April 26, 2022

Liane Randolph
Chair
California Air Resources Board

Martha Guzman
Pacific Southwest Regional Administrator
U.S. Environmental Protection Agency

VIA ELECTRONIC MAIL

CC: Deborah Jordan, Elizabeth Adams, Silvia Vanderspek, Rebekka Fine

Dear Chair Randolph and Administrator Guzman,

As California proceeds with the state planning process for its second round regional haze State Implementation Plan (SIP), NPCA wishes to express several concerns we urge CARB to properly address prior to the release of the state's draft SIP proposal to ensure CARB's adherence with the Clean Air Act's reasonable further progress haze requirements. Conversely, if CARB fails to adequately address clear deficiencies in its draft SIP, we call on EPA to make clear that they will not approve of the state's plan before it reaches the CARB board for a final vote.

Foremost among our concerns is the state's current strategy to only address visibility impairing emissions from NOx pollution and not from other haze forming pollutants such as SO2 and particulate matter. In addition, CARB's decision to only conduct a requisite four-factor analysis and stipulate additional controls for one of the sixty-six stationary sources identified as contributing to visibility impairment in Class 1 areas is highly problematic. Both issues have also been clearly raised by the Federal Land Managers (notably the National Park Service) and it is incumbent upon the state to ensure that their concerns are meaningfully addressed in subsequent iterations of the plan.[1]

As noted by EPA in both their 2019 Guidance and 2021 Clarification Memo, "EPA generally expects that each state will analyze sulfur dioxide (SO2) and nitrogen oxide (NOx) in selecting sources and determining control measures."[2] As illustrated in CARB's March 4, 2022 Second Workshop on state regional haze planning,[3] CARB plans to focus their haze reductions only on NOx emissions while fully ignoring other haze forming pollutants, including SO2, which causes more visibility extinction than NOx at 13 of the state's 17 monitoring sites. While we understand CARB's justification that a majority of SO2

[1] *See generally,* NPS, *National Park Service (NPS) Regional Haze SIP feedback for the California Air Resources Board, (April 11, 2022)*.
[2] EPA, *Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period (Clarifications Memo)*, at 4, (July 8, 2021). *Available at*, www.epa.gov/system/files/documents/2021-07/clarifications-regarding-regional-haze-state-implementation-plans-for-the-second-implementation-period.pdf. *See also*, EPA, *Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (Guidance Memo),* at 12(August 20, 2019). *Available at*, www.epa.gov/sites/default/files/2019-08/documents/8-20-2019_-_regional_haze_guidance_final_guidance.pdf.
[3] See, CARB Staff Presentation at Slide 34. *Available at,* ww2.arb.ca.gov/sites/default/files/2022-03/PublicWorkshoponRegionalHaze03042022.pdf.

emissions modeled come from either natural or foreign sources, we do not believe this wholly excuses the state from thoroughly analyzing California's own SO2 industrial emitters and requiring additional SO2 reductions during the second round of regional haze planning.

As captured in NPS's feedback on the draft plan, it is questionable whether the WRAP CAMx modeling accurately accounts for all humanmade SO2 from point sources in the state, as well as whether it accurately captures the levels of natural or foreign SO2 captured at monitoring sites within California.[4] Even if CARB's SO2 modeling of natural and foreign SO2 levels are taken at face value, there remains a statistically significant amount of SO2 being produced by California point sources that we believe must be addressed. According to the National Park Service's review of California's data, by the end of the second round attainment period in 2028 California is set to rank as the number three largest source of manmade stationary source SO2 pollution amongst WRAP states, producing a total of 16,458 tons of S02 emissions annually.[5] California's industrial SO2 pollution is also set to increase over the second round attainment period. While we agree that California's extremely high levels of NOx pollution from both stationary and mobile sources is certainly worthy of CARB's heightened attention, the fact is manmade SO2 in California is impacting visibility our parks, accounting for roughly 20% of total sulfate impairment at three different Class 1 national parks and 10% at an additional two parks.[6] Thus, NPCA believes CARB has a duty under the Clean Air Act to comprehensively address these manmade SO2 emissions that fall under the state's jurisdiction and not point the finger elsewhere.

NPCA also strongly urges CARB to reconsider their current failure to conduct a requisite four factor analysis on all but one of the sixty-six stationary sources identified by the state as contributing to NOx pollution and regional haze in Class 1 areas inside and outside of the state. This concern has been raised by NPCA on numerous occasions, including in our June 2021 letter to CARB staff (see Appendix A attached), as well as by EPA staff in their February 2021 letter to CARB (see Appendix B attached). Despite, this, CARB appears ready to move forward with a grossly inadequate analysis of potential measures for dozens of stationary sources in the state.

Although EPA allows states to forgo a four-factor analysis if a state can show that source will be effectively controlled through other measures,[7] CARB's approach to stationary sources bends EPA's flexibility far beyond what is required to show reasonable further progress and robs both federal land managers and members of the public of an opportunity to review analyses of potential state control measures and suggest improvements within the context of regional haze.

CARB's continued excuse that the stationary sources identified will be adequately controlled through other existing or "on-the-way" planned state measures is faulty on several fronts. First, this excuse is entirely arbitrary when considering that the state is proceeding with conducting four-factor analyses for its mobile source measures, despite the fact that all mobile source controls identified as counting toward its second round haze plan are also existing or planned state measures to meet other clean air or climate obligations. In fact, outside of the one relatively small stationary source analyzed (Collins Pine

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[4] NPS, *National Park Service (NPS) Regional Haze SIP feedback for the California Air Resources Board, (April 11, 2022)*, at 9.
[5] *Id.* at 5-6.
[6] *Id.* at 10
[7] *See,* EPA Clarification Memo at 5.

Company), CARB's plan does not appear to include a single new measure that the state was not already planning to address through other state programs.

Second, as stated in our attached prior letter, NPCA has serious worries about whether the additional on-the-way controls set to be implemented by state air districts under programs such as AB 617's expedited BARCT process, additional NAAQS SIP requirements, or other means will be timely, adequate, and federally enforceable in a manner that fulfills reasonable further progress Regional Haze Rule requirements. Furthermore, we believe CARB's current strategy does not contain sufficient documentation to fully explain how future programs such as AB 617 satisfy Regional Haze Rule requirements. As stated in EPA's clarification memo, "[b]ringing no sources forward for source selection without a thoroughly justified explanation of why it is reasonable to forgo a four-factor analysis is inconsistent with the statutory and regulatory requirements because . . . the determination of reasonable progress is based on the consideration of the four statutory factors."[8]

While we support California leading the way as the first state to address mobile source emissions in its haze plan, it is not enough to rely nearly entirely on existing or planned programs to address GHG or NAAQS pollutants instead of following through on CAA obligations to conduct a thorough four-factor analysis or require haze specific control measures on the multitude of sources in the state impacting visibility in our beloved national parks and wilderness areas. We strongly urge CARB to thoroughly respond to National Park Service and consider our concerns by addressing these planning deficiencies prior to opening their draft plan to public comment. If the state refuses to adhere to regional haze program requirements, then EPA must uphold their obligations under the CAA and immediately make clear their intention to reject the state plan as written.

Sincerely,

Mark Rose
Sierra Nevada Program Manager
National Parks Conservation Association

Bill Magavern
Policy Director
Coalition for Clean Air

Michael Murry
Chair
Coalition to Protect America's National
Parks

Joshua Smith
Staff Attorney
Sierra Club

[8] EPA Clarification Memo at 6.

Appendix A
June 2021 Coalition Letter to CARB

June 29, 2021

VIA ELECTRONIC MAIL

Rebekka Fine
California Air Resources Board
1001 I St.
Sacramento, CA 95814

CC: Richard Corey, Michael Benjamin, Sylvia Vanderspek

Dear Ms. Fine,

On behalf of National Parks Conservation Association, Coalition for Clean Air, The Coalition to Protect America's National Parks, and Sierra Club, we write to request that the California Air Resources Board (CARB) ensure California's upcoming State Implementation Plan (SIP) for the second round of the Regional Haze Rule is in full compliance with the Clean Air Act (CAA).

California is widely recognized as a national leader in the development of regulations to reduce air pollution from various sources. Despite the state's existing efforts, however, Californians continue to be burdened with some of the worst air quality in the nation. As a result, California likely has the furthest to go of any state in reaching the CAA's stated goal of restoring natural visibility conditions in the state's 29 Class I national parks and wilderness areas.

This gap between what is currently being done and what is needed is especially apparent in regions like the San Joaquin Valley, Mojave, South Coast, and Bay Area, where federal attainment with applicable CAA standards remains out of reach and disproportionately affected communities are saddled with far too many sources of pollution. Alongside these adversely affected communities, many of California's world-renowned national parks, including Sequoia, Kings Canyon, Yosemite, and Joshua Tree, also suffer from abysmal air quality—ranking among the most polluted park units in the nation.[1] The extent of this dirty air has led to dramatically obscured viewsheds, harms to the health of park visitors and employees, and negative affects to the long-term viability of already threatened ecosystems. Californians deserve bold action from CARB to draft a haze plan that specifically addresses all visibility impairing pollutants (including SO2), thoroughly reviews all relevant sources of pollution, and proposes specific and adequate controls that will clean up our numerous Class 1 areas and surrounding communities.

We are pleased to see the direction CARB is taking in regard to the inclusion of mobile sources in its second round regional haze plan given the outsized contributions such sources have on haze pollution in the state. We hope to remain closely engaged with CARB as it develops its 4-factor analyses and outlines control measures for various mobile source categories. If executed well, we believe CARB's current efforts can provide an excellent blueprint for how other states should

[1] *See* NPCA, 2019 Polluted Parks Report, *available at* https://npca.s3.amazonaws.com/documents/NPCAParksReport2019.pdf.

address mobile source emissions under the regional haze program. Thus, our emphasis on getting this process right from the outset cannot be overstated. To improve upon CARB's current efforts to include mobile sources we specifically recommend conducting a 4-factor analysis for passenger vehicles and including the upcoming Advanced Clean CARS 2 rulemaking as part of the suite of mobile source control measures included in the regional haze SIP. We further recommend analyzing controls for all other relevant mobile source categories in the state, especially those related to the oil and gas sector such as diesel powered nonroad sources.

Looking beyond mobile sources, we remain concerned that existing and proposed control measures for the 66 stationary sources CARB identified as contributing to haze pollution in Class 1 areas will not be enough to ensure reasonable further progress in line with the Regional Haze Rule. We cannot afford to miss this opportunity through the promulgation of a SIP that does not provide sufficient controls for large sources of haze pollution like oil refineries and cement manufacturing facilities. (See table attached below for an in-depth analysis of all stationary sources of concern identified by NPCA).

It has recently come to our attention that CARB intends to conduct a 4-factor analyses on only 1 of the 66 visibility impairing point sources identified by CARB. A thorough 4-factor analysis for sources of haze pollution and determination for emission reduction measures are critical requirements that states must follow when drafting their second round regional haze SIPs. Such analyses ensure that stakeholders and relevant agencies have a baseline understanding of what control measures are potentially feasible, and they inform the emission reduction measures the state is to make enforceable through its regional haze SIP. [2]

To understand CARB's planned approach towards stationary source emissions we ask for additional detail from CARB on the decision to exempt 38 of the 39 stationary sources not covered under the AB 617 expedited BARCT process from a four factor reasonable progress analysis.

As it relates to the 27 facilities that do overlap with the state's AB 617 expedited BARCT rulemaking and rank among the most pollution haze sources in the state, we understand it is CARB's viewpoint that proposed controls under AB 617 are sufficient to achieve reasonable further progress. Our principle asks for these sources is that CARB include in its haze SIP an analysis that quantifies the visibility impairing pollutant reductions that will be achieved via BARCT controls and that CARB ensures that such controls are federally enforceable through the state's second round haze SIP. We also remain worried about the timing of controls implemented under the AB 617 expedited BARCT program. Despite AB 617's implementation deadline of 2023, we have learned that air districts may be many years late in fully implementing their BARCT rules. For instance, it appears as though proposed amendments to NOx rules for refineries in the South

[2] See CAA § 169A(g)(2). See also 40 CFR § 51.308 (requiring second round regional haze SIPs to consider in establishing reasonable progress goals (1) The costs of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality impacts of compliance, and (4) the remaining useful life of any potentially affected sources).

Coast Air Quality Management District will not reach Phase 1 compliance until 2026, with full compliance not expected until 2031.[3]

While we fully support utilizing a suite of environmental justice tools and metrics (including AB 617 provisions) to tackle emissions and encourage CARB to use an EJ lens in analyzing controls for regional haze, the important and needed compliance for Districts with AB 617 at the state level should in no way excuses the state from the need to ensure that stationary source controls under the Regional Haze Rule are timely and enforceable at the federal level. We thus further request the state provide a summary of all required emission controls for the 66 stationary sources identified as well as emission limits and a timeline for meeting these limits for each stationary source.

We greatly appreciate your attention to our concerns and wholly recognize the challenges the myriad air quality rules present to CARB staff. We also recognize that California is home to some of our nation's most prized and valued national parks and wilderness areas while also struggling with unprecedented levels of air pollution. It is incumbent upon us to step up and rise to the occasion to ensure that we are doing all we can to protect these treasured places as well as the people closest to the sources of pollution and all those in between. We look forward to continue working with you throughout the second round regional haze process to help the state develop a robust, equitable, and successful SIP.

Thank you,

Mark Rose
Sierra Nevada Program Manager
National Parks Conservation Association

Bill Magavern
Policy Director
Coalition for Clean Air

Philip A. Francis, Jr.
Chair
Coalition to Protect America's National Parks

Joshua Smith
Staff Attorney
Sierra Club

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[3] *See,* SCAQMD, *Proposed Rule 1109.1 – NOx Emission Reduction for Refinery Equipment and Related Operations Working Group Meeting #20, April 30, 2021,* at slides 35-36. *Available at,* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/pr1109-1_wgm20_presentation.pdf?sfvrsn=18.

Sources of concern identified by NPCA*

Facility Name	County	Description	AB 617 Expidited BARCT Facility	2017 NOX (tons)	2017 PM10-PRI (tons)	2017 PM25-PRI (tons)	2017 SO2 (tons)	2017 VOC (tons)
LOS ANGELES INT AIRPORT	Los Angeles	Other Airport Operations	Yes	7836.1	114.3	112.4	1060.4	1990.4
CEMEX CALIFORNIA CEMENT LLC	San Bernardino	Cement Manufacturing	Yes	5419.7	915.8	494.7	569.1	365.0
CG MAGTFTC MCAGCC NREA - 29 Palms	San Bernardino	National Security	No	77.9	4255.1	534.7	2.0	25.7
San Francisco Internationl Airport	San Mateo	Airport Operations	No	5105.0	76.1	74.6	663.1	1320.3
MITSUBISHI CEMENT CORPORATION	San Bernardino	Cement Manufacturing	Yes	1943.9	440.0	177.0	344.1	26.9
SHELL MARTINEZ REFINERY	Contra Costa	Petroleum Refineries	Yes	916.5	768.6	640.2	1155.0	1176.8
LEHIGH SOUTHWEST CEMENT COMPANY	Santa Clara	Cement Manufacturing	Yes	1207.7	42.6	28.7	1392.9	30.0
CALIFORNIA PORTLAND CEMENT CO.	Kern	Cement Manufacturing	Yes	1531.0	304.0	49.8	502.3	22.0
SEARLES VALLEY MINERAL	San Bernardino	Potash, Soda, and Borate Mineral Mining	Yes	1516.9	241.0	159.5	145.6	37.5
CALPORTLAND ORO GRANDE	San Bernardino	Cement Manufacturing	Yes	1141.0	366.4	200.1	7.9	3.7
PHILLIPS 66 CARBON PLANT	Contra Costa	All Other Petroleum and Coal Products Manufac	Yes	360.0	23.6	23.3	1463.8	0.1
CHEVRON PRODUCTS COMPANY	Contra Costa	Petroleum Refineries	Yes	737.2	593.4	566.2	373.7	1343.1
ONTARIO INT AIRPORT	San Bernardino	Other Airport Operations	No	679.4	14.0	13.5	101.9	263.9
Oakland Metro Int. Airport	Alameda	Airport Operations	No	1261.8	26.3	24.9	183.6	471.6
San Diego Intl-Lindberg	San Diego	Airport Operations	No	1579.9	27.7	27.1	233.1	513.9
TORRANCE REFINING COMPANY LLC	Los Angeles	Petroleum Refineries	Yes	923.5	167.9	155.3	241.9	649.7
TESORO REFINING & MARKETING CO, LLC	Los Angeles	Petroleum Refineries	Yes	661.0	280.9	238.7	339.4	492.2
CHEVRON PRODUCTS CO.	Los Angeles	Petroleum Refineries	Yes	729.4	212.7	200.2	281.8	518.8
TESORO REFINING & MARKETING CO, LLC	Los Angeles	Petroleum Refineries	Yes	749.3	176.2	143.4	175.3	260.4
VALERO REFINING COMPANY - CALIFORNIA	Solano	Petroleum Refineries	Yes	1013.1	102.1	101.9	95.1	323.1
JOHN WAYNE AIRPORT	Orange	Other Airport Operations	No	698.2	24.8	22.0	108.7	274.9
LEHIGH SOUTHWEST CEMENT COMPANY	Shasta	Cement Manufacturing	Yes	603.1	104.0	33.5	8.3	2.7
TESORO REFINING & MARKETING COMPANY	Contra Costa	Petroleum Refineries	Yes	359.7	289.2	265.8	343.7	875.6
Norman Y. Mineta San Jo	Santa Clara	Airport Operations	No	884.1	18.7	17.9	134.2	299.3
US ARMY NATIONAL TRAINING CTR.	San Bernardino	National Security	No	43.5	902.7	99.8	0.0	10.1
PHILLIPS 66 COMPANY/LOS ANGELES REFINE	Los Angeles	Petroleum Refineries	Yes	391.4	58.6	52.6	240.8	92.4
PALM SPRINGS INTERNATIONAL AIRPORT	Riverside	Other Airport Operations	No	159.3	6.7	6.1	24.1	60.3
PHILLIPS 66 CO/LA REFINERY WILMINGTON F	Los Angeles	Petroleum Refineries	Yes	470.9	134.5	104.0	109.0	249.4
WHEELABRATOR SHASTA E.C.I.	Shasta	Hydroelectric Power Generation	No	535.8	45.6	41.5	2.5	65.0
VITRO FLAT GLASS LLC	Fresno	Flat Glass Manufacturing	No	384.9	16.6	16.2	59.0	0.9
TESORO REF & MKTG CO LLC,CALCINER	Los Angeles	Office Administrative Services	Yes	261.0	23.1	10.1	375.5	2.1
Sacramento International Airport	Sacramento	Airport Operations	No	736.9	14.8	14.4	112.3	278.6
ELEMENTIS SPECIALTIES - E HECTOR RD	San Bernardino	All Other Nonmetallic Mineral Mining	No	1.1	662.5	258.6		0.0
GUARDIAN INDUSTRIES CORP	Fresno	Flat Glass Manufacturing	No	313.0	15.2	12.0	146.7	36.9
COLLINS PINE CO	Plumas	Lumber/Sawmills w/ Cogen	No	129.5	40.3	36.9	3.6	16.9
BOB HOPE AIRPORT	Los Angeles	Other Airport Operations	No	375.4	13.2	12.1	61.7	161.6
TAMCO	San Bernardino	Iron and Steel Mills and Ferroalloy Manufacturing	Yes	108.1	51.9	37.8	28.8	17.4
CEMEX - RIVER PLANT	San Bernardino	Cement Manufacturing	No	76.3	231.7	107.8	5.5	4.0
BURNEY FOREST PRODUCTS	Shasta	Wood Container and Pallet Manufacturing	No	189.7	25.8	23.6	3.7	7.9
KIRKWOOD POWERHOUSE	Alpine	Fossil Fuel Electric Power Generation	No	9.8	0.4	0.4		0.0
PHILLIPS 66 COMPANY - SAN FRANCISCO REF	Contra Costa	Petroleum Refineries	Yes	217.8	77.1	70.6	367.5	247.6
SIERRA PACIFIC IND. - BURNEY	Shasta	Cut Stock, Resawing Lumber, and Planing	No	156.9	28.5	24.9	1.7	42.7
ULTRAMAR INC	Los Angeles	Petroleum Refineries	Yes	278.0	66.6	63.6	125.0	161.5
SIERRA PACIFIC INDUSTRIES	Plumas	Sawmills	No	392.4	21.1	19.5	6.7	33.2
GRANITE CONSTRUCTION LEE VINING	Mono	Asphalt Paving Mixture and Block Manufacturin	No	31.3	15.2	3.5	5.9	7.2
LONG BEACH-DAUGHERTY FIELD AIRPORT	Los Angeles	Other Airport Operations	No	307.7	22.4	18.4	44.2	160.1
SYCAMORE LANDFILL INC	San Diego	Hazardous Waste Treatment and Disposal	No	16.1	460.7	84.8	2.9	48.9
Arcata	Humboldt	Airport Operations	No	162.6	11.0	10.6	16.3	78.8
NATIONAL CEMENT CO	Kern	Cement Manufacturing	No	173.6	274.0	56.2	24.8	10.3
SPECIALTY MINERALS, INC	San Bernardino	Crushed and Broken Limestone Mining and Quarr	No	2.3	249.0	59.0	0.0	0.2
DESERT VIEW POWER	Riverside	Electricity Generation via Combustion - Biomass	No	188.5	13.7	13.2	47.7	7.1
HI-GRADE MATERIALS COMPANY 29 PALMS	San Bernardino	Other Crushed and Broken Stone Mining and Quarryin	No		63.0	16.4		0.0
CALIFORNIA STEEL INDUSTRIES INC	San Bernardino	Fabricated Pipe and Pipe Fitting Manufacturing	Yes	125.5	16.0	14.6	1.0	16.9
NEW- INDY ONTARIO, LLC	San Bernardino	All Other Support Services	Yes	136.7	19.2	17.3	1.2	50.2
LA CNTY SANITATION DISTRICT-PUENTE HILL	Los Angeles	Solid Waste Landfill	No	45.4	43.7	43.5	97.6	5.1
AMERICAN PERLITE COMPANY	Inyo	Ground or Treated Mineral and Earth Manufactu	No	1.7	46.3	6.9	0.0	0.0
REDWOOD LANDFILL INC	Marin	Hazardous Waste Treatment and Disposal	No	18.3	120.5	28.1	38.8	133.4
CALIFORNIA ENERGY COMPANY INC.	Inyo	Other Electric Power Generation	No	35.1	174.6	112.7	0.0	0.0
AERA ENERGY LLC	Kern	Crude Petroleum and Natural Gas Extraction	Yes	249.2	80.3	80.2	19.0	90.6
ORCUTT HILL IC ENGINES	Santa Barbara	Crude Petroleum and Natural Gas Extraction	No	170.0	0.9	0.9	8.9	9.2
AMPINE: A DIVISION OF TIMBER PRODUCTS	Amador	Reconstituted Wood Product Manufacturing	No	62.6	294.7	244.4	0.2	155.1
SCG - BLYTHE	Riverside	Pipeline Transportation of Natural Gas	No	351.8	8.7	8.7	0.2	27.6
CHEVRON USA INC	Kern	Crude Petroleum and Natural Gas Extraction	No	113.2	87.9	87.9	83.9	95.3
CHEMTRADE WEST US LLC	Contra Costa	Natural Gas Liquid Extraction	No	1.8	3.1	2.0	162.2	2.1
MT. LASSEN POWER	Lassen	Electric Power Distribution	No	84.0	20.5	19.1	4.2	0.4
OMYA - MAIN PLANT	San Bernardino	Crushed and Broken Limestone Mining and Quarrying	No	1.9	136.2	30.4	0.1	0.0
OWENS-BROCKWAY GLASS CONTAINER INC	Los Angeles	Glass Container Manufacturing	No	96.3	24.4	20.4	49.8	3.3
LONG BEACH CITY, SERRF PROJECT	Los Angeles	Solid Waste Combustors and Incinerators	No	268.7	13.1	9.3	13.9	9.5
PACIFIC GAS & ELECTRIC	Shasta	Pipeline Transportation of Natural Gas	No	86.9	2.2	2.2	1.1	2.4

* Facilities in red indicate sources that were identified by NPCA, but not CARB.

Appendix B
February 2021 EPA Letter to CARB

Background

This PDF accompanies a February 22, 2021 email and is intended to help guide conversations between EPA and CARB going forward.

Since April 2019, EPA and CARB have been engaging in early conversations on the development of the plan required for the second planning period of the Regional Haze Rule (RHR). State Implementation Plans (SIPs) for Regional Haze are due in July 2021. The purpose of early engagement is to help states understand the second period's requirements and develop approvable SIPs. After numerous conversations, we thought it important to document some of our concerns with the State's current approach, as we understand it.

Regional Haze Requirements

In accordance with the requirements of Clean Air Act (CAA) section 169A(b)(2),[1] the RHR requires states to submit long-term strategies in their SIPs that "include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress."[2] The term "reasonable progress" is defined by analysis of the "four factors" at sources that emit visibility-impairing pollutants:

> The State must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment..[3]

The second planning period's "reasonable progress" demonstration is thus based on "four-factor analyses" of potential emission reduction measures. After determining which emission reduction measures are necessary based on the four-factor analyses, the state must incorporate these measures into the SIP.[4] The state must then set "reasonable progress goals" for its Class I areas, based on projected 2028 visibility conditions, taking into account these necessary emission reduction measures, as well as the implementation of other requirements of the CAA.[5]

Rather than conducting four-factor analyses on all anthropogenic sources of visibility-impairing pollutants, states may select a subset of sources for which to conduct such analyses.[6] The state must document the bases for its selection of this subset to establish that this selection was performed in a reasonable manner, given the underlying CAA requirement for states to make reasonable progress

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[1] 42 U.S.C. 7491(b)(2).
[2] 40 CFR 51.308(f)(2).
[3] 40 CFR 51.308(f)(2)(i).
[4] 40 CFR 51.308(f)(2)(i)
[5] 40 CFR 51.308(f)(3)(i).
[6] 40 CFR 51.308(f) (2)(i)("The State should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources The State must include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated . . .").

toward natural visibility at federal Class I areas.[7] The EPA's Regional Haze Guidance contains recommendations regarding reasonable approaches to source selection in light of the applicable requirements.[8]

CARB's Source Selection Process

Since July 2019, CARB has told EPA staff that it is using the "Q/d" method to develop an initial list of stationary sources for four-factor analysis. In October 2020, CARB informed EPA that it intends to also apply additional screening criteria to determine whether sources should be subject to a four-factor analysis or be "screened out." We understand the result of applying these criteria is that CARB is not selecting any stationary sources for four-factor analysis. Although we have received CARB's initial Q/d list and a summary of its overall screening approach, we have not yet received information from CARB about which sources will be screened out based on each criterion. We cannot fully evaluate this approach until we receive that detailed information. In the meantime, we have concerns about the criteria and how they may be applied.

<u>Criterion Focused on Pollutants Driving Visibility Impairment</u>
One criterion CARB is using to eliminate sources is whether the type of emissions contributing to the elevated Q/d metric at the facility are "consistent with the pollutants driving diminished visibility on the most impaired days" at the potential Class 1 Area receptor.

As explained in the EPA's 2019 Regional Haze Guidance:

> . . . we recommend that the fact that a PM species accounts for only a small percentage of total light extinction not be used, by itself, to eliminate the species from subsequent analysis, because a large portion of the total light extinction may be due to natural source impacts, even on the 20 percent most anthropogenically impaired days. In that scenario, the percentage contribution to total light extinction by an individual PM species may give a false sense of the role of that PM species relative to anthropogenic light extinction. For example, organic mass by carbon (OMC) light extinction might be dominant in the IMPROVE data for a western Class I area on the average of the 20 percent most anthropogenically impaired days, even though days heavily affected by fires will tend not to be included in the 20 percent most anthropogenically impaired days. This may cause sulfate to account for only a small percentage of total light extinction. However, it could be clear that most of the OMC is natural and that sulfate dominates anthropogenic light extinction. In this situation, we recommend that a state consider SO_2 sources and SO_2 control measures.

We understand that visibility impairment at different Class 1 Areas is dominated by different species. However, the purpose of Regional Haze SIPs is to address anthropogenic visibility impairment. Even if the PM species that dominates a facility's Q/d is not the same species that dominates visibility impairment at a Class 1 Area on the most anthropogenically impaired days, the facility's emissions may

[7] Id. See also "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period" (August 2019) ("Regional Haze Guidance"), 9-10.
[8] Id., 9-28.

still be contributing to the anthropogenic fraction of visibility impairment at the Class 1 Area on those days.

Furthermore, while ensuring improvement on the most impaired days is a primary focus of the RHR, the Regional Haze Guidance also explains that:

> Alternative metrics may be more appropriate when examining visibility impacts from individual sources. Depending on wind direction and other meteorological factors, emissions from a single source may not always or frequently impact a particular Class I area. But there may be individual day visibility impacts that may be important to consider.[9]

Thus, it is not clear that elimination of sources based solely on consideration of the dominant species on the most impaired days is appropriate.

Finally, even where the dominant species at a particular class I area is driven by anthropogenic emissions, a state may not have jurisdiction to address the majority of emissions contributing to that species. In that case, the state should also address other species for which the state has authority to reduce corresponding emissions. For example, if a Class 1 Area is predominantly impacted by sulfates, but sulfates are known to be primarily from international sources, CARB should consider whether impairment from nitrates at the relevant area could be reduced through implementation of nitrogen oxide controls at sources whose emissions may contribute to impairment at the Class I area.

<u>Criterion Focused on Future Controls Required under AB 617</u>

Another criterion CARB is using to eliminate sources is whether "pending requirements for AB 617 require new district rules that will result in federally enforceable requirements for installation of" Best Available Retrofit Control Technology (BARCT) at the facility. As noted in the Regional Haze Guidance, when screening out a source based on existing controls, a state "should explain why the decision is consistent with the requirement to make reasonable progress, i.e., why it is reasonable to assume for the purposes of efficiency and prioritization that a full four-factor analysis would likely result in the conclusion that no further controls are necessary."[10] The Guidance provides specific examples of controls that could meet this threshold and clarifies that such determinations should be made on a pollutant-specific basis, meaning that, "if the source emits other pollutants that impair visibility, the source would still be brought forward for analysis of control measures for those other pollutants."[11] Therefore, before using BARCT to eliminate a facility from 4-factor analysis, CARB should assess for each relevant pollutant whether a full four-factor analysis would be likely to result in the conclusion that no further controls are necessary at that facility, following the implementation of BARCT controls.

The timing, applicability, and federal enforceability of BARCT rules also needs to be evaluated in relation to the Regional Haze second planning period. BARCT rules need to have been adopted by districts for CARB to submit them into the SIP to be made federally enforceable. We understand that, under AB 617 "expedited BARCT" must be implemented by 2023. While air districts have already adopted some rule revisions to address these requirements, other rules will not be revisited until later in 2021, 2022 or

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[9] Id., 15.
[10] Id., 23.
[11] Id., footnote 45.

2023.[12] CARB should not exclude sources from Regional Haze analysis based on anticipated rules that are not yet in effect or federally enforceable.

Criterion Focused on Trajectory Analyses

Another criterion that CARB intends to use to exclude sources from four-factor analysis is trajectory analyses. Specifically, CARB is planning to use the Western Regional Air Partnership (WRAP) Weighted Emissions Potential (WEP) analysis to evaluate whether emissions sources may contribute to diminished visibility on most impaired days at the potential receptor Class 1 Area. We have multiple concerns with this approach.

First, CARB has indicated it is using the WEP analysis to exclude sources from the Q/d list, but not to find additional sources that are contributing to visibility impairment in Class 1 Areas. This is not consistent with the EPA's recommended approach to using such analyses, as described in the Regional Haze Guidance (emphasis added):

> A more sophisticated trajectory-based analysis technique combines emissions, ambient PM data, and trajectory information. This approach selects sources for analysis using an approach that gives each point source a score that takes into account the source's emissions, the daily values of light extinction at a Class I area, the distance between the source and a Class I area, and the relative frequency with which wind trajectories indicate that each source is upwind of the IMPROVE monitoring site. . . . *States using this approach would select the sources that are above a chosen score threshold.* If the details of this approach are reasonably chosen, a state may use this type of approach for selecting sources in the second implementation period.[13]

The above language describes the use of trajectory-based analysis as the primary source selection tool. Because CARB has stated for 18 months that it is using Q/d as its visibility criterion for source selection, it is not clear why it is appropriate to apply WEP on top of that, particularly if the WEP analysis is only being used to eliminate sources.

Similarly, CARB has indicated that a source will be eliminated if it contributes less than 1% of the pollutant(s) of interest at the relevant receptors. Without an analysis of other sources contributing to that particular receptor and pollutant(s), it is unclear whether this an appropriate threshold to apply in all cases. For example, if other anthropogenic sources of the relevant pollutant(s) are out of the state's jurisdiction or already well-controlled, a lower threshold may be appropriate.

Finally, the WRAP WEP analysis focuses exclusively on the 20% most anthropogenically impaired days. As noted above, it is not clear that elimination of sources based solely on conditions on the most impaired days is appropriate.

In light of these considerations, we recommend that CARB consider applying an absolute value threshold or selecting a certain number of highest-ranking sources affecting each Class 1 Area from the RANK_POINT spreadsheet, rather than using the WEP to eliminate sources based on a percentage contribution. Regardless of the particular approach chosen, CARB's use of the WEP should be supported

[12] https://ww2.arb.ca.gov/our-work/programs/technology-clearinghouse/expedited-barct.
[13] Id., 14 (internal citation omitted).

by a rationale that reflects the CAA requirement for SIPs make reasonable progress based on the four statutory factors.

Summary

We understand that the current result of CARB's source selection methodology is that no stationary sources will be selected for a four-factor analysis. Without closely evaluating the basis for excluding each source, especially considering the concerns we have listed in this letter, we cannot offer support for that result at this time.

CARB has told EPA that it will address the reasonable progress and 4-factor analysis requirements of the second Regional Haze planning period by analyzing mobile source controls. We understand that mobile source emissions comprise a large portion of the emissions inventories for visibility-impairing pollutants in California and we support CARB's efforts to analyze mobile source controls. However, it is not clear whether CARB is simply going to analyze mobile source controls that are already on the books or whether CARB will be analyzing any new mobile source controls. Such existing emission controls that are necessary to meet other CAA requirements are factored into the reasonable progress goals for each Class I area,[14] but are not, by themselves, sufficient to meet the requirements of the RHR. Rather, as noted above, a state must also evaluate, by analyzing the four factors, whether any additional controls should be adopted for visibility purposes. This analysis is specifically for Regional Haze; the fact that CARB incorporates the four factors into its CAA rulemaking is informative but does not fulfill the analysis requirements for the Regional Haze Rule.

The main goal of early engagement between EPA and CARB during SIP development is to communicate the requirements of the CAA, the RHR, as well as recommendations in the Regional Haze Guidance to improve the likelihood that the State's submission will be approvable. Our current understanding of CARB's approach is that it does not follow many of the recommendations in the Regional Haze Guidance and may not meet all CAA and RHR requirements. We need to engage with CARB on the details of California's source selection approach to make productive use of early engagement.

[14] See 40 CFR 51.308(f)(3)(i) "reasonable progress goals . . . reflect the visibility conditions that are projected to be achieved by the end of the applicable implementation period as a result of those enforceable emissions limitations, compliance schedules, and other measures required under paragraph (f)(2) of this section that can be fully implemented by the end of the applicable implementation period, as well as the implementation of other requirements of the CAA."