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LATHAM & WATKINS LLP

March 20, 2017

Via Electronic Upload

Chair Mary D. Nichols
ATTN: Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Western States Petroleum Association Comments on the California Air Resources Board's ("ARB") Consideration of the South Coast Air Quality Management District ("SCAQMD") 2016 Air Quality Management Plan

Dear Chair Nichols:

Thank you for the opportunity to provide comments regarding ARB's consideration of the SCAQMD's 2016 Air Quality Management Plan (the "AQMP" or the "Plan"). We submit these comments on behalf of the Western States Petroleum Association ("WSPA"), a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon and Washington. WSPA has been an active participant in air quality planning issues for over 30 years, and it worked closely with the SCAQMD staff and other stakeholders during the development of the AQMP. WSPA submitted a number of comments on various iterations of the Plan to the SCAQMD staff and SCAQMD Governing Board (the "Governing Board"), and we incorporate those prior comments herein by reference.[1]

WSPA hereby requests that the ARB disapprove AQMP Control Measure CMB-05, Further NOx Reductions from RECLAIM Assessment, as adopted by the Governing Board on March 3, 2017. The reason for this request is that amendments made to proposed CMB-05 at the Governing Board hearing on March 3, 2017 are arbitrary and unsupported by the administrative record.

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[1]Prior comment letters attached and incorporated herein.

Background

In December 2015, the Governing Board approved the largest adjustment to the NOx RECLAIM program since its inception in 1994 (the "2015 Amendments"). When fully implemented, the 2015 Amendments will have removed at least 12 tons per day ("TPD") from the NOx RECLAIM market (a 45% reduction).

The 2015 Amendments made adjustments to RECLAIM to reflect the perceived advancement of NOx Best Available Retrofit Control Technology ("BARCT") for various equipment by establishing new RECLAIM Trading Credit ("RTC") adjustment factors for year 2016 and beyond. That rulemaking also took "credit" for the fact that certain companies had left Southern California, and made adjustments for anticipated future growth of industrial sectors covered by the RECLAIM program. The 2015 Amendments also included an "off-ramp" for electricity generating facilities ("EGF") operating at BACT or BARCT. That last provision, if utilized by qualifying EGFs, could result in additional RTCs being removed from the RECLAIM program above and beyond the 12 TPD market adjustment approved by the Governing Board. In October 2016, the Governing Board adopted further amendments (the "2016 Amendments") that will remove additional RTCs from the RECLAIM program in the event of future RECLAIM facility shutdowns.

AQMP Control Measure CMB-05, Further NOx Reductions from RECLAIM Assessment

AQMP CMB-05 purports to address "... issues that arose during recent [2015 and 2016 Amendments]." It further explains that a number of CMB-05-proposed measures "would be designed to achieve additional actual and/or SIP creditable emission reductions from the RECLAIM Program and ensure future equivalency with command-and-control regulations." However, as detailed in WSPA's November 4, 2016 comments on the Draft AQMP, each of these "issues" had already been addressed in the 2015 Amendments and/or 2016 Amendments, or were otherwise moot. For this reason, WSPA advocated during the development of the 2016 AQMP that CMB-05 was unreasonable, lacked technical foundation, and that it should be completely removed from the AQMP. District staff declined to adopt WSPA's suggestion, choosing instead to leave the control measure in place and committing to remove an additional 5 TPD from the NOx RECLAIM market by 2031. While WSPA continues to view CMB-05 as originally proposed by District staff as unreasonable and without technical foundation, the Governing Board's adopted amendment to the proposed control measure that requires the removal of 5 TPD from the program by 2025 and directing the program's termination is particularly troubling given that no impact analysis has been completed for removing an additional five tons from the program six years earlier than proposed and terminating the program completely.

CMB-05, as approved by the Governing Board, proposes an additional 5 TPD NOx reductions beyond the largest market reduction in program history - 12 TPD NOx reductions by 2023 required by the District in the 2015 Amendments. Complying with this new emissions target will require the investment of billions of dollars in new equipment and emissions controls

at RECLAIM facilities.[2] Taken together with the 2015 Amendments, that equates to an approximately 70% reduction in refinery sector NOx emissions from 2016 levels.[3] There is no evidence or analysis in the rulemaking record that achieving an additional 5 TPD of NOx reductions proposed under CMB-05 is technically or economically feasible by 2025. Furthermore, there has been no substantive assessment of the environmental or socioeconomic impacts of requiring the removal of an additional 5 TPD by a date prior to 2031.

The Final Draft 2016 AQMP, released in December 2016, was premised on the additional 5 TPD of NOx reductions associated with CMB-05 occurring as late as 2031. That Final Draft 2016 AQMP included an attainment demonstration, based on extensive modeling, which showed compliance with all applicable federal Clean Air Act requirements. Since the Final Draft 2016 AQMP released in December 2016 was premised on full implementation of CMB-05 by as late as 2031, and concluded that, as proposed, the 2016 AQMP met the requirements of the federal Clean Air Act, the accelerated reductions embodied in the amendments adopted on March 3, 2017 are clearly not necessary to meet those requirements. They must therefore be excluded from inclusion in the state implementation plan ("SIP") pursuant to California Health & Safety Code Section 40460(d), which provides as follows: "Notwithstanding any other provision of this division [pertaining to development of SCAQMD attainment plans], the state implementation plan for the air basin shall only include those provisions necessary to meet the requirements of the Clean Air Act [referring to the federal Clean Air Act]."

The RECLAIM program has been highly successful. Regulated facilities under the RECLAIM program have dramatically reduced NOx emissions since the program's inception in the mid-1990s. In fact, the RECLAIM program has achieved an approximately 70% reduction in emissions from covered sources over the last two decades, which significantly exceeds the reductions from non-RECLAIM stationary sources over the same period. The past success of the RECLAIM program does not mean that it should not be reevaluated from time to time, or that there are not ways to further improve upon the program. WSPA supports continued evaluation of the program, as has been done since its inception, to determine whether or not there are ways to improve upon its past success. However, any transition of even a portion of the RECLAIM program to a command-and-control model will require extremely careful planning and consideration that takes into account the substantial investments that facilities have made over the past two decades consistent with the RECLAIM market-based model. In evaluating any proposed changes to the RECLAIM program, care should be taken to preserve those elements of the program that have worked effectively to achieve substantial emission reductions. The Governing Board's predetermination of the program's sunset without any supporting analysis precludes such care, and could have significant impacts on the economic health of the region if allowed to stand.

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[2] AQMD Governing Board, December 4, 2015, Agenda Item 30. See page 17.

[3] It is important to note that the Staff's last technology assessment did not support a 70% reduction. *See* AQMD, Draft Final Staff Report, Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM, December 4, 2015 at p. 4. We also note the AQMP presents costs and cost effectiveness for measure CMB-05 that we believe are significantly inaccurate.

Conclusion

Given that the Governing Board-approved amendments to CMB-05 were never analyzed, and that there is no evidence in the administrative record to support their adoption, the amendments are arbitrary, and ARB should not approve them as part of the AQMP.[4] Furthermore, the accelerated reductions called for in the amendments to CMB-05 are not necessary to achieve compliance with federal requirements, and therefore must be excluded from inclusion in the SIP. We therefore urge ARB to disapprove the Governing Board's amendments to CMB-05 that: (1) accelerate the removal of 5 TPD from NOx RECLAIM market from 2031 to 2025; and (2) direct an outcome (program sunset) that has not been evaluated or analyzed. Thank you for the opportunity to submit these comments.

Sincerely,

on behalf of

Michael J. Carroll
of LATHAM & WATKINS LLP

cc: Honorable Members, Air Resources Board

[4] Furthermore, ARB staff's conclusion that the adopted amendments will "resolve the issues raised in ARB's review [of the 2015 and 2016 RECLAIM Amendments]" (*see* March 2017 ARB Staff Report on *Assessment of the South Coast Air Quality Management District's 2015 and 2016 RECLAIM Amendments* at p. 5) is unsupported in the administrative record, and cannot form the basis for ARB's approval of CMB-05 as amended by the Governing Board. For the reasons put forth in WSPA's and other's comments on the 2015 and 2016 Amendments and the 2016 AQMP, ARB staff's conclusions that the 2015 and 2016 Amendments are not sufficient to achieve a BARCT level of control and that there are additional feasible emission reductions that can be achieved is not based on substantial evidence and must be rejected.

Attachment

Western States Petroleum Association

Credible Solutions • Responsive Service • Since 1907

Sue Gornick
Manager, SoCal Technical

VIA ELECTRONIC MAIL

July 21, 2016

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Notice of Preparation (NOP) and Initial Study for the Draft Program Environmental Impact Report (PEIR) for the 2016 Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing twenty-five companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon, and Washington. 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 and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA appreciates the opportunity to submit these comments on the Notice of Preparation (NOP) and Initial Study (IS) for the Draft Program Environmental Impact Report (PEIR) for the 2016 Air Quality Management Plan (AQMP). Our comments are as follows:

1. **The NOP/IS fails to discuss the alternatives analysis required under the California Environmental Quality Act (CEQA) Guidelines, and so does not provide the public with any information concerning the range of alternatives which will be considered in the PEIR.**

Under the CEQA Guidelines (§15126.6), the Draft PEIR is required to discuss and compare alternatives to the proposed project which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project,

and evaluate the comparative merits of the alternatives.[1] The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives.[2] The alternatives considered should avoid or substantially lessen any of the significant effects of the project, and the range of feasible alternatives must be selected and discussed in a manner to foster meaningful public participation and informed decision making.[3]

The 2016 AQMP will be a regionally significant "program" and AQMD staff has already acknowledged that it may have potential adverse environmental effects in a number of areas including air quality, greenhouse gases, energy, hazards & hazardous materials, hydrology and water quality, noise, solid and hazardous waste, and transportation and traffic.[4] Additionally, the strategy outlined in the initial Draft AQMP would involve significant costs to both public and private stakeholders. Yet the NOP/IS released for the 2016 AQMP does not even mention that an alternatives analysis will be conducted in the PEIR, or describe the range of alternatives to be considered. The subject of the alternatives analysis was also not addressed during the Staff presentation made at the recent Public Scoping Meeting.[5]

The CEQA Guidelines require that alternatives "must be selected and discussed in a manner to foster meaningful public participation and informed decision making."[6] We recommend that a separate public meeting should be conducted specifically to allow public participation in the selection of the alternatives which might be considered in the PEIR.

2. The Draft PEIR schedule does not allow for reasonable consideration of public comments received in response to the Notice of Preparation (NOP).

While AQMD may have provided a minimum 30-day requirement period for public comments after the NOP release date, the anticipated August release for the Draft PEIR does not allow for reasonable consideration of those comments, some of which could be delivered as late as August 4th (i.e., the close of the public comment period). The schedule for the Draft PEIR should be relaxed to ensure that all public input can be meaningfully considered. This is especially necessary for the alternatives analysis since, as noted above, the public has so far been given no information concerning the project alternatives to be considered or opportunity for comment on same.

[1] CEQA Guidelines §15126.6 (a).
[2] CEQA Guidelines §15126.6 (a).
[3] CEQA Guidelines §15126.6 (f).
[4] SCAQMD, NOP/IS for the Draft Program Environmental Impact Report (EIR) for the 2016 AQMP, 30 June 2016.
[5] SCAQMD, Public Scoping Meeting for the NOP/IS for the Draft Program Environmental Impact Report (EIR) for the 2016 AQMP, 14 July 2016. See Item #3.
[6] CEQA Guidelines §15126.6 (f).

3. The alternatives analysis should include a "Reduced Measures" alternative. That alternative would focus the AQMP control strategy around the 2016 State Strategy for the State Implementation Plan, and exclude all measures not needed to minimally achieve the region's carrying capacity targets for attainment of the National Ambient Air Quality Standards (NAAQS).

As presented in the draft AQMP,[7] the Staff's proposal appears to include a large number of control measures which are actually not necessary for meeting the AQMP objectives. This situation is possible due to the significant emission reductions projected under the 2016 State Strategy. However, the draft AQMP includes dozens of other measures which have not been shown to be necessary for reaching the region's so-called "carrying capacity." These "extra" measures, some of which have no quantified emission benefit, would impose considerable costs on the Southern California economy.

The CEQA Guidelines demand the consideration of alternatives which could avoid or substantially lessen any of the significant effects of this AQMP.[8] Therefore, the alternatives analysis should include a Reduced Measures Alternative. The strategy for this Alternative would be limited to the 2016 State Strategy and only those measures needed to minimally achieve the region's carrying capacity targets for attainment of the ozone and particulate matter NAAQS as outlined in the program objectives.

WSPA appreciates the opportunity to submit these comments and we reserve the right to supplement them as this process moves forward. Please contact me with any questions at (310) 808-2146 or sgornick@wspa.org.

Sincerely,

Suzanne E. Gornick

cc: Jillian Wong, SCAQMD

[7] SCAQMD, Draft 2016 AQMP, Table ES-2 (June 2016).
[8] CEQA Guidelines §15126.6 (f).

Western States Petroleum Association
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Sue Gornick
Manager, Southern California Region

VIA ELECTRONIC MAIL

August 18, 2016

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Draft 2016 Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing twenty-five companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon, and Washington. 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 and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA appreciates the opportunity to submit these comments on the Draft 2016 Air Quality Management Plan (AQMP) and continues to support the South Coast regional air quality planning process and the successes achieved to date. Over the last two decades, Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have reduced their emissions by over 70 percent for most criteria pollutants including nitrogen oxides (NO_X) and sulfur oxides (SO_X).

Our general comments are as follows:

1. **The AQMP control strategy should exclude all measures not needed to minimally achieve the region's carrying capacity targets for attainment of the National Ambient Air Quality Standards (NAAQS).**

As presented in the Draft AQMP,[1] the Staff's proposal includes a large number of control measures which do not appear to be necessary for meeting the AQMP objectives. This situation is possible due to the significant emission reductions projected under the 2016 State Strategy. However, the Draft AQMP includes dozens of additional control measures which have not been shown to be necessary for reaching the region's so-called "carrying capacity." In fact, most of these "extra" measures have no quantified emission benefits yet would impose considerable costs on the Southern California economy.

WSPA provides our comments on the ARB Proposed 2016 State Strategy for the State Implementation Plan in Attachment 1, attached hereto and incorporated herein by reference for your consideration.

2. The AQMP control strategy should prioritize non-regulatory, incentive based approaches to reducing emissions outside the State Strategy. Such incentive based measures should be cost effective and limited to reasonably anticipated funding levels and sources.

To the extent they are needed to demonstrating attainment, WSPA is supportive of the Draft AQMP's inclusion of control measures based on incentives and other non-regulatory approaches intended to accelerate the transition of vehicles, buildings, and industrial facilities to cleaner technologies. Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have dramatically reduced their emissions by over 70 percent for most criteria pollutants over the last two decades. This includes emissions of NO_X and SO_X. These facilities may not be able to further reduce emissions in a cost effective manner absent some form of incentive.

WSPA is concerned that these Draft AQMP measures may have gone beyond what might reasonably be able to be funded. AQMD Staff are suggesting the amount of incentive funding needed for these control measures (i.e., $14 billion over a 15 year period, present value)[2] that is without precedent. The AQMP needs to demonstrate how this level of funding might actually be accomplished.

3. Proposed Control Measure CMB-05 (Further NOX Reductions from RECLAIM Assessment) is unreasonable and should be removed from the AQMP.

In December 2015, the AQMD Governing Board approved the single largest adjustment of NOx RECLAIM since the program began in 1994. When fully implemented, those amendments will remove at least 12 tons per day (tpd) from the NOx RECLAIM market; a 45% reduction.[3] This is on top of the nearly 70% reduction in NOx emissions achieved under RECLAIM since 1994.

The 2015 rulemaking, which implemented Control Measure CMB-01 from the 2012 AQMP, proposed market adjustments due to the advancement of NOx Best Available Retrofit Control

[1] SCAQMD, Draft 2016 AQMP, Table ES-2 (June 2016).
[2] SCAQMD, Presentation to the 2016 AQMP STMPR, Socioeconomic Session, 28 July 2016.
[3] See SCAQMD Rule 2002. Also Governing Board package for 4 December 2015 meeting, Agenda item #30.

(BARCT) for various equipment by establishing RECLAIM Trading Credit (RTC) reduction targets and RTC adjustment factors for year 2016 and beyond. That rulemaking also took "credit" for the fact that certain companies have left Southern California, and made some adjustments for anticipated future growth of industrial sectors covered by the RECLAIM program. The 2015 rulemaking also included an "off-ramp" for electricity generating facilities (EGF) at BACT or BARCT. That last provision, if optioned by qualifying EGFs, would result in additional RTCs being removed from the RECLAIM program above and beyond the 12 tpd market adjustment approved by the Governing Board. And in 2016, AQMD Staff are also developing additional amendments to Rule 2002 which would, if adopted by the Governing Board, remove even more RTCs from the NOx RECLAIM Program in the event of future RECLAIM facility shutdowns.

As presented in the Draft AQMP, the proposed control measure purports to address several issues that arose during recent NOx RECLAIM amendments. "These measures listed below would be designed to achieve additional actual and/or SIP creditable emission reductions from the RECLAIM Program and ensure future equivalency with command-and-control regulations.[4] But as detailed below, all of these "issues" were already addressed in the December 2015 rulemaking or have now been made moot such that there is no factual rationale for the proposed target of 5 tpd of additional creditable emission reductions from the NOx RECLAIM program by 2031.

Specifically, the Draft AQMP suggests the following reasons for this measure:[5]

Issue as Presented: *"Assess the need for and the size of the differential between RTC holdings and actual emissions. The size of this unused RTC margin is affected by the possible need for a compliance margin, uncertainties in the growth projections for existing and new businesses, facility and equipment shutdowns, and holdings by investors. A full assessment may allow for an optimization of the size of the margin that could allow for further RTC reductions."*

During the last Regulation XX rulemaking, it was noted that overall NOx RECLAIM market had, in recent years (i.e., 2011-2013), exhibited an unused RTC margin of 4-6 tpd depending on the year and prevailing economic conditions. In the context that period's market cap of 26.5 tpd represented 15-25% of the overall NOx RTC market. By its very design, the 2015 rulemaking will have eliminated nearly all of those previously unused RTCs once fully implemented by 2023. As such, we do not believe this represents a valid basis for a future market adjustment.

Issue as Presented: *"Consider options for facilities at BACT or BARCT and/or facilities with no allocations (structural buyers) to exit the program and be subject to command and control regulations. The most recent NOx amendment allowed EGFs to voluntarily opt-out of RECLAIM. Such an option could be extended to other facilities, and potentially lead to more AQMP creditable emission reductions given that future non-RECLAIM facilities emissions are projected at actual levels with growth rather than total allocations."*

[4] SCAQMD Draft AQMP, Appendix IV, page IV-A-77.

[5] SCAQMD Draft AQMP, Appendix IV, page IV-A-75 et seq.

The 2015 rulemaking already featured an "off-ramp" for EGFs at BACT or BARCT, and the rulemaking by design would force the remaining RECLAIM facilities to meet the Staff's BARCT levels (found in Rule 2002) on a programmatic basis. Simply put, the "issue" identified is no longer valid after the 2015 amendments to RECLAIM.

Issue as Presented: *"Consider command-and-control regulation overlays to certain RECLAIM facilities. For some RECLAIM facilities a command-and-control overlay may be the best way to reduce NOx emissions while maintaining the required equivalency with command and control."*

The 2015 rulemaking by design would force RECLAIM facilities to meet the Staff's BARCT levels (found in Rule 2002) on a programmatic basis. Those BARCT levels are in many cases equal to or more stringent than current BACT.[6] The suggested "command-and-control overlays" would fundamentally conflict with Regulation XX program design. And given the 2015 amendments, they would be unlikely to yield material additional, creditable emission reductions.

Issue as Presented: *"Assess facility and equipment shutdowns and the removal of associated RTCs from the market. Under command-and-control rules, shutdown emission credits are heavily discounted to BACT, based on the last 2 years of operation. While there is no discount of credits for a RECLAIM facility or equipment shutdown, the overall RTCs available to RECLAIM facilities have been reduced over time to reflect the advancement of BARCT (i.e., command-and-control equivalency). In some cases, these BARCT levels are equal to, or more stringent than, BACT determinations. However, these credits, if not removed from the program, could reduce the incentive to implement cost-effective controls that would otherwise be required under command-and-control."*

As noted above, AQMD Staff are already developing a Proposed Amended Rule 2002 which would, if adopted by the Governing Board, remove additional RTCs from the NOx RECLAIM program in the event of future RECLAIM facility shutdowns. It is impossible to know how many, if any, facilities might shutdown in the future and whether such shutdowns would trigger the removal of additional credits from the RECLAIM market.

Issue as Presented: *"Assessment of whether the cost-effectiveness benefits that the RECLAIM market was intended to provide still exist given the need for all feasible NOx reductions and the potential lack of lower-cost control options."*

While such an assessment could be informative, this is not a rationale for further reductions in the NOx RECLAIM market.

Issue as Presented: *"Perform additional or more frequent BARCT assessments and adjust allocations as control technologies improve and are implemented in practice."*

[6] SCAQMD 2016 AQMP, Appendix IV, page IV-A-77. "In some cases, these BARCT levels are equal to, or more stringent than, BACT determinations."

AQMD is already obligated to perform such assessments under the California Health & Safety Code.[7] Such assessments would trigger future rulemaking if it was concluded that BARCT was more stringent that the levels presented in Rule 2002. Given the severity of BARCT determinations in the 2015 rulemaking, some of which are already more stringent than BACT, there is no technical basis at this time to suggest that BARCT advancement will be able to yield an additional 35% of NOx emissions from RECLAIM facilities by 2031 (i.e., 5 tpd / 14.5 tpd).

Issue as Presented: *"Assess whether more SIP creditable and/or actual emission reductions could be achieved without the RECLAIM program, and if so, explore how the program could be sunset in an orderly and equitable fashion."*

This is a policy matter which would need to be considered by the Governing Board. It is not a rationale that supports further proposed reductions in the NOx RECLAIM market.

Issue as Presented: *"Re-examination of the RECLAIM program if RTC prices hit the upper or lower threshold amounts. The current NOx RECLAIM regulation has a lower price threshold of $200,000 per ton (infinite year block) and upper price thresholds of $22,500 and $35,000 per ton (discrete year; annual and 3-month average, respectively). The levels of these thresholds or additional thresholds could be modified commensurate with future BARCT assessments and attainment needs."*

California's Health and Safety Code requires an air district to make certain findings when adopting rules and regulations to implement a market-based incentive program, including a determination that:

- The program will result in an equivalent or greater reduction in emissions at equivalent or less cost compared with current command and control regulations and future air quality measures that would otherwise have been adopted as part of the district's plan for attainment.
- The program will provide a level of enforcement and monitoring, to ensure compliance with emission reduction requirements, comparable with command and control air quality measures that would otherwise have been adopted by the district for inclusion in the district's plan for attainment.
- The program will not result in a greater loss of jobs or more significant shifts from higher to lower skilled jobs, on an overall districtwide basis, than that which would exist under command and control air quality measures that would otherwise have been adopted as part of the district's plan for attainment.
- The program will not result in disproportionate impacts, measured on an aggregate basis, on those stationary sources included in the program compared to other permitted stationary sources in the district's plan for attainment.[8]

Any reconsideration of price triggers or cost effectiveness thresholds would need to be supported by findings that the program will not result in disproportionate impacts, measured on an

[7] CH&SC §39616(c).
[8] CH&SC §39616(c).

aggregate basis, on those facilities included in the RECLAIM program as compared to other permitted stationary sources in the District. We are skeptical that such a finding could be made at this time; the issue does not support further reductions in the NOx RECLAIM market.

Issue as Presented: *"Assess the impacts of investors holding RTCs. Investors have historically played an important role in the RECLAIM program. However, their holding of RTCs have posed problems with the trading and identification of reductions because they are not RECLAIM facilities that have an initial allocation or a potential to reduce NOx emissions."*

California Health & Safety Code specifically provides that RECLAIM "shall achieve emission reductions across a spectrum of sources by allowing for trading of emissions trading units for quantifiable reductions in emissions from a significant number of different sources."[9] So this topic would appear to be a policy matter which would need to be considered by the Governing Board and/or State Legislature. Regardless, it is not a rationale which supports further proposed reductions in the NOx RECLAIM market.

Given the already adopted and proposed changes to the RECLAIM program, the basis presented for proposed Control Measure CMB-05 is fundamentally flawed. It lacks any factual rationale to support the notion that 5 tpd of additional creditable emission reductions could be achieved by 2031. For these reasons, this proposed control measure should be removed from the AQMP. If the district insists on including a RECLAIM control measure in this AQMP, it should be a range since what is included in the AQMP is the minimum commitment to USEPA that must be met. We recommend a range of 0-3 tpd. And further, WSPA believes that any additional adjustment to RECLAIM Trading Credits (RTCs) under the NOx RECLAIM program should be applied equally to all NOx RECLAIM market participants as a proportion of their present RTC holdings consistent with the founding principles of the RECLAIM program.

Lastly, staff estimates that the cost to implement this measure to be 50% higher than the projection for the December 2015 amendments, but there is no basis for that estimate. This figure should be supported with an actual technical basis or completely removed from the document.

4. As a co-benefits measure, proposed Control Measure ECC-01 (Co-Benefit Emission Reductions from GHG Programs, Policies, and Incentives) should not involve any AQMD "enhancements."

The Draft AQMP presents proposed Control Measure ECC-01 as potentially involving AQMD authority to regulate emissions from stationary sources and that "AQMD will work with other regulatory agencies for program enhancements."[10] Yet, the Draft AQMP also suggests "Because this control measure relies on other programs, no additional costs other than relatively minor administrative costs are anticipated as a direct result of this control measure." [11] [emphasis added] These positions are contradictory. Since the measure is intended to rely on the

[9] California Health & Safety Code §40440.1(a).
[10] SCAQMD Draft AQMP, Appendix IV, page IV-A-25, Implementing Agencies.
[11] SCAQMD Draft AQMP, Appendix IV, page IV-A-25, Cost-Effectiveness.

accounting of co-benefits from GHG programs, policies, and incentives, it is not appropriate to consider other "enhancements" or AQMD authority under this measure. The Draft AQMP discussion of ECC-01 must be revised to exclude references to program enhancements or the exercise of AQMD authority.

5. **Proposed Control Measure FUG-01 (Improved Leak Detection and Repair) should be revised to consider the use of optical gas imaging (OGI) technology as a suitable substitute for, not an addition to, conventional LDAR component inspections. This was the intended purpose of "Smart-LDAR" and would help to resolve the inefficient and labor-intensive effort associated with conventional LDAR programs. References to unspecified "new technologies" should be removed from the measure.**

As with prior AQMPs, this Draft AQMP includes a proposed control measure which describes a wide-ranging approach to potentially further reducing VOC emissions from fugitive emission components at petroleum industry facilities and chemical plants. The control measure again focuses on the potential use of optical gas imaging technology (as it did the 2012 and 2007 AQMPs).[12] Optical gas imaging (OGI) technology was borne out of a desire to conduct fugitive emission LDAR programs in a more efficient manner (thus, the term "Smart-LDAR"). Prior AQMPs have specifically recognized the inefficient and labor-intensive effort associated with conventional LDAR programs; however, this concept is not addressed in FUG-01. The control measure should recognize the problem and do something about the inefficiency of existing LDAR programs.

The control measure lists seven existing AQMD rules for which it is suggested that the requirements could be enhanced, but the nature of the potential enhancements to the individual rules is not explained. So the overall proposed approach remains vague. Mention is made of an OGI pilot program. The control measure needs to provide more information and greater clarity, or, in the alternative, there should be a description of a potential stakeholder process through which a pilot program might be developed.

FUG-01 suggests that OGI might be used to supplement existing LDAR programs. However, clearly the highest and best potential use of the OGI is <u>as a substitute</u> for conventional inspections of components with an organic vapor analyzer. WSPA's overriding concern is that adding OGI to existing requirements is not cost-effective. Replacing LDAR with OGI is more attractive, and there are various possibilities that could be explored (e.g., using OGI for difficult-to-monitor components).

The control measure summary table[13] identifies potential VOC reductions of 2 tpd by 2023 from an inventory of 7.1 tpd. WSPA believes that the emissions reduction estimate (i.e., >25%) is overly optimistic. We also note that the baseline emissions inventory is considerably different than the figures which were presented in the 2012 AQMP for Control Measure FUG-03. WSPA would like to understand the source of the 7.1 tons/day emissions inventory as well as the basis

[12] SCAQMD 2012 AQMP Control Measure FUG-03 and 2007 AQMP Control Measure FUG-01.
[13] SCAQMD 2016 AQMP, Appendix IV, page IV-A-80.

for the estimated reductions. We note that the discussion of "Emissions Reduction" provides no basis for the estimated emission reductions.

The cost effectiveness for this measure is presented as $11,000 per ton of emissions reduced, but there is no basis for that estimate. This figure should be supported with an actual technical basis or completely removed from the document.

Lastly, the proposed measure also suggests exploring the use of “new technologies to detect VOC fugitive emissions in order to supplement existing programs and achieve additional emission reductions.” But the Draft AQMP does not explain what those technologies might be, how they would be effective, or how much they might cost and to whom. The measure goes on to discuss two phase implementation without these technologies (or so we inferred). Given the lack of an actual proposal for these new technologies, all references to unspecified “new technologies” should be removed from proposed Control Measure FUG-01.

WSPA appreciates the opportunity to submit these comments. We may submit additional comments during this process as the District releases additional 2016 AQMP documents including, but not limited to the second Draft AQMP. We understand all submissions will be given due consideration by the District staff and the Governing Board.

Please contact me with any questions at (310) 808-2146 or sgornick@wspa.org.

Sincerely,

cc: Michael Krause, SCAQMD

Western States Petroleum Association

Credible Solutions • Responsive Service • Since 1907

Sue Gornick
Manager, Southern California Region

31 October 2016

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

via email: PFine@aqmd.gov

Re: Comments on the Preliminary Draft Socioeconomic Report for the 2016 Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon and Washington. 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 and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA believes the 2016 AQMP must be scientifically-based and technically accurate and the District's Governing Board needs to have a thorough assessment of the air quality benefits, environmental impacts, and economic costs associated with that plan. This is consistent with Governing Board Resolution (1989) which directs AQMD Staff to prepare an economic analysis that identifies affected industries, the cost effectiveness of emissions controls, and the potential public health benefits of proposed rules.[1]

Our initial comments are as follows:

1. The costs presented for proposed control measure CMB-05 (RECLAIM) are significantly understated. This understatement compromises the quality of the assessment's findings related to industrial sector employment and the regional economy.

[1] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 9.

The Preliminary Draft Socioeconomic Report presents a control cost for proposed measure CMB-05 at $13,500 - $21,000 per ton of NO_X reduced. This is reportedly based on information in the Staff Report for the December 2015 amendments to Regulation XX.[2] However, WSPA previously provided information to the District which demonstrated that the cost for refinery sector emission reductions beyond those already required by the December 2015 Regulation XX amendments would be significantly higher.

WSPA, through a third party contractor, had conducted a confidential cost survey of the Southern California refineries related to total capital and operating costs for compliance with the District's proposed NOx RECLAIM shaves.[3] This proprietary information was submitted by refiners on a confidential basis to the third-party contractor who de-identified and aggregated the compliance costs for the overall industry. That forecast suggested the refinery sector compliance costs for the December 2015 shave would be nearly twice the estimate presented by AQMD staff.[4]

Furthermore, WSPA's contractor also projected that additional NO_X reductions could cost the refining industry as much as $120,000 per ton, using a 10-year equipment life. Even using AQMD Staff's liberal 25-yr equipment life assumption, the estimated costs for additional reductions came to over $55,000 per ton of NOx. While the proposed CMB-05 measure is short on explaining exactly how any additional reductions from RECLAIM might actually be achieved, it does openly contemplate the imposition of command-and-control overlays that might further increase the compliance costs for RECLAIM sources beyond previous projections.

Such higher costs would significantly reduce the cost effectiveness of the proposed measure, and would likely increase adverse regional employment impacts to the industrial sector. We strongly recommend that cost estimates for proposed control measure CMB-05 should be reexamined and the socioeconomic impacts be reassessed.

2. AQMD's 25-year useful equipment life assumption is not appropriate and results in understated costs for proposed measure CMB-05. A ten-year useful equipment life would be more appropriate due to the frequency of District rulemakings. Given the size of the proposed market shave, stranded asset costs may need to be considered in the socioeconomic assessment.

As previously noted, AbT Associates has recommended that the District's socioeconomic program should ensure that the control costs include the full cost of retrofitting existing controls or installing new controls. This would include consideration of any stranded asset costs, such as when the proposed BARCT determination requires replacement of prior investments for emission control equipment, or effectively mandates the replacement of basic equipment.[5]

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[2] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 29.

[3] Stillwater Associates LLC, Refinery NOx RECLAIM Shave – A Confidential Survey for WSPA, January 2015 ("WSPA Survey").

[4] WSPA Survey as compared to slides 28 and 30 presented to AQMD NOx RECLAIM Working Group Meeting (WGM) on 7 January 2015.

[5] ABT Associates, Review of the SCAQMD Socioeconomic Assessments, Documentation, Task 1-4 Final, 14 August 2014.

In the case of the RECLAIM program, the District just last year completed a comprehensive assessment for RECLAIM source categories and imposed reductions which established new BARCT levels. So at this time there are no identified control technologies for these source categories, leaving one to wonder how such a severe market shave would even occur short of basic equipment replacements or forced shutdowns.

For this reason, we believe the use of a 25-year equipment life assumption to compute cost effectiveness is inappropriate and results in a systemic understatement of control costs. Control costs for the RECLAIM program should be computed using a 10-year equipment life assumption as is done by most other California air quality agencies. Furthermore, the District should consider whether proposed measure CMB-05 should consider potential stranded asset costs consistent with Abt Associates' recommendations, or explain why that is not needed.

3. The Preliminary Draft Socioeconomic Report fails to provide the economic analysis required under California Health & Safety Code section 39616.

The Preliminary Draft Socioeconomic Report acknowledges that the California Health & Safety Code section 39616 requires certain economic analyses for market based programs.[6] Yet the assessment does not include such an analysis. We would note the specific requirement to demonstrate that market based programs such as RECLAIM will result in equivalent or greater reduction in emissions at equivalent or less cost compared with command and control regulations and future air quality measures that would otherwise have been adopted as part of the District's plan for attainment. Such analysis is wholly missing and should be incorporated into the economic analysis for proposed measure CMB-05.

4. Given the potential adverse socioeconomic impacts that this AQMP could impose on Southern California's industrial sector workforce, the 2016 AQMP and Socioeconomic Report should consider the potential benefits of extending incentives to reduce costs to industrial stationary sources.

The AQMP notes that Southern California's industrial employment remains an important engine for the regional economy. Despite the industry's shrinking workforce over the last 15 years, economic output per worker in the industrial sector is reported in the Preliminary Draft Socioeconomic Report at $152,000 per worker (2014 data reported in 2015 dollars).[7] And in Riverside County and Orange County, industrial sector jobs pay about 25% more than the average wages for those counties. The difference in Los Angeles County is greater.[8]

Given the importance of industrial sector employment to the regional economy, it would make sense to consider extending financial incentives to large stationary sources as a means of accelerating the deployment of lower emission technologies. This should include major facilities presently subject to the RECLAIM program. Including such an incentive based measure would be consistent with recent discussions at the Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty to consider targeted incentives, financing, and funding programs as means for promoting emission reductions and helping businesses remain

[6] H&SC §39616.
[7] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 9.
[8] Ibid.

economically viable, especially in environmental justice areas.[9] We would also note that the Socioeconomic Report projects that 80% of manufacturing job losses under this AQMP would occur in Los Angeles County where the industry is concentrated.[10]

5. The Preliminary Draft Socioeconomic Report states that the RECLAIM control measure is 'expected to mainly affect the petroleum and coal products manufacturing industry, including refineries'.[11] WSPA is surprised and concerned to see that statement, especially since this industry is currently subject to a 56% NOx shave per the December 2015 amendments, while other industry categories either have a lower percentage shave or none at all. Also, the BARCT used to determine the recent shave was set more aggressively for refinery sources than for most non-refinery sectors. Perhaps the intention of this statement was simply to say that since refineries have more RECLAIM units than non-refinery sectors; refineries will bear more absolute cost. However, a proportional shave will have financial impacts whether a facility has one RECLAIM unit or 20. WSPA asks for a clearer explanation and justification of the above statement in the draft report.

6. The control cost for FUG-01 is listed as $11,000/ton of emissions reduced[12]. However, as discussed in WSPA's August 18, 2016 letter, there is no factual cost basis for this estimate. This figure should be supported with an actual technical basis or completely removed from the document.

7. WSPA is deeply concerned about the costs and impacts presented in CARB's Mobile Source Strategy for South Coast (Appendix IV-B of the draft 2016 AQMP), including the low-emission diesel standard. The total estimated cost for CARB control measures affecting South Coast is $28.7 billion; $834 million is attributed to the low-emission standard alone[13]. WSPA has submitted initial comments to CARB on the low-emission diesel standard in June 2016 and will provide additional comments to SCAQMD on the mobile source strategy once the remaining sections of the AQMP Socioeconomic Report are released in the coming weeks.

WSPA appreciates the opportunity to submit these comments. We may submit additional comments during this process as the District releases additional 2016 AQMP documents including, but not limited to the Draft Socioeconomic Report.

Please contact me with any questions at (562) 307-6353 or sue@wspa.org.

Sincerely,

Suzanne E. Sorrick

[9] AQMD Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty, September 2, 2016.
[10] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 10.
[11] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 26.
[12] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 29.
[13] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 23.

Western States Petroleum Association
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Patty Senecal
Director, Southern California Region

4 November 2016 Via Email: PFine@aqmd.gov

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: WSPA Comments on the Revised Draft 2016 Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon, and Washington. WSPA member companies operate petroleum refineries and other facilities in the South Coast Air Basin that will potentially be affected by the information presented in the Revised Draft 2016 Air Quality Management Plan.

WSPA appreciates the opportunity to submit these comments and continues to support the regional air quality planning process. Over the last two decades, Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have reduced their emissions by over 70 percent for most criteria pollutants including nitrogen oxides (NO_X) and sulfur oxides (SO_X). And by 2023, these industries will have further reduced their NO_X emission by another 45 percent.

Our general comments in the Revised Draft AQMP are as follows:

1. **The AQMP control strategy should exclude all measures not needed to minimally achieve the region's carrying capacity targets for attainment of the National Ambient Air Quality Standards (NAAQS).**

As presented in the Revised Draft AQMP,[1] the proposed control strategy continues to include a number of measures which are not necessary for meeting the AQMP objectives. These additional measures are not shown as necessary for reaching the region's "carrying capacity." In fact, most of these extra measures have no quantified emission benefits yet would impose considerable costs on the Southern California economy. They should be removed from the AQMP.

[1] SCAQMD, Revised Draft 2016 AQMP, Table ES-2 (October 2016).

2. **The AQMP control strategy should prioritize non-regulatory, incentive based approaches to reducing emissions outside the State Strategy. The AQMP should consider the potential benefits of extending incentives to reduce costs to industrial stationary sources.**

To the extent they are needed to demonstrate attainment, WSPA is supportive of the AQMP's inclusion of control measures based on incentives and other non-regulatory approaches intended to accelerate the transition of vehicles, buildings, and industrial facilities to cleaner technologies. Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have dramatically reduced their emissions by over 70 percent for most criteria pollutants over the last two decades, and by 2023 these same industries will have further reduced their NO_X emission by another 45 percent[2]. With these additional reductions, industrial facilities may not be able to further reduce emissions in a cost effective manner absent financial incentives.

Industrial sector employment is a vital part of the regional economy. The AQMP should extend the use of incentives to include large stationary sources, including major sources presently subject to the RECLAIM program. This could serve to accelerate the deployment of lower emission technologies and would be consistent with recent discussions at the Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty to consider targeted incentives, financing, and funding programs as means for promoting emission reductions and helping businesses remain economically viable, especially in environmental justice areas.[3]

3. **Given the December 2015 and October 2016 amendments to the RECLAIM program, Proposed CMB-05 (Further NOx Reductions from RECLAIM Assessment [NOx]) is unreasonable and lacks any technical foundation. Proposed measure CMB-05 should be completely removed from the AQMP.**

In December 2015, the AQMD Governing Board approved the single largest adjustment to the NOx RECLAIM program since it began in 1994. When fully implemented, those amendments will have removed at least 12 tons per day (tpd) from the NOx RECLAIM market; a 45% reduction. This is on top of the nearly 70% reduction in NOx emissions achieved under RECLAIM since 1994.

The December 2015 rulemaking made RECLAIM adjustments to reflect the (perceived) advancement of NOx Best Available Retrofit Control Technology (BARCT) for various equipment by establishing new RECLAIM Trading Credit (RTC) adjustment factors for year 2016 and beyond. That rulemaking also took "credit" for the fact that certain companies had left Southern California, and made adjustments for anticipated future growth of industrial sectors covered by the RECLAIM program. The December 2015 rulemaking also included an "off-ramp" for electricity generating facilities (EGF) at BACT or BARCT. That last provision, if optioned by qualifying EGFs, could result in additional RTCs being removed from the RECLAIM program above and beyond the 12 tpd market adjustment approved by the Governing Board. And in October 2016, the Governing Board adopted further amendments that will remove even more RTCs from the NOx RECLAIM Program in the event of future RECLAIM facility shutdowns.

As presented in the Revised Draft AQMP, the proposed measure purports to address "*…issues that arose during recent NOx RECLAIM amendments. These measures listed below would be designed to achieve*

[2] SCAQMD December 2015 amendments to the NOx RECLAIM program, Rule 2002, adopted 12/4/15.
[3] SCAQMD Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty, September 2, 2016.

additional actual and/or SIP creditable emission reductions from the RECLAIM Program and ensure future equivalency with command-and-control regulations." As detailed below, each of these "issues" has already been addressed in the December 2015 or October 2016 rulemakings or are otherwise moot.

Specifically, the Revised Draft AQMP suggests the following reasons:[4]
Note: Changes from the first draft AQMP are represented as follows: removed words are crossed out and added words are underlined.

Issue as Presented: *"Assess whether more SIP creditable and/or actual emission reductions could be achieved without the RECLAIM program, and if so, explore how the program could be sunset in an orderly and equitable fashion. ~~Assessment of whether t~~<u>T</u>he cost-effectiveness benefits that the RECLAIM market was intended to provide <u>may</u> ~~still exist~~ <u>cease to exist</u> given the need for all feasible NOx reductions and the potential lack of lower-cost control options. <u>As many of the program's original advantages appear to be diminishing and generating increased scrutiny, an orderly sunset of the RECLAIM program may be the best way to create more regulatory certainty and reduce compliance burdens for RECLAIM facilities. Many of the approaches listed below may serve as interim steps in a long-term elimination of the program."</u>*

As stated earlier in this letter, the RECLAIM program has been very successful over the past 20 years, and with the recent amendments in December 2015, significant emission reductions will continue to be realized over the next 6 years. A sunset of the program would be a policy matter to be debated by the Governing Board and should not only include a detailed socioeconomic assessment to consider the potential impacts to the regional economy but also a thorough review of the District's legal obligations under the California Health & Safety Code. Additionally, Staff has not offered any information to suggest such a policy change could even yield creditable reductions. For these reasons, a sunset of the RECLAIM program is, at best, premature, and should not be included as an alternative in the AQMP.

Issue as Presented: *"Consider options for facilities at BACT or BARCT and/or facilities with no allocations (structural buyers) to exit the program and be subject to command and control regulations. The most recent NOx amendment allowed EGFs to voluntarily opt-out of RECLAIM. Such an option could be extended to other facilities, and potentially lead to more AQMP creditable emission reductions ~~given that future non-RECLAIM facilities emissions are projected at actual levels with growth rather than total allocations~~."*

The December 2015 rulemaking already featured an "off-ramp" for EGFs at BACT or BARCT, and that rulemaking (by design) would force the remaining RECLAIM facilities to meet the Staff's BARCT levels (found in Rule 2002) on a programmatic basis. As stated previously, if optioned by qualifying EGFs, the provision could result in additional RTCs being removed from the RECLAIM program above and beyond the 12 tpd market adjustment approved by the Governing Board. Therefore, WSPA cautions staff from including additional "off-ramp" provisions in the AQMP until the impact of its implementation is clearly understood on the RECLAIM program.

Issue as Presented: *"Consider command-and-control regulation overlays to certain RECLAIM facilities. For some RECLAIM facilities a command-and-control overlay may be the best way to reduce NOx emissions while maintaining the required equivalency with command and control."*

[4] SCAQMD Draft AQMP, Appendix IV, page IV-A-88 et seq.

The December 2015 rulemaking by design forces RECLAIM facilities to meet the Staff's BARCT levels (found in Rule 2002) on a programmatic basis. Those BARCT levels in most cases are equal to or more stringent than current BACT.[5] The suggested "command-and-control overlays" would fundamentally conflict with Regulation XX program design. And given the December 2015 amendments, there is no evidence to suggest they would yield additional creditable emission reductions.

Issue as Presented: "*Assess the need for and the size of the differential between RTC holdings and actual emissions. The size of this unused RTC margin is affected by the possible need for a compliance margin, uncertainties in the growth projections for existing and new businesses, facility and equipment shutdowns, and holdings by investors. A full assessment may allow for an optimization of the size of the margin that could allow for further RTC reductions.*"

During the December 2015 rulemaking, it was noted that overall, the NOx RECLAIM market had, in recent years (i.e., 2011-2013), exhibited an unused RTC margin of 4-6 tpd depending on the year and prevailing economic conditions. In the context of that period's market cap of 26.5 tpd, the 4-6 tpd represented 15-25% of the overall NOx RTC market. By its very design, the December 2015 rulemaking will have eliminated nearly all of those previously unused RTCs once fully implemented by 2023. This historical observation does not represent a valid basis for further market adjustment.

Issue as Presented: *"Assess facility and equipment shutdowns and the removal of associated RTCs from the market. Under command-and-control rules, shutdown emission credits are heavily discounted to BACT, based on the last 2 years of operation. While there is no discount of credits for a RECLAIM facility or equipment shutdown, the overall RTCs available to RECLAIM facilities have been reduced over time to reflect the advancement of BARCT (i.e., command-and-control equivalency). In some cases, these BARCT levels are equal to, or more stringent than, BACT determinations. However, these credits, if not removed from the program, could reduce the incentive to implement cost-effective controls that would otherwise be required under command-and-control. California Health & Safety Code Section 39616(c)(1) requires that RECLAIM, a market-based program, will result in equivalent or greater reduction in emissions at equivalent or less cost compared with current command and control regulations and future air quality measures that would otherwise have been adopted as part of the SCAQMD's plan for attainment. Amendments are currently being considered to address RTCs upon facility shutdowns."*

On 7 October 2016, the Governing Board adopted additional amendments to RECLAIM which comprehensively addressed the facility shutdown issue. This "issue" is now resolved and should be removed from the AQMP.

Issue as Presented: "*Perform additional or more frequent BARCT assessments and adjust allocations as control technologies improve and are implemented in practice."*

AQMD is already obligated to perform such assessments under the California Health & Safety Code.[6] Such assessments would trigger future rulemaking if it was concluded that BARCT was more stringent than the levels stated in Rule 2002. Given the severity of the BARCT determinations in the December

[5] SCAQMD 2016 AQMP, Appendix IV, page IV-A-89. "In some cases, these BARCT levels are equal to, or more stringent than, BACT determinations."
[6] H&SC §39616(c).

2015 rulemaking, some of which are more stringent than accepted BACT, there is no technical basis at this time to suggest that BARCT advancement will be able to yield an additional 5 tpd of NOx emissions from RECLAIM facilities by 2031.

Issue as Presented: *"Re-examination of the RECLAIM program if RTC prices hit the upper or lower threshold amounts. The current NOx RECLAIM regulation has a lower price threshold of $200,000 per ton (infinite year block) and upper price thresholds of $22,500 and $35,000 per ton (discrete year; annual and 3-month average, respectively). The levels of these thresholds or additional thresholds could be modified commensurate with future BARCT assessments and attainment needs."*

California Health and Safety Code requires the District to make certain findings when adopting rules and regulations to implement a market-based incentive program, including a determination that:

- The program will result in an equivalent or greater reduction in emissions at equivalent or less cost compared with current command and control regulations and future air quality measures that would otherwise have been adopted as part of the district's plan for attainment.
- The program will provide a level of enforcement and monitoring, to ensure compliance with emission reduction requirements, comparable with command and control air quality measures that would otherwise have been adopted by the district for inclusion in the district's plan for attainment.
- The program will not result in a greater loss of jobs or more significant shifts from higher to lower skilled jobs, on an overall districtwide basis, than that which would exist under command and control air quality measures that would otherwise have been adopted as part of the district's plan for attainment.
- The program will not result in disproportionate impacts, measured on an aggregate basis, on those stationary sources included in the program compared to other permitted stationary sources in the district's plan for attainment.[7]

Any reconsideration of price triggers or cost effectiveness thresholds would need to be supported by findings that the program will not result in disproportionate impacts, measured on an aggregate basis, on those facilities included in the RECLAIM program as compared to other permitted stationary sources in the District. Given the severity of the December 2015 and October 2016 amendments, we are skeptical that such a finding could be made at this time. We do not believe this issue supports further reductions in the NO_X RECLAIM market.

Issue as Presented: *"Assess the impacts of investors holding RTCs. Investors have historically played an important role in the RECLAIM program. However, their holding of RTCs has posed problems with the trading and identification of reductions because they are not RECLAIM facilities that have an initial allocation or a potential to reduce NOx emissions."*

This topic appears to be a policy matter which would need to be considered by the Governing Board and possibly state legislation. California Health & Safety Code specifically provides that RECLAIM "shall achieve emission reductions across a spectrum of sources by allowing for trading of emissions trading

[7] H&SC §39616(c).

units for quantifiable reductions in emissions from a significant number of different sources."[8] Absent a change in policy directive, this does not support further reductions in the NOx RECLAIM market.

To summarize, the basis presented in the Revised Draft AQMP for proposed Control Measure CMB-05 do not support this control measure given the RECLAIM program changes already adopted under the December 2015 and October 2016 rulemakings. Furthermore, the proposed measure lacks any rationale to support the notion that 5 tpd of additional creditable emission reductions could be achieved by 2031. For these reasons, proposed measure CMB-05 should be completely removed from the AQMP. If the District insists on including a RECLAIM control measure in this AQMP, the emission reduction should be represented as a range since what is included in the AQMP is the minimum commitment to USEPA that must be met. We recommend a range of 0-3 tpd. WSPA believes this range adequately encompasses the uncertainty on all the components listed above, some already adopted (i.e. facility shutdown credits) and some to be considered (i.e. command-and-control overlays), but none of them have specific reductions that have been analyzed and justified. And further, WSPA believes that any additional adjustment to RECLAIM Trading Credits (RTCs) under the NOx RECLAIM program should be applied equally to all NOx RECLAIM market participants as a proportion of their present RTC holdings consistent with the founding principles of the RECLAIM program.

4. The costs presented for proposed control measure CMB-05 (RECLAIM) in Table 6-5 are significantly understated. This understatement compromises the Governing Board's ability to make in informed policy decision.

Revised Draft AQMP Table 6-5 presents the cost for proposed measure CMB-05 at $13,500 - $21,000 per ton of NO_X reduced. This is supposedly based on information in the Staff Report for the December 2015 amendments to Regulation XX. However, WSPA previously provided information to the District which clearly demonstrated that the cost for refinery sector emission reductions beyond those required in the December 2015 amendments would be significantly higher.

WSPA, through a third party contractor, conducted a confidential cost survey of the Southern California refineries related to total capital and operating costs for compliance with the District's proposed NO_X RECLAIM shaves. This proprietary information was submitted by refiners on a confidential basis to the third-party contractor who de-identified and aggregated the compliance costs for the overall industry. That forecast suggested the refinery sector compliance costs for the December 2015 shave would be nearly twice the estimate presented by AQMD staff.

Furthermore, WSPA's contractor also projected that additional NO_X reductions could cost the refining industry as much as $120,000 per ton, using a 10-year equipment life. Even using Staff's liberal 25-yr equipment life assumption, the estimated costs for additional reductions came to over $55,000 per ton of NOx. While proposed measure CMB-05 fails to explain how any additional reductions from RECLAIM might actually be achieved (see above), it does openly contemplate the imposition of command-and-control overlays that might further increase compliance costs for RECLAIM sources beyond previous projections.

[8] California Health & Safety Code §40440.1(a).

5. Proposed measured CMB-01 should be expanded to include facilities in the RECLAIM program.

Proposed measure CMB-01, Transition to Zero and Near-Zero Emission Technologies for Stationary Sources, would seek emissions reductions of NO_X and VOCs from traditional combustion sources by replacement with zero and near-zero emission technologies. This incentive measure would help fund qualifying technology changes by deploying funding or grants to encourage the immediate use of clean, low emission technologies. Such facility modernization concepts have been extensively discussed with stakeholders and were summarized in the Business Case for Clean Air Strategies White Paper. But for some reason, the current CMB-01 proposal would exclude RECLAIM facilities without exception. Given the interest in promoting feasible emission reductions from combustion sources, we see no reason for such a broad exclusion.

Proposed measure CMB-01 should be revised to allow RECLAIM facilities with qualifying projects to participate in the incentive funding program.

6. Under proposed Measure FUG-01 (Improved Leak Detection and Repair), WSPA supports the use of Smart-LDAR as a substitute for conventional LDAR programs. This would be the intended purpose of "Smart-LDAR" and could help to resolve the inefficient and labor intensive effort associated with conventional LDAR programs.

The Revised Draft AQMP includes a proposed control measure which describes a wide-ranging approach to potentially further reducing VOC emissions from fugitive emission components at petroleum industry facilities and chemical plants. The control measure again focuses on the potential use of optical gas imaging technology (as it did the 2012 and 2007 AQMPs).[9] Optical gas imaging (OGI) technology was borne out of a desire to conduct fugitive emission LDAR programs in a more efficient manner (thus, the term "Smart-LDAR"). Prior AQMPs have specifically recognized the inefficient and labor intensive effort associated with conventional LDAR programs; however, this concept is not addressed in FUG-01.

WSPA appreciates that the Revised Draft AQMP's language for this control measure has been revised to (potentially) allow the use of Smart-LDAR technologies as an alternative to inefficient conventional LDAR programs. This would be the intended purpose of "Smart-LDAR" and could help to resolve the inefficient and labor intensive effort associated with conventional LDAR programs.

7. Proposed Measure FUG-01 (Improved Leak Detection and Repair) should be revised to clarify that Smart-LDAR would not be required as a supplement to conventional LDAR inspections.

The Revised Draft AQMP states that: "*Consideration will be made, where appropriate, for the use of Smart LDAR as a substitute for existing LDAR programs. Some smart LDAR technologies are qualitative only and the lack of quantitative information would require the continued use of existing LDAR programs in those situations*." [10]

As noted above, we support the concept of potentially replacing traditional LDAR programs with Smart-LDAR technologies. Industry would be strongly opposed to requirements for using Smart-LDAR

[9] SCAQMD 2012 AQMP Control Measure FUG-03 and 2007 AQMP Control Measure FUG-01.
[10] SCAQMD, Revised Draft 2016 AQMP, Appendix IV, page IV-A-93.

technologies as a supplement to existing LDAR programs. The highest and best potential use of Optical Gas Imaging (OGI) is as a substitute for conventional inspections of components with an organic vapor analyzer. Adding OGI (or other technologies) to existing requirements is not cost-effective and may not provide environmental benefit.

8. The emission reductions cited for Proposed Measure FUG-01 are not supported.

The control measure summary table identifies potential VOC reductions of 2 tpd by 2023 from an inventory of 7.1 tpd. [11] WSPA believes that the emissions reduction estimate (i.e., >25%) is overly optimistic. We also note that the baseline emissions inventory is considerably different than the figures which were presented in the 2012 AQMP for Control Measure FUG-03. WSPA still wants to understand the source of the 7.1 tons/day emissions inventory as well as the basis for the estimated reductions.

9. For Proposed Measure FUG-01, all references to new technologies or optical remote sensing technologies are out of place and should be removed.

The proposed measure also suggests exploring the use of "new technologies to detect VOC fugitive emissions in order to supplement existing programs and achieve additional emission reductions."[12] But the Draft AQMP does not explain what those technologies might be, how they would be effective, or how much they might cost and to whom. The measure goes on to discuss two phase implementation without these technologies (or so we inferred). Given the lack of an actual proposal for these new technologies, all references to unspecified "new technologies" should be removed from proposed Control Measure FUG-01.

Furthermore, the Cost Effectiveness section for proposed measure FUG-01 contains a random reference to "SOF" (Solar Occultation Flux).[13] WSPA understands that pilot studies are currently being conducted to develop a variety of ORI technologies that could be used to detect fugitive emission leaks; however, we are concerned that a specific technology would be named in a general document such as the AQMP. Therefore, any references to SOF should be removed from the AQMP.

10. Proposed measure BCM-02 (Emission Reductions from Cooling Towers) is not needed for the attainment demonstration; it should be removed from the AQMP.

As presented in the Revised Draft AQMP, this control measure would seek to phase-in the use of drift eliminators with 0.001% efficiency for existing cooling towers. This would be achieved by requiring retrofit of older cooling towers with modification to the cooling fans to accompany the drift eliminators. Newly constructed cooling towers have demonstrated ultra-low drift rate of 0.0005%.

The Revised Draft AQMP does not present an emission reduction number for this proposed measure, and it is clearly unnecessary for the $PM_{2.5}$ attainment demonstration. In fact, the Revised Draft AQMP modeling assessment shows that the region will satisfy the $PM_{2.5}$ NAAQS based solely on the ozone

[11] SCAQMD, Revised Draft AQMP, Appendix IV, page IV-A-91.
[12] SCAQMD 2016 Revised Draft AQMP, Appendix IV, page IV-A-93.
[13] SCAQMD 2016 Revised Draft AQMP, Appendix IV, page IV-A-94.

strategy control measures and that no additional measures are needed.[14] As such, this measure should be removed from the AQMP.

11. Proposed measure BCM-05 is not needed to support the attainment demonstration; it should be removed from the AQMP.

As presented in the Revised Draft AQMP, this control measure would require ammonia slip catalysts be installed in combustion sources with Selective Catalytic Reduction (SCR) systems for the control of NO_X. These would be installed post-SCR and could result in less ammonia slip from these sources.

The Revised Draft AQMP does not present an emission reduction number for this measure, and the measure is clearly not needed for the $PM_{2.5}$ attainment demonstration. In fact, the Revised Draft AQMP modeling assessment shows that the region will satisfy the $PM_{2.5}$ NAAQS based solely on the ozone strategy control measures and that no additional measures are needed.[15] Since this measure is unnecessary for regional attainment, it should be removed from the AQMP.

12. General Comments Regarding CARB's Mobile Source Strategy.

WSPA is deeply concerned about the costs and impacts presented in CARB's Mobile Source Strategy for South Coast (Appendix IV-B of the draft 2016 AQMP), including the low-emission diesel standard. The total estimated cost for CARB control measures affecting South Coast is $28.7 billion; $834 million is attributed to the low-emission standard alone[16]. WSPA has submitted initial comments to CARB on the low-emission diesel standard in June 2016 and will provide additional comments to SCAQMD on the mobile source strategy once the remaining sections of the AQMP Socioeconomic Report are released in the coming weeks.

WSPA appreciates the opportunity to submit these comments. We may submit additional comments during this process as the District releases additional 2016 AQMP documents including, but not limited to the Final Draft AQMP. We understand all submissions will be given due consideration by the District staff and the Governing Board.

If you have any questions, please contact me at (310) 808-2144 or by email at patty@wspa.org.

Sincerely,

Patty Senecal

[14] SCAQMD, Presentation to the AQMP Working Group, Meeting #14, Agenda Item 2 (27 October 2016).
[15] Ibid.
[16] AQMD, Preliminary Draft Socioeconomic Report for the 2016 AQMP, August 2016. Page 23.

Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Patty Senecal
Director, Southern California Region

19 December 2016

Via email: PFine@aqmd.gov

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the November 2016 version of the Socioeconomic Report for the 2016 Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon and Washington. 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 and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA believes the 2016 AQMP must be scientifically-based and technically accurate and the District's Governing Board needs to have a thorough assessment of the air quality benefits, environmental impacts, and economic costs associated with that plan. This is consistent with Governing Board Resolution (1989) which directs AQMD Staff to prepare economic analysis that identifies affected industries, the cost effectiveness of emissions controls, and the potential public health benefits of proposed rules.[1]

Our comments on the Draft Socioeconomic Report (dated November 2016) are as follows:

[1] AQMD, Draft Socioeconomic Report for the 2016 AQMP, November 2016. Page 1-4.

1. **The costs for the Final Draft AQMP have been disproportionately targeted against stationary sources. The plan should be adjusted to more fairly align costs with the needed emissions reductions.**

It is well documented that the South Coast region's air quality problem is now overwhelmingly due to emissions from mobile sources. In fact, the AQMP's emission inventory shows that mobile sources are responsible for 85% of regional NOx emissions with the combined emissions from stationary and area sources (e.g., residences) now representing only 15% of those emissions.[2] Yet the AQMP is proposing measures that would impose 36% of the plan's total costs against stationary sources.[3] Given the significant emission reductions from stationary sources made over the previous decades, this plan's measures and associated costs must be adjusted to reflect fair share reductions needed for attainment of the National Ambient Air Quality Standards.

2. **The Final Draft AQMP is proposing a number of control measures for which the Draft Socioeconomic Report presents no costs. Given the Final Draft AQMP's clear demonstration that these measures are unneeded for either the ozone or $PM_{2.5}$ attainment demonstrations, they should be removed from the control strategy.**

The Final Draft AQMP continues to include a large number of proposed control measures which are demonstrated in the plan as unnecessary for reaching the region's "carrying capacity."[4] These additional measures are presented with no quantified emissions benefits and are often vaguely described as to what the proposed measures would even require. Such extraneous measures include:

Number	Title	Emission Reductions (tpd) (2023/2031)
MCS-01	Improved Breakdown Procedures and Process Re-Design [All Pollutants]	N/A
MCS-02	Application of All Feasible Measures [All Pollutants]	TBD
FLX-02	Stationary Source VOC Incentives [VOC]	TBD
BCM-02	Emission Reductions from Cooling Towers [PM]	TBD
BCM-03	Further Emission Reductions from Paved Road Dust Sources [PM]	TBD

[2] AQMD, Revised Draft AQMP, Appendix III, Attachment A, 2016 Annual Average Emissions by Source Category in South Coast Air Basin, comparison of "Total Stationary and Area Sources" NOx emissions to Total NOx emissions.
[3] AQMD, Draft Socioeconomic Report for the 2016 AQMP, November 2016. Table 2-1, comparison of Present Worth Value of Total Incremental Costs for SCAQMD Stationary Sources to Grand Total for all Qualified Costs.
[4] AQMD, Final Draft AQMP, Chapter 4

BCM-05	Ammonia Emission Reductions from NOx Controls [NH3]	TBD
BCM-06	Emission Reductions from Abrasive Blasting Operations [PM]	TBD
BCM-07	Emission Reductions from Stone Grinding, Cutting and Polishing Operations [PM]	TBD
BCM-08	Further Emission Reductions from Agricultural, Prescribed and Training Burning [PM]	TBD
BCM-09	Further Emission Reductions from Wood-Burning Fireplaces and Wood Stoves [PM]	TBD
EGM-01	Emission Reductions from New Development and Redevelopment Projects [All Pollutants]	TBD
MOB-01	Emission Reductions at Commercial Marine Ports [NOx, SOx, PM]	TBD
MOB-02	Emission Reductions at Rail Yards and Intermodal Facilities [NOx, PM]	TBD
MOB-03	Emission Reductions at Warehouse Distribution Centers [All Pollutants]	TBD
MOB-04	Emission Reductions at Commercial Airports [All Pollutants]	TBD
MOB-05	Accelerated Penetration of Partial Zero-Emission and Zero-Emission Vehicles [VOC, NOx, CO]	TBD
MOB-06	Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles [VOC, NOx, CO]	TBD
MOB-07	Accelerated Penetration of Partial Zero-Emission and Zero-Emission Light-Heavy- and Medium-Heavy-Duty Vehicles [NOx, PM]	TBD
MOB-08	Accelerated Retirement of Older On-Road Heavy-Duty Vehicles [NOx, PM]	TBD
MOB-09	On-Road Mobile Source Emission Reduction Credit Generation Program [NOx, PM]	TBD
MOB-12	Further Emission Reductions from Passenger Locomotives [NOx, PM]	TBD
MOB-13	Off-Road Mobile Source Emission Reduction Credit Generation Program [NOx, SOx, PM]	TBD

In fact, while none of these proposed measures has any quantified emission benefits they would certainly impose additional costs on the Southern California economy. Yet the Draft Socioeconomic Report presents no costs for these measures. Given that the AQMP clearly demonstrates that these measures are unneeded for either the ozone or $PM_{2.5}$ attainment demonstrations, they should all be removed from the control strategy.

3. The AQMP control strategy should prioritize non-regulatory, incentive based approaches to reducing emissions outside the State Strategy. The AQMP should consider the potential benefits of extending incentives to reduce costs to industrial stationary sources.

To the extent they are needed to demonstrate attainment, WSPA is supportive of the Final Draft AQMP's inclusion of control measures based on incentives and other non-regulatory approaches intended to accelerate the transition of vehicles, buildings, and industrial facilities to cleaner technologies. Southern California's industrial facilities (i.e., stationary sources including the region's petroleum refineries) have dramatically reduced their emissions by over 70% for most criteria pollutants over the last two decades, and by 2023 these same industries will have further reduced their NO_X emission by another 45%.[5] With these additional reductions, industrial facilities may not be able to further reduce emissions in a cost effective manner absent financial incentives.

Industrial sector employment is a vital part of the regional economy. The report notes:

> *Despite the industry's shrinking workforce, its output per worker has increased over time, rising from $89,000 to $152,000 (in 2015 dollars) over the 2001 to 2014 time period (see Figure 1-3). Currently, the average pay in the sector ranges from $50,000 in Riverside County to $69,000 in Orange County, paying about a quarter more than the average wages in these counties. Both chemical manufacturers and refineries are expected to be impacted by stationary source measures. Chemical manufacturing pays slightly higher with average pay ranging from $58,000 in Riverside County to $70,000 in Orange County. Petroleum manufacturing pays substantially higher, ranging from $75,000 in Riverside County to $117,000 in Los Angeles County.*[6]

The report notes that Southern California's industrial employment remains an important engine for the regional economy. Despite the outsized economic importance of the industrial sector, both in terms of economic output and average wages, the current AQMP strategy would impose a disproportionate share of costs against industrial employers. The AQMD Staff and Governing Board should consider extending the use of financial incentives to include large stationary sources, including major sources. This could accelerate the deployment of cleaner technologies and would be consistent with recommendations from the Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty to consider targeted incentives, financing, and funding programs as means for promoting emission reductions and helping businesses remain economically viable, especially in environmental justice areas.[7] The AQMP as currently presented is in conflict with that direction.

[5] AQMD, Staff Report for Amendments to the NOx RECLAIM program, Rule 2002, December 2015.
[6] AQMD, Draft Socioeconomic Report, page 1-7.
[7] AQMD Ad Hoc Committee on Large Compliance Investments and Future Regulatory Certainty, September 2, 2016.

4. **The costs presented for proposed control measure CMB-05 (RECLAIM) in Table 2-1 of the Draft Socioeconomic Report are significantly understated. This understatement compromises the Governing Board's ability to make informed policy decisions. Given these uncertainties, proposed measure CMB-05 should be changed to reflect a range of potential emission reductions (e.g., 3-5 TPD NO_X), and the socioeconomic analysis should be revised to reflect the better cost information which was previously supplied to AQMD Staff by industry (e.g., WSPA).**

Draft Socioeconomic Report Table 2-1 presents the cost for proposed measure CMB-05 at $856.4 million. This figure is supposedly based on information in the Staff Report for the December 2015 amendments to Regulation XX. However, as previously noted by WSPA, the District was previously provided information that demonstrated the cost for refinery sector emission reductions beyond those required under the December 2015 amendments would be significantly higher than AQMD Staff estimates.

WSPA, through a third party contractor, conducted a confidential cost survey of the Southern California refineries related to total capital and operating costs for compliance with the District's proposed NO_X RECLAIM shaves. This proprietary information was submitted by refiners on a confidential basis to the third-party contractor who de-identified and aggregated the compliance costs for the overall industry. That forecast suggested the refinery sector compliance costs for the December 2015 shave would be nearly twice the estimate presented by AQMD Staff. Furthermore, WSPA's contractor also projected that additional NO_X reductions could cost the refining industry as much as $120,000 per ton, using a 10-year equipment life. Even using Staff's more liberal 25-yr equipment life assumption, the estimated costs for additional reductions came to over $55,000 per ton of NO_X.

The proposed control measure openly contemplates the imposition of new command-and-control overlays that would increase compliance costs for RECLAIM sources beyond previous projections. But the measure continues to lack a clear explanation of how RECLAIM facilities might actually achieve such reductions or realistic cost bases for them. Given these uncertainties, proposed measure CMB-05 should be changed to reflect a range of potential emission reductions (e.g., 3-5 TPD NO_X), and the socioeconomic analysis should be revised to reflect the better cost information which was previously supplied to AQMD Staff by industry (e.g., WSPA).

5. **The Preliminary Draft Socioeconomic Report fails to provide the economic analysis required under California Health & Safety Code section 39616.**

The Draft Socioeconomic Report acknowledges that the California Health & Safety Code section 39616 requires certain economic analyses for market based programs.

> *Section 39616 requires the SCAQMD to ensure that any market-based incentive strategy it adopts results in equivalent or greater emission reductions at equivalent or less cost and overall job impacts – i.e., no greater job losses or significant shifts from high-paying to low-paying jobs – when compared to command-and-control regulations. Section 40920.6, requires that incremental*

cost effectiveness – i.e., the difference in costs divided by difference in emission reductions – be performed whenever more than one control option is feasible to meet control requirements. [8]

Yet the assessment does not include such an analysis. We would note the specific requirement to demonstrate that market-based programs such as RECLAIM will result in equivalent or greater reduction in emissions at equivalent or less cost compared with command and control regulations and future air quality measures that would otherwise have been adopted as part of the District's plan for attainment. Such analysis is wholly missing and should be incorporated into the economic analysis for proposed measure CMB-05.

6. AQMD's 25-year useful equipment life assumption is not appropriate and results in understated costs for proposed measure CMB-05. A ten-year useful equipment life would be more appropriate due to the frequency of District rulemakings and the expected technology replacement. Stranded asset costs may need to be considered in the socioeconomic assessment.

As previously noted, Abt Associates recommended that the District's socioeconomic program should ensure that the control costs include the full cost of retrofitting existing controls or installing new controls. This would include consideration of any stranded asset costs, such as when the proposed BARCT determination requires replacement of prior investments for emission control equipment, or effectively mandates the replacement of basic equipment.[9]

In the case of the CMB-05 program, the District just last year completed a comprehensive assessment for sources covered by Regulation XX and imposed reductions which established new BARCT levels. So at this time there are no identified control technologies for these source categories, and no explanation for how another severe market reduction would occur without basic equipment replacements or forced facility shutdowns.

As such, we believe the use of a 25-year equipment life assumption to compute cost effectiveness is really inappropriate and results in a systemic understatement of AQMP control costs. Control costs for CMB-05 should be re-computed using a 10-year equipment life assumption. Furthermore, the Staff should consider if this measure would cause potential stranded asset costs consistent (with Abt Associates' recommendations), or clearly explain why that is not needed.

[8] AQMD, Draft Socioeconomic Report, page 1-4.

[9] ABT Associates, Review of the SCAQMD Socioeconomic Assessments, Documentation, Task 1-4 Final, 14 August 2014.

7. For the proposed Advanced Clean Cars 2 measure, the Draft Socioeconomic Report does not provide a basis for cost estimates. Certain assumptions appear questionable, as best. AQMD or CARB must support or adjust these assumptions which are important to the projected costs of the measure.

The proposed Advanced Clean Cars 2 measure assumes that combined passenger vehicle (LDA/LDT2) ZEV/PHEV sales increase from 18% to 40% between 2025 and 2030, medium-duty trucks (MDV) ZEV/PHEV sales beginning 2026, ramping up to 10 percent by 2030, with 100 percent sales of super-ultra-low-emission vehicles certified to the SULEV 20 exhaust emission standards by 2030 for gasoline light-duty automobiles (LDAs). ARB staff also modeled increased fuel efficiency (at approximately 2.9 percent per year) between 2025 and 2035 for gasoline vehicles. Under this scenario of rapidly declining demand for gasoline and diesel, the analysis assumes that gasoline and diesel prices will increase. Conversely, the analysis suggests that prices for electricity and hydrogen will be flat despite transportation related demand for electricity increasing by 200% and hydrogen by over 210%.[10] No basis is offered for why prices for some energy types might increase in the face of declining demand while others remain flat despite radically increasing demand. Yet those assumptions clearly color the results of the economic analysis. AQMD or CARB should explain the reasoning for these assumptions which are important to the financial analysis.

Furthermore, the analysis seems to completely ignore the economic impacts, positive and negative, of forcing a radical shift of transportation related energy demand from petroleum fuels to electricity. Such a transformation would require significant electricity infrastructure investments, and could also create stranded assets in the traditional petroleum fuels supply chain which this analysis appears to completely ignore. These are significant economic factors which must be analyzed. Instead, the Report downplays broader impacts as being limited retail establishments with lower wage employment.

> *The California businesses impacted by this measure concept are largely impacted indirectly, as affiliated businesses such as gasoline service stations, automobile dealers, and automobile repair shops may see changes in the demand for services and goods. These businesses compete within the State and generally are not subject to competition from out-of-state businesses. Therefore, the potential regulations resulting from this measure concept are not expected to impose significant competitive disadvantages on affiliated businesses.*[11]

Given the regional significance of employment in the refining sector, both direct and indirect, these impacts could be regionally important and should be assessed.

[10] AQMD, Draft Socioeconomic Report, Appendix 2-A, Page 2-A-35.
[11] CARB, Mobile Source Strategy, Economic Analysis, Page A-9

8. The Draft Socioeconomic Report fails to present any costs for the Further Deployment for Cleaner Technologies, On-Road Light Duty control measure. The AQMD's analysis must be revised to include a full assessment of the costs associated with this measure.

A significant amount of the AQMD's proposed emissions reductions are anticipated to come from the control measure entitled Further Deployment for Cleaner Technologies, On-Road Light Duty.[12] The stated goals of this proposed measure are to accelerate the penetration of zero and near-zero emission vehicles and to promote in-use efficiency gains related to vehicle miles travelled (VMT), and through use of autonomous vehicles and advanced transportation systems.[13] To achieve these further reductions associated with early penetration of the zero and near-zero vehicle technologies established under the ZEV regulation, CARB and AQMD Staff estimate that approximately 500,000 to 600,000 of the oldest passenger cars and trucks would need to be turned over to model year vehicles meeting the currently applicable LEV III emission standard or advanced hybrid or zero-emission technology by 2023. To achieve these objectives, which would only apply to the South Coast basin, the agencies suggest they would:

- *Expand and enhance existing incentive and other innovative funding programs for light-duty vehicles in order to accelerate the replacement of older vehicles with vehicles meeting a LEV III or better emissions level. Assuming incentive funding is the primary mechanism to achieve the scope of further technology deployment described above; funding would be required for approximately 70,000 to 85,000 vehicles per year over a seven year period. The incentive funding required for this effort would go beyond the amount currently authorized for existing programs through 2023. This effort could expand upon the current EFMP and EFMP Plus-Up programs, and include increasing the use of these vehicles in underserved communities and by lower-income consumers. Continued incentive funding post-2023 to further accelerate the deployment of zero-emission vehicles would provide additional reductions for 2031.*

  Determination of the needed resources will be based on assessment of the incremental cost of technologies and the type of funding mechanism employed. Funding needs and mechanisms will be identified working in collaboration with the South Coast and other State agencies over the next several months.

- *Continue to support infrastructure investment programs with the California Energy Commission (CEC) to maximize the use of electric vehicles through expanding charging and hydrogen networks.*

The scale of this measure is very large and would represent a significant transformation of the transportation sector, yet the Draft Socioeconomic Report presents no information concerning the potential impacts associated with this measure. The Preliminary Draft version of the Socioeconomic Report actually presented a cost estimate for this measure that totaled $22 billion.[14] The Draft Socioeconomic Report states these costs were omitted for the following reason:

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[12] AQMD, Final Draft AQMP, Table 4-5 and Appendix IV-B, Table 3.

[13] AQMD, Revised Draft AQMP, Appendix IV-B, Page IV-B-17.

[14] AQMD Preliminary Draft Socioeconomic Report, Table 2-1, Present Worth Value of Total Incremented Cost.

> *This control measure is primarily designed to reduce greenhouse gas emissions and therefore it is recognized as providing NOx and VOC reductions as a co-benefit since it is part of other state programs that are expected to be implemented even if the Revised Draft 2016 AQMP is not adopted.* [15]

But this assertion is directly contradicted by the CARB Mobile Source Strategy which states:

> ***This proposed measure is designed to achieve further emission reductions for South Coast attainment in 2023 and 2031 through a suite of additional actions****, including early penetration of zero and near-zero technologies, and emission benefits associated with increased transportation efficiencies, as well as the potential for autonomous vehicles and advanced transportation systems. The emission reductions will be achieved through a combination of actions to be undertaken by both ARB and the South Coast. These actions reflect an initial assessment of a pathway, recognizing that as funding is allocated and advanced technologies further develop, the balance amongst approaches will necessarily adjust.*[16]

So these costs are related to this AQMP and should be included in the analysis. By more than doubling the cost of the AQMP, this would dramatically increase both the cost to consumers and the required incentive funding.[17]

And again, the analysis completely ignores the economic impacts, positive and negative, of forcing a radical shift of transportation related energy demand from petroleum fuels to electricity. Such a market change could create stranded assets in the traditional petroleum fuels supply chain which this analysis completely ignores. These are significant economic factors which must be analyzed.

The AQMD's socioeconomic analysis should be revised to include a full assessment of the costs associated with this measure.

9. The proposed Low-Emission Diesel Fuel Requirement measure is poorly defined and inadequately analyzed.

Under the Low-Emission Diesel Fuel Requirement measure, the portion of the heavy-duty fleet that chooses to continue operating on internal combustion engines, instead of adopting the expectedly more cost-effective zero and near-zero emission technologies, is anticipated to incur additional costs due to the proposed requirement to utilize low-emission diesel fuel.

WSPA continues to have several key questions regarding Low-Emissions Diesel (LED).

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[15] AQMD, Draft Socioeconomic Report, November 2016, Preface, Page 2-1.

[16] CARB, Mobile Source Strategy, May 2016, See description of "Further Deployment of Cleaner Technologies: On-Road Light-Duty Vehicles" found on page 74.

[17] Comparison of "Grand Total Cost for All Quantified Measures" (PWV basis) figure presented in Preliminary Draft Socioeconomic Report, Table 2-1 (August 2016), and the corresponding value presented in Draft Socioeconomic Report, Table 2-1 (November 2016).

- While the Report limits its analysis of this measure to off-road equipment, the discussion suggests this LED requirement would apply to all diesel sales (i.e., on-road and off-road). Is the measure only limited to off-road equipment? If not, the socioeconomic analysis is deficient.
- What is the disposition of conventional gas to liquids (GTL) fuels and other like fuels in this strategy?
- Why add the carbon intensity component to the low emission diesel when the LCFS standard and Cap & Trade program already does this?

By CARB's own projections, later model year trucks equipped with NO_X traps and PM filters would constitute more than 90% of the off-road equipment fleet by 2023. In addition, there is another measure in the Mobile Source Strategy that drives the engine manufacturers to even lower exhaust emission targets. With those two key elements, it is not clear what the benefits of requiring this potentially costly fuel would be.

- WSPA would like CARB and AQMD to provide a forecast of market share for legacy on-road diesel vehicles in 2025 as well as the projected off-road fleet. Such analysis should separate the impact of vehicle technology from the emissions impacts of low emission diesel fuel.
- Such analysis should explain the incremental benefit of the low emission diesel fuel over the new technology vehicles.

Creating a new LED fuel standard for off-road equipment would force a separate distribution requirement on the industry which would carry with it significant new costs which have not been analyzed.

Again, the AQMD's socioeconomic analysis completely ignores larger economic impacts, positive and negative, of forcing a radical shift of transportation-related energy demand from petroleum fuels to electricity. Such a market change could create stranded assets in the traditional petroleum fuels supply chain, and also would demand significant new costs for electricity infrastructure which this analysis has completely ignored. These are significant economic impacts which must be analyzed.

WSPA appreciates the opportunity to submit these comments. We may submit additional comments during this process as the District releases additional 2016 AQMP documents. We understand all submissions will be given due consideration by the District staff and the Governing Board.

If you have any questions, please contact me at (310) 808-2144 or by email at psenecal@wspa.org.

Sincerely,

Patty Senecal

Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Patty Senecal
Director, Southern California Region

January 4, 2017

Via email: PFine@aqmd.gov

Dr. Philip Fine
Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Final Draft Air Quality Management Plan (AQMP)

Dear Dr. Fine:

Western States Petroleum Association (WSPA) is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon and Washington. 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 and thus have a major stake in the Air Quality Management Plan (AQMP) being prepared by the South Coast Air Quality Management District (SCAQMD or District), and any rule developments that might stem from the final AQMP as adopted by the District's Governing Board.

WSPA submitted comments on the Revised Draft version of the AQMP on 4 November 2016 which comments are incorporated herein by reference (see attached copy). WSPA also supports the comments made by BizFed on January 4, 2017 concerning the Final Draft AQMP.

Additionally, WSPA has the following comments concerning the Final Draft AQMP.

970 West 190th Street, Suite 304, Torrance, CA 90502 (310) 808-2144
psenecal@wspa.org www.wspa.org

1. The Final Draft AQMP continues to propose a number of control measures for which there are no quantified emissions benefits and no costs presented. Given the Final Draft AQMP's clear demonstration that these measures are not needed for either the ozone or $PM_{2.5}$ attainment demonstrations, they should be removed from the control strategy.

The Final Draft AQMP continues to include a number of proposed control measures which are demonstrated in the plan as unnecessary for reaching the region's "carrying capacity."[1] These additional measures are presented with no quantified emissions benefits and are often vaguely described as to what the proposed measures would even require. Such extraneous measures include:

Number	Title	Emission Reductions (tpd) (2023/2031)
MCS-01	Improved Breakdown Procedures and Process Re-Design [All Pollutants]	N/A
MCS-02	Application of All Feasible Measures [All Pollutants]	TBD
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MOB-05	Accelerated Penetration of Partial Zero-Emission and Zero-Emission Vehicles [VOC, NOx, CO]	TBD

[1] AQMD, Final Draft AQMP, Chapter 4

MOB-06	Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles [VOC, NOx, CO]	TBD
MOB-07	Accelerated Penetration of Partial Zero-Emission and Zero-Emission Light-Heavy- and Medium-Heavy-Duty Vehicles [NOx, PM]	TBD
MOB-08	Accelerated Retirement of Older On-Road Heavy-Duty Vehicles [NOx, PM]	TBD
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MOB-12	Further Emission Reductions from Passenger Locomotives [NOx, PM]	TBD
MOB-13	Off-Road Mobile Source Emission Reduction Credit Generation Program [NOx, SOx, PM]	TBD

Given the clear demonstration that these measures are not needed for ozone or $PM_{2.5}$ attainment, they should be removed from the control strategy.

1. **The costs presented for proposed control measure CMB-05 (RECLAIM) in the Final Draft AQMP continue to be significantly understated. This understatement compromises the Governing Board's ability to make informed policy decisions. The proposed measure should be changed to reflect a range of potential emission reductions (e.g., 3-5 TPD NO_X), and the document should be revised to reflect the projected cost information which was previously supplied to AQMD Staff by industry as the result of a confidential cost survey conducted by a third party contractor under contract to WSPA.**

The Final Draft AQMP continues to report costs and cost effectiveness for proposed measure CMB-05 which we believe are understated. The figures are supposedly based on information in the Staff Report for the December 2015 amendments to Regulation XX. However, as previously noted by WSPA in several other comment letters, the District has been provided information that demonstrates that the projected cost for refinery sector emission reductions, beyond those required under the December 2015 amendments would be significantly higher than AQMD Staff estimates. Please see WSPA's comment letter (dated 19 December 2016) on the Draft Socioeconomic Report.

Proposed measure CMB-05 should be changed to reflect a range of potential emission reductions (e.g., 3-5 TPD NO_X), and the cost effectiveness and socioeconomic analyses should be revised to reflect the far more realistic cost information previously supplied to AQMD Staff.

2. **The proposed Low-Emission Diesel Fuel Requirement measure is poorly defined and inadequately analyzed.**

Under the Low-Emission Diesel Fuel Requirement measure, the portion of the heavy-duty fleet that chooses to continue operating on internal combustion engines, instead of adopting the expectedly more cost-effective zero and near-zero emission technologies, is anticipated to incur additional costs due to the proposed requirement to utilize low-emission diesel fuel.

WSPA continues to have several key questions regarding Low-Emissions Diesel (LED).

- While the Report limits its analysis of this measure to off-road equipment, the discussion suggests this LED requirement could apply to all diesel sales (i.e., on-road and off-road). Please explain/confirm the following:
- Whether this measure is actually limited to off-road equipment?
- What is the disposition of conventional gas to liquids (GTL) fuels and other like fuels in this strategy?
- Has AQMD or the Air Resources Board considered the negative fuel efficiency impacts associated with high percentage blends of renewable diesel?
- Why add the carbon intensity component to the low emission diesel when the LCFS standard and Cap & Trade program already does this?

By CARB's own projections, later model year trucks equipped with NO_X traps and PM filters would constitute more than 90% of the off-road equipment fleet by 2023. In addition, there is another measure in the Mobile Source Strategy that drives the engine manufacturers to even lower exhaust emission targets. With those two key elements, it is not clear what the benefits of requiring this potentially costly fuel would be.

- CARB and AQMD should provide a forecast of market share for legacy on-road diesel vehicles in 2025 as well as the projected off-road fleet. Such analysis should separate the impact of vehicle technology from the potential emissions impacts of low emission diesel fuel.
- Such analysis should explain the incremental benefit of the low emission diesel fuel over new technology vehicles.

Creating a new LED fuel standard for off-road equipment would force a separate distribution requirement on the industry which would carry with it significant new costs which have not been analyzed.

WSPA appreciates the opportunity to submit these comments. Lastly, we remain concerned about the late and non-sequential release of important AQMP products. This includes a December 2016 revision to the State SIP Strategy which has not yet been made fully available to stakeholders, and a Draft Socioeconomic Report which does not correspond to the Final Draft AQMP. Given these circumstances, stakeholder review and comment on this AQMP has been made extremely challenging. WSPA may be left with no alternative but to submit additional comments during this process as the District and CARB release additional revisions to the AQMP documents. We understand all submissions will be given due consideration by the District staff and the Governing Board.

If you have any questions, please contact me at (310) 808-2144 or at psenecal@wspa.org.

Sincerely,

Patty Senecal

cc: Wayne Nastri, Executive Officer, SCAQMD
cc: Catherine Reheis-Boyd, President, WSPA