United States Department of the Interior
NATIONAL PARK SERVICE
Air Resources Division
P.O. Box 25287
Denver, CO 80225

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

January 14, 2009

N3615 (2350)

Lynn Terry, Deputy Executive Officer
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, California 95812-2815

Dear Ms. Terry:

On May 5, 2008, the State of California sent to us a draft implementation plan describing your proposal to improve air quality regional haze impacts at mandatory Class I areas across your region. We provided informal comments to the Air Resources Board staff on May 21, 2008. After evaluating our draft comments and reviewing internal priorities, your agency delayed final SIP action to incorporate, among other items, a full Best Available Retrofit Technology assessment.

On November 13, 2008, we received a revised draft implementation plan for review. Many of the issues we raised in our preliminary comments had been addressed, but we have some follow-up comments. We appreciate the opportunity to work closely with the State through the initial evaluation, development, and, now, subsequent review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward the Clean Air Act's goal of natural visibility conditions at all of our most pristine National Parks and Wilderness Areas for future generations.

This letter acknowledges that the U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS), and National Park Service (NPS) have received and conducted a substantive review of your revised proposed Regional Haze Rule implementation plan in fulfillment of your requirements under the federal regulations 40 CFR 51.308(i)(2). Please note, however, that only the U.S. Environmental Protection Agency (EPA) can make a final determination regarding the document's completeness and, therefore, ability to receive federal approval from EPA.

As outlined in a letter to each State dated August 1, 2006, our review focused on eight basic content areas. The content areas reflect priorities for the Federal Land Manager agencies, and we have enclosed comments associated with these priorities. We look

forward to your response, as per section 40 CFR 51.308(i)(3). For further information, please contact Bruce Polkowsky (NPS Air Resources Division) at (303) 987-6944, or Tim Allen of the FWS Branch of Air Quality at (303) 914-3802.

Again, we appreciate the opportunity to work closely with the State of California and compliment you on your hard work and dedication to significant improvement in our nation's air quality values and visibility.

Sincerely,

for Christine L. Shaver
Chief, Air Resources Division
National Park Service

Sincerely,

Sandra V. Silva
Branch of Air Quality
U.S. Fish & Wildlife Service

Enclosure

cc:
Christine M. Suarez-Murias
Air Pollution Specialist
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, California 95812-2815

General Comments on California's Draft Regional Haze State Implementation Plan

California has done an excellent job in compiling a draft State Implementation Plan (SIP) that examines the current visibility conditions at its mandatory Federal Class I (Class I) areas. Appendix B is well thought out and communicates the causes of current visibility conditions, as well as projected natural conditions, in a clear, understandable manner. This effort creates a good foundation for this and future SIP efforts.

Long-Term Strategy and Resulting Reasonable Progress Goals

In our preliminary comments we noted that California's decision to adopt ongoing air quality control programs plus some non-quantified future programs as the basis for a Long-Term Strategy for regional haze addresses key statutory and regulatory requirements. However, the conclusion that no additional control measures for visibility improvement are "reasonable" needed better support based on the statutory and regulatory factors. We are pleased to find that the assessment of the statuary factors was added to the revised draft. Given the large number of Class I areas in California we understand the reason for conducting the reasonable progress assessment based on groups of Class I areas and the geographic areas associated with transport of visibility impairing pollutants for each grouping. While Appendix B establishes the basic causes of visibility impairment for each of the Class I Areas, we would encourage some elaboration within the body of the SIP narrative on the rationale for groupings of Class I areas chosen and how the geographic source regions where defined. Addressing the selection of geographic areas, and therefore all major sources of emissions within those areas, ensures that the State reviewed the statutory factors for possible reasonable progress measures for impacts that could result at any Class I area in the group.

We do support the inclusion of a review of the nitrate portion of "reasonable progress" and suggest that similar assessments for sulfate and organic aerosols be provided, especially for those Class I areas where those pollutants cause the majority of current impairment.

We appreciate the State linking its new source review requirements to the protection of the clearest days at the Class I areas under the regional haze rule in the revised SIP. We feel it is important to note that current new source review programs will be used to assure that no Class I area sees degradation from expansion or growth of a single new source or regional development.

Best Available Retrofit Technology (BART)

The BART chapter was significantly improved from the initial draft. We agree with California's conclusion that only one source, the Valero refinery, is subject to full BART review. We appreciate the additional information provided by the Bay Area Air Quality Management District (BAAQMD) at our request. At this time we have a few outstanding issues regarding the BART determination that we are requesting the

BAAQMD or State address prior to submitting the plan to EPA. The specific items are stated in the specific comments on Chapter 5 below.

Specific Comments

Chapter 2

Chapter 2 does an excellent job summarizing visibility conditions at the Class I areas. We particularly compliment the approach of setting geographic sub-regions. As noted, we agree that a few of the Class I areas could be grouped in a slightly different manner, and this should be further explored with examining strategies for reasonable progress.

Chapter 3

Chapter 3 summarizes current emissions and emissions projections for 2018. While overall emissions trend downward there are exceptions (sulfur dioxide for point sources) which are not very well explained. We request the State to summarize emissions changes by the regions which affect the geographic sub-regions of Class I areas noted in Chapter 2. This would help the reader understand what is likely to influence the visibility conditions in 2018 and whether there is any rationale to explore additional strategies beyond the WRAP modeled case for a given Class I area or sub-region.

Chapter 4

Chapter 4 does an excellent job presenting California's history of aggressive control of air pollution. In 4.3, the description of the new source review program could be expanded to show which districts require "offsets" and which districts have a more traditional new source review program. It would be good to mention the NSR / PSD requirement for FLM consultation on major new permits in this section as well. This would address the general comment above, regarding a link between new source review and the regional haze rule strategy.

Section 4.3 mentions that the largest source for sulfur oxides is located in a district that will likely be designated PM2.5 nonattainment, resulting in likely examination of control measures. A table or map of districts or areas that are likely to be undergoing control strategy develop for attainment of ambient standards, if implementation occurs within the time frame of the regional haze SIP, would support the conclusion in Section 4.4 that programs underway are "reasonable" for haze protection purposes. Again, listing or mapping those affected areas in a way that related to effects on the sub regions of Class I areas would be helpful.

Section 4.5 reviews the cost factor for assessing reasonable progress. We appreciate the SIP noting that California is a significant contributor to worst day impairment at Class I areas in Nevada, Arizona or Oregon and the revised discussion regarding the adequacy of the State Plan for addressing that contribution. Conversely, the sources in the State of Nevada has a significant impact on several California Class I areas, so your SIP should

note that those areas rely on Nevada sufficiently addressing their contribution in order to achieve reasonable progress. This is particularly true regarding nitrate impacts on the worst twenty percent days.

Chapter 5

We generally agree with the SIP conclusion that most sources meet BART requirements through current conditions or limited impact on visibility. For the Valero refinery, the one source found subject to BART, we request the following items be addressed prior to submission of the SIP to EPA.

Main Stack

- The Bay Area Air Quality Management District (BAAQMD) states that additional control of NO_x from the CO boilers by SCR is not feasible because the stream contains a high concentration of sulfur at the point where the SCR will be installed. Considering that SCR is commonly used on boilers burning eastern high-sulfur coals, please compare the SO_2 concentrations in the CO boiler exhaust to that of a typical coal-fired boiler with SCR. (Or provide a statement from the SCR vendor supporting the BAAQMD assertion.)

- The costs for SO_2 control of the main stack were provided by Valero. The capital cost for the scrubbers is estimated to be $413 million, and the annual operating costs will be $7 million, for a total annual cost of $80 million. In a previous e-mail we attached a sample Excel workbook (based upon the OAQPS Control Cost Manual) and requested that the pertinent information on the first "Given/Assume" page be supplied. We again ask that this information be provided to us.

- Our initial reaction to the SO_2 scrubbing proposal was that 93% control seemed low for an amine scrubber. Our review of the RACT/BACT/LAER Clearinghouse (RBLC) found that all but one similar refinery process had limits of at least 25 ppm, as proposed by BAAQMD. However, the PSD permit issued by TX to Marathon Ashland petroleum (RBLC ID #TX-0532) contains a 20 ppm annual SO_2 limit for the Fluidized Catalytic Cracking Unit. If Valero were to achieve the same 20 ppm limit as Marathon-Ashland, then this largest source of SO_2 emissions would be reduced by an additional 20% or 83 tpy. BAAQMD should also provide additional justification for the 25 ppm limit and the vendor guarantee that it cites as limiting SO_2 removal to 25 ppm.

- BAAQMD states, "An additional reduction of all of the remaining SO_2 (7% more) would result in an imperceptible improvement at the Class I area." Please note that reductions do not have to be perceptible to represent BART.

Turbine/Boiler Sets

- BAAQMD states at the combined NO_x emissions of the remaining three sets are about 341 tpy. However, our calculations estimate that the current potential emissions are 503 tpy.

- The District determined that the cost/ton for controlling from 40 ppmv to 10 ppmv @ 15% O2 was $5,000 to $7,000/ton, and that this cost was above reasonable cost-effectiveness levels for regional haze. BAAQMD should provide a clear explanation of its cost-effectiveness calculations and justify its conclusions.

- Regarding application of SCR to the turbine/boiler sets, BAAQMD states, "If the limit were lowered to 5 ppmv @ 15% O2, it is expected that the cost/ton would be even higher and therefore even less cost-effective." It is more likely that, if a given control technology is more fully utilized, the cost/ton will decrease. BAAQMD should provide cost data to support its assertion.

- CARB modeled a hypothetical reduction of 268 tpy NO_x at the turbines to 73 tpy NO_x, which is equivalent to a 10 ppmv NO_x concentration achievable by SCR. However, our calculations estimate that the reduction would be 430 tpy.

- The modeling result for the hypothetical reduction was 0.091 deciview, which BAAQMD says is an insignificant improvement. However, visibility improvements do not have to be perceptible to represent BART, and the amount of emission reduction and the corresponding improvement in visibility may have been understated.

Chapter 6

Chapter 6 presents the source apportionment and modeling results. These results reflect the work of the WRAP regional modeling center. We note that Section 6.3.4 addresses any issues related to neighboring States contributing to impairment at California Class I areas.

The modeling and results reported do not include final BART determinations, or other actions taken after the WRAP modeling.

Chapter 7

Table 7-2 establishes the reasonable progress goals for the worst and best days in 2018 based on WRAP modeling which does not include all measures. If new modeling is not completed by the time California submits the SIP to EPA, then the established goals will need to be revised based on final model runs. This should be completed as soon as possible, but in no case later than the mid-term review. This revised modeling could also incorporate any additional measure beyond BART that may be quantified or may result

from analysis of strategies needed to reach uniform rate of progress as noted above. While we understand, given California's aggressive record of pollution control and recent approval of a program to address climate change, there are not likely to be large changes from the current reasonable progress projections for most Class I areas, there may be significant additional progress made in one or two Class I areas.