meeting #2 – San Bernardino County: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=D9W5wVEq7k4.
- Meeting #3 – Coachella Valley: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=BfI0x01qgas.
- Meeting #4 – Orange County: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=IyJFRHNYQKE.
- Meeting #5 – Riverside County: http://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=xsoIrB45r4k.

Public Comment #1

Jan Victor, East Yard Communities for Environmental Justice:

I have lived in the Long Beach Carson area for 20 years. Is there a Spanish option for this presentation? I want to invite and challenge the AQMD and CARB to push for a clearer path to prevent emissions at the source. We need you all to take more risk to provide clean air and protect public health. There is no price that a polluting facility should pay that is worth the price of my health. We need to continue towards a zero-emission path so that we aren't trading one emission source for another. We need AQMD to invest in technology that can be deployed to address the black box. I want to ensure that these presentations are available in all languages.

Response to Public Comment 1: Thank you for your comments. Spanish presentation materials are available online.[1] Additionally, the Spanish recording of the Coachella Valley Regional Hearing is available.[2] Your concerns regarding the availability of Spanish translation and language justice are important, and we will strive to increase and improve our outreach efforts to non-English speakers. The 2022 AQMP is the most aggressive plan to date, recognizing the substantial magnitude of emission reductions needed to meet the 2015 ozone standard. South Coast AQMD is committed to ensuring attainment of this standard as expeditiously as possible via an economy-wide transition to zero emissions technology wherever feasible. South Coast AQMD is committed to working with stakeholders and other state and federal agencies to promote the development of cleaner technologies and their commercial deployment to achieve the emission reductions needed to attain the 2015 ozone standard and protect public health.

Public Comment #2

Fernando Gaytan, Earthjustice:

I noticed that this presentation is much shorter than previous presentations that I've seen. A more comprehensive presentation is needed that includes the public health cost effectiveness threshold. The AQMP places 43% of the emission reductions into the black box. EPA must do more, but even within the black box, South Coast is responsible for 10 TPD, and there is more that the agency can do to close that gap. We urge the District to identify a path for reducing emissions in their fraction of the black box. It is possible to do more with large commercial combustion sources, which are the largest share of emissions in the stationary and area source category. There are numerous zero emission strategies available for this sector. There is an unprecedented level of funding from state and federal governments and this is the time to act so that we do not miss this opportunity to reduce emissions. I appreciate the focus on public health with the cost effectiveness threshold, but it is not required, and any threshold can prematurely quell the development of strong measures. Thresholds could be used to prioritize future rules to pick options that are the most protective of public health.

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[1] http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan.

[2] https://www.youtube.com/watch?v=7Rx2sfPZv7Q.

Response to Public Comment 2: Thank you for your comments. During the development of the 2022 AQMP, numerous public meetings were hosted to solicit stakeholders' participation and feedback. The Governing Board meeting on October 7th 2022 had a lengthy presentation and discussion on the cost effectiveness threshold and socioeconomic impact assessment and the Mobile Source Committee meeting on September 16, 2022 discussed the strategy on zero emissions technology in detail. Meeting materials and webcast recordings (if applicable) are available for public review and comment.

South Coast AQMD has 3 tons per day of black box measures for stationary sources and 7 tons per day for mobile source incentive measures (MOB-05 and MOB-11). The reductions associated with incentive measures are conservative estimates based on current annual funding and there is high confidence that the reductions will be achieved. However, they are described as potential black box measures due to U.S. EPA's enhanced scrutiny of SIP credit calculations for incentive programs. South Coast AQMD has demonstrated successful implementation of incentive programs for decades and has obtained SIP credit from the associated reductions. Staff will continue to engage U.S. EPA staff on acquiring SIP credits from incentive measures. The 3 tons per day reduction from stationary sources rely on advanced clean technologies which are not yet available. South Coast AQMD will continue working closely with researchers and industrial organizations to identify, develop and deploy zero emission technologies at scale to fulfill the commitment.

Public Comment #3

Mark Abramowitz, Community Environmental Services:

1982 AQMP was the first AQMP that I participated in. Staff did a really good job with this AQMP, but there are a number of fatal flaws in the plan. I will spread these comments out over multiple hearings. I want to agree with Fernando's comments. It is really good that staff came up with criteria for looking at cost, but staff used the social cost of pollution and weighed the scale on one end and put it on another. Staff took the investments it made looking at impacts in the community that aren't health based and threw those out. These costs shouldn't be ignored. Secondly, Congress had developed cost effectiveness guidelines in 1967, 1970, 1977, 1990. The District should recognize that it must meet air quality standards and it can prioritize, but it is not the purview of the Board to define what not to do unless the standards are being met. The District might want to take some of these guidelines and come up with something else to replace it with if you are not going to be imposing a control measure or stringency level.

Response to Public Comment 3: Thank you for your participation in the regional public hearings and providing comments. Details on cost-effectiveness are included in the general response on Cost-Effectiveness Method and Threshold.

When U.S. EPA sets NAAQS, cost is expressly prohibited from consideration. However, the California Health & Safety Code requires the consideration of cost-effectiveness for control measures in the AQMP. Each control measure with quantified emission reductions needs to include an extensive cost-effectiveness evaluation and all measures must be ranked by cost-effectiveness. The 2022 AQMP complies with these legal mandates by providing a ranking of control measures by cost effectiveness. In addition, the 2022 AQMP includes a cost effectiveness threshold to trigger an additional public process during a rulemaking. Please refer to the general response on Cost-Effectiveness Method and Threshold.

Public Comment #4

Paola, a community member in Tonga Nation in Willowbrook or unincorporated Compton:

I am also a member of East Yard Communities for Environmental Justice to support young people. I realized that your actions and role decide how much we can be polluted, but you fail to protect our polluted air. I call 1-800-CUT-SMOG often to call in black smoke from refineries, rotten egg smell, and the petroleum rubber-like smell coming from World Oil, and we are sick of it. It is common for children to have day-to-day health impacts. You must do more. You need a stronger plan to reduce emissions with tangible targets. This meeting is inaccessible to monolingual Spanish speakers and the youth that are in school. We need stronger emission reductions and clear measures. The port and rail ISR are a clear example of this. We need zero emissions and need to shift away from anything combustion related and demand more accountability from large commercial and industrial polluters.

Response to Public Comment 4: Thank you for your participation in the regional public hearing and your testimony. The regional public hearing materials – announcement, agenda and presentation – are available in Spanish and a Spanish recording is also available. Refer to Response to Public Comment 1.

South Coast AQMD is committed to pursuing all feasible measures to achieve emission reductions and the 2022 AQMP calls for an economy-wide transition to zero emission technology where feasible and advanced low NOx technology for remaining sources. Please refer to the general response on Control Measures for Large Combustion Sources for more details.

Public Comment #5

John Heinz, Latham and Watkins speaking on behalf of the Regulatory Flexibility Group:

I want to thank District staff for careful review of our July comment letter. We appreciate the District's acknowledgement that rulemaking will evaluate technological feasibility and cost effectiveness. We recognize and appreciate the balance that staff is trying to achieve. We are concerned with the District's fundamental shift in cost effectiveness in rulemaking. The health-based method would result in cost effectiveness values that are 6.5 times the cost as compared to the 2016 AQMP. This will undercut the effectiveness of health and safety code required rigor for technological feasibility, cost effectiveness and incremental cost effectiveness in future rule making. We strongly encourage the District to retain the control measure cost effectiveness to provide that rigor. We appreciate the District's efforts towards CMB-07, but we believe that there isn't an appropriately rigorous analysis of the feasibility and cost effectiveness of the control measure.

Response to Public Comment 5: Please refer to Response to Comment 99-4 and the general response on Cost-Effectiveness Method and Threshold. Please refer to Response to Comment 99-5 regarding L-CMB-07.

Public Comment #6

Yassi Kavezade, Sierra Club National:

This AQMP is written with the intention of delivering zero emissions, but it has fallen short, but we are hoping that the staff attempts to eliminate an arbitrary cost effectiveness cap that would limit certain options based on an element such as long term benefits to public health. Our public health and failure to attain clean air, and failure to attain NOx emission reductions especially on the indirect sources and mobile sources cannot wait. We need to do more to mandate the cleanest technology. Want more dialog regarding cost effectiveness. We should send out another alert that Spanish access would be available in the October 18th meeting. We need true emission reductions now as we can't wait until 2037.

Response to Public Comment 6: Thank you for your comments. Please refer to the general response on Cost-Effectiveness Method and Threshold. Please refer to Response to Public Comment 1 regarding Spanish language accessibility.

Public Comment #7

Moses Huerta, a resident of Paramount:

I appreciate the updates and all the hard work from staff. I would like to see more stringencies and enforcement in the plan. Data in Paramount is trending in the wrong direction despite all the efforts by AQMD in the city. We have a ways to go and the 2022 AQMP plan is another opportunity to go forward towards clean air and strengthen the push towards emission reductions at all levels. I would like more stringent language added to the AQMP to enhance enforcement and rulemaking.

Response to Public Comment 7: Thank you for your comment. South Coast AQMD is committed to adopt and implement stringent rules and regulations to control air pollution sources in the South Coast Air Basin and Coachella Valley. Since the South Coast Air Basin is designated as an "extreme" nonattainment area for federal ozone standards, the Clean Air Act (CAA) requires South Coast AQMD rules and regulations to be, at a minimum, as stringent as those in other jurisdictions. The 2022 AQMP addresses all federal requirements for nonattainment areas, including the implementation of Reasonably Available Control Measures (RACM). Section 172(c)(1) of the CAA requires nonattainment areas to provide for implementation of all RACM as expeditiously as possible, including the adoption of Reasonably Available Control Technology (RACT). In analyzing RACM/RACT compliance, South Coast AQMD's NOx and VOC rules are evaluated for current rule requirements compared to other agencies' rules and federal guidance. This analysis is described in Appendix VI of the 2022 AQMP. Staff concluded that South Coast AQMD rules and regulations are at least as stringent as other agencies' requirements and meet the federal RACT/RACM requirements. Staff also agrees with your concern regarding the need to strengthen emission reductions at all levels. South Coast AQMD is committed to pursuing all feasible measures to achieve emission reductions and the 2022 AQMP calls for an economy-wide transition to zero emission technology where feasible and advanced low NOx technology for remaining sources.

Staff appreciates your concern regarding enforcement. South Coast AQMD conducts routine source testing and on-site inspections, which strengthen compliance verification. A new paragraph on Rule Effectiveness has been added in Appendix IV-A.

Public Comment #8

Laura Rosenberger, self:

I hope your standards are strict to address all the oil drilling going on these days. My daughter is having health issues because of air pollution. I hope you stay very strict on air toxics and methane coming from oil wells.

Response to Public Comment 8: AQMPs focus on address criteria air pollutants (namely, ozone and particulate matter) as required by CAA. The 2022 AQMP specifically addresses attainment of the 2015 8-hour ozone standard by the 2037 attainment deadline. In order to reduce ozone levels, the 2022 AQMP prioritizes NOx emission reductions, while recognizing that limited, strategic VOC reductions can reduce near-term ozone exposure during the course of attainment. Please refer to control measure FUG-01, which seeks VOC reductions from oil and gas production, petroleum refining, and other sources.

The operations of oil and gas production facilities are subject to stringent requirements in South Coast AQMD Rule 1148.1 – Oil and Gas Production Wells. Various types of operations including well drilling, well completion, and well reworks are also subject to notification and reporting requirements pursuant to Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Supplies. Certain information regarding these activities is made available to the public. Please visit the South Coast AQMD's website for more information at: https://www.aqmd.gov/home/rules-compliance/compliance/1148-2. Staff is currently working with stakeholders in amending Rule 1148.2 to enhance public notification efforts and will be seeking to amend Rule 1148.1 to address the actions recommended by the AB 617 communities.

Public Comment #9

Mark Abramowitz, Community Environmental Services:

The District does have a high-quality staff and there is great innovation in this plan, but the plan falls short. I'm concerned about bad policy decisions. I want to focus on public participation, which is critical. I was surprised that comment responses were only addressed towards written comments. Public mainly gives verbal comments, which are ignored. Secondly, with respect to the health analysis, I'm concerned about the timing of the Advisory Council meeting, which was held on Yom Kippur, the most important solemn holiday for Jews around the world. This was not inclusive and forced people to make a choice whether to practice their religion or attend the meeting. This adds to the uproar of holding and not recording the Board retreat last time on a similar date. Including everyone is important.

Response to Public Comment 9: Thank you for your participation and comments. Throughout the development of the AQMP, public comments and feedback on the AQMP were taken seriously. All comments, including verbal comments given at various meetings, have been reflected in the Plan to the extent possible. Verbal comments raised during the regional public hearings are included in the 2022 AQMP Responses to Comments. In addition, the regional public hearings were professionally transcribed for Governing Board consideration during the final public hearing and adoption. Staff acknowledges the need to incorporate diversity, equity and inclusion in all facets of our work, including when scheduling public meetings. Future meetings will be coordinated carefully to accommodate all stakeholders and to avoid conflicts with cultural and religious events.

Public Comment #10

Robbie Gross, on behalf of Ontario Airport:

In the revised draft AQMP, EGM-02 indicates that the general conformity set-aside budget will be eliminated and rulemaking will be initiated to develop a process to accommodate projects using mechanisms other than the set-aside account. We recommend that AQMD reconsider this approach as the set-aside account is an important tool to facilitate that process. Appendix IV of the AQMP indicates that the set-aside budget is a useful tool to streamline the conformity evaluation process. The ability to demonstrate general conformity is a critical component for other facilities to have projects to support the economic health of the region. The set-aside budget establishes a clear and quantifiable means of achieving general conformity in the applicable year. The Draft 2022 AQMP proposes two other mechanisms for projects that need to demonstrate general conformity. Both of these mechanisms are based on emission offsets and both will likely inhibit projects due to timing delays. It would be prudent for AQMD to maintain an effective tool for potential use in the future such as the set-aside account that doesn't create significant economic burdens for projects that may reduce emissions. CARB found that SJV's Emission Reduction Credit system was found to have significant issues based on timing, calculation methods, and a lack of transparency that made calculations difficult to review.

Response to Public Comment 10: South Coast AQMD acknowledges Ontario Airport's concerns regarding EGM-02 Emission Reductions from Projects Subject to General Conformity Requirements. Due to the magnitude of emission reductions needed to achieve attainment of the 2015 8-hour ozone standard, no single source can be left uncontrolled and South Coast AQMD is under public scrutiny regarding the issuance of "free" emission credits from the general conformity set-aside account. Further, other air pollution agencies in the State utilize a fee-based approach to offset or mitigate the emissions subject to the general conformity requirements. Public participation and feedback will be solicited when South Coast AQMD's rule for general conformity undergoes rulemaking and adoption. Please refer to Response to Comment 77-1.

Public Comment #11

Mark Abramowitz, Community Environmental Services:

I want to make sure all the recordings, notes, and presentations go on the record. I want to talk about New Source Review (NSR) and implementation of the plan. The District has the technology to implement and meet standards. I first testified on NSR 40 years ago in front of the Governing Board. That NSR rule adopted then is stronger than the current one. The District has determined that it is too difficult for companies to find offsets. Rather than focus on the real beginnings of the CAA to ensure that new sources don't get in the way of achieving AQ standards, the District has sort of given up. Clients with new technologies had to abandon them because of implementation of air quality standards and NSR requirements. This is a failure of the District to come up with ways to get that program to work. The District cites SB 288 as the reason why the District cannot do more. However, this is ridiculous because strengthening NSR should not make it weaker. Many suggestions have been made to make NSR stronger, and with a consensus, SB 288 will not have an adverse impact.

Response to Public Comment 11: Regulation XIII provides the framework for complying with federal New Source Review requirements in the Clean Air Act including requiring Best Available Control Technology, modeling, and offsets. Following adoption of federal New Source Review reforms in 2002, California adopted Senate Bill 288 (SB 288), the "Protect California Air Act of 2003" which prohibits backsliding of any aspect of New Source Review. Offsets are extremely scarce and any strengthening of requirements for offsets would only make offsets more scarce because of SB 288, thus hindering growth and potentially the voluntary upgrade of existing facilities. Offsets available through Regulation XIII ensure that critical services can be built and operated, including installation of emissions controls. These offsets will potentially be available if emission reduction credits are needed for relocations or equipment modernization in instances where offsets from emission decreases are insufficient or unavailable. Please refer to the general response on Control Measures for Large Combustion Sources for more about the strategy to pursue emission reductions from stationary sources.

Public Comment #12

Mark Abramowitz, Community Environmental Services:

CARB's public process did not integrate well with the AQMP process. CARB already adopted the State Strategy for the State Implementation Plan. How is that not premature to this process and our public process? AQMP does not provide parity on commitments or responsibilities on the part of government agencies. These agencies have land use planning requirements and authorities and I don't understand why there aren't other measures that affect these agencies. District staff has identified barriers, but these haven't been addressed in legislative proposals with respect to BACT/LAER or burdens on staff in Section 40400 of the Health and Safety Code. Why doesn't the District focus and try to eliminate these barriers in their legislative proposals?

Response to Public Comment 12: Thank you for your comment. South Coast AQMD and CARB have been working closely on the emission reductions needed from the sources subject to CARB's authority and have coordinated to ensure that the 2022 State SIP Strategy as presented to the CARB Board includes all the measures for State sources required to provide needed emission reductions. On September 22, 2022, CARB adopted the Strategy, including the measures to pursue and their implementation schedule. In January 2023, following adoption of the 2022 AQMP, CARB is scheduled to adopt the emission reduction commitment from mobile and select stationary sources that provides for attainment of the 2015 ozone standard in the South Coast Air Basin. Legislative proposals have multiple items with competing priorities and items may or may not be pursued depending on priority. Regardless, South Coast AQMD will continue work with other state and federal agencies and legislative branches to improve air quality in the region as well as opportunities in removing barriers and burdens in implementing BACT/LAER. Please refer to the general response on Control Measures for Large Combustion Sources.

Public Comment #13

James Enstrom, Scientific Integrity Institute:

There are no premature deaths due to ozone or particulate matter in California based on a body of literature. Death rates in California are so low that there is no relationship. This must be corrected. I submitted this evidence to four plans and none of this evidence was included in any of these reports. I

want the opportunity to discuss this evidence with a trained epidemiologist. Death rates in the South Coast Air Basin are extremely low compared to other areas in the US. The entire plan should be based on personal exposure to air pollution, not ambient levels of pollutants. The levels of exposure for ozone and fine particulate matter are well below the NAAQS. The economic risk-benefits should be fairly assessed, and the process should be slowed down until I have a chance to talk and resolve this.

Response to Public Comment 13: Thank you for your comment. Appendix I provides a summary of the latest epidemiological research regarding the health impacts of criteria air pollutants including ozone and particulate matter (PM), and U.S. EPA's latest review on ozone and PM2.5 NAAQS. It is required by the California Health and Safety Code Section 40471(b) that the South Coast AQMD summarize the available scientific evidence and the related health impacts in conjunction with the preparation of AQMPs. However, U.S. EPA is the sole agency responsible for interpreting the scientific consensus when setting the NAAQS. The 2022 AQMP is not discretionary because South Coast AQMD is required by federal law to develop plans to attain the NAAQS. Failure to develop an approvable plan or submit a plan will trigger economic sanctions for the region and draconian measures via Federal Implementation Plan.

Public Comment #14

Teresa Bui, Pacific Environment:

I appreciate all the work that staff has done on this plan. In addition to the federal responsibilities, the District also has authority to regulate ships. We recommend that the District set strong emission limits for commercial marine ports, work with CARB to set a zero emission standard by 2040, and in the interim, allow only Tier 3 vessels by 2025 to protect the port communities. We believe that these measures will reduce NOx emissions and save lives. Record funding is available for the ports to transition to zero emissions with $1.2 billion under the port and freight infrastructure program, 70% of which is designated to the San Pedro ports. At the federal level, there is $3 billion from US EPA to reduce port emissions.

Response to Public Comment 14: Thank you for your comment. As a local air agency, South Coast AQMD lacks direct authority to regulate OGVs. However, South Coast AQMD is currently developing Proposed Rule 2304 – Marine Port Indirect Source Rule, to seek further emission reductions from mobile sources operating in and out of commercial marine ports. Rule concepts include approaches that would accelerate adoption of the cleanest available ocean-going vessels, heavy-duty trucks, cargo-handling equipment, locomotives, and harbor craft, and the necessary infrastructure to support zero emission technologies. Please also refer to Response to Comment 65-2.

Public Comment #15

Stan Young, self:

I'll present a claim of no air quality health effects in the South Coast Air Basin. I've studied a massive California dataset, from 2000-2012 including 8 air basins, 37,000 exposure days, 2 million electronic death certificates. There are no effects of PM or ozone on all cause respiratory or cardiovascular mortality. I looked specifically at the South Coast Air Basin and there were no effects there either. The committee should review my National Association of Scholars Shifting Sands Report, which covers all

aspects of air pollution and health effects. We prove that there are no health effects and we show how researchers got their flawed results; there are many flawed results in this area. You should get your own data based on years 2013-2021, make the dataset public, and hire a statistician to present the results.

Response to Public Comment 15: Thank you for your comment. Per California Health and Safety Code Section 40471(b), South Coast AQMD is obligated to summarize the available scientific evidence and the related health impacts of PM air pollutants on health effects in conjunction with the preparation of the AQMP revisions. Please refer to Response to Public Comment 13.

Public Comment #16

Mike McCarthy, Radical Research LLC:

This AQMP is a fundamentally disappointing plan to improve air quality. It is frustrating to see the AQMP hide the effects of emissions activity and fail to account for the actions of local land use planning agencies that are undermining regional air quality goals by growing emissions activity of the goods movement sector. An emissions inventory is made up of two parts: 1) the emissions rate and 2) the emissions activity. This AQMP is a whole bunch of controls, but it does not reduce emissions activity growth. The control measures focus exclusively on the technological options to reduce the emission rate, while the most cost-effective method is to reduce emissions activity growth. The goods movement sector is expected to grow at 3-6 times the rate of population. If growth rates were cut back to mirror those of population growth, we'd save 20 tons per day of NOx. This would also reduce greenhouse gas and diesel PM emissions which disproportionately affect environmental justice communities. It is a win-win scenario and there is no discussion of it in the AQMP. While staff noted that South Coast AQMD does not have land use authority, there is nothing preventing South Coast AQMD from mentioning it to local land use agencies and coordinating with them to reduce emissions activity growth. Please ask our local land use planning agencies to do their part.

Response to Public Comment 16: Thank you for your comment. Please refer to Response to Comments 89-2 through 89-4.