

**Comment Letters Received on the Draft Program Environmental Assessment (PEA) for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM)**

**Circulated August 14, 2015 to October 6, 2015 (53 days)**

<b>Comment Letter</b>	<b>Commentator</b>
#1	Latham & Watkins on behalf of the Regulatory Flexibility Group
#2	Alston & Bird LLP on behalf of the Western States Petroleum Association
#3	Charles F. Timms, Jr. on behalf of the City of Burbank Department of Water and Power
#4	Los Angeles Department of Water and Power
#5	Phillips 66 Company
#6	Curtis L. Coleman on behalf of the NOx RECLAIM Industry Coalition
#7	Natural Resources Defense Council et al.
#8	Communities for a Better Environment

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October 6, 2015

VIA E-MAIL

Barbara Radlein  
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File No. 018282-0000

Re: **DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT FOR PROPOSED  
AMENDMENTS TO REGULATION XX**

Dear Ms. Radlein:

On behalf of the Regulatory Flexibility Group (RFG), we are submitting the following comments on the Draft Program Environmental Assessment (Draft PEA) prepared to support the proposed amendments to South Coast Air Quality Management District (SCAQMD) Regulation XX- NO<sub>x</sub> RECLAIM. These comments are limited to the legal adequacy of one of the alternatives analyzed in Chapter 5 of the Draft PEA (Alternative 3 – Industry Approach). The RFG also endorses the comments submitted on behalf of the NO<sub>x</sub> RECLAIM Industry Coalition and the Western States Petroleum Association.

During its presentation at the September 23, 2015 Special Stationary Source Committee meeting, SCAQMD staff expressed the view that the industry proposal to reduce current NO<sub>x</sub> RECLAIM allocations by 8.79<sup>1</sup> tons per day (tpd) fails to meet minimum legal requirements because it fails to attain “maximum reductions achievable,” as required by California Health & Safety Code § 40406, and is not equivalent to levels that would be achieved under command and control.

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<sup>1</sup> The industry proposal is to reduce allocations by the level of emission reduction determined to be achievable through deployment of 2015 best available retrofit control technology (BARCT). This level of emission reductions is referred to herein as “BARCT-equivalent emission reductions.” 8.79 tpd is the SCAQMD staff’s calculated BARCT-equivalent emission reductions. Industry believes that if certain necessary corrections were made to the staff’s analysis, the actual figure would be 6.6 tpd. For the purposes of this discussion, we will assume that the staff’s figure is correct.

SCAQMD staff is correct that Health & Safety Code § 40440(b)(1) requires adoption of rules and regulations that “require the use of . . . best available retrofit control technology for existing sources.” Best available retrofit control technology (BARCT) is defined in Health & Safety Code § 40406 as “an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.”

Having determined that BARCT-equivalent emission reductions equate to 8.79 tpd, the SCAQMD staff must adopt amendments to the RECLAIM program necessary to achieve that level of reductions in order to meet the legal requirements identified above. Assuming that there is no dispute that 8.79 tpd is the correct level of BARCT-equivalent emission reductions (see footnote 1), then there is no dispute that achieving this level of emission reductions will satisfy applicable legal requirements.

By applying what it refers to as its “remaining emissions methodology,” staff has concluded that it is necessary to reduce allocations by 14 tpd in order to achieve the desired 8.79 tpd in emission reductions. In other words, the reduction in allocations must be 63% higher than the desired reduction in emissions in order to achieve the desired reductions. According to staff, a reduction in allocations of anything less than 14 tpd will not achieve the minimum required emission reductions, and therefore will not satisfy applicable legal requirements. It is on this basis that the staff concludes that the industry proposal to reduce allocations by 8.79 tpd fails to satisfy minimum legal requirements. Thus, staff’s legal critique of the industry proposal is entirely dependent on the premise that one must reduce allocations by 14 tpd in order to achieve 8.79 tpd in emission reductions.

The problem with the staff’s analysis, is that there is nothing to support the underlying premise that 14 tpd in allocations must be eliminated in order to achieve 8.79 tpd in emission reductions. In fact, the SCAQMD’s own historical data indicate that a much more modest reduction in allocations would achieve the desired emission reductions. The SCAQMD previously adopted amendments to achieve BARCT equivalency in 2005. In that case, allocations were reduced from 34.2 tpd to 26.5 tpd between 2005 and 2011, a reduction of 7.7 tpd. Over that same period of time, emissions were reduced from 26.4 tpd to 20 tpd, a reduction of 6.4 tpd. What this past experience demonstrates is that for every tpd that allocations are reduced, 0.83 tpd of emission reductions will occur. Put another way, the level of reduction in allocations should be no more than 17% higher than the desired level of emission reductions.

Thus, past experience indicates that the reduction in allocations necessary to achieve 8.79 tpd in emission reductions is 10.3 tpd (17% higher than the desired reductions); not 14 tpd (63% higher than the desired reductions). The drastic reduction in allocations proposed by SCAQMD staff will require overall reductions of greater than 8.79 tpd in order to bring actual emissions in line with remaining allocations. Thus, RECLAIM sources will be required to achieve emission reductions that are greater than what the SCAQMD staff has determined to be BARCT. In other words, RECLAIM sources will be required to achieve reductions above and beyond the BARCT levels that would be required under a command and control regime.

Not cited by the staff in its presentation, but also relevant to this discussion is Health & Safety Code § 39616. Health & Safety Code § 39616(c)(1) requires that a market-based incentive program adopted in lieu of command and control regulations “result in an equivalent or greater reduction in emissions at equivalent or less cost compared with . . . measures that would have otherwise been adopted [command and control] . . .” (emphasis added). Similarly, Health & Safety Code § 39616(c)(7) requires that the market based program “not result in disproportionate impacts measured on an aggregate basis, on those stationary sources included in the program compared to other permitted stationary sources . . .”

By requiring emission reductions in excess of what has been determined to be achievable with BARCT, the SCAQMD staff proposal imposes costs on RECLAIM sources that are greater than those that would be imposed under a command and control regime, and imposes disproportionate impacts on RECLAIM sources relative to other stationary sources, in violation of Health & Safety Code § 39616. Thus, it is the SCAQMD staff proposal that runs afoul of applicable legal requirements; not the industry proposal.

During the September 29, 2015 Public Consultation Meeting on the proposed amendments, SCAQMD staff indicated that it had been suggested that Health & Safety Code § 39616(c) did not apply to the proposed action of the Governing Board to amend the RECLAIM program. Section 39616(c) provides as follows:

(c) In adopting rules and regulations to implement a market-based incentive program, a district board shall, at the time that the rules and regulations are adopted, make express findings, and shall, at the time that the rules and regulations are submitted to the state board, submit appropriate information, to substantiate the basis for making the findings that each of the following conditions is met on an overall districtwide basis:

Presumably, the party suggesting that this section does not apply to the proposed amendments is focusing on the phrases “at the time that the rules and regulations are adopted” and “at the time that the rules and regulations are submitted to the state board” and arguing that the findings specified later in the section need only be made upon initial adoption of the program and not upon its subsequent amendment. Such an interpretation is nonsensical. First, amendments to rules and regulations are “adopted” by the Governing Board and “submitted to the state board” in the same manner as initial adoption. Second, the specified findings go to the implementation of the program and were clearly intended to survive and apply beyond the date that the rules are adopted and submitted to the California Air Resources Board. Under the proffered interpretation, the Governing Board could make the required findings and adopt the program one day, and then amend it the next with complete disregard for the findings. Clearly, the legislature did not intend to create the possibility of such an absurd outcome. The only reasonable interpretation is that Health & Safety Code § 39616(c) applies to the proposed action of the Governing Board and the specified findings must be made.

LATHAM & WATKINS LLP

For the reasons set forth above, Alternative 3 analyzed in the Draft PEA, or any other alternative designed to achieve the necessary BARCT-equivalent emission reductions, would meet applicable legal requirements.

Best regards,

A handwritten signature in black ink, appearing to read "Michael J. Carroll". The signature is fluid and cursive, with a large initial "M" and "C".

Michael J. Carroll  
of LATHAM & WATKINS LLP

cc: Robert A. Wyman  
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October 6, 2015

VIA ELECTRONIC & FIRST CLASS MAIL

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Re: Draft Program Environmental Assessment for Proposed Amended  
Regulation XX – Regional Clean Air Incentives Market

Dear Ms. Radlein:

We respectfully submit, on behalf of the Western States Petroleum Association (“WSPA”) and its members, these comments on the draft Program Environmental Assessment (“PEA”) for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (“RECLAIM”). WSPA is a non-profit trade association that represents oil and gas exploration, production, refining and marketing companies, some of whom own and operate facilities in the RECLAIM program.

The draft PEA suffers from fundamental problems that undermine the entire environmental analysis. The draft PEA purports to consider a project to implement the Air Quality Management Plan (“AQMP”) and to evaluate best available retrofit control technology (“BARCT”), but narrowly focuses on construction activities associated with the replacement NOx emissions control equipment for selected facilities to achieve 14 tons per day (“TPD”) in NOx reductions. Further, the construction activities that are evaluated in the draft PEA have not been confirmed by the District’s independent expert, resulting in a proposed project that is likely infeasible. The District’s improper focus on 14 TPD in NOx reductions is particularly apparent in the alternatives analyses where the majority of the alternatives require 14 TPD or more of NOx reductions – a skewed selection of alternatives which fails to meet the “reasonable range of alternatives” requirement. Aside from these fundamental problems, the draft PEA lacks adequate analysis in several individual resource areas.

Attachment 1 to this letter provides more detailed comments on this draft PEA from WSPA's technical consultant, and are hereby incorporated by reference. ("Attachment 1").

WSPA has previously submitted numerous comments on the proposed regulation itself, as well as the notice of preparation and initial study ("NOP/IS") for the draft PEA, but these comments have received insufficient attention from the District in its environmental analyses.<sup>1</sup> The District responds to the NOP/IS Letter by claiming that technical analyses have been considered, when an in-depth evaluation of the industry's technical concerns has not been performed.

WSPA has serious concerns with both the proposed rule amendments and the draft PEA, and believe that the requirements under the California Environmental Quality Act ("CEQA") have not been satisfied. Furthermore, both the proposed amendments and the draft PEA must be revised and recirculated to address the comments raised by WSPA and the numerous other commenters in order to correct errors, disclose all significant impacts, and allow the consideration of feasible mitigation measures or project alternatives to reduce or avoid these impacts.

## **I. Fundamental Problems With The Draft PEA Undermine The Environmental Analysis**

Under CEQA, an EIR is an informational document designed to provide public agencies and the public with detailed information about the impacts that a proposed project is likely to have on the environment, analyze the ways in which the significant effects of a project might be minimized, and identify alternatives to the project.<sup>2</sup> The District's draft PEA, as a substitute EIR under its certified regulatory program, is also subject to the substantive provisions of CEQA.<sup>3</sup>

Fundamental flaws in the draft PEA's project description and objectives, the scope of review, and the selection and analysis of alternatives, pervade the document, ultimately resulting in a misleading document in specific resource areas as well. Many of the errors in the draft PEA are related to problems with the methodology, assumptions,

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<sup>1</sup> See, in particular, the letter submitted by WSPA dated August 21, 2015 on the preliminary draft staff report ("PDSR") and Attachments 1 and 2 (hereinafter referred to as "WSPA's August 21 Letter"). See also the January 30, 2015 letter submitted by WSPA as part of the Industry RECLAIM Coalition commenting on the NOP/IS (the "NOP/IS Letter"), and WSPA's May 27, 2015 letter on the April 29, 2015 SCAQMD NOx RECLAIM Working Group Meeting. For convenience, these letters are provided as Attachments 2, 3 and 4 to this letter.

<sup>2</sup> Pub. Resources Code §§21002, 21002.1(a), 21061; 14 Cal. Code Regs. §15362; see also Pub. Resources Code §§21100, 21150.

<sup>3</sup> 14 Cal. Code Regs. §15250; *City of Morgan Hill v. Bay Area Air Quality Management District*, 118 Cal.App.4th 861, 874-875 (2004).

which WSPA described in detail in its August 21 Letter and which are reiterated here as they also relate to inadequacies under CEQA. WSPA believes that the draft PEA must be revised and recirculated for further public review and comment, all in compliance with CEQA.

**A. The Project Description is Flawed, Misleading and Hinders Analysis**

“An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.”<sup>4</sup> An accurate project description is an essential requirement because an EIR must be “prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences.”<sup>5</sup> If the project description contains inaccurate or misleading information, the entire analysis may be tainted. “A curtailed, enigmatic or unstable project description draws a red herring across the path of public input.”<sup>6</sup>

**1. The project description includes amendments to Regulation XX, but the draft PEA evaluates only environmental effects of BARCT construction activities**

The proposed project is described as “amendments to Regulation XX – Regional Clean Air Incentives Market (RECLAIM) to achieve additional NOx emission reductions to address best available retrofit control technology (BARCT) requirements and to modify the RECLAIM trading credit (RTC) ‘shaving’ methodology.”<sup>7</sup> However, the draft PEA examines only the construction activities that purportedly achieve a reduction of 14 TPD of NOx emissions, and fails to evaluate in any manner the potential environmental effects of effectively eliminating the NOx RTC market.

The RECLAIM program is a cap and trade program, and it is misleading for the District to characterize the proposed severe changes to this program as merely a series of construction projects to achieve BARCT requirements. Depending on how they are implemented, changes to the marketplace can have wide-ranging impacts that are not limited to BARCT construction, but also to the operation of the RECLAIM facilities subject to the District’s proposed severe shave. The District’s focus on NOx emissions reduction – and the PEA’s correspondingly limited analysis – has resulted in foreseeable consequences that are neither considered in the District’s rulemaking nor analyzed in its environmental assessment in the form of the draft PEA.

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<sup>4</sup> *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 185, 192 (1977).

<sup>5</sup> *Dry Creek Citizens Coalition v County of Tulare*, 70 Cal.App.4th 20, 26 (1999).

<sup>6</sup> *Inyo*, 71 Cal.App.3d at 197-198.

<sup>7</sup> Draft PEA, p. 1-1.

While the District certainly has the authority to prepare a CEQA document solely for BARCT requirements, and if that is the District's intention with the draft PEA, then the draft PEA needs to clearly state that intention in the project description. "[I]ncessant shifts among different project descriptions" undermines the CEQA process "as a vehicle for public participation."<sup>8</sup> However, the project description purports to include an RTC "shave," and the CEQA document needs to evaluate it. For this reason alone, the draft PEA must be revised and recirculated for further public review and comment.

**2. The draft PEA does not substantiate the fundamental assumptions that form the basis of the BARCT construction activities**

As explained above, the draft PEA improperly focuses solely on BARCT construction activities for its analysis, but the viability of those construction activities being adequately represented and analyzed in the draft PEA cannot be substantiated, creating further uncertainty for the project description. "An EIR may not define a purpose for a project and then remove from consideration those matters necessary to the assessment of whether the purpose can be achieved."<sup>9</sup> Given that the District has narrowly defined the purpose of the project as implementing BARCT, it still must be able to substantiate that those BARCT construction activities can actually be performed.

The District erroneously assumes all its proposed BARCT requirements are not only technologically feasible but can be achieved unilaterally despite evidence suggesting the proposed BARCT levels may not be cost effective or feasible for all RECLAIM facilities subject to the District's proposed severe shave. As WSPA has explained previously, most recently in its August 21 Letter, this is not the case. In November 2014, Norton Engineering Consultants ("NEC"), the third party expert hired by the District to "ground truth" the District's technical analysis in this rulemaking, presented findings in its BARCT Feasibility and Analysis Review.<sup>10</sup> However, when the preliminary draft staff report for the proposed amendments was released on July 21, 2015, it was apparent that many of NEC's findings were ignored, misunderstood, or misstated by the District. As described in WSPA's August 21 Letter, failure to correct some of the assumptions and errors in the staff report for this rulemaking skews the analysis for nearly 40 operating units (i.e., RECLAIM NOx sources).

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<sup>8</sup> *Inyo*, 71 Cal.App.3d at 197.

<sup>9</sup> *County of Inyo v. City of Los Angeles*, 124 Cal.App.3d 1, 7-9 (1981).

<sup>10</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM – BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014, [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/regxx/noxreclaimbarct-nonconf-refinery\\_112614.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/regxx/noxreclaimbarct-nonconf-refinery_112614.pdf?sfvrsn=2) (last accessed September 13, 2015).

Moreover, there is no support for the District's assumption that certain NOx sources subject to this rulemaking can achieve 2 ppm NOx levels using new or upgrade selective catalytic reduction systems ("SCR"). This 2 ppm NOx level assumption is an integral component of the District's calculus justifying the currently proposed severe shave. While CEQA provides that disagreements among experts does not make an EIR inadequate, that is not the case here with the draft PEA.<sup>11</sup> As a threshold matter, the District cannot claim to be an expert in specific applications unique to the refining and petrochemical industry; indeed that is apparently the reason for its hiring of an outside third party expert to verify (i.e., "ground truth") the District's technical assumptions. Importantly, the District has been presented with a highly technical analysis from its own third party expert on the ability – or inability – of certain types of NOx sources to achieve 2 ppm NOx levels using SCR, and effectively dismissed this information in favor of unsubstantiated assertions that certain equipment can, indeed, meet such NOx levels and reductions.<sup>12</sup>

The District also assumes that the installation of the BARCT can and will be implemented in the specified timeframe, which is fairly aggressive. This aggressive time frame is unrealistic and again, has not been substantiated. A number of internal and external factors influence when a company can and will undertake a construction project. WSPA members report that completion of all needed projects to implement the proposed NOx reductions would likely require at least eight (8) years. (Attachment 1, p. 13).<sup>13</sup> It is also a possibility that, depending on the economic climate and incentives, a project would not be implemented at all. In the current economic climate for the oil and gas industry, a more realistic schedule is required for an adequate CEQA review.

The draft PEA also purports to conduct a site-specific analysis for certain resource areas, but makes unsubstantiated conclusions to eliminate further environmental analysis. For example, the PEA determines noise impacts will not occur from the project because any increase in noise levels will be within the thresholds of the industrial facilities. The PEA makes similar extrapolations from a site specific review of the aesthetics, taking a specific example of a facility where a wet gas scrubber ("WGS") had been installed, resulting in a characteristic steam plume. The PEA essentially states that because these refineries are in industrial areas, additional WGS plumes would not have an aesthetic impact.<sup>14</sup> The PEA's assumptions and extrapolations make an informed analysis difficult.

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<sup>11</sup> See, e.g., *Karlson v. City of Camarillo*, 100 Cal.App.3d 789, 805 (1980).

<sup>12</sup> See letter from NEC to the District dated August 10, 2015, and included as Attachment 2 to WSPA's August 21 Letter, attached to this letter as Attachment 2.

<sup>13</sup> WSPA also recommended that the shave implementation schedule be "back-loaded" to accommodate a longer, more realistic project implementation period with at least 2 of the proposed 4 TPD (currently being proposed for 2016) being moved to 2019 or later. WSPA's August 21 Letter, p. 3, attached to this letter as Attachment 2.

<sup>14</sup> Draft PEA, p. 4.1-4.

The draft PEA should identify realistic assumptions based on facts to properly evaluate potential environmental effects of construction activities, and a one-size fits all approach that dismisses the potential for environmental effects based on the industrial locations of the facilities is not sufficient.

In short, the PEA makes unsubstantiated industry-wide generalizations in determining that technology is feasible, implementation timeframes are reasonable, the site specific impacts will be negligible, and the individual businesses will perform as expected. These generalizations cannot support the PEA's assumptions, particularly in light of the District's own third party expert's efforts to correct the errors in its technical analysis. If an EIR is "so fundamentally and basically inadequate and conclusory in nature" that public comment on the draft is essentially meaningless, or if significant new information is added to an EIR, it must be recirculated for further public review.<sup>15</sup> The PEA should be revised to substantiate its assumptions and reevaluate its conclusions accordingly, and should then be recirculated for further public review and comment.

**B. The PEA Purports To Be A Program-Level Document, But Construction Activities Generally Require Project-Level Review**

The draft PEA is described as a "program CEQA document" ostensibly because it consists of proposed amendments to Regulation XX.<sup>16</sup> As noted above, however, the draft PEA appears to evaluate BARCT construction activities, and specific construction projects generally require a project-level analysis. This distinction is important because a program-level review can be more abbreviated and the District apparently seeks to utilize that approach, but it has now embarked on a partial project-level review of BARCT construction activities. As noted above, noise is dismissed in the PEA and not evaluated at all, even though noise is an environmental topic commonly reviewed in a project level EIR for a construction project. If the District seeks to transform a rule-making into a construction project, it needs to do so in compliance with CEQA.

Furthermore, the draft PEA, which is a "substitute CEQA document" pursuant to the District's certified regulatory program, states that the "program" CEQA document may be used by other agencies for "future related actions." Section 15253 of the CEQA Guidelines addresses use of a substitute CEQA document by responsible agencies, and the District should clarify how the provisions of that Section have been satisfied.

The draft PEA's insufficient project level analysis for BARCT construction activities reinforces WSPA's main critique of the District's proposed amendments to Regulation XX—the technical analysis to support the proposed amendments is

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<sup>15</sup> *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.*, 6 Cal.4th 1112 (1993); 14 Cal. Code Regs. §15088.5(a).

<sup>16</sup> Draft PEA, p. 1-3.

inadequate.<sup>17</sup> If these construction activities had been properly evaluated in the CEQA document at a project level, the infeasibility of the proposed BARCT would have become apparent.

### **C. The PEA Overlooks Impacts From the “Whole Of The Project”**

An EIR must consider the whole of an action.<sup>18</sup> "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is an activity directly undertaken by any public agency.<sup>19</sup> An “indirect physical change” may be one resulting from any economic and social effects of a project, and that change too must be evaluated.<sup>20</sup> The CEQA Guidelines provide: “Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project.”<sup>21</sup> While not all projects evaluated under CEQA have sufficient economic and social effects to warrant further analysis regarding consequential physical effects, this project is unique in that it consists of amendments to a market system – economic consequences are integral to RECLAIM operations.

#### **1. The Draft PEA fails to consider the physical effects resulting from reasonably foreseeable economic and social effects**

The draft PEA summarily asserts: “No indirect or indirect physical changes resulting from economic or social effects have been identified as a result of implementing the proposed project.”<sup>22</sup> No citation is provided for this conclusion, and no analysis was performed to support this conclusion. As a result and the clear fact that the draft PEA proposes such a severe RTC “shave” that it could potentially eliminate the NOx RTC market, an analysis must be performed to evaluate the potential physical changes that might result from the reasonably foreseeable economic and social effects of the project.

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<sup>17</sup> See also WSPA’s August 21 Letter.

<sup>18</sup> Because the District has adopted a Certified Regulatory Program under California Public Resources Code §21080.5, an environmental assessment (“EA”) may be prepared instead of an EIR or negative declaration. An EA is the equivalent of an EIR under the Certified Regulatory Program.

<sup>19</sup> Cal. Code Regs. § 15378(a)(1).

<sup>20</sup> CEQA Guidelines Section 15131. See, e.g., *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal.App.4th 1184 (2004) (holding that CEQA requires consideration of social or economic impacts if they may lead to adverse changes in the physical environment such as "urban decay").

<sup>21</sup> 14 Cal. Code Regs. §15064(e).

<sup>22</sup> Draft PEA, p. 1-16.

More specifically, the draft PEA fails to consider the physical impacts of an analysis in which the economic consequences of the rule result in reasonably foreseeable changes in the regulated sectors. The District is well aware of the statistic it cites in its staff report and PEA: since the start of the RECLAIM program, the number of facilities in the program has shrunk by approximately 30 percent.<sup>23</sup> Where there were once 392 RECLAIM facilities in the South Coast Air Basin, there are now only 276. While the District cites this statistic, it makes no effort to analyze or consider the significance of it, or to examine the physical changes in the environment that resulted in the PEA.

This reduction in RECLAIM facilities means that some productivity within the Basin has been lost, and the draft PEA should evaluate the potential for future loss of productivity from sources within the RECLAIM system, particularly those RECLAIM facilities subject to the District's proposed severe shave. This analysis in the PEA should evaluate the Basin's energy needs and assess whether there would be adequate sources of reliable power if the proposed project were to result in lowered productivity within RECLAIM facilities and the businesses that support and supply these facilities. It should also consider whether lowered production of the affected products could result in adverse environmental impacts within or outside of the Basin. It should consider the environmental impacts of leakage, which is a well-known, and thus, foreseeable consequence of sub-regional cap and trade schemes. CEQA provides that "[a]ny emissions or discharges that would have a significant effect on the environment in this state" are subject to CEQA.<sup>24</sup> Accordingly, the District is obligated to analyze whether potential changes in operations resulting from the imposition of this aggressive RTC shave would result in potential environmental impacts, including increased emissions due to needing to source products from outside the South Coast Air Basin where the RECLAIM program applies.

The District's incomplete and selective approach neglects to consider potential environmental impacts beyond the narrow scope of construction associated with installation of the anticipated BARCT required by the proposed project. In the District's own words, RECLAIM is a market-based program which was "designed to use the power

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<sup>23</sup> Draft PEA, p. 2-2.

<sup>24</sup> Cal. Pub. Resources Code § 21080. In certain instances, the mandate of CEQA to ensure a high level of environmental protection extended to considering out of state activities as part of the project due to resulting in-state impacts. (See 58 Ops. Cal. Atty. Gen. 614 (1975), opining that where California cities were joining forces with Utah cities to construct a coal plant in Utah that would provide power to California, and related transmission lines would have to be built from Utah into California, any project-related EIRs had to examine the environmental consequences of the project as a whole. Additionally, because the project area spanned multiple states, local California agencies were required to look at the impacts of the project as a whole.)

of the marketplace” to reduce air emissions from stationary sources.<sup>25</sup> A proposed shave effectively manipulates that marketplace. It stands to reason that an aggressive, deep manipulation – like the one proposed by the District – will impact RECLAIM facilities differently than one that is less drastic. The District is proposing a massive change in the marketplace designed to change behavior and cause reactions, yet the District assumes that the only reaction will be small scale construction projects involving installation of NOx control equipment to meet shave requirements. The District is proposing a massive change that will cause RECLAIM facilities and the businesses that support and supply these facilities to *react* in ways that are reasonably foreseeable by the District. These reactions, in turn, will have environmental impacts, which should have been analyzed in the PEA.

The RECLAIM program was introduced as an alternative to traditional command and control requirements, and was intended to provide business within the South Coast Air Basin with greater flexibility and financial incentive to reduce air pollution. As set forth in WSPA’s August 21 Letter, the District has accomplished the substantial NOx emissions reductions achieved to date by reducing RTCs across the board. With the present project, not only is the District proposing deep cuts to the remaining RTCs, but it is imposing these cuts in a targeted, uneven manner. This is a significant manipulation of the marketplace, with foreseeable consequences that the PEA has neglected to analyze. The likely impacts resulting from the District’s chosen methodology occur in various resource areas, as described further in this letter. However, by not recognizing the market-driven business considerations, the PEA has neglected to analyze and disclose the “whole of the project,” in violation of CEQA.

CEQA prohibits segmenting a project into separate actions in order to: avoid environmental review of the “whole of the action”<sup>26</sup>; defer environmental analysis; ignore the foreseeable environmental impacts of the end result of a project; or, avoid considering potential cumulative impacts. Thus, a lead agency may not limit environmental disclosure by ignoring other activities that will ultimately result from approval of a particular project. The District’s limited focus on technical equipment related to control of NOx emission reductions to achieve the severe RTC shave, to the exclusion of other foreseeable impacts is evidence of the District’s failure to consider the entire project and its potential environmental impacts.

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<sup>25</sup> SCAQMD RECLAIM website, <http://www.aqmd.gov/home/programs/business/business-detail?title=reclaim> (last accessed September 12, 2015).

<sup>26</sup> Cal. Pub. Resources Code § 21065.

**2. The draft socioeconomic report is deficient, and a revised report should be prepared and recirculated concurrently with a revised draft PEA**

The draft Socioeconomic Report for the RECLAIM amendments provides little assistance in evaluating this issue as it considers only a limited number of potential economic and social issues, based solely on BARCT construction activities, and does not delve into the potential for physical effects resulting from the severe RTC “shave.” WSPA will be submitting comments on the draft Socioeconomic Report, and once those comments have been considered and addressed, the draft PEA should be revised and recirculated for public review and comment to reflect the District’s analysis of the potential environmental effects of any physical changes resulting from these economic and social effects.

Furthermore, the Draft Socioeconomic Report was only circulated on September 7, 2015 – weeks after the completion of the PEA. Failure to consider socioeconomic impacts in conjunction with the environmental review hampers the environmental review of the whole of the project. A proper socioeconomic analysis should have been completed in advance of, or at minimum in conjunction with, the draft PEA, and the draft PEA should have analyzed the resulting physical changes based on the socioeconomic effects of the RECLAIM amendments.

For example, the socioeconomic analysis with respect to the BARCT cost effectiveness could well have environmental impacts which were not adequately analyzed in the PEA. Health and Safety Code §39616 requires RECLAIM to achieve emissions reductions “at equivalent or less cost” than otherwise applicable command and control regulations. The project proposes cost effectiveness of \$50,000/ton threshold, above which the District assumes, for purposes of CEQA analysis, that a facility would decline to install the given air pollution control technology. However, as discussed in greater detail below, this \$50,000 is more than twice the AQMD’s cost effectiveness threshold for command-and-control programs. The socioeconomic impacts of adopting new BARCT threshold, and setting such a high cost effectiveness figure, could result in operational changes which have physical impacts on the environment. In order to comply with CEQA, the PEA must analyze the foreseeable impacts of this component of the project.

**D. The Project Objectives Are Disconnected From The Project Evaluated In The Draft PEA**

An EIR is required to have a “statement of objectives sought by the proposed project.”<sup>27</sup> The statement of objectives should include the underlying purpose of the project, and it should be clearly written to guide the selection of alternatives to be

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<sup>27</sup> 14 Cal. Code Regs. §15124(b).

evaluated in the EIR.<sup>28</sup> Here, however, the objectives do not appear to inform the alternatives; instead, they appear to be independent of the proposed project. In fact, the Alternatives section of the draft PEA contains little analysis of whether the project objectives can be satisfied because they have become irrelevant, thereby infecting the Alternative analysis in its entirety (as discussed below).

The draft PEA appears instead to apply an unstated objective – reduce NO<sub>x</sub> RTCs by 14 TPD or more – which actually creates inconsistencies with the District’s own plans and with the Health & Safety Code provisions with which it purports to comply. The District’s 2012 Air Quality Management Plan (“AQMP”) included NO<sub>x</sub> reduction control measure CMB-01. This control measure provided that additional reductions of NO<sub>x</sub> RTCs in the range of 3 to 5 tons per day (“TPD”) would occur. The PEA states that one of the project objectives is to “[a]chieve the proposed NO<sub>x</sub> emission reduction commitments” of CMB-01. Yet the current project’s proposal to reduce NO<sub>x</sub> RTCs by 14 TPD goes far beyond the control measure’s initial recommendation of 3 to 5 TPD target.

WSPA and the Industry RECLAIM Coalition commented on this issue in their NOP/IS Letter. The District’s response is that the current project “is the result of a much more rigorous and in-depth analysis as compared to the analysis that supported control measure CMB-01.”<sup>29</sup> However, it is apparent that the analysis conducted by the District focused primarily on assessing the maximum number of remaining NO<sub>x</sub> emissions that could be reduced, to the exclusion of other analyses. As described above, the proposed project has the potential to trigger unintended consequences that were not considered in the draft PEA. The new, aggressive reduction in NO<sub>x</sub> RTCs, combined with the ambitious timeframe and questionable assumptions about facility performance suggest that the District did not undertake the same holistic view of the RECLAIM program and market as it did when it adopted the 2012 AQMP. Again, it appears that in its zeal to reduce NO<sub>x</sub> emissions by as much as possible, the District has ignored the potential repercussions of such a severe reduction.

Another unstated, but unsubstantiated, objective is the establishment of a \$50,000/ton cost effectiveness threshold that justifies its severe shave. However, this is inconsistent with the stated District’s objective: to “[c]omply with the requirements in Health and Safety Code ...§39616 by conducting a BARCT assessment of the NO<sub>x</sub> RECLAIM program and reducing the amount of available NO<sub>x</sub> RTCs to reflect emission reductions equivalent to implementing available BARCT.”<sup>30</sup> Compliance with that provision of the Health and Safety Code requires that the market-based emissions program should result in (1) emissions reductions equivalent to or greater than reductions that would have resulted under command and control, **and** (2) “*at equivalent or less cost*

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<sup>28</sup> 14 Cal. Code Regs. §15124(b).

<sup>29</sup> Draft PEA, p. 1-15.

<sup>30</sup> Draft PEA, p. 2-4.

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.”<sup>31</sup> The currently proposed emissions reductions may well provide greater reductions of NO<sub>x</sub> than would occur under traditional command and control regulation. However, this comes at a cost which far exceeds what implementation of BARCT would cost under command and control.

More specifically, the project proposes a \$50,000/ton cost effectiveness threshold, above which the District assumes, for purposes of a CEQA analysis, a facility would decline to install a given NO<sub>x</sub> air pollution control technology to meet the severe shave requirements.<sup>32</sup> However, this \$50,000 is more than twice the District's cost effectiveness threshold for command-and-control programs. As WSPA explains in its August 21 Letter, the 2012 AQMP used a cost threshold for NO<sub>x</sub> control measures of \$22,500 per ton.<sup>33</sup> As another point of reference, the District's current Best Available Control Technology (“BACT”) guidance document presents a discounted cash flow (“DCF”) cost effectiveness threshold of only \$19,100 per ton.<sup>34</sup>

The District, in its preliminary draft staff report for the NO<sub>x</sub> shave rulemaking, has also made misleading cost analysis assumptions which have the effect of making the overall costs for the severe shave look lower than actual. For example, in its staff report, the District proposed a 25-year Useful Life when calculating equipment cost effectiveness. This is misleading because the District rulemaking – which is often technology forcing – occurs on a more frequent basis. For example, the District last amended the NO<sub>x</sub> RECLAIM rules only 10 years ago. As WSPA explains in its August 21 Letter, assuming a 25-year project life dilutes the capital cost over a longer period of time than what the company is likely to actually realize.

As discussed below, Alternative 3 (the Industry Approach) meets project objectives, with fewer impacts. Thus, the project, as currently proposed, does not meet CEQA's requirements, and the PEA must be revised and recirculated for public review and comment.

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<sup>31</sup> Cal. Health & Saf. Code § 39616(c)(1), emphasis added.

<sup>32</sup> Draft PEA, p. 4.2-7.

<sup>33</sup> SCQAMD, 2012 AQMP, December 2012, pp. 4-43.

<sup>34</sup> SCAQMD, BACT Guidelines, Part C: Policy and Procedures for Non-Major Polluting Facilities, 2006.

**E. The Alternatives Analysis Is Flawed**

**1. The analysis of alternatives is inadequate to allow for informed comparison**

The alternatives analysis is critical to the integrity of an EIR.<sup>35</sup> Under CEQA, an EIR must describe a reasonable range of alternatives to the proposed project, or to its location, that would feasibly attain most of the project's basic objectives while reducing or avoiding any of its significant effects, and must evaluate the comparative merits of those alternatives.<sup>36</sup> The alternatives analysis has been described as “the core of an EIR.”<sup>37</sup>

An EIR’s analysis of alternatives and mitigation measures must focus on those alternatives with the potential to avoid or lessen a project's significant environmental effects.<sup>38</sup> The alternatives discussed in an EIR should be ones that offer substantial environmental advantages over the proposed project.<sup>39</sup>

Here, the PEA evaluates 5 alternatives, and except for the Alternative 4 (No Project) and Alternative 3 (Industry Approach), all other alternatives propose 14 TPD or more of NOx emission reductions. Given that the proposed project has remaining significant environmental effects with the proposed project at 14 TPD, the failure to include any additional alternatives other than Alternative 3 (Industry Approach) at a lesser reduction of NOx emissions does not satisfy CEQA’s requirement for a “reasonable range of alternatives.” Furthermore, CEQA generally prohibits a selection of “straw man” alternatives which are intended to be knocked down in favor of the proposed project.<sup>40</sup> The majority of the alternatives require 14 TPD or more of NOx reductions, including an alternative for 15.87 TPD, suggesting that the District’s selection of alternatives was guided not by the ability to reduce environmental effects, but by an effort to support the proposed project.

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<sup>35</sup> *In re Bay Delta Programmatic Evtl. Impact Report Coordinated Proceedings*, 43 Cal.4th 1143, 1162 (2008) [“The EIR is the heart of CEQA, and the mitigation and alternatives discussion forms the core of the EIR.”]

<sup>36</sup> 14 Cal. Code Regs. §15126.6(a).

<sup>37</sup> *Citizens of Goleta Valley v Board of Supervisors*, 52 Cal.3d 553, 564 (1990).

<sup>38</sup> Pub. Resources Code §21002; 14 Cal. Code Regs. §15126.6(a)-(b).

<sup>39</sup> *Citizens of Goleta Valley v. Board of Supervisors*, *supra*, 52 Cal.3d at 566.

<sup>40</sup> *Sierra Club v. Contra Costa County*, 10 Cal.App.4th 1212, 1217 (1992).

## **2. Alternative 3 is the environmentally superior alternative**

The PEA's alternatives analysis is flawed because it appears to reject alternatives based solely on the total TPD of emissions reduced, rather than a more comprehensive analysis that evaluates the remaining significant effects associated with the proposed project. The CEQA Guidelines provide that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives..."<sup>41</sup> Alternative 3 achieves the project objectives and is the environmentally superior alternative. As such, the District should adopt Alternative 3 rather than the proposed project.

Here, the District has chosen, as the proposed project, to employ a methodology that has significantly greater potential environmental impacts than Alternative 3. Specifically, the District proposes that NOx RTC holdings for major refineries be "shaved" by 67 percent; NOx RTC holdings for non-major refineries and other facilities among the top 90 percent of RTC holders be shaved by 47 percent. This aggressive "shaving" method would remove nearly all of the unused NOx RTCs from the RECLAIM market, ostensibly to reduce NOx emissions from RECLAIM facilities. However, the PEA suffers from a narrow view of the RECLAIM universe: by focusing almost exclusively on potential benefits from NOx emissions, the District fails to analyze the environmental impacts that such a drastic NOx RTC reduction is likely to have.

On the other hand, the Industry Approach (Alternative 3) to NOx reduction would take a more measured and holistic approach, resulting in fewer environmental impacts while still achieving a reduction in NOx emissions. More specifically, the Industry Approach proposes to reduce the unused RTCs in an amount equivalent to those reductions that could be directly attributable to an appropriate and valid BARCT.<sup>42</sup> The Industry Approach would result in an across the board reduction of 33 percent of the unused NOx RTCs – a significant reduction of RTCs and advancement of BARCT – without many of the environmental impacts resulting from the District's methodology.

The draft PEA downplays that Scenario 3 (Industry Alternative) will require less operational use of ammonia, by claiming that it is "not quantifiable."<sup>43</sup> However, no evidence is provided to support that conclusion. In the alternatives air quality analysis, the District asserts that if Alternative 3 were implemented, it would be too difficult to

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<sup>41</sup> 14 Cal. Code Regs. § 1526.6(a).

<sup>42</sup> The Industry Approach is described in section 5.3.2.4 of the draft PEA, as well as in the January 30, 2015 letter to the District regarding the NOP/IS, submitted by WSPA and the other members of the Industry RECLAIM Coalition.

<sup>43</sup> Draft PEA, Table 1-4.

predict the number of facilities that would install NOx control equipment.<sup>44</sup> First, the District should have acknowledged the unpredictability of facilities implementing the proposed project, which is more aggressive and could trigger correspondingly more drastic business reactions. Instead, the District assumes there that all facilities will fall in line to install NOx control equipment as it predicts. Second, the likely NOx control equipment installation projects can be quantified.

Furthermore, the alternatives analysis in the PEA fails to explain why the proposed project will only reduce NOx emissions 8.72 TPD when history suggests a 1:1 relationship between RTC reductions and program emissions.<sup>45</sup> If the project objective is to meet BARCT at 8.7 TPD, Alternative 3 meets that objective with fewer environmental impacts, and thus, should be the environmentally preferred alternative.

The lead agency has the flexibility to approve an alternative to the proposed project if that alternative better addresses the agency's environmental concerns.<sup>46</sup> An EIR's failure to analyze an adequate range of alternatives deprives the lead agency of the ability to provide this sort of meaningful review and selection. Recirculation of a new draft PEA will be required by CEQA because the current PEA has not considered alternatives that have not been previously adequately analyzed but must be analyzed as part of a reasonable range of alternatives.

## **II. Specific Resource Areas Lack Adequate Analysis**

### **A. Energy Reliability Impacts Were Not Considered**

The District's proposal will dramatically increase the costs for the facilities it has selected to be regulated and the businesses that support and supply these facilities. The PEA acknowledges that if the BARCT is implemented at these selected facilities, there will be an increase in the amount of energy used both during construction, and more significantly, during operation of the facilities. But the PEA only considered whether there would be sufficient energy when all the facilities installed and implemented the BARCT. Given that 100 facilities have ceased to exist in the District's RECLAIM market since its inception, the District needs to consider not only whether there will be sufficient energy to power the BARCT NOx control equipment, but whether important energy reliability needs of the region and State can be met or whether they will be impacted by the District's proposal.

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<sup>44</sup> Draft PEA, p. 5-15.

<sup>45</sup> See, e.g., Draft PEA, Table 1-4; SCAQMD Annual RECLAIM Audit Report, March 2015.

<sup>46</sup> *Sierra Club v. City of Orange*, 163 Cal.App. 4th 523, 533 (2008).

There is a complete absence of any analysis of electricity or fuel supply impacts. The potential for outages, interruptions and severe price spikes should be considered and analyzed. Also, the future growth in energy demand should be assessed and the impact of this proposed project on the ability to maintain adequate energy supply. This analysis should consider proposed population growth and growth in use of power-consuming electronics (e.g., hospital diagnostic and treatment tools such as high proton lasers are replacing lower-energy using tools) and growth in electrification and energy use more generally.

## **B. Air Quality Impacts Were Not Fully Addressed**

### **1. Direct impacts of new and expanded ammonia sources are not addressed**

The PEA notes that the proposed project will increase operational use of ammonia, a toxic air contaminant, by 39.5 TPD.<sup>47</sup> The increase is due to the large number of new and expanded ammonia emissions sources associated primarily with the larger number of SCRs that would be required to be installed to meet the severe NOx shave requirements. However, the PEA does not address the impacts from a program which results in increased ammonia emissions. Additionally, as the District's other documents acknowledge,<sup>48</sup> ammonia is a precursor to PM2.5. Accordingly, the PEA should have analyzed the regional impacts from increased secondary formation of PM2.5.

Furthermore, the draft PEA's analysis of ammonia slip depends on physical conditions which are explicitly omitted from the project description (e.g., use of Ammonia Slip Catalysts or ASC) despite recommendations by Norton to use ASC.<sup>49</sup> Without the ASC, the ammonia slip could be as great as 20 ppmv, but the draft PEA underestimates the ammonia slip to be 5 ppmv, ostensibly based on permit conditions for new SCRs. However, existing SCRs are not necessarily subject to those permit conditions, and thus, ammonia slip of up to 20 ppmv should be considered in the health risk assessment for ammonia emissions.<sup>50</sup>

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<sup>47</sup> Draft PEA, Table 1-4; p. 4.4-9.

<sup>48</sup> See, e.g., Supplement to 24-hour PM2.5 State Implementation Plan for South Coast Air Basin proposed at February 6, 2015 Governing Board meeting, agenda item no. 22 (link: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-feb6-022.pdf?sfvrsn=2> last accessed on September 16, 2015).

<sup>49</sup> Norton Engineering Consultants, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for FCCUs, Document No. 14-045-7, July 21, 2015, p. 3; see also Draft PEA, Table 2-3.

<sup>50</sup> Draft PEA, Tables 4.2-18 and 4.2-21.

## **2. Cumulative impacts from air emissions are not adequately considered**

An EIR must discuss the cumulative impacts of a project when its incremental effects are “cumulatively considerable.”<sup>51</sup> Moreover, in the specific context of a programmatic EIR, one of the key purposes of the EIR is to “ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis.”<sup>52</sup> Programmatic EIRs play an instrumental role in allowing the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems in program implementation, or cumulative impacts.<sup>53</sup> Accordingly, the CEQA Guidelines require lead agencies to explain how implementing the particular requirements in the plan, regulation or program under review “ensure[s] that the project’s incremental contribution to the cumulative effect is not cumulatively considerable.”<sup>54</sup>

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”<sup>55</sup> “Cumulatively considerable” impacts are present when “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” and activities.<sup>56</sup> A lead agency’s threshold findings of significance with regard to cumulative impacts must “be supported by substantial evidence”; and, where found, cumulatively considerable impacts must be adequately mitigated.<sup>57</sup>

As discussed above, there are indirect air impacts from increased ammonia emissions for SCRs. The District also fails to provide substantial evidence that cumulative impacts from increased ammonia emissions for SCRs (which could number in the dozens at a single refinery) will not result in cumulative health risk impact. The PEA makes the conclusory statements that “[e]ven if multiple SCRs are installed at one refinery facility, the locations of all the stacks would not be situated in the same place within the affected facility’s property. As such, even with multiple SCR installations, the acute and chronic hazard indices would not be expected exceed the significance

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<sup>51</sup> Pub. Resources Code § 21083(b)(2); CEQA Guidelines § 15130(a).

<sup>52</sup> 14 Cal. Code Regs. § 15168(b)(2).

<sup>53</sup> 14 Cal. Code Regs. § 15168(b)(4).

<sup>54</sup> 14 Cal. Code Regs. § 15064(h)(3).

<sup>55</sup> 14 Cal. Code Regs. § 15355.

<sup>56</sup> Pub. Resources Code § 21083(b)(2); 14 Cal. Code Regs. § 15065(a)(3).

<sup>57</sup> 14 Cal. Code Regs. § 15064.7 (b).

threshold.”<sup>58</sup> However, no evidence is provided to support this assumption, and the draft PEA should base its analysis on a conservative assumption regarding the locations of SCRs, and not dismiss the potential environmental effect by relying on unsupported and result-driven assumptions.

Furthermore, the PEA’s conclusions with respect to potential cumulative health impacts are contradicted by recent District statements that recognize a potential need to control SCR ammonia slip. In a presentation on August 26, 2015, the District proposes possible “short-term” implementation for such a control.<sup>59</sup> Although CEQA does not require compliance with rule or programs that have not yet been adopted, the PEA should address, in its air quality analysis, the underlying concerns driving the proposed 2016 AQMP control measure. However, the project appears to value NOx RTC reductions above all other concerns, and accordingly the lopsided analysis does not acknowledge the related potential ammonia issues.

### **C. Water Supply Impacts Are Not Adequately Mitigated**

The EIR “must assume that all phases of the project will eventually be built and will need water, and must analyze, to the extent reasonably possible, the impacts of providing water to the entire proposed project.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal.4th 412, 431 (2007).) Also, “the future water supplies identified and analyzed must bear a likelihood of actually proving available; speculative sources and unrealistic allocations (‘paper water’) are insufficient bases for decision-making under CEQA.” (*Id.* at 432.)

The draft PEA acknowledges “significant adverse water demand impacts from hydrotesting” requiring the imposition of mitigation measures.<sup>60</sup> The mitigation measures consist of a requirement to use recycled water “if available” and if not, a declaration from the water purveyor indicating why the recycled water cannot be supplied to the project.<sup>61</sup> The draft PEA summarily states that “the potential increase in potable water use cannot be fully supplied either with all potable water or with a combination of recycled water and potable water, since some potable water may still be required.” The draft PEA also states: “[T]here is no absolute guarantee at the time of this writing that future supplies of potable or recycled water will be available to all of the affected facilities.”

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<sup>58</sup> Draft PEA, p. 4.2-23.

<sup>59</sup> Draft Potential Control Measures Concepts for 2016 AQMP August 2015, at p. 9 (link: <http://www.aqmd.gov/docs/default-source/Agendas/aqmp/advisory7-item5-attachment.pdf?sfvrsn=2>, last accessed September 16, 2015).

<sup>60</sup> Draft PEA, p. 4.5-9.

<sup>61</sup> Draft PEA, pp. 4.5-9 – 4.5-10.

CEQA requires a more in-depth evaluation of the availability and reliability of both potable and recycled water for the project.<sup>62</sup> It is insufficient to conclude that a significant impact for water supply exists without providing a more detailed analysis of the amount of water available, the reliability of such water, all of which has become more important as California is facing one of the most serious droughts in history. While the draft PEA identifies the existence of emergency drought regulations, it does not analyze the effect of these regulations – or of local water restrictions – on the facilities subject to the rule.

A similarly deficient analysis was presented in the draft PEA for the water usage associated with the wet gas scrubbers.<sup>63</sup> In that section, the District states that it cannot confirm or verify the use of recycled water and that “it is not known at this time whether water purveyors would be able to supply potable water for those facilities.” CEQA requires an actual analysis of the water availability and reliability, and the inability to verify the use of recycled water means that the use of potable water must be evaluated, including an understanding of whether it is available at all.

Furthermore, the draft PEA fails to evaluate any further mitigation measures, other than a commitment to use recycled water, if available. Such mitigation measures are speculative, and may be found to be legally inadequate if they are so undefined that it is impossible to gauge their effectiveness.<sup>64</sup> Feasible – and therefore defensible – mitigation could include provisions in the rule that allow for alternative technologies and additional NOx RTCs in the foreseeable event that water supply is increasingly restricted, and the cost of water increases accordingly.

#### **D. Noise Impacts Should Have Been Analyzed**

The NOP/IS for the project determined that noise was among the environmental areas which would not be significantly adversely affected by the project. The PEA, in explaining why noise is not considered, states that the facilities are generally industrial in nature, and any increase in noise levels due to construction and installation of BARCT NOx control equipment would be within acceptable limits for an industrial facility. However, this is an example of the District’s programmatic review failing to take into account site-specific conditions which could have an adverse impact. Rather than make generalizations about the facilities and extrapolated that there will be no adverse noise levels, the PEA should have undertaken a more conservative analysis to assess whether noise could, in fact, adversely affect receptors in the vicinity of the facilities, including on

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<sup>62</sup> *California Oak Foundation v. City of Santa Clarita*, 133 Cal.App.4<sup>th</sup> 1219, 1237 (2005) (EIR requires “forthright discussion of a significant factor that could affect water supplies).

<sup>63</sup> Draft PEA, p. 4.5-12 – 4.5-13.

<sup>64</sup> *Federation of Hillside & Canyon Ass’ns v. City of Los Angeles*, 83 Cal.App.4<sup>th</sup> 1252, 1260 (2000); *Preserve Wild Santee v. City of Santee*, 201 Cal.App.4<sup>th</sup> 260 (2012).

nearby roadways based on the local noise ordinances or requirements. Noise impacts could occur from the use of large construction equipment to construct and install NOx control equipment and increase in construction traffic, which can include large trucks, trailers and cranes. Additionally, there could be an increase in noise impacts associated with the operation of the NOx control equipment and the ammonia delivery trucks.

#### **E. Solid And Hazardous Waste Is Not Adequately Considered**

The PEA fails to adequately analyze potential impacts of hazardous waste as a result of the project. The significant NOx RTC reductions necessitate a high degree of BARCT NOx control installation, most of which consists of SCR technology. While SCR technology has been used in a wide variety of applications and industries over the decades, it nonetheless generates a hazardous wastestream in the form of spent catalyst which, in turn, requires potential on site storage and off-site transport and disposal.<sup>65</sup> Section 4.6 of the PEA acknowledges that the hazards exist and acknowledges that the generation of hazardous waste and materials will increase. The PEA should also evaluate the impact on communities near hazardous waste landfills, such as Kettleman Hills, where the impacts may be greater without any corresponding benefit from the District's proposed action. Also, as discussed earlier, the emissions implications of the increased ammonia from the SCR have been overlooked in the District's PEA.

#### **F. Growth-Inducing Impacts Analysis Is Flawed**

An EIR must describe any growth-inducing impacts of the proposed project.<sup>66</sup> As part of the analysis, the EIR must discuss ways in which the project could directly or indirectly foster economic or population growth,<sup>67</sup> and should also describe growth-accommodating features of the project that may remove obstacles to population growth. An EIR must discuss growth-inducing effects even though those effects will result only indirectly from the project.<sup>68</sup> A discussion on growth-inducing effects should not necessarily make assumptions about whether the growth is beneficial, detrimental, or inconsequential to the environment.<sup>69</sup> The purpose of the EIR is to act as an informational document.

Here, not only does the draft PEA fail to consider the significance of the shrinking number of RECLAIM facilities (as discussed in Section I.C. of this letter), but the PEA also fails to consider the possibility that the facilities within the RECLAIM universe

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<sup>65</sup> See, e.g., "Alternative Control Techniques Document – NOx Emissions from Process Heaters, (U.S. EPA, September 1993), <http://www3.epa.gov/ttn/catc/dir1/procheat.pdf>.

<sup>66</sup> Pub. Resources Code §21100(b)(5); 14 Cal. Code Regs. §15126(d).

<sup>67</sup> 14 Cal. Code Regs. §15126.2(d).

<sup>68</sup> *Napa Citizens for Honest Gov't v Napa County Bd. of Supervisors*, 91 Cal.App.4th 342, 368 (2001).

<sup>69</sup> 14 Cal. Code Regs. §15126.2(d).

could grow. In a footnote, the PEA assigns a “growth factor” to different categories of RECLAIM facilities.<sup>70</sup> No explanation is provided about how that growth factor was derived, nor whether it is current or likely to change. The PEA must consider a scenario which allows for more growth of those industries within the RECLAIM universe, and modify the growth-inducing impacts analysis accordingly.<sup>71</sup>

### **III. Conclusion**

The District has a very admirable – but narrow – statutorily defined focus: to promulgate rules and regulations which promote air quality in its jurisdiction. Under CEQA, the District is the lead agency for purposes of its own rulemaking. The District must be able to square its obligations as a lead agency to fully analyze and disclose impacts of its discretionary approvals with the narrow focus required of the District’s mission to promote air quality within a specific geographic area. The District has failed to adequately balance those obligations here, which has resulted in a PEA that presents a skewed analysis of the potential benefits and impacts of the proposed rule amendments. The District must address the numerous inadequacies of the draft PEA raised in this comment letter, and then, revise and recirculate the draft PEA for public review and comment in order to meet its mandate under CEQA.

Sincerely,



Nicki Carlsen  
ALSTON & BIRD LLP

NC:dtc  
LEGAL02/35874006v4

cc: Sue Gornick, WSPA (w/enclosures)

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<sup>70</sup> Draft PEA, p. 2-6.

<sup>71</sup> The Growth Inducement section is in Section 4.8.3 of the draft PEA.

## ATTACHMENT 1

### ADDITIONAL WSPA COMMENTS ON DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT (PEA) FOR NO<sub>x</sub> RECLAIM AMENDMENTS

Page/Section	WSPA Comment
Page 1-1, 3 <sup>rd</sup> paragraph	<p>This paragraph describes the project as “amendments to Regulation XX – Regional Clean Air Incentives Market (RECLAIM) to achieve additional NO<sub>x</sub> emission reductions to address best available retrofit control technology (BARCT) requirements <u>and to modify the RECLAIM trading credit (RTC) “shaving” methodology.</u>” [emphasis added]</p> <p>This description is not consistent with the project description contained in the AQMD’s Notice of Preparation issued 4 December 2014,<sup>1</sup> nor is the description consistent with Project Description contained in the Initial Study.<sup>2</sup> Specifically, neither the NOP Project Description nor the Initial Study Project Description includes any reference to modifying “the RECLAIM trading credit (RTC) “shaving” methodology” in the description of the project or the project objectives.</p>
Page 1-1, 4 <sup>th</sup> paragraph	<p>The Draft PEA states that “further analysis of the actual BARCT NO<sub>x</sub> emission control opportunities for the various equipment/process categories demonstrated that the proposed project could achieve 14 tons per day of NO<sub>x</sub> emission reductions by 2023 which is much higher than estimates provided in the 2012 AQMP.”</p> <p>While this value is certainly much higher than contemplated in the 2012 AQMP, it is also <u>not supported</u> by the AQMD Staff’s technical analysis.<sup>3</sup> The Staff’s analysis does not support a 14 ton per day (TPD) shave as necessary for BARCT equivalency. Rather, the Preliminary Draft Staff Report (PDSR) very clearly demonstrates that not more than 8.79 TPD of emission reductions from the RECLAIM program can be attributed to BARCT advancement; a conclusion that is later echoed in the Draft PEA.<sup>4</sup></p> <p>Furthermore, a 14 TPD shave reduction of the RECLAIM market may violate the project objectives under the California Health &amp; Safety Code (H&amp;SC). Contrary to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is absolutely no consideration of the economic impacts which would be incurred by RECLAIM facilities under a 14 TPD market adjustment that goes beyond BARCT.</p>

<sup>1</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>2</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

<sup>3</sup> AQMD, Preliminary Draft Staff Report (PDSR) for Proposed Amendments to NO<sub>x</sub> RECLAIM, 21 July 2015.

<sup>4</sup> AQMD, Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Table 1-3.

	<p>And contrary to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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</b>. Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>5</sup>). This higher cost threshold clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations. But the Staff proposal to shave 14 TPD, which goes beyond BARCT, exposes RECLAIM facilities to even greater costs than would have been incurred under a command-and-control program. According the Staff’s analysis, BARCT equivalency is not more than 8.79 TPD and even that value is overstated since adjustments are needed to account for the findings of the AQMD’s third-party refinery expert (Norton Engineering) would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>6</sup></p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the district’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>7</sup> The BARCT levels being proposed by AQMD Staff represent performance levels that have not been demonstrated as broadly achievable for most of the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.). The resultant impacts would be disproportionate and that is in conflict with H&amp;SC §39616(c)(7).</p> <p>For these reasons, the Draft PEA must be revised to address inconsistencies between the AQMD Staff’s proposal and the project objectives, as well as inconsistencies with the Health &amp; Safety Code.</p>
Page 1-2, 1 <sup>st</sup> full paragraph	This paragraph suggests that the proposed project will be limited to specific types of equipment/source categories in the RECLAIM program. While these types of equipment/source categories are certainly in the

<sup>5</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>6</sup> AQMD, Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>7</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality Management Plans (1997, 2003, 2007, 2012) and AQMP NOx RECLAIM Working Group Meeting #5, Agenda Item #3.

	<p>RECLAIM program, the program is a market-based program; not a command-and-control program. Furthermore, the stated objectives of Control Measure CMB-01 Phase I and Phase II which this rulemaking intends to implement are for <b>programmatically equivalency</b>. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p> <p>The language in the referenced section needs to be revised to reflect that (a) proposed project is seeking programmatic equivalency <u>within the requirements and limitations of the California Health &amp; Safety Code</u> and (b) acknowledge that there may be impacts on other RECLAIM facilities given the market-based design of the RECLAIM program. Those impacts must be analyzed to the extent practicable.</p>
Page 1-2, 2 <sup>nd</sup> full paragraph	As discussed above (see comments on Page 1-1, 4 <sup>th</sup> paragraph), the Draft PEA must be revised to address inconsistencies between the AQMD Staff's proposal and the project objectives.
Page 1-13, Table 1-1, Areas of Controversy  Line 1, Amount of proposed NOx shave and availability of RTCs	<p>Draft PEA claims "The staff analysis shows that after the proposed shave is imposed, there will be sufficient NOx RTCs available to maintain trading within the NOx RECLAIM program given foreseeable opportunities for emissions reductions." This statement is without technical foundation; neither the PEA nor the PDSR includes such a market analysis.</p> <p>On the contrary, the Staff's proposal would reduce the quantity of RECLAIM Trading Credit (RTCs) to levels without historical precedent and that action, according to Staff's own analysis, would result in a level of "unused" RTCs (i.e., RTCs not used to cover facility emissions) for which the only historical precedent was observed during the RECLAIM market collapse during the California power crisis of 2000-2001.<sup>8</sup> WSPA and the Industry RECLAIM Coalition have repeatedly expressed concerns about shaving the RECLAIM program to this level when such action is clearly beyond what is needed for BARCT equivalency and in conflict with California Health &amp; Safety Code requirements.</p> <p>Table 1-1 must be revised to accurately reflect the actual technical record; not assert conclusions without technical foundation.</p>
Page 1-14, Table 1-1, Areas of Controversy  Line 2, Equity of proposed NOx shave	The Draft PEA states that for 210 facilities holding 10% of the available NOx RTCs that "no NOx RTC shave is proposed because no new BARCT (not cost effective and/or infeasible) was identified...for the types of equipment and source categories." This statement is factually incorrect and should be corrected. In actuality, AQMD Staff <u>elected not to review</u> BARCT for these facilities under this RECLAIM rulemaking. And contrary to the statement, AQMD and other California air districts have previously made BARCT determinations that do apply to the types of equipment and operations at those smaller emitting facilities (e.g., boilers, heaters, etc.) were they not under RECLAIM. <sup>9</sup>

<sup>8</sup> AQMD Annual RECLAIM Audit Report, March 2015.

<sup>9</sup> See SCAQMD Regulation XI for examples.

<p>Page 1-14, Table 1-1, Areas of Controversy</p> <p>Line 3, Results of the BARCT analysis</p>	<p>The Draft PEA states “While staff believes the engineering assumptions in the staff BARCT analysis are appropriate, the difference in BARCT reductions attributable to the alternate engineering assumptions suggested by the consultant is relatively small. To account for this difference and to provide a compliance margin, staff is proposing a shave of 14 tpd, reduced from the initial BARCT result of 14.85 tpd.” We disagree.</p> <p>There continues to be a significant number of unresolved issues which result in uncertainty in the Staff’s BARCT analysis as presented in the PDSR. This includes, but is not limited to the Staff’s decision to selectively ignore the findings of the agreed upon third-party expert for the Refinery Sector, Norton Engineering Consultants. These issues are fundamental to the engineering design basis of the Staff’s proposed BARCT determinations for most refinery sector source categories. These discrepancies were exhaustively described in Norton Engineering’s expert analysis of the AQMD Staff’s analysis,<sup>10</sup> as well as reiterated in NEC’s letters dated 10 August 2015<sup>11</sup> and 4 September 2015.<sup>12</sup> Norton’s comments are incorporated herein by reference.</p> <p>Furthermore, Staff’s “after-the-fact” 0.85 TPD adjustment to the overall shave (i.e., reduces proposed shave from 14.85 to 14.0 TPD) is an improper application of the adjustments necessitated by Norton Engineering’s expert findings. Such an adjustment, which is necessary, must be applied to the quantity of BARCT equivalency emission reductions attributed to refinery sector source categories. By failing to properly adjust this value, the AQMD Staff have distorted their own methodology to increase the burden of this shave on one sector (i.e., refineries). This is disproportionate and without technical foundation.</p>
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<sup>10</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>11</sup> James Norton, NEC, letter to Dr. Phillip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for FCCUs Document No. 14-045-7, 10 August 2015.

<sup>12</sup> James Norton, NEC, letter to Dr. Phillip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for Fired Heaters & Boilers Document No. 14-045-8, 4 September 2015.

<p>Page 1-14, Table 1-1, Areas of Controversy</p> <p>Line 4, Equivalency with command-and-control</p>	<p>The Draft PEA asserts that the proposed shave amount of 14 tpd is consistent with previous RECLAIM rule amendments, the California Health &amp; Safety Code, and the purpose of the program. As noted above (see above comments on Page 1-1, 4<sup>th</sup> paragraph), the AQMD Staff have not demonstrated that the Staff proposal is consistent with certain provisions of the California Health &amp; Safety Code.</p> <p>Table 1-1, Line 4 must be revised to describe how the Staff proposal will comply with the project objective requiring compliance with all applicable H&amp;SC requirements.</p> <p>The Draft PEA goes on to state "...This approach will result in approximately 8.79 tons per day of BARCT reductions of actual NOx emissions attributable to installing and operating additional controls. Otherwise, actual emissions reductions of only about two tpd over the next seven years would be achieved." WSPA agrees that under the AQMD Staff's analysis, BARCT equivalency as currently presented is not more than 8.79 TPD. And with adjustments needed to fully account for the findings of the AQMD's third-party refinery expert, Norton Engineering, the shave needed for BARCT equivalency is not more than 7.94 TPD.<sup>13</sup> Staff has provided no information to support the assertion that 14 TPD must be shaved to achieve the 8.79 TPD (or 7.94 TPD) required for BARCT equivalency. And RECLAIM program history does not support that conclusion. Under the 2005 Shave, a 23% reduction in RTCs resulted in a 24% reduction in NOx RECLAIM emissions; a nearly 1:1 relationship.<sup>14</sup></p> <p>The Staff proposal must be revised to reflect the project objective of BARCT equivalency. That has not been demonstrated as any more than 8.79 TPD.</p>
<p>Page 1-15, Table 1-1, Areas of Controversy</p> <p>Line 5, 2012 AQMP Commitment in the State Implementation Plan (SIP)</p>	<p>The Draft PEA states: "This staff proposal recommends a reasonably available 14 tpd of NOx RTC reductions, based on BARCT, as required by state law." In fact, the PDSR presents BARCT equivalency as not more than 8.79 TPD, and the AQMD Staff have not explained how its proposal will comply with H&amp;SC §40406, since there is no consideration of the economic impacts which would be incurred under a 14 TPD market adjustment that goes beyond BARCT. Furthermore, AQMD Staff's proposal is contrary to H&amp;SC §39616(c)(1), which requires the market to perform 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.</p> <p>The Draft PEA must be revised to fully demonstrated compliance with the project objectives and relevant H&amp;SC requirements.</p>

<sup>13</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>14</sup> SCAQMD Annual RECLAIM Audit Report, March 2015. Under the 2005 shave, RTCs were reduced from 34.2 to 26.5 TPD between 2005 and 2011 and emissions declined from 26.4 to 20 TPD over the same period.

<p>Page 1-16, Table 1-1, Areas of Controversy</p> <p>Line 6, Availability of RTCs for future power plant needs</p>	<p>The Draft PEA states” The staff proposal would establish a separate adjustment account to hold RTCs for power plants to meet their NSR holding obligations. Many newer peaking plants are required to hold RTCs at the potential to emit level each year even though their actual emissions are far below this level. The adjustment account would relieve power producing facilities from the obligation of holding RTCs in order to meet the NSR holding requirements of Rule 2005.”</p> <p>The AQMD Staff proposal for a separate “adjustment account” has not been fully defined, and the Staff proposal and Draft PEA fail to address how such a mechanism would comply with U.S. EPA requirements for New Source Review. The PDSR and Draft PEA must be revised to demonstrate how such a proposed adjustment account would function, and demonstrate that it is approvable by U.S. EPA.</p> <p>Furthermore, Staff’s proposal would apparently not apply to new peaking power plants. The California Air Resources Board prepared assessment of electrical grid reliability needs in the South Coast air basin which suggested a significant amount of peaking power plant capacity would be needed to ensure reliability in the future.<sup>15</sup> This report was prepared in conjunction with the California’s power sector regulators (i.e., California Public Utilities Commission, California Independent System Operator, and California Energy Commission). Contrary to the CARB report, AQMD Staff’s analysis depends on a negative growth rate for power sector emissions and RTC demand. This is a significant difference.</p> <p>The Draft PEA should be revised to clarify that the Staff proposal would provide no relief to any new peaking power plants. The Draft PEA should also be revised to demonstrate how the Staff proposal will accommodate new power sector facilities which may be needed to ensure electric reliability and integration of renewable electricity.</p>
<p>Page 1-17, 3<sup>rd</sup> paragraph</p>	<p>The Draft PEA states “For the remaining 210 facilities that hold 10 percent of the 26.5 tpd of the NOx RTCs, no NOx RTC shave is proposed because no new BARCT (not cost effective and/or infeasible) was identified for the types of equipment and source categories at these facilities.” This statement is factually incorrect and should be revised. As noted above, AQMD Staff elected not to review BARCT for these smaller facilities for this RECLAIM rulemaking (i.e., no analysis was performed).</p>

<sup>15</sup> CARB, Assembly Bill 1318: Assessment of Electrical Grid Reliability Needs and Offset Requirements in the South Coast Air Basin, Draft Final Report, October 2013.

<p>Page 1-20, 1<sup>st</sup> paragraph, 3<sup>rd</sup> sentence</p> <p>Air Quality and Greenhouse Gases</p>	<p>The Draft PEA states “For the 275 facilities that are in the NOx RECLAIM program, the 14 tpd of NOx RTC reductions will affect 65 facilities plus the investors, who collectively hold 90 percent of the NOx RTC holdings.” This paragraph suggests that the proposed project will be limited to specific facilities in the RECLAIM program. While the application of the shave may be limited to these facilities, the impacts of the proposed shave will be broader. RECLAIM is a market-based program; not a command-and-control program. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p> <p>For example, smaller facilities without Infinite Year Basis (IYB) RTC holdings may incur higher RTC prices to meet their future compliance obligations. Alternatively, such facilities may find themselves unable to purchase RTCs at any price similar to the RTC supply crisis observed during the 2000/2001 power crisis which nearly collapsed the RECLAIM program. Also, Staff has not considered potential impacts to new or expanding facilities which are required to participate in RECLAIM. Or the potential consequences to the regional economy if those facilities are unable to obtain RTC supply. Or the potential environmental impacts of those operations if they are forced to locate outside of the South Coast air basin where they would presumably be subjected to lessor regulation. These are all issues and impacts which have been identified and should be disclosed as potential impacts from the project.</p> <p>The Draft PEA must be revised to clarify that market impacts may be broader than intended or even recognized by Staff, and those impacts must be quantified to the extent possible.</p>
<p>Page 1-20, 2<sup>nd</sup> paragraph</p>	<p>The Draft PEA states “...only 44 facilities are expected to comply with the proposed NOx RTC shave through the purchase of RTCs which will have no environmental impact.” The Draft PEA should be revised to present supporting analysis demonstrating how this conclusion was reached.</p> <p>RECLAIM is a market-based program; not a command-and-control program. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p>
<p>Table 1-3, Summary of Proposed Project &amp; Alternatives</p> <p>Alternative 3</p>	<p>This table reports the NOx Reduction Potential (tons/day) for Alternative 3 at 8.00 TPD. As proposed by the Industry, RECLAIM Coalition, Alternative 3 would result in BARCT equivalent reductions. Using the AQMD Staff’s latest BARCT analysis, which needs to be revised downward as discussed earlier herein, the Proposed NOx RTC “Shave” for this alternative should be 8.79 TPD. The Draft PEA should be revised.</p>

<p>Table 1-3, Summary of Proposed Project &amp; Alternatives</p> <p>Proposed Project Page 1-26</p>	<p>This table clearly shows that the AQMD Staff proposal, which would shave 14 TPD, would include removing 5.21 TPD of RTCs from the RECLAIM market that cannot be attributed to BARCT. The table even labels these 5.21 TPD as “NOx RTCs Needed to Fulfill Shave <u>Post-BARCT.</u>” [Emphasis Added] This proposal is beyond BARCT. Furthermore, a 14 TPD shave reduction of the RECLAIM market could violate the project objectives under the California Health &amp; Safety Code (H&amp;SC).</p> <p>Contrary to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is absolutely no consideration of the economic impacts which would be incurred under a 14 TPD market adjustment that goes Beyond BARCT.</p> <p>Contrary to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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.</b> Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>16</sup>). This clearly imposing a greater cost on RECLAIM sources than would be incurred under command and control regulations.</p> <p>Furthermore, Staff has proposed a market shave of 14 TPD which goes beyond BARCT. Under AQMD Staff’s analysis, BARCT equivalency is currently presented as not more than 8.79 TPD. Even that value is overstated since adjustments needed to fully account for the findings of the AQMD’s third-party refinery expert, Norton Engineering, would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>17</sup> Thus, RECLAIM facilities would have greater costs under the Staff proposal than would have been incurred under a command-and-control program.</p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the District’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>18</sup> The BARCT levels being proposed by</p>
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<sup>16</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>17</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>18</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality

	<p>AQMD Staff generally represent performance levels that have not been demonstrated as broadly achievable for the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.).</p> <p>For these reasons, the Draft PEA must be revised to address inconsistencies between the AQMD Staff’s proposal and the project objectives.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p>	<p>This table reports for Alternative 3 “Less operational NOx reductions than proposed project but not quantifiable.” As correctly reported in Table 1-3, Alternative 3 would actually reduce emissions by 8.79 TPD so it clearly is quantifiable. Table 1-4 must be revised to correctly report the emission reduction potential for Alternative 3.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p> <p>Page 1-29</p>	<p>For the proposed project, the table reports “Increases operational use of NH3 (a TAC) by 39.5 tpd.” But for Alternative 3, the table reports that ammonia (NH3) use is not quantifiable. However, no evidence is provided to support that conclusion. In the alternatives air quality analysis, the District asserts that if Alternative 3 were implemented, it would be too difficult to predict the number of facilities that would install NOx control equipment. First, the District should have acknowledged the unpredictability of facilities implementing the proposed project, which is more aggressive and could trigger correspondingly more drastic business reactions. Instead, the District assumes there that all facilities will fall in line to install equipment as it predicts (i.e., command and control). Second, the likely NOx control installation projects can be quantified at a program level since it is a function of the same stoichiometric relationship used in the Staff’s analysis for the proposed project. The Draft PEA should be revised to provide an estimate of the operational ammonia use for Alternative 3. Since this value will be lower than the proposed project, Alternative 3 would have lower ammonia emissions by comparison and would therefore be environmentally preferable on this issue.</p> <p>Is Staff’s estimate for increased operational use of ammonia based on 8.79 TPD of NOx emission reductions (i.e., BARCT equivalency)? Since the Staff’s 14 TPD proposal would require significantly greater emission reductions (i.e., beyond BARCT), the Draft PEA should be revised to explain the basis for this ammonia use figure to ensure that project’s potential environmental impacts are fully disclosed. The ammonia figure also drives traffic and construction impacts which may be greater than disclosed in the Draft PEA.</p> <p>For similar reasons, the Staff’s statement that Alternative 3 emissions for construction are “not quantifiable” is not accurate. As reported in Table 1-3, Alternative 3 would require emission controls sufficient to reduce NOx emissions by 8.79 TPD (again, using the Staff’s BARCT analysis). The</p>

	<p>Draft PEA must be revised to include a quantified estimate of the construction emissions needed to deliver those emissions control using a methodology similar to the Staff’s analysis of the proposed project.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p> <p>Page 1-30</p>	<p>The Alternative 3, the Draft PEA reports impacts are “Less than significant; achieves net NOx emission reductions during operation (less reductions than the proposed project <u>but not quantifiable</u>.” [emphasis added]</p> <p>This is not correct. As reported in Table 1-3, Alternative 3 would require emission controls sufficient to reduce NOx emissions by 8.79 TPD (again, using the Staff’s BARCT analysis) so clearly the impacts from Alternative 3 are quantifiable. The Draft PEA must be revised to include a quantified estimate of the NOx emission reductions during operation for Alternative 3.</p>
<p>Page 2-2, Section 2.2 Project Objectives</p>	<p>The Draft PEA states: “The objectives of the proposed project are to: 1) Comply with the requirements in Health and Safety Code (HSC) §§40440 and 39616 by conducting a BARCT assessment of the NOx RECLAIM program and reducing the amount of available NOx RTCs to reflect emission reductions equivalent to implementing available BARCT; 2) Modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment; 3) Ensure that RECLAIM facilities, in aggregate, achieve the same emission reductions that would have occurred under a command-and-control approach; 4) Achieve the proposed NOx emission reduction commitments in the 2012 AQMP Control Measure #CMB-01: Further NOx Reductions from RECLAIM; and, 5) Achieve NOx emission reductions to assist in attaining the NAAQS.” This highlights several problems with the Draft PEA and the Staff proposal.</p> <p>WSPA agrees that AQMD has a legal obligation to comply with the requirements in Health and Safety Code (HSC) §§40440 and 39616. However, Staff has oversimplified what those obligations are by suggesting this is entirely about conducting a BARCT assessment. The AQMD Staff’s proposed 14 TPD shave reduction from the RECLAIM market could violate the project objectives under the California Health &amp; Safety Code (H&amp;SC).</p> <p>With respect to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is no consideration of the economic impacts which would be incurred under a larger 14 TPD market adjustment that goes beyond BARCT.</p> <p>With respect to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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</b></p>

	<p><b>District’s plan for attainment.</b> Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>19</sup>). This clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations.</p> <p>Furthermore, Staff has proposed a market shave of 14 TPD which goes beyond BARCT. Under AQMD Staff’s analysis, BARCT equivalency is currently presented as not more than 8.79 TPD. Even that value is overstated since adjustments needed to fully account for the findings of the AQMD’s third-party refinery expert, Norton Engineering, would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>20</sup> Thus, RECLAIM facilities would have greater costs under the Staff proposal than would have been incurred under a command-and-control program.</p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the District’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>21</sup> The BARCT levels being proposed by AQMD Staff generally represent performance levels that have not been demonstrated as broadly achievable for the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.).</p>
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<sup>19</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>20</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>21</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality Management Plans (1997, 2003, 2007, 2012) and AQMP NOx RECLAIM Working Group Meeting #5, Agenda Item #3.

<p>Page 2-2, Section 2.2 Project Objectives (continued)</p>	<p>Next, the Draft PEA suggests an objective to “modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment.” That is not consistent with the project description contained in the Notice of Preparation issued 4 December 2014,<sup>22</sup> nor is it consistent with project description contained in the Initial Study.<sup>23</sup> Specifically, neither the NOP Project Description nor the Initial Study Project Description included any reference to modifying “the RECLAIM trading credit (RTC) “shaving” methodology” in the description of the project or the project objectives. And this is also inconsistent with the objectives approved by the Governing Board under Control Measure CMB-01. For these reasons, all references to “modifying “the RECLAIM trading credit (RTC) “shaving” methodology” should be removed from the Draft PEA.</p>
<p>Page 2-2, Section 2.2 Project Objectives (continued)</p>	<p>This section also suggests an objective “Achieve NOx emission reductions to assist in attaining the NAAQS.” This is also not consistent with the Project Description contained in the Notice of Preparation issued 4 December 2014,<sup>24</sup> or the description contained in the Initial Study Project Description.<sup>25</sup></p>

<sup>22</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>23</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

<sup>24</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>25</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

Page 2-6, 4 <sup>th</sup> paragraph	The Draft PEA states “the proposed project is estimated to reduce four tons per day of NOx emissions starting in 2016 because the amount of unused RTCs in the NOx RECLAIM program over the past five years (e.g., from 2009 to 2013) ranged from five tpd to eight tpd, demonstrating that there is enough cushion to support reduction of four tpd in 2016.” While the quantities of “unused” RTCs are a matter of historical record, Staff has provided no evidence to support that supposition that the RECLAIM market has “enough cushion to support reduction of four tpd in 2016.” And if this was just a reduction of unused RTCs, that would not equate to an emissions reduction in 4 TPD. The Draft PEA needs to be revised to include a market analysis to support that supposition or this statement should be deleted.
Page 2-6, 4 <sup>th</sup> paragraph (continued)	The Draft PEA goes on to state “it could take from two to four years for the affected facilities to plan, obtain permits, and install air pollution control equipment or modify existing equipment in response to the proposed project.” According to information from WSPA members, this estimate is too short. <sup>26</sup> While some individual projects might be complete able in 2-4 years, the proposed project would require dozens and dozens of emission control projects to be completed. For the refinery sector, such projects would need to be planned, engineered, and sequenced for construction in consideration of unit turnaround schedules. WSPA members report that completion of all needed projects for the proposed project would likely require not less than eight (8) years. The Draft PEA should be revised to reflect this timetable and the Proposed Amended Rules and PDSR should be similarly adjusted.
Page 2-9, PAR 2005 Requirements for New or Relocated RECLAIM Facilities – Subdivision (b)	The AQMD Staff have yet to provide a complete description of the amendments to this rule. AQMD Staff have also not obtained U.S. EPA approval that such amendments would even be approvable into the State Implementation Plan (SIP). The Draft PEA and PAR 2005 should be revised to reflect these important details <u>after</u> AQMD Staff have obtained the U.S. EPA approval needed for such amendments to be legal.
Page 2-10, top of page	The Draft PEA states “Further, only 44 facilities are expected to comply with the proposed NOx RTC shave through the purchase of RTCs which will have no environmental impact.” The Draft PEA should be revised to present supporting analysis demonstrating how this conclusion was reached.
Page 3.2-34, 2 <sup>nd</sup> paragraph, GHG Tailoring Rule	This section should be revised to note that the courts vacated significant portions of the GHG Tailoring Rule. The applicability criteria as described in the Draft PEA are not consistent with current regulations.
Page 4.1-3, Section 4.1.3.1	The Draft PEA states “Because each affected facility is located in heavy industrial areas, the construction equipment is not expected to be substantially discernable from what exists on-site for routine operations and maintenance activities. Further, the construction activities are not expected to adversely impact views and aesthetics resources since most of the heavy equipment and activities are expected to occur within the confines of each existing facility and are expected to introduce only minor visual changes to areas outside each facility, if at all, depending on the location of the construction activities within the facility.”

<sup>26</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, March 2015.

	<p>This statement oversimplifies the range of physical settings existent for RECLAIM facilities. In actuality, some refinery or non-refinery RECLAIM facilities are located areas where additional vertical obstructions from cranes or new emission control structures could be “discernable” and may adversely impact views and aesthetics resources for adjacent communities. The Draft PEA should be revised to clarify the range of settings which would be impacted by the proposed project and acknowledge the range of potential impacts associated with the proposed project.</p>
<p>Page 4.2-2, Table 4.2-1 Estimated Number of NOx Control Devices Per Sector and Equipment/Source Category</p>	<p>As shown in this table, the Draft PEA states that Staff has assumed 74 SCRs would be installed on Refinery Process Heaters and Boilers under the proposed project. Staff does not explain the basis for this value, which conflicts with the Preliminary Draft Staff Report (PDSR). The PDSR suggests that the proposed project would result in 76 SCRs (25 upgraded, 51 new) for refinery heaters and boilers,<sup>27</sup> in which case the Draft PEA would be understating the potential project impacts. It should also be noted that AQMD’s third-party refinery sector expert, Norton Engineering, found that only 48 refinery heaters and boilers could be cost effectively retrofit with new or upgraded SCRs.<sup>28</sup> Staff have done nothing to reconcile this discrepancy which is material. The Draft PEA must be revised to clarify the technical basis for the assumed emission controls outcome and associated potential impacts to the environment. The Draft PEA should also explain how emission controls which are not cost effective, according to AQMD’s own third-party expert, will be implemented.</p>
<p>Page 4.2-4, Section 4.2.3.1, first paragraph</p>	<p>The Draft PEA states “Further, operators at each affected facility who construct NOx control equipment that utilize chemicals as part of the NOx control equipment operations, such as a new ammonia or caustic storage tank, may also need to build a containment berm large enough to hold 110 percent of the tank capacity in the event of an accidental release, pursuant to U.S. EPA’s spill prevention control and countermeasure regulations.”</p> <p>While other regulations and good engineering practices would require containment features for these tanks, the Spill Prevention Control and Countermeasure (SPCC) regulations actually don’t apply to ammonia or caustic storage vessels. The Draft PEA should be clarified accordingly.</p>
<p>Page 4.2-7, last paragraph</p>	<p>The Draft PEA states “if a particular technology was identified as having a cost that exceeds \$50,000 per ton, this CEQA analysis assumed that the facility operator would not install this type of air pollution control technology in response to the project.” This statement is inconsistent with the project objectives which require compliance with the California Health &amp; Safety Code. The \$50,000 threshold fails in this regard.</p> <p>Under H&amp;SC§39616(c)(1), the RECLAIM program is required to result in “an equivalent or greater reduction in emissions <b>at equivalent or less cost compared with current command and control regulations</b> and future air quality measures that would otherwise have been adopted as part of the District’s plan for attainment.” AQMD Staff has failed to demonstrate that the proposed amended RECLAIM program will be <b>at equivalent or less</b></p>

<sup>27</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, Table B.10.

<sup>28</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, Table B.9.

	<p><b>cost compared with current command and control regulations.</b> On the contrary, Staff’s proposed \$50,000 cost effectiveness threshold for this RECLAIM rulemaking is more than double the cost threshold used by AQMD for command-and-control rules (i.e., \$22,500 per ton<sup>29</sup>). This clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations. The Draft PEA and Proposed Amended Rules must be revised to be consistent with the project objectives and all applicable H&amp;SC requirements.</p>
Page 4.2-8, Section 4.2.3.1, first paragraph	<p>The Draft PEA states “In order to operate SCR and UltraCat technology, ammonia is necessary and, as such, tanks to store ammonia would also need to be installed. The size of each ammonia tank needed to operate the SCR units and one UltraCat filtration unit have been estimated to range between 2,000 and 11,000 gallons in capacity.”</p> <p>While this statement may be appropriate for characterizing <u>new</u> tanks which are likely to handle aqueous ammonia, it ignores the fact that some <u>existing</u> ammonia tanks are used to store anhydrous ammonia. The PEA should be revised to address this description. Staff should consider whether this condition requires revision of the offsite consequence analysis presented in the Draft PEA.</p>
Page 4.2-8, Section 4.2.3.1, 5 <sup>th</sup> paragraph	<p>The Draft PEA states “From a construction point of view, the installation of a NOx control technology at a refinery is a complex process. For example, if a facility operator chooses to install NOx control equipment, time will be needed for pre-construction/advance planning activities such as engineering analysis of the affected equipment, engineering design of the potential control equipment, contracting with a vendor, securing financing, ordering and purchasing the equipment, obtaining permits and clearances, and scheduling contractors and workers. The amount of lead time can vary from six months (e.g., for a SCR for refinery/boiler heater or gas turbine) to up to 18 months for a scrubber (either a WGS or DGS).”</p> <p>AQMD permitting for new emission controls can easily take as much as 18 months for Title V facilities. This could easily increase the amount of lead time a company requires to 2-3 years. Some of the pre-construction activities cannot be conducted until the Permit to Construct has been issued.</p>
Page 4.2-11, top of page	<p>The Draft PEA states “...the analysis also includes an analysis of the overlapping impacts spread out over a five- and seven-year period.” According to information from WSPA members, this estimate is too short. While some individual projects might be complete in 2-4 years, the proposed project would require dozens and dozens of emission control projects to be completed. For the refinery sector, such projects would need to be planned, engineered, and sequenced for construction in consideration of unit turnaround schedules. WSPA members report that completion of all needed projects for the proposed project would likely require not less than eight (8) years.<sup>30</sup> The Draft PEA should be revised to reflect this timetable and the Proposed Amended Rules and PDSR should be similarly adjusted.</p>

<sup>29</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>30</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, March 2015.

<p>Page 4.2-13, 1<sup>st</sup> paragraph</p> <p>Combined Construction Emissions From Non-Refinery and Refinery Facilities</p>	<p>The Draft PEA does not disclose the assumed basis for construction impact estimates. Are these impacts based on construction of emission controls to deliver 8.79 TPD (i.e., BARCT equivalency), or has Staff assumed construction sufficient to deliver the proposed 14 TPD of emission reductions (i.e., beyond BARCT equivalency)? The amount of construction activity for modification of existing SCRs will be different than the activity needed for entirely new SCR installations. The Draft PEA must be revised to fully disclose the technical basis of this analysis so the public can understand whether the impacts presented are complete.</p>
<p>Page 4.2-13, last paragraph</p> <p>Combined Construction Emissions From Non-Refinery and Refinery Facilities</p>	<p>The Draft PEA notes "...it is likely that only minimal, if any, construction activities would occur at any refinery facilities during 2016." This is exactly why the Staff proposal to remove four (4) TPD of RTCs in 2016 is too much, too fast. Staff has provided no evidence to support that supposition that the RECLAIM market has "enough cushion to support reduction of four tpd in 2016."</p>
<p>Page 4.2-18, 1<sup>st</sup> paragraph</p>	<p>The Draft PEA states "Implementation of the proposed project is expected to result in direct air quality benefits from the reduction of 14 tons per day of NOx RTCs by 2022. Because of the RECLAIM market system, the actual reduction in NOx emissions each year may be less than the reduction in RTC holdings imposed by the project." This statement conflicts with Page 1-1, 4<sup>th</sup> paragraph. Please see our comment to that prior statement.</p>
<p>Page 4.2-20, Refinery Facilities</p>	<p>This section presents impacts from operation of the proposed project for refinery facilities in the South Coast air basin. The Draft PEA does not disclose the assumed basis for these impact estimates. Are these impacts based on operation of emission controls to deliver 8.79 TPD (i.e., BARCT equivalency), or has Staff assumed operations sufficient to deliver the proposed 14 TPD of emission reductions (i.e., beyond BARCT equivalency)? The Draft PEA should be revised to explain the basis of the technical analysis so the public can understand whether the impacts presented are complete.</p>
<p>Page 4.2-22, 1<sup>st</sup> paragraph</p>	<p>The Draft PEA states "Ammonia slip is limited to five parts per million (ppm) by permit condition." This is an oversimplification since some existing SCRs are permitted with higher ammonia slip limits. These existing units may not be required to open their permits, in which case they could continue to operate with higher than 5 ppmv ammonia slip performance.</p> <p>Furthermore, the Draft PEA analysis of ammonia slip for new SCR installations depends on physical conditions which the Staff analysis explicitly omitted from the project description (e.g., use of Ammonia Slip Catalysts or ASC) despite recommendations by the AQMD's third-party expert, Norton Engineering, to use ASC.<sup>31</sup> Without the ASC, ammonia slip from individual devices could be as great as 20 ppmv, but the draft PEA underestimates the ammonia slip by assuming it will universally be 5 ppmv. However, existing SCRs are not necessarily subject to those permit</p>

<sup>31</sup> Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Table 2-3.

	<p>conditions, and thus, ammonia slip of up to 20 ppmv should be considered in the health risk assessment for ammonia emissions.<sup>32</sup></p> <p>The Draft PEA should be revised to more accurately reflect the range of ammonia slip conditions which could exist. Importantly, the screening Health Risk Assessment results presented in the Draft PEA would need to be revised to reflect that broad range of ammonia slip performance.</p>
Section 4.2.4, Cumulative Air Quality Impacts	The Draft PEA does not discuss the potential secondary impacts on air quality associated with increased emissions of ammonia from the numerous SCRs mandated by this rulemaking. Ammonia is a precursor to PM2.5 formation for which the South Coast AQMD is in nonattainment, so the PEA should consider whether additional ammonia emissions would represent a cumulatively considerable impact.
Page 4.2-26, 1 <sup>st</sup> full paragraph	The Draft PEA states "...based on regional modeling analyses performed for the 2012 AQMP, implementing control measures contained in the 2012 AQMP, in addition to the air quality benefits of the existing rules, is anticipated to bring the District into attainment with all national and most state ambient air quality standards by the year 2023." This statement is at best incorrect. A significant portion of the control strategy presented in the 2012 AQMP was still 182(e) "black box" measures which have not been defined.
Chapter 5, Alternatives	<p>In this section, the Draft PEA presents 5 alternatives to the proposed project, but except for Alternative 4 (No Project) and Alternative 3 (Industry Approach), all other alternatives propose 14 TPD or more of NOx emission reductions. Given that the proposed project has remaining significant environmental effects with the proposed project at 14 TPD, the failure to include any additional alternatives other than Alternative 3 (Industry Approach) at a lesser reduction of NOx emissions does not satisfy CEQA's requirement for a "reasonable range of alternatives."</p> <p>In addition, the Draft PEA repeatedly claims that the impacts from the alternatives are "not quantifiable" for unspecified reasons. But these figures are not unknowable. In most cases, Staff could have easily made bounding or other technical assumptions to complete the quantification to allow the public to understand how the impacts from the alternatives compare to the Staff's proposed project. The Draft PEA must be revised to include this additional technical detail.</p>

<sup>32</sup> Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Tables 4.2-18 and 4.2-21.



**Western States Petroleum Association**

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Sue Gornick

Senior Coordinator, Southern California Region

VIA ELECTRONIC MAIL

August 21, 2015

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

**SUBJECT: WSPA COMMENTS ON PRELIMINARY DRAFT STAFF REPORT  
(PDSR) FOR NOX RECLAIM AMENDMENTS DATED JULY 21, 2015**

Dear Dr. Fine:

The 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-member companies operate petroleum refineries and other facilities in the South Coast Air Basin that are within the purview of the Regional Clean Air Incentives Market (RECLAIM) program.

WSPA and the Industry RECLAIM Coalition (of which we are a member) have submitted several comment letters during this rulemaking process to request changes to the District Staff's proposal that we believe are necessary to preserve a healthy and successful RECLAIM program for all RECLAIM participants, as well as to satisfy the 2012 AQMP commitments to the State Implementation Plan (SIP) and USEPA. We have not yet received written responses to these comments. Nevertheless, we appreciate the opportunity to provide this letter to reiterate our previous concerns, and to discuss new issues arising from the PDSR.

Below are the highlights of our major concerns. More detailed comments are included in Attachment 1, attached hereto and incorporated herein by reference.

## **I. Shave Methodology and Arbitrary Removal of Unused RECLAIM Trading Credits (RTCs)**

The District's Remaining Emissions method for calculation of RTC reductions conflicts with the CMB-01 Phase 1 and Phase 2 Control Measures as approved under the 2012 AQMP. The District's Remaining Emissions method would remove nearly all Unused RTCs from the RECLAIM market even though CMB-01 Phase 1 had explicitly considered and rejected such a reduction, instead determining that a 2 tpd reduction of Unused RTCs was more appropriate.<sup>1</sup> Additionally, the Incremental BARCT method proposed by the Industry RECLAIM Coalition is more consistent with Control Measure CMB-01 Phase 2 as approved under the 2012 AQMP because this method removes only those RTCs directly attributable to technology advancement (i.e., BARCT).<sup>2</sup>

Further, the proposed Compliance Margin of 10% may be inadequate to meet the market's historical need for Unused RTCs. Unused RTCs may be needed for several reasons, including facility-level compliance margins, which vary depending on facility size and/or risk tolerance; RTC holding requirements imposed under Rule 2005; and market liquidity, to name a few. These Unused RTCs have historically averaged in the 15-30% range (approximately 5 to 9 tpd), with the sole exception being the RTC market crisis during the 2000 compliance year. The AQMD Staff's proposal, which includes only a 10% compliance margin, appears to be inadequate for satisfying this market requirement. Hence, WSPA recommends that Staff adopt the Incremental BARCT method as their preferred proposal.

While the proposed, limited RTC adjustment account may help certain Power Sector facilities subject to Rule 2005 New Source Review (NSR) RTC holding limit requirements, it does not resolve the holding requirements applicable to many current and future non-power facilities. It is recommended that any RTC adjustment account be accessible to all RECLAIM participants subject to the Rule 2005 NSR RTC holding requirement. WSPA also recommends that Staff provide technical justification to support the quantity of RTCs set aside to fund any such adjustment account. Finally, WSPA recommends that USEPA approval of the NSR set aside concept be obtained in writing prior to adoption of the rule amendment.

## **II. Shave Application and Implementation Schedule**

Any NO<sub>x</sub> RECLAIM shave should be applied in an equally distributed "across-the-board" manner consistent with RECLAIM founding principles<sup>3</sup> and the precedent set under the 2005 NO<sub>x</sub> RECLAIM shave. In addition, the proposed schedule should be consistent with the 2012 AQMP commitment to the State Implementation Plan (SIP) which was 2 tpd in the first year; anything larger may not allow sufficient time for industry to implement emission control projects necessitated by the rulemaking.<sup>4</sup> Since RECLAIM is tied to BARCT (as discussed in more detail below), the lack of sufficient lead time means that the proposed shave goes beyond

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<sup>1</sup> SCAQMD, 2012 AQMP. Page 4-9 states: "The control measure will seek further reductions of 2 tpd of NO<sub>x</sub> allocations if triggered." Appendix A, page IV-A-13 presents rationale for that conclusion.

<sup>2</sup> SCAQMD, 2012 AQMP. Page 4-26 states: "This phase of control is to implement periodic BARCT evaluation as required under the state law." Appendix A, page IV-A-60 presents more detailed discussion for the measure.

<sup>3</sup> SCAQMD, Staff Report for Proposed Amended Regulation XX – RECLAIM, January 2005, Executive Summary.

<sup>4</sup> WSPA-SCAQMD letter, July 14, 2015.

BARCT and that RECLAIM will not achieve equivalent or greater reductions than BARCT at equivalent or lesser cost. Therefore, the shave implementation schedule should be “back-loaded” to accommodate a longer, more realistic project implementation period with at least 2 of the proposed 4 tpd (currently being proposed for 2016) being moved to 2019 or later. We are not recommending additional annual increments at this time, since the final shave amount has not been finalized.

### **III. Useful Life of Control Equipment**

The proposed Useful Life of 25 years is inappropriate because AQMD rulemaking is far more frequent, with the prior major NO<sub>x</sub> RECLAIM rulemaking occurring only 10 years ago. Use of a 25 year assumption makes the rule costs appear lower than they actually are by diluting the significant capital costs of required projects over a much longer time table than is likely to occur. The Staff analysis should be revised to reflect the 10-year Useful Life assumption, which is more consistent with recent SCAQMD rulemaking schedules and is also consistent with the Useful Life assumption typically used by CARB and other major Air Districts.

### **IV. BARCT Analysis**

There is a statutory requirement that RECLAIM achieve equivalent or greater emission reductions than command and control at equivalent or lesser cost.

*Command and Control Regulation Would Require BARCT of the Refining Sources Subject to RECLAIM:* The District is required to adopt rules and regulations implementing the AQMP.<sup>5</sup> Among other things, these rules and regulations must require BARCT for existing sources.<sup>6</sup> In rulemaking addressing existing sources outside of RECLAIM, SCAQMD is mandated to require BARCT. Because of the mandate to require BARCT on all existing sources, it is fair to say that current command and control regulations and future measures adopted as part of the plan would at least be equivalent to BARCT. In the absence of a market-based mechanism (cap-and-trade program) such as RECLAIM, SCAQMD would adopt a rule requiring source-specific BARCT for each of the sources covered under RECLAIM.

*The Proposed Shave Appears to Include an Additional 5.21 Tons per Day Beyond BARCT:* The proposal set forth by the District indicates that the proposed BARCT would result in a reduction of 8.79 tpd of NO<sub>x</sub> from 2011 emissions at 2000/2005 BARCT. As described above, RECLAIM must achieve emission reductions equivalent to or greater than traditional command and control, or BARCT. Thus, a NO<sub>x</sub> shave equivalent to BARCT (which the District proposes at 8.79 tpd) would be the level for comparison with the Health and Safety Code provision stating that equivalent or greater reductions would be achieved 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.” Yet, SCAQMD does not seek merely its determined BARCT equivalency level of 8.79 tpd; it seeks 14 tpd of NO<sub>x</sub> reductions and has not demonstrated that such reductions will be achieved at equivalent or lower cost than

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<sup>5</sup> Health & Saf. Code § 40460.

<sup>6</sup> Health & Saf. Code § 40440.

BARCT. The additional 5.21 tpd reduction goes above and beyond BARCT. Such a severe reduction is not essential to compliance with the statute.

*SCAQMD Needs to Demonstrate that Achieving This Additional 5.21 Tons per Day Would Be Less Costly than Achieving BARCT on a Source-by-Source Basis in the District:* The Health and Safety Code requires RECLAIM to achieve at least equivalent reductions as traditional command and control at an equivalent or lesser cost.<sup>7</sup> While the draft staff report does provide a cost accounting for BARCT, that accounting (which we believe to be understated) only covers 8.79 tons of the 14 ton per day shave. The draft staff report does not even mention, let alone provide detailed discussion of, the costs associated with the additional 5.21 tons per day being required by the proposed rule. Because the Legislature has required RECLAIM to impose costs less than or equal to command and control regulation (i.e., BARCT), and BARCT only makes up a portion of the proposed shave, the remaining reductions which are in excess of BARCT will cost more than BARCT. The costs related solely to BARCT are substantial with refinery costs over \$900 million.<sup>8</sup> Costs associated with the additional 5.21 tpd reduction will only increase that figure in a substantial manner. The District must include the cost figures for the additional shave amount and justify imposing these reductions under the statutory standard of achieving command and control levels at equivalent or lower costs. It is simply not reasonable to exclude such a relevant factor from consideration.

## V. NEC Study

The BARCT analysis for Refinery Sector categories should be revised to explicitly consider the findings presented in Norton Engineering Consultants' (NEC) BARCT Feasibility and Analysis Review.<sup>9</sup> NEC is a third-party expert hired to confirm the Staff's technical analysis in support of this rulemaking. Following the issuance of the PDSR, however, NEC responded to SCAQMD in an August 10, 2015 letter (see Attachment 2) to "clarify the most glaring misstatements/misunderstandings of the information [NEC] provided to the District." By selectively dismissing the third-party expert's findings, without resolution of the technical issues in dispute, Staff has compromised the process and the results of that process. It is unacceptable to arbitrarily reduce the overall shave by 0.85 tpd to resolve the differences in technical assumptions. For example, if the Staff disregards the conclusion from the NEC's third-party expert report, nearly 40 operating units would be impacted by this analysis error.<sup>10</sup> Furthermore, any adjustment that may be justified on a technical basis should be applied to the sector where the actual BARCT reduction occurs and not to the total shave reduction (i.e., Staff's proposed adjustment of 0.85 tpd should be applied to the Refinery Sector's BARCT reduction).

While WSPA understands that BARCT should represent a level of performance that is technically feasible and cost-effective for most units on a retrofit basis in a given source category, the District's assumptions regarding the feasibility of achieving the BARCT levels are

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<sup>7</sup> Health & Saf. Code § 39616(c)(7).

<sup>8</sup> SCAQMD, *Preliminary Draft Staff Report, Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM* (Draft NOx RECLAIM Staff Report), p. 23. (July 21, 2015)

<sup>9</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM – BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>10</sup> SCAQMD, Preliminary Analysis – Refinery Boilers/Heaters, July 2014 (posted on AQMD website October 2014).

not supported by evidence that the units in question can achieve 2 ppm NOx. In fact, the data provided by Staff (Appendix B of the PDSR) indicates that only 4 of the 76 installed SCRs in the boiler and heater category are currently performing below 2 ppm. This alone suggests that the proposed BARCT is not representative. Even more, in a confidential WSPA refinery survey,<sup>11</sup> conducted by a third party contractor, only 2 of the 4 are retrofits. This does not represent the necessary proportion of the units in this source category.

The draft staff report proposes 2015 BARCT levels of 2 ppmv of NOx for FCCUs, refinery heaters and boilers greater than 40 mmbtu/hr, gas turbines, and sulfur recovery unit tail gas incinerators. While the District justifies these levels based on an assumption that all refinery equipment can reach such levels, the draft staff report says otherwise. With respect to refinery heaters and boilers, very few of the existing refinery heaters and boilers already equipped with SCR are able to meet 2 ppmv of NOx. In fact, as stated in the draft staff report, of the 212 refinery boilers and heaters classified as major and large NOx sources, 14 heaters using refinery fuel gas have achieved 1.6-3.5 ppmv NOx, two boilers using natural gas have achieved 2-5 ppmv NOx, and a crude heater using refinery fuel gas achieved 3-8 ppmv NOx. Apart from some unknown percentage of the 14 process heaters, none of these sources already employing the control technology on which the BARCT level is based (SCR) have shown an ability to reduce emissions below 2 ppmv NOx. Accordingly, the District has not shown that a BARCT level of 2 ppmv NOx is achievable over the broad spectrum of refinery heaters and boilers subject to the proposed amendments. Therefore, 5 ppm is a more appropriate endpoint for refinery boilers/heaters.

The same is true with respect to FCCUs. The District proposes a 2015 BARCT level of 2 ppm NOx based on the ability of one FCCU achieving the proposed level. As explained by the District's consultant, of the three FCCUs currently operating with SCRs, only one of them achieves less than 2 ppmv NOx.<sup>12</sup> Again, achievability in one unit does not guarantee similar performance in other units, particularly units that have been operating under different conditions for many years. Each refinery has unique circumstances such as equipment type, age, and configuration that factor into its ability to achieve the proposed emission levels. Thus, what may be achievable for one piece of equipment may not be for another. Further, while there may be controls available with the ability to achieve the proposed level of performance, such control may come at a cost that is unreasonable. The District has not shown that the proposed levels can be achieved across the board in a cost effective manner. As a result, and to be consistent with the statutory obligations, the District needs to reconsider and revise the proposed BARCT levels to ensure that they are achievable by a more representative percentage of the sources subject thereto.

## **VI. Costs and Cost Effectiveness**

Exclusion of the NEC cost estimates results in an inappropriate minimization of the estimated Refinery Sector costs presented in the PDSR. It also inflates the presented emission reductions estimate for the Refinery Sector. The BARCT analysis should be revised to explicitly reflect the

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<sup>11</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, March 2015.

<sup>12</sup> Norton Engineering, *Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM-SCRs for FCCUs Document No. 14-045-7* (August 10, 2015).

NEC cost estimates for Refinery Sector categories. Additionally, use of the Discounted Cash Flow (DCF) method along with interest rate and useful life assumptions make estimated costs for this rulemaking appear less expensive than they would be under the Levelized Cash Flow (LCF) method used by CARB and most other major Air Districts. WSPA believes that the LCF method is a better representation of cost effectiveness than the DCF method and recommends it be used. The same cost effectiveness threshold should be used for both DCF and LCF methods. Staff has used a higher cost threshold for LCF in the past than they used for DCF, so that the differences between the two methods are diluted.

The proposed \$50,000 cost effectiveness threshold is greater than the AQMD's DCF cost effectiveness threshold for Command-and-Control sources in South Coast. Under the 2012 AQMP, the approved cost threshold for NO<sub>x</sub> control measures was \$22,500 per ton,<sup>13</sup> and AQMD's current Best Available Control Technology (BACT) guidance document presents a cost effectiveness threshold that is only \$19,100 per ton.<sup>14</sup> Also, the Health & Safety Code requires that market-based program costs be "equivalent or less 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" and "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." [H&SC 39616(c)(1) and (7)]. Staff has not demonstrated that these legal obligations are satisfied. Therefore, WSPA recommends that the PDSR analysis be revised with the cost effectiveness threshold not greater than \$22,500 (i.e., the cost effectiveness threshold used in the 2012 AQMP).

Further, the draft staff report understates the actual costs associated with meeting the proposed BARCT levels. As the District has done in past rulemakings, it hired NEC to provide reviews and recommendations on the analysis developed by SCAQMD as it relates to the technical feasibility of the control options as well as the cost effectiveness of each option. After gathering information from onsite visits to six of the refineries, NEC provided the District with a comprehensive evaluation of costs of each control option, the size and space needed for the equipment, and the time needed to install the control technologies. The District, however, chose to use different cost estimation approaches, opting to selectively disregard its own consultant's evaluation. This information was site specific and should be considered more credible than the District's generic evaluation of costs. It is a hallmark of reasoned decision-making that an agency use the most accurate available information.

Apart from WSPA's concern relating to the dismissal of NEC's evaluation, the District's estimates do not include all of the costs that are required to be considered, and therefore vastly understate the cost impacts of the BARCT proposed. It appears that installation, design, and engineering costs have not been included properly. Moreover, it is critical to recognize that each refinery is unique such that BARCT levels achievable and cost effective at one refinery may not be at another. Plant configuration, equipment type, equipment age, length of time the SCR must remain in service and consistently achieving emission reduction targets between maintenance opportunities (most FCCUs, heaters, and boilers operate for years at a time, 24 hours per day and

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<sup>13</sup> SCAQMD, 2012 AQMP, December 2012, pages 4-43.

<sup>14</sup> SCAQMD, BACT Guidelines, Part C: Policy and Procedures for Non-Major Polluting Facilities, 2006.

7 days per week), and composition of fuel, are a few of the factors in play with determining the costs associated with achieving the proposed levels. For example, some refinery configurations such as processes that utilize dual stacks, may require more than one SCR, and thus greater expenditures (i.e., double), to achieve the proposed level. It does not appear that such a scenario was considered by the District in developing its cost effectiveness determinations.

Accordingly, WSPA believes that the District's cost effectiveness calculations significantly understate the costs associated with achieving the proposed BARCT levels. We believe that even the Norton analysis underestimates actual costs. WSPA is currently developing additional information based on detailed engineering assessments that more accurately represent the costs associated with the proposed BARCT. We will submit this information to the record as it becomes available.

## **VII. Disproportionate Impacts**

Under Health and Safety Code Section 39616(c)(7), the District must show that RECLAIM facilities are not being disproportionately impacted by participating in the program.<sup>15</sup> The draft staff report, noting the emission projections described in the 2012 AQMP, indicates that RECLAIM sources make up 37 percent of the projected NOx emissions for 2023 from stationary sources.<sup>16</sup> Table 2.1 of the draft staff report indicates that non-RECLAIM sources, including waste disposal and miscellaneous processes, will account for 46 tons per day of the annual average NOx emissions for the 2023 base year while RECLAIM sources (pre-shave) will account for 27 tons per day.<sup>17</sup>

In its proposal, the District is seeking substantial reductions from RECLAIM sources, the majority of which come from the nine refineries in the Basin. Nonetheless, there is nothing in the draft staff report or other proposal document that indicates what reductions will be required for non-RECLAIM facilities. In fact, there is no evidence presented that would lead the Board to make a finding that RECLAIM facilities are not taking the brunt of the load when it comes to requiring emission reductions. The District has failed to provide "appropriate information" to "substantiate" a finding of no disproportionate impact.

Indeed, for the Board to make such a finding, there must be evidence indicating that non-RECLAIM facilities are, on an aggregate basis, required to reduce their NOx emissions at the levels required by their RECLAIM counterparts (at least proportionately). Non-RECLAIM facilities represent the majority of the stationary NOx emissions, yet SCAQMD appears to be seeking *no* reductions from such sources. Barring appropriate information showing that non-RECLAIM sources are required to reduce emissions equivalent to what is proposed by these amendments, the Board cannot make the required findings and as a result, the proposed amendments violate the District's statutory mandate.

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<sup>15</sup> Health & Saf. Code § 39616(c)(7).

<sup>16</sup> SCAQMD, *Preliminary Draft Staff Report, Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM* (Draft NOx RECLAIM Staff Report), p. 14. (July 21, 2015)

<sup>17</sup> *Id.*

## **VIII. Energy Efficiency Projects**

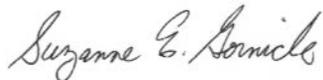
Staff suggests that there are NOx emission co-benefits available from Refinery Sector sources due to energy efficiency projects that are in addition to the projected emission reductions under this rule. This is essentially an erroneous assumption due to the fact that the AQMD is relying on information that was submitted under the California AB32 Energy Efficiency and Co-Benefits regulation and most of the projects that were presented by Refinery Sector facilities in those 2011 vintage reports were already completed. As such, those emissions benefits were already reflected in the 2011 baseline year emissions presented in the PDSR. AQMD Staff acknowledges as much in PDSR Table 3.2. As such, these co-benefit reductions should not be presented or characterized as a potential additional benefit.

## **IX. Socioeconomic Impacts**

Under Health and Safety Code Section 40728.5, the District is required to perform an analysis of the socioeconomic impacts of the proposed regulation. This assessment is important because it lays out the range of probable economic impacts to the regulated industries as well as the impact on the economy of the region as a whole. Unfortunately, the socioeconomic impacts analysis is not available at this time. WSPA believes that reviewing the analysis is important to its ability to meaningfully comment on these proposed regulatory changes. Accordingly, WSPA may change or supplement its comments on review of the analysis when it is released.

Thank you for considering the comments addressed in this letter. We look forward to continuing to work with you and your Staff on this important rulemaking. WSPA reserves the right to file additional comments or other materials as this rulemaking progresses.

Sincerely,



cc: Dr. Barry Wallerstein  
Joe Casmassi

Attachment 1

## ATTACHMENT 1

### ADDITIONAL COMMENTS ON PRELIMINARY DRAFT STAFF REPORT (PDSR) FOR NO<sub>x</sub> RECLAIM AMENDMENTS

Page/Section	WSPA Comment
Page 2, Current Emissions and RTC Holdings.	<p>AQMD should use 2012 compliance year emissions as the baseline year for “current emissions” for all industrial sectors.</p> <p>WSPA understands the rationale presented by AQMD for use of 2012 data to characterize baseline Power Sector emissions. However, non-Power RECLAIM facilities were also exhibiting lower output levels in 2011 due to the recession that started in 2007. This is shown in attached Figure 1.</p> <p>Looking at certain key industrial sectors yields a similar conclusion. On a sectoral level, publicly reported economic data (see Figure 2A and Figure 2B) shows that economic output and emissions for the cement and textile manufacturing sectors in AQMD were also still recovering from recessionary low points in 2011. For these reasons, WSPA recommends that AQMD revise the Staff Report to use 2012 compliance year emissions as the baseline emissions year for all industrial sectors.</p>
Page 3: Table EX-1, Summary of Proposed BARCT (May 2015).	<p>Table EX-1 presents data for the Refinery Sector which fails to reflect changes necessitated by the findings of the third-party expert hired to confirm the AQMD Staff’s Refinery Sector technical analysis for this rulemaking. The Staff’s BARCT analysis for the Refinery Sector categories should be revised to explicitly consider the findings presented in Norton Engineering Consultants’ (NEC) BARCT Feasibility and Analysis Review.<sup>1</sup></p> <p>The third-party experts were hired to confirm the AQMD Staff’s technical analysis in support of this rulemaking. By selectively dismissing the third-party refinery sector expert’s findings without resolution of the technical issues in dispute, AQMD Staff have compromised the rulemaking process.</p> <p>We also note that NEC has raised a significant number of technical issues with the conclusions presented in the PSDR for the Refinery Sector categories.<sup>2</sup> WSPA strongly suggests that these technical issues be resolved before further presentation of emissions reductions attributable to the proposed BARCT analysis.</p>
Page 3. Last paragraph, 3 <sup>rd</sup> sentence.  Resolution of Uncertainties	<p>WSPA recommends this section be re-written after the requested and required changes to the Staff’s BARCT analysis have been completed. The subject paragraph suggests that Staff has “accounted for uncertainties that arose in the BARCT analysis....” We disagree. There continues to be a significant number of unresolved issues which result in uncertainty in the Staff analysis presented in the PDSR. This includes, but is not limited to the Staff’s decision to selectively ignore the findings of the agreed upon third-party expert for the Refinery Sector.</p>

<sup>1</sup> Norton Engineering Consultants (NEC), SCAQMD NO<sub>x</sub> RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>2</sup> James Norton, NEC, letter to Dr. Philip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NO<sub>x</sub> RECLAIM – SCRs for FCCUs Document No. 14-045-7, 10 August 2015.

<p>Page 3. Last paragraph, 3<sup>rd</sup> sentence.</p> <p>Proposed Adjustment Account</p>	<p>The proposed “Adjustment Account” should be accessible by all RECLAIM facilities subjected to the Rule 2005 NSR RTC holding requirement. Furthermore, AQMD Staff should provide a technical rationale to support the quantity of RTCs set aside to fund any such adjustment account.</p> <p>The PDSR suggests the RTC demand caused by Rule 2005 RTC holding requirements are addressed by the proposed creation of an RTC Adjustment Account for power plants. However, the RTC holding requirements imposed under Rule 2005 are also applicable to many non-Power Sector facilities under RECLAIM New Source Review. The Staff’s current proposal does nothing to address the RTC demand associated with these non-Power Sector facilities. This should be resolved.</p>
<p>Page 3. Last paragraph, 3<sup>rd</sup> sentence.</p> <p>Proposed Adjustment Account</p>	<p>AQMD Staff should provide a regulatory discussion detailing how this proposed Adjustment Account would be managed, and how RTCs in the account would be treated with respect to the State Implementation Plan (SIP).</p>
<p>Page 3. Last paragraph, 5<sup>th</sup> sentence.</p> <p>Compliance Margin</p>	<p>WSPA recommends this section be re-written to eliminate potential misstatements concerning the level of “unused RTCs” that might be available under the Staff’s proposed shave. The Staff’s “Remaining Emissions” approach as presented in the PDSR limits the overall “Compliance Margin” for RECLAIM facilities to 10% of projected 2023 emissions (i.e., not 23%).</p> <p>The Staff’s Remaining Emissions estimate excludes some RECLAIM market sectors (i.e., cement) which had reduced emissions in 2011 due to the major recession from which certain sectors were still recovering. Staff has made an adjustment to account for that omission, but this paragraph then suggests that such adjustment is part of the overall market’s Compliance Margin. That is incorrect.</p>
<p>Page 4: 1<sup>st</sup> full paragraph.</p> <p>Application of Shave</p>	<p>The proposed NOx RECLAIM shave should be applied in an equally distributed, “Across the Board” manner consistent with RECLAIM founding principles and the precedent set under the 2005 NOx RECLAIM shave.</p> <p>RECLAIM is a market-based program which was designed to use “the power of the marketplace”<sup>3</sup> to reduce air emissions from stationary sources. This approach was expressly intended not to impose “command-and-control” requirements on specific facilities or specific equipment therein. Rather, RECLAIM was intended to provide Southern California businesses with greater flexibility and a financial incentive to reduce air pollution at least equal to what traditional command-and-control rules would have required. This program has been very successful in reducing NOx emissions with RECLAIM facilities having reduced their overall actual emissions well in excess of the program’s current target under Regulation XX.</p>

<sup>3</sup> SCAQMD RECLAIM website, <http://www.aqmd.gov/home/programs/business/business-detail?title=reclaim>.

	<p>The District has previously <u>considered and rejected targeted shaves</u> as noted in the excerpts below:</p> <ul style="list-style-type: none"> <li>• Oct 1993, RECLAIM Program Summary: “Throughout the development of RECLAIM, the District evaluated several design options that would have treated some industries differently than others.....After evaluating advantages and disadvantages, the District adopted a program that treats all sources consistently for equity and fairness.”</li> <li>• 2005 Staff Report, Appendix E: “The Staff proposal is taking the “across-the-board” reduction of NOx RTC holdings approach by looking at the total reductions possible based on BARCT determinations and reducing allocations for all RTC holders by the same percentage...This approach, from a market design standpoint and based on the overall conceptual design of the RECLAIM program to achieve programmatic BARCT, is the most equitable...”</li> </ul> <p>The Staff proposal presented in the PDSR is inconsistent with the founding principles of the RECLAIM program that stressed the importance of a market-based program, as well as the precedent established by the SCAQMD in previous NOx regulatory reductions in 1999 and 2005. An equally distributed “across-the board” treatment of all sources, as originally designed and implemented since the program’s inception in 1994, is critical to the continued success of the RECLAIM program.</p>
<p>Page 4: 1<sup>st</sup> full paragraph, 3<sup>rd</sup> sentence.</p> <p>Small Facilities</p>	<p>This sentence states “The remaining 210 facilities that hold 10% of the 26.5 tpd RTC are not proposed to be shaved because there was no new BARCT for the types of equipment and operation at these facilities.” This statement is factually incorrect and should be corrected.</p> <p>AQMD Staff opted not to review BARCT for these facilities under this RECLAIM rulemaking. Additionally, AQMD and other California air districts have previously made BARCT determinations that would apply to the equipment and operations at those smaller emitting facilities (e.g., boilers, heaters, etc.) were they not under RECLAIM.<sup>4</sup></p>
<p>Page 4: 2<sup>nd</sup> and 3<sup>rd</sup> full paragraphs.</p> <p>Implementation Schedule</p>	<p>The proposed Implementation Schedule should be revised to shave not more than 2 tons per day (tpd) from the program in the first year. This is consistent with Governing Board’s direction under Control Measure CMB-01 Phase 1. Additionally, the overall schedule should be longer than the proposed seven (7) years to ensure RECLAIM facilities have sufficient time to comply.</p> <p>2012 Air Quality Management Plan (AQMP) Control Measure CMB-01) Phase 1 was approved by the Governing Board on the basis that 2 tpd would be removed from RECLAIM in the event of the PM<sub>2.5</sub> contingency measure being triggered.<sup>5</sup> The proposed schedule should be consistent with that 2 tpd State Implementation Plan (SIP) commitment; anything</p>

<sup>4</sup> See SCAQMD Regulation XI for examples.

<sup>5</sup> SCAQMD, 2012 AQMP. Page 4-9 states: “The control measure will seek further reductions of 2 tpd of NOx allocations if triggered.” Appendix A, page IV-A-13 presents rationale for that conclusion.

	<p>larger may not allow sufficient time for industry to implement emission control projects necessitated by the rulemaking.</p> <p>Also, the proposed schedule for full implementation by 2022 may be insufficient to achieve the proposed level of NOx emission reductions from RECLAIM facilities. Refinery Sector sources may need 8 years or more to fully engineer, permit, construct and operationalize all the projects needed to comply with the proposed rulemaking.<sup>6</sup></p>
Page 6: Table EX-2, Summary of Public Process.	To provide ample opportunity for stakeholder review and comment, AQMD Staff should revise this schedule to provide the public with a realistic schedule for this rulemaking that includes the CEQA Program Environmental Assessment (PEA) and the Socioeconomic Analysis.
Page 19: Co-Benefits of Energy Efficiency Projects.	<p>This section should be completely removed from the PDSR or significantly revised to correct factual mischaracterizations.</p> <p>The information submitted by refineries to the California Air Resources Board in 2011 under the AB32 Energy Efficiency and Co-Benefits regulation reflected projects that mostly had been completed by 2011. Thus, those co-benefits were already reflected in the 2011 baseline year emissions presented in the PDSR and cannot be characterized as additional or creditable. Staff have acknowledged as much in PDSR Table 3.2.</p>
Page 29 CEQA Alternatives	The size of the shave approved in the 2012 AQMP should be included in the list of CEQA alternatives.
Chapter 4: Costs and Cost Effectiveness.  Cost Thresholds	<p>The cost effectiveness threshold for this rulemaking should not be greater than \$22,500 (i.e., the cost effectiveness threshold used in the 2012 AQMP) and the BARCT analysis presented in the PDSR should be revised accordingly.</p> <p>The \$50,000 cost effectiveness threshold proposed by AQMD Staff is greater than the AQMD's DCF cost effectiveness threshold for Command-and-Control sources in South Coast. Under the 2012 AQMP, the approved cost threshold for NOx control measures was \$22,500 per ton. As an additional data point, AQMD's current Best Available Control Technology (BACT) guidance document presents a DCF cost effectiveness threshold of only \$19,100 per ton.</p> <p>Health &amp; Safety Code (H&amp;SC) §39616(c) requires that market-based program costs will be "equivalent or less 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" and also requires "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."<sup>7</sup> The AQMD Staff analysis presented in the PDSR has not demonstrated that these obligations are satisfied.</p>
Chapter 4: Costs and Cost Effectiveness.	A 10-year "Useful Life" assumption is more appropriate given actual rulemaking timetables; the BARCT analysis presented in the PDSR should be accordingly revised to use a 10-year Useful Life assumption.

<sup>6</sup> Stillwater Associates LLC, RECLAIM Analysis for WSPA, July 2015.

<sup>7</sup> Health & Safety Code §39616(c)(1) and (7).

Useful Life Assumption	The AQMD Staff's proposed 25-year Useful Life is inappropriate because AQMD rulemaking occurs on a far more frequent recurrence. The last major NOx RECLAIM rulemaking was only 10-years ago. Use of a 25-year assumption makes the rule costs appear lower than actual by diluting the significant capital costs of required projects over a much longer time table than is likely to occur. The AQMD Staff analysis should be revised to reflect the 10-year Useful Life assumption which is more consistent with recent AQMD rulemaking schedules and is also consistent with the Useful Life assumption typically used by CARB and other major Air Districts.
Chapter 4: Costs and Cost Effectiveness.  DCF Method	The BARCT analysis presented in the PDSR should be revised to utilize the Levelized Cash Flow (LCF) methodology used by CARB and other major air districts.  Use of the DCF method, in combination with the proposed interest rate and Useful Life assumptions serves to distort the estimated costs for this AQMD rule by making them appear less expensive than they would be using the Levelized Cash Flow (LCF) method employed by CARB and other major Air Districts. The same threshold should be used for both DCF and LCF.
Chapter 5: RTC Reductions, Remaining Emissions  Remaining Emissions Method	The AQMD Staff's "Remaining Emissions" method conflicts with Control Measure CMB-1 Phase 1 as approved under the 2012 AQMP and should be replaced with the Incremental BARCT method proposed by the Industry RECLAIM Coalition.  The Remaining Emissions method presented in the PDSR conflicts with Control Measure CMB-1 Phase 1 because it would remove nearly all Unused RTCs (i.e., "surplus") from RECLAIM. CMB-01 Phase 1 explicitly considered and rejected such a reduction; instead arguing that a 2 tpd of reduction for Unused RTCs was more appropriate due to concerns that baseline RECLAIM emissions might reflect the economic downturn. <sup>8</sup> As noted above, many Southern California industry sectors covered by RECLAIM were in fact still under a recessionary hangover in 2011 so such concerns were valid.  Furthermore, the "Incremental BARCT" method is more consistent with Control Measure CMB-1 Phase 2 approved under the 2012 AQMP <sup>9</sup> because the method would only remove RTCs in an amount attributable to technology advancement (i.e., BARCT). AQMD Staff's own analysis demonstrates that less than 9 tpd of proposed RTC reductions are attributable to the 2015 BARCT analysis. Yet the Staff proposal proposes to shave 14 tpd.  Removing RTCs beyond what is supported by technology advancement may subject facilities in the RECLAIM program to disproportionate impacts, measured on an aggregate basis, compared to other permitted stationary sources in the District's plan for attainment. It may also subject

<sup>8</sup> SCAQMD, 2012 AQMP. Page 4-9 states: "The control measure will seek further reductions of 2 tpd of NOx allocations if triggered." Appendix A, page IV-A-13 presents rationale for that conclusion.

<sup>9</sup> SCAQMD, 2012 AQMP. Page 4-26 states: "This phase of control is to implement periodic BARCT evaluation as required under the state law." Appendix A, page IV-A-60 presents more detailed discussion for the measure.

	<p>RECLAIM facilities to greater costs 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. Either of these outcomes would conflict with H&amp;SC 39616(c). AQMD has not demonstrated that the Staff proposal successfully meets these obligations. Further, under Section 40727, the Legislature has established that regulations must meet the requirements of necessity, authority, clarity, consistency, non-duplication, and reference. The necessity requirement ensures in part that unnecessary costs are not imposed on the economy of California. Accordingly, the District needs to establish that the shave is no more stringent than what is “necessary.” Necessity “means that a need exists for the regulation, or for its amendment or repeal, as demonstrated by the record of the rulemaking authority.”<sup>10</sup> Through the 2012 AQMP, SCAQMD has described that a need exists for a reduction in NOx emissions. The ceiling of that need was five tons per day. The magnitude of the current shave proposal goes above and beyond what is necessary to meet the requirements of the AQMP or any other statutory or regulatory obligation that SCAQMD faces.</p>
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<p>Chapter 5: RTC Reductions, Remaining Emissions</p> <p>Compliance Margin</p>	<p>The proposed Compliance Margin of 10% appears inadequate to meet the market’s historical need for Unused RTCs and should be revised to the 20-30% range.</p> <p>The RECLAIM market has exhibited “Unused RTCs” since program inception. This may be for several reasons including facility compliance margins which range in size depending on facility size and/or risk tolerance, RTC holding requirements imposed under Rule 2005, or market trading to name few. These Unused RTCs have historically averaged in the 15-30% range (5 to 9 tpd) with the sole exception being the market crisis during the 2000 compliance year.<sup>11</sup> The AQMD Staff’s proposal (with only 10% compliance margin) may be inadequate for satisfying this market requirement. Excessive shaving of Unused RTCs could result in a market which is unable to accommodate the economic activity levels projected in the Staff’s analysis. Furthermore, removal of all Unused RTCs would directly conflict with Control Measure CMB-01 Phase 1 as authorized by the Governing Board.</p>
<p>Chapter 5: RTC Reductions, Remaining Emissions</p> <p>Table 5.1 – Remaining Emissions for Refinery Sector (May 2015)</p>	<p>The BARCT analysis for the Refinery Sector categories should be revised to explicitly consider the findings presented in Norton Engineering Consultants’ (NEC) BARCT Feasibility and Analysis Review, and Table 5.1 should be accordingly revised.</p> <p>As noted in the PDSR, the Staff analysis fails to account for the technical recommendations from NEC, the third-party Refinery Sector expert hired by the AQMD. NEC’s findings have material impacts on the resulting BARCT determinations for certain Refinery Sector categories. Once corrected, the projected “2023 Remaining Emissions at 2015 BARCT” for the Refinery Sector will increase, and the “2023 Emission Reductions Beyond 2000/2005 BARCT” will decrease. These technical corrections are critical to a fair application of the proposed shave.</p>

<sup>10</sup> Health & Saf. Code § 40727.

<sup>11</sup> SCAQMD, Annual RECLAIM Audit Report for 2013 Compliance Year, 6 March 2015. See Table 3-2.

<p>Appendix A - Refinery Fluid Catalytic Cracking Units (FCCUs)</p> <p>Page 53. Incremental Costs and Cost Effectiveness</p> <p>Cost Effectiveness Calculations</p>	<p>The cost effectiveness analysis presented for FCCUs in Appendix A does not consider the 2000/2005 BARCT emissions or cost baselines. This conflicts with the methodology outlined in Chapter 4. The Staff BARCT analysis should be accordingly revised based on the incremental cost effectiveness approach outlined in Chapter 4.</p> <p>Staff proposes that the cost effectiveness of 2015 BARCT is to be calculated based on the incremental cost of progressing from 2000/2005 BARCT to the proposed 2015 BARCT level, divided by the incremental emissions benefit related to the progression from 2000/2005 BARCT to the proposed 2015 BARCT level (i.e., “2023 Emission Reductions Beyond 2000/2005 BARCT”). For some reason, it was not applied in this manner for the FCCUs. We request that this oversight be corrected.</p>
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<p>Appendix A - Refinery Fluid Catalytic Cracking Units (FCCUs)</p> <p>Page 53. Incremental Costs and Cost Effectiveness</p> <p>Consideration of Third-Party Expert’s Recommendations on Cost</p>	<p>The Staff’s BARCT analysis for the Refinery FCCUs category should be revised to explicitly consider the findings presented in Norton Engineering Consultants’ (NEC) BARCT Feasibility and Analysis Review.<sup>12</sup></p> <p>The third-party experts were hired to confirm the AQMD Staff’s technical analysis in support of this rulemaking. By selectively dismissing the third-party refinery sector expert’s findings, without resolution of the technical issues in dispute, AQMD Staff have compromised the rulemaking process.</p> <p>We also note that NEC has raised a significant number of technical issues with the conclusions presented in the PSDR for the Refinery FCCUs which have reportedly been discussed with Staff and were reiterated in NEC’s letter dated 10 August 2015.<sup>13</sup> Norton’s comments are attached hereto and incorporated herein by reference. These technical issues are significant and should be resolved before any further characterization of emissions reductions attributable to proposed BARCT under the Staff’s analysis.</p>
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<p>Appendix B – Refinery Boilers and Process Heaters</p> <p>Page 60, Achieved-In-Practice NOx Levels for Boilers and Heaters</p> <p>Proposed BARCT</p>	<p>WSPA requests further technical demonstration to support the proposed BARCT level for refinery heaters and boilers; the proposed BARCT level does not appear to represent an achievable level of performance for most refinery heaters/boilers operating on refinery fuel gas. According to the AQMD’s figures, fewer than 10% of the heater/boiler units already equipped with SCR technology are able to achieve the proposed BARCT level. This does not suggest the performance level can be broadly achieved with add-on emissions controls. If this level of performance effectively demands basic equipment replacement, the AQMD’s BARCT analysis should identify and quantify costs for that demand.</p> <p>WSPA also requests clarification on the number of refinery heaters and boilers reported to that have “very low emissions levels.” AQMD Staff have provided conflicting counts to stakeholders, and those counts conflict</p>
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<sup>12</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>13</sup> James Norton, NEC, letter to Dr. Philip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for FCCUs Document No. 14-045-7, 10 August 2015.

	<p>with information provided to WSPA directly by WSPA member refineries.<sup>14</sup> The PDSR reports fourteen refinery heaters in the AQMD as using refinery fuel gas and achieving NOx concentrations “between 1.6 and 3.5 ppmv” (corrected to 3% O2) using Selective Catalytic Reduction (SCR) technology. AQMD Staff also report that two boilers have achieved NOx emissions between 2 and 5 ppmv using LoTOx scrubbers and natural gas. We understand that AQMD’s analysis is based on data collected from Southern California refineries under a 2013 survey.<sup>15</sup> AQMD had previously reported to the RECLAIM Working Group that, based on that same survey, only nine refinery heaters/boilers were achieving below 5 ppmv. WSPA requests clarification on how this count of units with “very low emissions levels” could have changed.</p> <p>Lastly, AQMD should not categorize units between performing “between 1.6 and 3.5 ppmv” as a single group consistent with the proposed BARCT. 3.5 ppmv does not equal 2 ppmv, and some units which achieve 3.5 ppmv may be unable to meet 2 ppmv even with add-on controls. We would suggest this group supports a BARCT determination of 3.5 ppmv; not 2 ppmv.</p>
<p>Appendix B – Refinery Boilers and Process Heaters</p> <p>Page 60, Achieved-In-Practice NOx Levels for Boilers and Heaters</p> <p>Cost Basis for BARCT and Consideration of Third-Party Expert’s Recommendations on Cost</p>	<p>The Staff’s BARCT analysis for the Refinery heaters and boilers should be revised to explicitly consider the findings presented in Norton Engineering Consultants’ (NEC) BARCT Feasibility and Analysis Review, and any subsequent comments from NEC.<sup>16</sup></p> <p>The third-party experts were hired to confirm the AQMD Staff’s technical analysis in support of this rulemaking. By selectively dismissing the third-party refinery sector expert’s findings without resolution of the technical issues in dispute, AQMD Staff have compromised the rulemaking process.</p> <p>The AQMD Staff’s analysis suggests that the proposed BARCT level of 2 ppmv can be achieved with less equipment (e.g., 1 layer of catalyst) and less cost than suggested by the third-party Refinery expert; a firm that engineers such equipment as its primary business. Counter to the AQMD Staff’s assertion that NEC was simply wrong on its design basis is the fact (reported by AQMD)<sup>17</sup> that fewer than 10% of the existing Refinery heaters/boilers with SCR technology are able to meet 2 ppmv. This result includes both new and retrofit installations and suggests that the proposed 2 ppmv NOx performance level may not be as easily achieved as suggested by Staff.</p> <p>Given the material impact of these technical issues on the BARCT analysis, they should be resolved before any further characterization of emissions reductions attributable to proposed BARCT under the Staff’s analysis. Specifically, we request that the BARCT analysis presented in Appendix B be revised to consider the cost estimates presented by NEC.</p>
<p>Appendix B – Refinery</p>	<p>The BARCT cost effectiveness analysis presented in this table suggests</p>

<sup>14</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, Mar 2015.

<sup>15</sup> SCAQMD, Preliminary Draft Staff Report (PDSR) for Proposed Amendments to NOx RECLAIM, 21 July 2015.

<sup>16</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>17</sup> SCAQMD, NOx RECLAIM Working Group Meeting, 19 September 2013.

<p>Boilers and Process Heaters</p> <p>Table B.11 - Details of Cost Estimates for Boilers and Heaters (March 2015)</p>	<p>AQMD Staff have selectively applied the methodology outlined in Chapter 4. This is specifically a problem for select heaters which are reportedly already meeting proposed BARCT. In these instances, Staff has claimed emissions reductions relative to the 2000/2005 BARCT level without assigning any programmatic costs for those reductions.</p> <p>This is inconsistent with the programmatic approach outlined in Chapter 4, under which cost effectiveness of 2015 BARCT is to be calculated based on the incremental cost of progressing from a 2000/2005 BARCT level to the proposed 2015 BARCT level, divided by the incremental emissions benefit related to the progression from 2000/2005 BARCT to the proposed 2015 BARCT level (i.e., “2023 Emission Reductions Beyond 2000/2005 BARCT”). WSPA does not believe it appropriate for Staff to selectively “pick and choose” when use the prescribed programmatic approach.</p> <p>The Staff BARCT analysis should be revised accordingly to be fully consistent with the incremental cost effectiveness approach outlined in Chapter 4.</p>
<p>Appendix D - Coke Calciner</p> <p>Staff’s Recommendation</p>	<p>WSPA appreciates that AQMD Staff accepted NEC’s recommended BARCT level of 10 ppmv and has incorporated it into the BARCT analysis for this source category.</p>
<p>Appendix E - Sulfur Recovery Units/Tail Gas Incinerators</p> <p>Page 110. Costs and Cost Effectiveness</p> <p>Design Basis for BARCT and Consideration of Third-Party Expert’s Recommendations</p>	<p>The Staff’s BARCT analysis for the Refinery Sulfur Recovery Units/Tail Gas Incinerators (SRU/TG Incinerators) category should be revised to explicitly consider the findings presented in Norton Engineering Consultants’ (NEC) BARCT Feasibility and Analysis Review.<sup>18</sup></p> <p>The third-party experts were hired to confirm the AQMD Staff’s technical analysis in support of this rulemaking. As with other categories, the AQMD Staff’s analysis suggests that the proposed BARCT level of 2 ppmv can be achieved for SRU/TG Incinerators with less equipment (e.g., fewer layers of catalyst) and less cost than suggested by the third-party Refinery expert; a firm that engineers such equipment as its primary business. By selectively dismissing the third-party refinery sector expert’s findings without resolution of the technical issues in dispute, AQMD Staff have compromised the rulemaking process.</p> <p>Given the impact of these technical issues on the projected emissions and costs for this category, these issues should be resolved before any further characterization of emissions reductions attributable to proposed BARCT under the Staff’s analysis. Specifically, we request that the BARCT analysis presented in Appendix E be revised to consider the cost estimates presented by NEC.</p> <p>Tables E.1 and E.2 should include NOx concentration levels.</p>
<p>Appendix K – Co-Benefits of Energy Efficiency Projects</p>	<p>This appendix should be completely removed from the PDSR or significantly revised to correct factual mischaracterizations.</p>

<sup>18</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

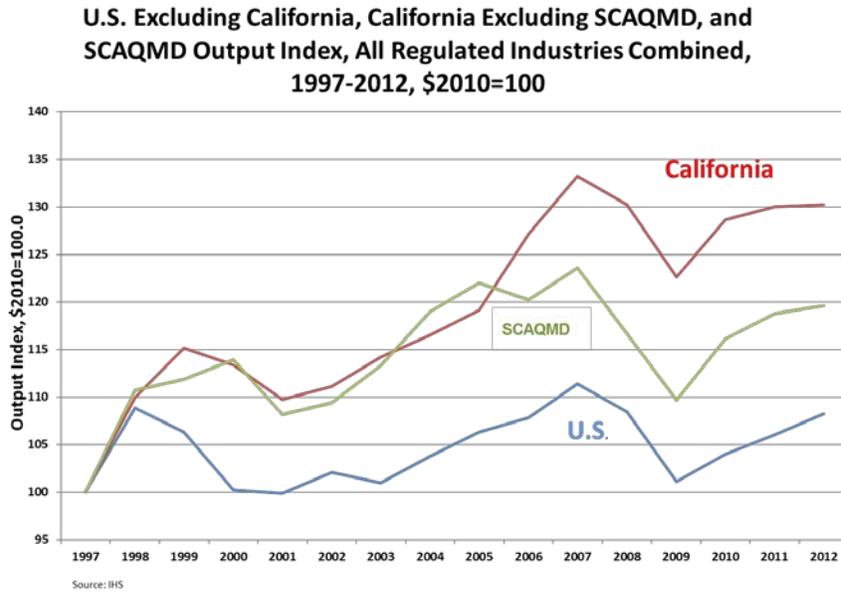
	<p>The information submitted by refineries to the California Air Resources Board in 2011 under the AB32 Energy Efficiency and Co-Benefits Regulation reflected projects that had mostly been completed by 2011. Thus, those co-benefits were already reflected in the 2011 baseline year emissions presented in the PDSR and cannot be characterized as additional or creditable. Staff have acknowledged as much in Table K.1 and also PDSR Table 3.2.</p>
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<p>Part III – RTC Reduction Approaches</p> <p>Appendix U – Staff’s Proposal and CEQA Alternatives</p>	<p>The proposed NOx RECLAIM shave should be applied in an equally distributed, “Across the Board” manner consistent with RECLAIM founding principles and the precedent set under the 2005 NOx RECLAIM shave.</p> <p>RECLAIM is a market-based program which was designed to use “the power of the marketplace”<sup>19</sup> to reduce air emissions from stationary sources. This approach was expressly intended not to impose “command-and-control” requirements on specific facilities or specific equipment therein. Rather, RECLAIM was intended to provide Southern California businesses with greater flexibility and a financial incentive to reduce air pollution at least equal to what traditional command-and-control rules would have required. This program has been very successful in reducing NOx emissions with RECLAIM facilities having reduced their overall actual emissions well in excess of the program’s current target under Regulation XX.</p> <p>The District has previously <u>considered and rejected targeted shaves</u> as noted in the excerpts below:</p> <ul style="list-style-type: none"> <li>• Oct 1993, RECLAIM Program Summary: “Throughout the development of RECLAIM, the District evaluated several design options that would have treated some industries differently than others.....After evaluating advantages and disadvantages, the District adopted a program that treats all sources consistently for equity and fairness.”</li> <li>• 2005 Staff Report, Appendix E: “The Staff proposal is taking the “across-the-board” reduction of NOx RTC holdings approach by looking at the total reductions possible based on BARCT determinations and reducing allocations for all RTC holders by the same percentage...This approach, from a market design standpoint and based on the overall conceptual design of the RECLAIM program to achieve programmatic BARCT, is the most equitable...”</li> </ul> <p>The Staff proposal presented in the PDSR is inconsistent with the founding principles of the RECLAIM program that stressed the importance of a market-based program, as well as the precedent established by the SCAQMD in previous NOx regulatory reductions in 1999 and 2005. An equally distributed “across-the board” treatment of all sources, as originally designed and implemented since the program’s inception in</p>
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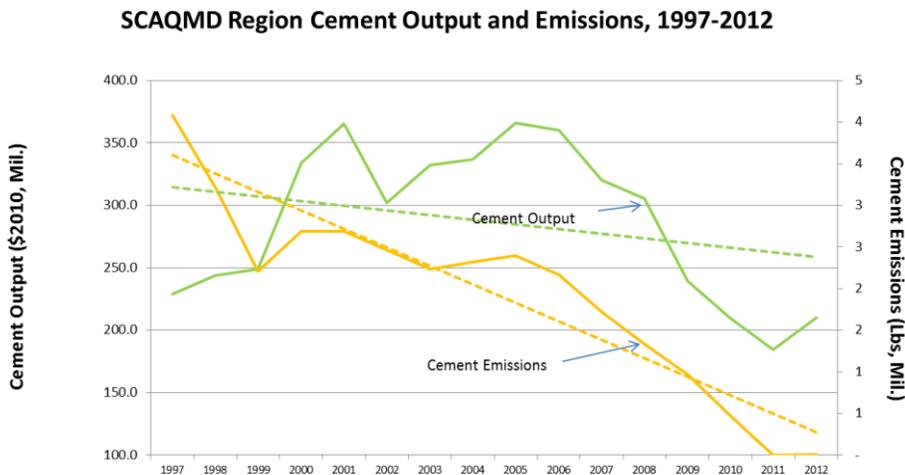
<sup>19</sup> SCAQMD RECLAIM website, <http://www.aqmd.gov/home/programs/business/business-detail?title=reclaim>.

## SUPPORTING FIGURES

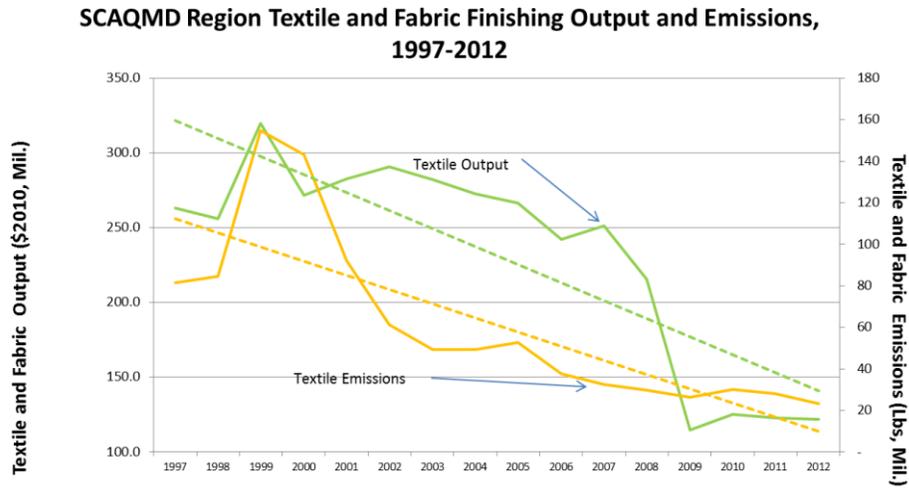
**Figure 1. U.S. Excluding California, California Excluding SCAQMD, and SCAQMD Output Index, All Regulated Industries Combined, 1997-2012**  
 (Source: Kavet, Rockler & Associates based on data from his IHS County-Level Economic Database, 2015)



**Figure 2A. South Coast AQMD Region Cement Output and Emissions, 1997-2012**  
 (Source: Kavet, Rockler & Associates based on data from his IHS County-Level Economic Database, 2015)



**Figure 2B. South Coast AQMD Region Textile and Fabric Finishing Output and Emissions, 1997-2012**  
 (Source: Kavet, Rockler & Associates based on data from his IHS County-Level Economic Database, 2015)



Source: SCAQMD and IHS

Attachment 2

August 10, 2015

Philip M. Fine, PhD  
Deputy Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178

Comments on Preliminary Draft Staff Report  
Proposed Amendments to Regulation XX  
Regional Clean Air Incentives Market (RECLAIM)  
NO<sub>x</sub> RECLAIM – SCRs for FCCUs  
Document No. 14-045-7

Dear Mr. Fine,

We have completed a first pass review of the above captioned report's discussion of SCR applications to district SCRs and have identified several misstatements and/or misunderstandings of the information provided by our company, under contract from SCAQMD, which may have material impact on the conclusions drawn by staff in the report. It is my intent in this letter to clarify the most glaring misstatements/misunderstandings of the information we provided to the district both in our final report (Doc. No. 14-045-4, Nov. 26, 2014) which summarized the data on a non-confidential basis, and the details provided on a confidential basis to the district and individually to each of the refineries.

We stated, quite clearly, in the final report and in subsequent discussions with staff, that we agree that 2 ppmvd (3% O<sub>2</sub>) NO<sub>x</sub> emissions is a justifiable emission level for SCR applications to FCCUs, Fired Heaters, Boilers, Gas Turbines and TGU/SRUs, with caveats. While a few existing units can meet this guideline under current operating conditions, many more, similarly designed units have not demonstrated similar low emissions capabilities. With the exception of Gas Turbine installations (which have an equivalent emission level of 6 ppmv @ 3% O<sub>2</sub>) most low emission SCRs in service today, being built today and even those being designed today carry manufacturer's guarantees to meet a NO<sub>x</sub> limit of 5 vppm @ 3% O<sub>2</sub>. In spite of the limited number of units (other than gas turbines) operating at or below 2 vppm NO<sub>x</sub>, we believe that it is possible to achieve these levels, but to guarantee long term reliable performance (refineries typically operate 24/7 for periods of 4 to 6 years) it is prudent and quite possibly necessary to design future SCRs to increase residence time, improve NH<sub>3</sub> distribution, improve overall flue gas flow distribution, add catalyst, etc. SCAQMD staff agrees with this concept but we have strong disagreement as to how much change from current SCR designs

will be required to achieve the sought after NOx reductions not only on day one but at the end of year one and year five and beyond.

NEC's engineers have extensive experience in process development, equipment development and project development for the refining and petrochemical industry in the manufacturing and air pollution control areas. The experience level of the engineers who completed our technology and project cost evaluations is 51, 37 and 8 years. It is exactly this experience base, and past successful work with the district, that caused you to look to NEC to develop "cost guidance" for evaluating the refining sector. We find it very surprising therefore, that staff essentially ignored our recommendations and continued to use what we feel are unrealistically low costs for NOx control projects for district refineries.

### **Comments on FCCU SCR Costs**

Appendix F presents a review of NEC's analysis for FCCU SCR costs by SCAQMD staff. It concludes that NEC's estimated costs for NOx control are excessive and gives the following reasons for this assessment:

- NEC recommends using three catalyst beds and designing for superficial gas velocities of 10 ft/sec vs SCR vendor proposals which have less catalyst and 20% higher superficial velocities.
- NEC conditions budgetary quotations from manufacturers for the accuracy of the quote, the accuracy of the project basis and for the application of refining industry standards for construction of the equipment. This is characterized by staff as: "Adding a "mark-up" factor, or a bid conditioning factor of 1.35 to increase the costs".
- NEC includes the cost of installation of the SCR in its estimate to arrive at a direct material and labor cost for the SCR component of a project at 75% of the equipment cost. Characterized by staff as: "Adding another 75% increase in labor to the costs of the manufacturer's SCR.".
- NEC used incorrect FCCU feed rates in developing comparisons to AQMD PWVs.

The following paragraphs address each of staff's objections and provide additional information and clarifications to address what we perceive as staff's misunderstanding of the information presented in our final report.

### **Basis for Catalyst Addition and Velocity Reductions vs Vendor Budget Quotes**

All FCCU SCR catalyst beds are in the range of 3 - 4' deep, all are prone to plugging by catalyst and/or ABS and all have limitations on allowable pressure drop, so superficial velocity is a good basis for comparison between units. The district has three operating FCCU SCRs. All units have two catalyst beds and operate at superficial gas velocities in the range of 8 to 13 ft/sec. Two of the three units, operating at superficial velocities of 12 and 13 ft/sec do not achieve emissions of 2 vppm @ 3% O<sub>2</sub>. The other unit, highlighted in the draft report, achieves less than 2 vppm @ 3% O<sub>2</sub> operating at a superficial velocity of 7.7 ft/sec. The "good" unit is operating with inlet NOx levels which are 50%

of design or lower and at lower than design flue gas flows. There are several ways to bring the two “non-performing” units into compliance with the revised standard, each with different costs and different overall performance impacts. NEC was not commissioned to do an evaluation of individual units and propose improvement options, but rather to make an assessment of what it would take, cost wise, to reliably achieve the 2 ppmv limit for grass roots SCR installations. Based on the experience of operating units in the district, and our direct experience with FCCU units for other clients (due to confidentiality agreements we cannot divulge client identities and specific locations) reliably achieving 2 vppm NOx emissions in an FCCU over a five year run will require the addition of catalyst and will be designed for superficial velocities of 10 ft/sec or less. Considering that SCR catalyst vendors have not developed and guaranteed a specific SCR design for 2 ppmvd @ 3% O<sub>2</sub> NEC feels that it is prudent to assume that a third bed of catalyst (SCR or ASC) and cross section designed to achieve a maximum superficial velocity of 10 ft/sec is sufficient to characterize the most likely cost of a SCR unit capable of achieving 2 ppmvd in a typical refinery FCCU environment. The impact of the increased cross sectional area and the addition of a third bed of catalyst on the cost of an SCR installation has been overstated by district staff as a 284% increase in catalyst volume over manufacturer’s estimates. The increase over manufacturer’s budget estimates/proposals is actually 92%, one half of staff’s reported delta.

**Staff’s SCR Design Comparison Did Not Accurately Reflect NEC’s “Typical” FCCU SCR Design**

Staff used an incorrect basis for comparing NEC’s typical FCCU SCR with district units in Table F.3. A revised comparison, using data from Refineries 1, 5 and 6 is shown below.

*Table 1 (F. 3 Showing NEC Typical SCR)  
 Performance Information of Existing SCRs*

	Refinery 1	Refinery 5	Refinery 6	NEC Typical
FCC Feed Rate, kBPD	95	71	84	55
SCR Inlet Flue Gas Flow, ACFS	6,585	5,525	9,685	3,848
SCR Manufacturer	1	3	2	--
No. Catalyst Layers	2	2	2	3
Catalyst Volume, ft <sup>3</sup>	6,200	2,975 <sup>(1)</sup>	6,200 <sup>(5)</sup>	4,600
Design Inlet NOx, ppmv	133 <sup>(2)</sup> /40-80 <sup>(3)</sup>	150	35	45
Design Outlet NOx, ppmvd	--	17	6	2
NOx Measured, ppmvd	<2	15-17	5.6 – 6.4	1.5 (Est.)
Superficial Gas Velocity, fps	7.4	13.3	11.6	10.0
Space Velocity, 1/hr	3,823 <sup>(6)</sup>	6,686 <sup>(4)</sup>	5,624 <sup>(5)</sup>	3,011
Removal Efficiency	95 - 97% <sup>(3)</sup>	89%	83%	97%

Notes:

1. Staff incorrectly stated catalyst volume as 2,391 ft<sup>3</sup> in Table F.3. 2,975 ft<sup>3</sup> catalyst volume confirmed by NEC with Refinery 5 and via review of SCR data provided by Refinery 5 to SCAQMD.
2. Design value reported as 155 ppmv @ 0% O<sub>2</sub>. Value presented in table is corrected to 3% O<sub>2</sub>.

3. Measured outlet NOx value of <2 ppmv corresponds to operation of unit with inlet NOx in the range indicated. Removal efficiency based on range of actual operation.
4. Staff reports space velocity value of 2,974/hr in table F.3.
5. Confidential data provided by SCAQMD staff is insufficient to calculate the catalyst volume for this unit without making the following assumption on the depth of a catalyst module which we assume to be 45". Staff used ½ of this value in Table F.3 corresponding to catalyst bed depth (catalyst element height) of 22.5". Recommend staff confirm catalyst volume with Refinery 6.
6. Confidential data on unit design and performance, provided by SCAQMD staff, used to calculate inlet volumetric flow and space velocity. Values differ from staff's entries in Table F.3.

In their review, staff is suggesting that NEC's typical SCR is overdesigned and as a result overpriced. Staff's comparisons suggest an overdesign factor of as much as 284%. We do not agree with this assessment. As can be seen in Table 1, NEC's typical SCR should be able to achieve 97% NOx reduction by virtue of the addition of catalyst at higher gas velocities than the SCR operating at Refinery 1. The typical SCR design provides an approximate 21% margin in space velocity over the Refinery 1 SCR design primarily due to the addition of a third catalyst bed. The addition of a third bed has inherent performance advantages in that it provides for partial redistribution of unreacted NH<sub>3</sub> and NOx versus further cross sectional area additions. If it is determined that the incremental cost of specially fabricated catalyst modules (shorter depth) is low, some further optimization may be possible to reduce SCR cost. It is worth noting that the ~21% catalyst margin will have a 12% overall TIC and PWV cost impact.

***Basis of the: "mark-up" factor, or a bid conditioning factor of 1.35 to increase the costs"***

The following paragraphs provide background for NEC's use of a 35% conditioning factor for vendor equipment quotes at early stages of projects. These concepts were discussed with SCAQMD staff during reviews of our report and in subsequent follow-up phone conversations and e-mails. Due to the extensive discussion around this topic we are mystified by staff's characterization of this "bid conditioning factor" as, and here I paraphrase, 'an undefined and therefore invalid cost increase'.

Obtaining budgetary quotations from vendors for their equipment is part of the process of developing cost estimates for any project. At the early stages of projects, or when general information is sought, vendors are not provided comprehensive design basis information and therefore do not have a complete picture of the operating envelope for their proposed equipment. In these instances, some vendors will use costs from recent projects and "factor" them to the provided process conditions, other vendors may develop estimates based on equipment designed specifically to meet the provided process conditions. In either eventuality, the vendor is providing a quality estimate with reasonable accuracy (about +/- 10%) for the specified process conditions, without providing a performance guarantee and without review of the specific codes and standards applicable to refinery installations.

As project definition improves the process basis becomes fixed, equipment sizes become more reliable, performance guarantees are finalized, and vendor quote accuracy improves. Industry experience shows that at the early stages of a project, basis uncertainty alone, necessitates the addition of a 15 – 25% conditioning factor to a vendor's budget quote, in addition to other bid conditioning factors, to account for the difference seen between early equipment bids and final, full definition, performance guaranteed, equipment bids based on a definitive project basis.

Refineries are built to a more rigorous set of standards than typical air pollution control equipment which makes projects in the refining sector slightly more expensive than typical industrial projects. Standards which will have an impact on either the SCR design, the structural support design, location of equipment, internal and external maintenance access, etc., are likely to increase Direct SCR M&L costs. At this stage of project definition a factor of 10% is added to a vendor's equipment bid to account for the cost of meeting local plant standards.

The 1.35 "mark-up" or bid conditioning factor used in NEC's cost work-up for all SCR projects (FCCU, Heaters/Boilers, etc.) is not an arbitrary factor used to inflate costs, as implied in Appendix F, but is actually the low end of a time tested and proven means to determine the actual cost of a piece of equipment after full project definition is complete, including application of local industry standards to the design of the equipment, performance guarantees are offered and firm pricing for equipment components is provided by the vendor.

**Basis for: *"Adding another 75% increase in labor to the costs of the manufacturer's SCR."***

Another cost factor discussed with SCAQMD staff, and apparently dismissed as a simple adder to make costs appear high, is the cost of actually installing the equipment supplied by the SCR vendor in the plant. The vendor does not do construction and does not quote the cost of field assembly in their quote which only covers fabrication and supply of the equipment, in this case the SCR catalyst, support frames, ammonia injection grid and the carbon steel box.

The labor cost factor used in NEC's development of project costs is applied to the SCR vendor's factored estimate to account for the labor required to install the manufacturer's equipment at the site, transportation, taxes, tie-ins, insulation, access, structural steel, etc. Installation labor for equipment can range from a low of about 30% of the equipment cost to as much as 200% of direct equipment cost depending on the complexity of the equipment, the material it is made of and other equipment specific factors. In general, low cost equipment manufactured of low cost materials have higher installation percentages than highly complex equipment made of high cost materials. As a reference point, "Applied Cost Engineering", Clark F. D. and Lorenzoni A. B.; Marcel Decker Inc., 1978, uses a factor of 2.2 times direct material costs to estimate the direct M&L cost of a fired heater installation, a factor of 3.0 times direct material costs to estimate the direct M&L cost of a pump installation and a factor of 2.9 to estimate the direct M&L cost of a distillation tower. Due to the simplicity of the SCR equipment and its use of low cost materials we have used an installation labor cost factor of 0.75 (75%) to account for physical installation of the SCR, structural steel, fit-up of ducting, connection of piping, foundations, excavation, instrumentation, insulation, equipment storage, etc. This factor does not account for any costs associated with: demolition of existing equipment, modification of existing equipment, labor inefficiencies attributed to working in an operating plant, relocation and/or modification to underground utilities, piping, piping supports, ammonia storage facilities, control system additions, instrumentation wiring, conduit, power wiring, area paving, area lighting, area utilities, safety facilities, sootblowers, etc.. The cost of these items is rolled up into the overall TIC factor applied to escalate SCR M&L costs to a total project cost.

**TIC Factor**

SCAQMD staff disputes NEC’s use of a TIC factor of 4.5 to convert direct M&L costs for the SCR into TIC for the SCR PROJECT. This factor is a reasonable estimate for project items not specifically identified in the direct M&L costs (indirect costs, engineering and owner’s costs, labor productivity, ancillary equipment and systems, revamp items, duct work, area paving, lighting, utilities, safety systems, control system connections and programming, instrumentation, sootblowers, etc.) As a point of reference, the TIC factor used by NEC, in this analysis, is 90% of the average TIC factor of 4.9 used to estimate SOx control costs in NEC’s SOx RECLAIM report.

**NEC Estimated FCCU Feed Rates from  
 Flue Gas Rate Data Provided by SCAQMD  
 Correction of NEC PWVs Required**

SCAQMD staff is correct in pointing out that NEC used incorrect design capacities in developing the FCCU SCR costs shown in section 1.2 of NEC’s non-confidential report (14-045-4, November 26, 2014). NEC back calculated expected FCCU rates from flue gas flow rate data provided by AQMD staff to obtain estimated FCCU sizes. The following table presents a revision to the report table based on corrected FCCU sizes as indicated by district staff. Also included in the table is an update to the cost of a Grass Roots SCR for Refinery 6 based on a comparison of flue gas rates to the SCR versus the typical (base case) SCR. Revised NEC estimates provided in Table 2 do not include any reduction to NEC’s original cost estimate model.

*Table 2 (Restatement of Table F.2)  
 Estimates of PWV Correcting NEC Values for FCCU Feed Rates*

Facility	FCCU Feed, kBPD	AQMD’s Estimate, \$M	Revised NEC Estimate, \$M	Ratio: NEC/AQMD
5	71	33	43 <sup>(2)</sup>	1.3
6	90	57	62 <sup>(1)(2)</sup>	1.09
7	55	27	37	1.37
4	34/36 <sup>(3)</sup>	16	28	1.75
9	55	19	37	1.95
<b>Total</b>		<b>152</b>	<b>207</b>	<b>1.36</b>

Notes:

1. The PWV shown includes the impact of additional flue gas from a CO boiler but does not include the incremental flue gas from another source which is fed to the existing SCR.
2. Costs shown are for grass roots (new) SCR additions to existing FCCUs. Existing units may be modified to reduce compliance costs below those indicated.
3. Staff report throughput is 34 kBPD. Published unit capacity is 36 kBPD.

### **Staff Evaluation of NEC PWVs vs. Refinery 1 SCR Costs Does Not Factor In Project Scope Differences**

Staff provided a review of NEC's cost estimates based on a comparison to the cost provided for Refinery 1's SCR to demonstrate that NEC's estimating method is overly conservative. In this comparison staff claims that NEC's cost tool over predicts the cost of this installation by \$11M (27%). The difficulty in comparing a specific project to a generalized curve is that the project has a specific scope which in most cases is different than the assumed scope of the "typical" project. This is the case for the SCR installation at Refinery 1 which, according to Refinery 1 personnel, did not include the cost for waste heat boiler modifications. Subtracting this component from the TIC for a typical FCCU SCR installation and recalculating PWV yields a cost of \$45.45M which is 10.8% higher than staff's cost work-up on this project of \$41M, not the 26% difference indicated in Appendix F. Staff had the WHB cost information NEC used in our estimates, we do not understand why they did not make the PWV comparison on the same basis.

### **Staff Evaluation of NEC PWVs vs. Refinery 9 SCR Costs Misstates Vendor and NEC Information**

Staff also provided a review of NEC's cost estimates based on staff's assessment of differences between the data provided by an SCR vendor to staff and NEC for an installation at Refinery 9. In staff's evaluation of the data provided by the vendor they incorrectly calculate the total catalyst volume to be 3,100 ft<sup>3</sup> vs the actual vendor proposal which provided only 2,400 ft<sup>3</sup>. Staff also incorrectly calculates NEC's estimated catalyst volume at 12,697 ft<sup>3</sup> vs an actual value of 4,600 ft<sup>3</sup> (1.92 x vendor proposal, see previous discussion on catalyst volumes and specification of a third bed).

### **Comments on Staff's Determination of PWVs for FCCU SCRs**

I would like to take the opportunity to provide a few comments on SCAQMD staff's determination of PWVs for FCCU SCRs.

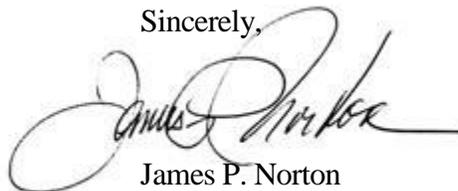
1. In using the costs provided for Refinery 1's SCR staff is assuming that all district SCRs can be installed without any impact on upstream equipment and that installation of the SCR can be executed in an open, non congested area. Refinery 1's SCR was installed prior to the installation of a large ESP, which occurred around 2006. If the SCR was to be installed today, or at any time after installation of the large ESP, costs would be higher due to productivity debits associated with working in a congested area and quite possibly even higher due to the need to move or modify some equipment to make the installation possible. In the most extreme case the SCR and ducting may have to be field erected from small fabricated assemblies due to access constraints.
2. Staff used a 0.7 power factor to scale the costs for Refinery 1's SCR project to different sizes. Costs for FCCU regenerator flue gas systems scale more accurately when a figure of around 0.6 is used. The effect of using a larger scale factor is a greater reduction in project costs for all projects with the differences getting proportionately greater the further one gets from the base case unit size. In essence using the 0.7 factor instead of 0.6, in this particular evaluation, will decrease costs for all units and will disproportionately decrease the cost of smaller units.

3. In using vendor budget quotes for SCRs, staff needs to add erection labor to the vendor quote. There is no indication that this is done in staff's analysis.
4. Staff does not condition the vendor's quotes to account for operational conditions, including unit upsets, and other project unknowns which will have direct bearing on SCR design details, performance and costs. An allowance must also be made for the accuracy inherent in vendor's budget quotations, which does not appear anywhere.
5. The PWVs provided for Refinery 7 and Refinery 9 are \$27M and \$19M respectively. There is an apparent inconsistency in these numbers as the stated capacity for each of these units is 55 kBPD. Units of the same capacity should have PWVs close to one another not differing by 42%. Staff should check these numbers and ensure that the SCR project scope differences between these two units can explain the large difference in cost.

In the interest in getting our comments into your hands as soon as possible we will provide comments on Staff's review of our SCR estimates for other applications in the district in one or more separate letters.

I am looking forward to discussing the items identified in this letter with SCAQMD staff and invite them to meet with us at our office in Montville, NJ.

Sincerely,



James P. Norton  
President & CEO

cc: NEC – Montville, NJ

P. M. Corritori  
J. A. Norton  
R. S Todd, PhD  
D. Vizzuso  
S. Zhang, PhD  
Z. Zhang

NEC – Swedesboro, NJ

W. A. Lincoln  
C. A. Steves

NEC – New Orleans, LA

S. G. Haydel

AFPM – Washington, DC

A. Adams – AFPM  
C. Gleason – Chevron Phillips  
M. Hodges - Valero  
T. Kruzich - Chevron  
S. Moyer – Holly Frontier  
D. Pavlich – P66  
D. Price - Tesoro  
K. Saffell - Valero  
B. Williams - AFPM

Chevron El Segundo Refinery

J. Doyle  
S. Worley  
R. Spackman

ExxonMobil Torrence Refinery

S. Holm  
P. Sheng

Paramount Refining Co.

K. Gleason  
H. Chang

P66 LAR

K. Beruldsen  
S. Micucci

Tesoro Carson / Wilmington

S. Stark  
F. Colcord  
D. Kurt

Valero LA Refinery

N. Irwin  
M. Smith

WESPA

S. Gornick

### Comment Letter #6



30 January 2015

Dr. Elaine Chang  
Deputy Executive Officer, Planning, Rule Development & Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**SUBJECT: INDUSTRY COMMENTS ON THE NOTICE OF PREPARATION (NOP) OF A DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT FOR PROPOSED AMENDED REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)**

Dear Dr. Chang:

These comments are presented on behalf of the members of leading Southern California businesses represented by the California Council for Environmental and Economic Balance (“CCEEB”), the Regulatory Flexibility Group (“RegFlex”), the Southern California Air Quality Alliance (“SCAQA”), and Western States Petroleum Association (“WSPA”). The members of these business groups are major Southern California employers who own and operate facilities in the Regional Clean Air Incentives Market (“RECLAIM”) program.

6-1

This “Industry RECLAIM Coalition” formally offers the following comments on the Notice of Preparation and Initial Study for the Draft Program Environmental Assessment (“PEA”) for Proposed Amended Regulation XX (“NOP/IS”).<sup>1</sup>

*1. The PEA Project Description should specify the potential shave as a range since neither the Proposed Amended Rule nor the Staff’s Technical Report is complete.*

The Project Description presented in the NOP and Initial Study (“NOP/IS”) incorporates Proposed Amended Rule (PAR) 2002 language as presented in Appendix A of the NOP/IS. At the time of the NOP/IS release, the AQMD had not completed technical work on this rulemaking, with the third-party consultant reviews having not even been released. The cover page for NOP/IS Appendix A did include the following disclaimer:

6-2

*“The BARCT evaluation and the RTC shaving methodology are ongoing, so a RECLAIM industry’s required RTC shave may change due to the public review process. The*

<sup>1</sup> SCAQMD, Notice of Preparation (NOP) of a Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014.

Dr. Elaine Chang, SCAQMD  
30 January 2015

*programmatic RTC shave could range from five to 14 tons per day. To provide a worst case scenario of adverse environmental impacts, the adjustment factors and the Non-tradable/Non-usable NOx RTC adjustment factors in Proposed Amended Rule 2002 subparagraph (f)(1)(B) reflect an RTC shave at the higher end of the range to capture a conservative estimate of potential control technologies needed that could generate secondary environmental impacts. As the staff proposal is being refined, if a lesser RTC shave is proposed, the adverse environmental impacts would be less and the Draft PEA and its alternatives will also be further defined.<sup>2</sup>*

Now that the third-party contractor reviews have been released, we expect changes are needed to the technical analysis which would alter the technical calculations. Members of this coalition have unresolved questions and concerns about those reviews and the current analysis from AQMD staff. But these reviews and additional inputs from industry stakeholders will necessitate revisions to the draft PAR 2002 language, and more changes will undoubtedly be needed as the rulemaking process progresses.

For this reason, we recommend that the PEA Project Description should explicitly specify the potential shave under this rulemaking as a range. This could be accomplished using language similar to that which was presented on the NOP/IS Appendix A cover page, however this disclosure should be noted in the Project Description section of the main PEA document; not left only in an Appendix.

2. *The PEA should explicitly address at least two project Alternatives: (1) AQMP control measure CMB-01 as approved by the Governing Board (i.e., shave of 3-5 tpd); and (2) the Industry RECLAIM Coalition proposal.*

Under the 2012 Air Quality Management Plan ("AQMP"), the Governing Board approved control measure CMB-01 which authorized further reductions from the NOx RECLAIM program. The control measure authorized by the Governing Board was based on a range of 3-5 tons per day ("TPD") of RECLAIM Trading Credits ("RTCs") being removed from the program. While stakeholders understood the eventual rulemaking could differ, the current Staff proposal as presented in the NOP/IS would be substantially larger at nearly 13 TPD.

This Industry RECLAIM Coalition has presented an alternative methodology for demonstrating command-and-control equivalency. The Industry proposal would reduce the program's quantity of RTCs by limiting the "shave" to only those reductions that can be directly attributed to the advancement of Best Available Retrofit Control Technology ("BARCT"). This Industry proposal could also result in RTC reductions greater than the approved AQMP control measure, but less than those which have been presented by the AQMD Staff.

We recommend that both of these alternatives should be fully considered as project Alternatives in the PEA, at a minimum.

6-2  
Concluded

6-3

<sup>2</sup> SCAQMD, NOP/IS for Proposed Amended Regulation XX, Appendix A, 4 December 2014.

Dr. Elaine Chang, SCAQMD  
30 January 2015

*3. Public stakeholders should be provided a schedule that is consistent with regulatory requirements while providing reasonable opportunity for stakeholder review and comment.*

The proposed rulemaking could potentially result in significant economic impacts to Southern California businesses and the regional economy. The technical analysis for this rulemaking is not yet complete, and the potential impacts have not yet been fully analyzed or considered. To date, only preliminary technical data has been made available to stakeholders. As such, thorough review and input by the RECLAIM Working Group or other stakeholders has not been possible.

6-4

This Industry RECLAIM Coalition respectfully requests that stakeholders be provided with a rulemaking schedule, including this PEA and the socioeconomic analysis, that is consistent with applicable regulatory requirements but also provides stakeholders a reasonable opportunity for review and comment of the technical bases.

The RECLAIM program remains vitally important to the health of Southern California's economy and environment. The members of this coalition have actively participated in this rulemaking through the NOx RECLAIM Working Group over these last two years, and we look forward to continuing to work with you and the District's Staff on the significant rulemaking.

6-5

Very truly yours,



Bill Quinn  
California Council for Environmental and Economic Balance



Michael Carroll  
Regulatory Flexibility Group



Curtis Coleman  
Southern California Air Quality Alliance



Patty Senecal  
Western States Petroleum Association



**Western States Petroleum Association**

Credible Solutions • Responsive Service • Since 1907

[Sue Gornick](#)

Senior Coordinator, Southern California Region

VIA ELECTRONIC MAIL

May 27, 2015

Dr. Barry Wallerstein  
Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**SUBJECT: WSPA COMMENTS ON APRIL 29, 2015 SCAQMD NOX RECLAIM WORKING GROUP MEETING**

Dear Dr. Wallerstein:

The Western States Petroleum Association (WSPA) is a non-profit trade association representing twenty-six 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 are within the purview of the Regional Clean Air Incentives Market (RECLAIM) program.

On May 15, 2015 we submitted a letter specifically focused on the District's shave approaches under consideration and strongly confirmed our support of an equally distributed "across-the-board" reduction in RECLAIM NOx credits. This letter provides additional comments on the remaining proposals presented by Staff on April 29, 2015 during the NOx RECLAIM Working Group meeting. We highlight our key issues below.

Incremental Best Achievable Retrofit Control Technology (BARCT) Method as a CEQA Alternative

WSPA is a part of the Industry RECLAIM Coalition, and we have presented an alternative formula to determine the size of the shave. The Coalition believes our alternative method is consistent with the Health & Safety Code provisions for a market-based system; reflects advances in emission control technology; achieves real emission reductions; more than fulfills the commitments made in the 2012 Air Quality Management Plan (AQMP); preserves the

successful RECLAIM program; and achieves all the above in a more cost-efficient manner than the District's Remaining Emissions proposal.

On January 30, 2015, the Coalition submitted comments on the Notice of Preparation and Initial Study (NOP/IS) for a Draft Program Environmental Assessment (PEA) requesting that at least two project alternatives be considered. Based on the information presented at the April 29, 2015 working group meeting, and subsequently with the document released on May 15, 2015 entitled, "SCAQMD NOx RECLAIM Proposed Shave Approaches", WSPA reiterates this request. The May 15<sup>th</sup> document only addresses how a 14.85 RECLAIM Trading Credits (RTC) reduction could be implemented. WSPA requests that the PEA include alternative emissions reductions, including the proposed Industry alternative approach, currently estimated at 8.8 tpd based on the District's most recent BARCT determinations. We believe the Incremental BARCT method recognizes the importance and economic value of the allowance market and, hence, must be included for an adequate Staff and CEQA analysis.

WSPA requests that the SCAQMD include an analysis of the Industry Coalition's Incremental BARCT method in the Draft PEA when it is published in the coming months. As the Initial Study acknowledges, the Draft PEA must discuss and compare a reasonable range of alternatives, in addition to the proposed project. Alternatives must be feasible as defined by CEQA (CEQA Guidelines § 15364) and must attain the basic objectives of the proposed project and avoid or substantially lessen adverse environmental impacts of the project as proposed (CEQA Guidelines § 15126.6). *See also City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4<sup>th</sup> 889, 920. The lead agency bears the burden of adequately presenting and analyzing alternatives. *See Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405. The CEQA document must provide an "in-depth discussion of those alternatives identified as at least possibly feasible." *See Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4<sup>th</sup> 1336, 1350; *Sierra Club v. County of Napa* (2004) 121 Cal.App.4<sup>th</sup> 1490.

The Incremental BARCT method would result in RTC reductions greater than the approved SCAQMD control measures, but would lessen significant impacts from compliance with the District's proposed shave methodology. The Initial Study identifies numerous potentially significant impacts associated with the installation and operation of emission control equipment as required by the project as proposed. These include impacts to aesthetics (visual impacts of control equipment), air quality and greenhouse gases (increased construction emissions from NOx control equipment installation; operational emissions from control equipment and its support equipment, and from trucks delivering supplies and hauling waste), energy (energy demand for construction and operation of control equipment), hazards and hazardous materials (use and transport of catalysts and scrubbing agents used by control equipment, in particular use of acutely hazardous ammonia in SCR and SNCR technologies), hydrology and water quality (risk of spills of toxic chemicals including ammonia), solid and hazardous waste (solid and hazardous waste generation from construction activities), and transportation and traffic (from truck trips associated with construction activity). The Incremental BARCT method can achieve basic project objectives while reducing these impacts, and so should be fully evaluated as a reasonable and feasible alternative in the forthcoming PEA.

Alternatives also must be feasible, and one of the elements of “feasibility” as defined by CEQA is economic feasibility (CEQA Guidelines § 15364). The Incremental BARCT method constitutes a feasible alternative that would avoid or reduce the excessive costs of the project as proposed. The District’s shave methodology not only includes a reduction in allowances due to a BARCT assessment for new technology, it also removes a considerable amount of allowances beyond what is justified by BARCT advancement. Staff’s graph entitled, “BARCT Costs for Refinery Sector”, estimated BARCT costs for all five categories of refinery equipment to be \$741 million for 6.06 tons/day of NO<sub>x</sub> reductions with an average cost of \$13,200 per ton of NO<sub>x</sub> reduced using the discounted cash flow (DCF) method. However, Staff did not include the cost of reductions for the approximately 6 tons of RTCs that are shaved beyond BARCT. WSPA regards this omission as a significant issue that must be addressed by the SCAQMD Staff analysis and in the CEQA analysis of the proposed project in comparison to alternatives. Simply ascribing zero costs to the additional 6 tpd market shave beyond BARCT is not appropriate. On the contrary, given that the cost of achieving the first 6.06 tpd of NO<sub>x</sub> reductions is \$741 million, the cost of an additional 6 tpd increase must be substantial. If the District has data indicating that the additional 6 tpd could be achievable at a reasonable and feasible cost, it is the District’s burden to provide that information and incorporate it into both the CEQA alternatives analysis and the analysis of cost effectiveness.

#### Shave Methodology and Estimation

Concerns with the District’s method and costs estimates include:

- The District’s 2023 remaining emissions calculation includes a growth factor for the non-refinery sectors, BARCT adjustments for shutdown glass facilities and from the CPCC (after BARCT adjustment with growth), remaining emissions from new facilities from the 2005 NO<sub>x</sub> RECLAIM amendments, and a 10% adjustment factor applied to refinery, non-refinery, and new facility emissions only. WSPA recommends that a more appropriate compliance margin is 30% or 3.08 tpd. This amount is consistent with the historical unused RTC trend that ranged from 5.1 tpd to 9.1 tpd between 2005 and 2013.<sup>1</sup>
- WSPA recommends that the RTCs derived from ERC conversions be exempted from the proposed shave. According to SCAQMD’s 1996 annual RECLAIM audit report, the original RTC amount is 2.6 tpd<sup>2</sup>. With the adjustment for the 2005 shave, the amount for the exemption proposed is 2.01 tpd (i.e. 7.6% of the current RTC market).
- The October 2013 AB 1318 Air Resources Board draft final report<sup>3</sup> stated on page 65 (Table II-5) that the estimated offset needs for once-through cooling power plant replacements and new greenfield generation are 8.23 NO<sub>x</sub> tons/day. This does not appear to be included in Staff’s adjustment factors. How will the District accommodate the 8.23 tons/day requirement with the approximately 2 tons/day allowance shown for power providers?

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<sup>1</sup> SCAQMD, Annual RECLAIM Audit Report.

<sup>2</sup> Table 2-1, NO<sub>x</sub> Allocation Adjustments, SCAQMD Annual RECLAIM Program Audit Report, January 1996.

<sup>3</sup> Air Resources Board Draft Final Report: Assembly Bill 1318: Assessment of Electrical Grid Reliability Needs and Offset Requirements in the South Coast Air Basin, October 2013.

### Useful Life of Control Equipment

Abt Associates recently conducted a third-party review of the District's socioeconomic assessment process<sup>4</sup> and recommended that AQMD "appropriately consider useful life of pollution control equipment" to "ensure that compliance deadlines are set such that control equipment is not required to be replaced before end of useful life." In response to this finding, SCAQMD Staff committed to consider equipment life on a case-by-case basis, attempt to avoid stranded assets, and in cases of stranded assets, include equipment replacement costs and salvage values in the socioeconomic analysis.<sup>5</sup>

SCAQMD Staff stated at the Working Group meeting<sup>6</sup> their intention to estimate a useful life of 25 years for the BARCT control equipment review for all source categories under this rulemaking (i.e., refinery and all non-refinery sources). While we agree that certain **emission control equipment** may in theory have a useful life of 25 years, we believe that the economic useful life is more appropriately linked to the adoption frequency of new **control measures**. The regularity with which regulations are being promulgated indicates that the appropriate useful life of an SCR is more likely on the order of 10 years. WSPA's analysis also includes review of other Air Districts in California that support our recommendation.

For example, although Staff presented the Bay Area's useful life of 20 years, this is based only on a rule currently in development. The Bay Area's current BACT Guidelines actually recommend 10 years<sup>7</sup>. Additionally, both the San Joaquin Valley<sup>8</sup> and San Diego County<sup>9</sup> use 10 years. In fact, the South Coast's own Best Available Control Technology Guidelines<sup>10</sup> (BACT) recommends a 10 year useful life.

Staff stated that useful life is solely based on actual equipment life and not economic life. The Staff position does not take into consideration the regularity with which new rules are promulgated and the significant impact that using the 25-year period has on the District's cost effectiveness calculation. By using the District's recommendation for useful life, the costs are amortized over 25 years, rather than recognizing the fact that the last shave was in 2005, and control equipment can potentially be required to be replaced well before 25 years. The useful life of the equipment is simply not relevant when AQMD rulemaking necessitates the upgrade or replacement of equipment on an earlier timetable. In fact, both a useful life of 10 years (non-refinery) and a useful life of 25 years (refinery) were used during the 2005 shave. Therefore, WSPA recommends that Staff recommend a 10-year useful life for Selective Catalytic Reduction (SCR) control equipment. Staff should also include in their CEQA analysis the cost

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<sup>4</sup> Abt Associates, Review of the SCAQMD Socioeconomic Assessments, Documentation Tasks 1-4, August 2014.

<sup>5</sup> SCAQMD, Summary of Abt Recommendations & SCAQMD Staff Response, November 2014.

<sup>6</sup> Staff presentation slides from NOx RECLAIM Working Group Meeting, 29 April 2015.

<sup>7</sup> BAAQMD, BACT guideline (<http://hank.baaqmd.gov/pmt/bactworkbook/>).

<sup>8</sup> SJVAPCD, Revised BACT Cost Effectiveness Thresholds, 14 May 2008; BACT Guidelines and Policy APR 2015.

<sup>9</sup> SDCAPCD, NEW SOURCE REVIEW REQUIREMENTS FOR BEST AVAILABLE CONTROL TECHNOLOGY (BACT) GUIDANCE DOCUMENT, 2011.

<sup>10</sup> SCAQMD, Best Available Control Technology Guidelines, Part C: Policy and Procedures for Non-Major Polluting Facilities, 2006.

effectiveness evaluation using a 10-year period<sup>11</sup>. Because SCAQMD is ultimately responsible for making findings and determinations as to the proposal's feasibility, as well as the feasibility of other alternatives, this cost-effectiveness analysis is critical to the CEQA analysis. *See Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1356; *see also Flanders Foundation v. City of Carmel-by-the-Sea* (2012) 202 Cal.App.4th 603, 618.

#### Emission Reductions and Remaining Emissions

Staff presented two tables at the April 29, 2015 Working Group that detailed the emission reductions and remaining emissions for the refinery sector, power plants and non-power plants. Minor changes were noted in the refinery sector and non-power plant sector, however, modifications to the growth factor and base year for the power sector significantly reduced the 2023 Emissions at 2015 BARCT for that category. WSPA requests the data supporting these modifications.

#### BARCT Costs for the Refinery Sector and Cost Effectiveness Summary

- Staff indicated that they disagreed with the cost data and conclusions from their third party engineering consultant, Norton Engineering. Specifically, the SCR equipment costs were based only on one data point from one refinery and the recommendation was for double the SCR catalyst. As a result, Staff indicated that they dismissed the data and instead used their own cost data derived through their own analysis (i.e. field data for SCR installations, discussions with vendors, and literature reviews). WSPA is troubled by the selective dismissal of the third party engineering analysis which is meant to assure a reliable and transparent process during rulemaking. Additionally, while we appreciate the discussion provided at the April 29, 2015 Working Group, there are several unresolved questions. They are:
  - Since the dismissed cost data will impact a specific engineering recommendation (i.e. length of catalyst beds), how will performance be guaranteed to meet the new BARCT levels proposed?
  - What are the specific cost details that were modified and how does that impact cost effectiveness?
  - How will third party evaluations be treated in the future to ensure a transparent process?
- WSPA met with Staff on April 10, 2015 to discuss the BARCT assessment for refinery heaters & boilers and explained that we believe the District has miscalculated the cost effectiveness for a number of refinery heaters. Specifically, there were 10 heaters in the Staff's BARCT analysis tables dated 2 February 2015<sup>12</sup> where the cost effectiveness of proposed BARCT was analyzed based on an inappropriate cost baseline. That cost baseline assumed the presence of SCR technology where prior BARCT determinations had not been based on SCR technology. Correction of this error would render most of these units not cost effective. Furthermore, if the Staff disregard the conclusion from the Norton's third-party

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<sup>11</sup> SCAQMD, Staff Report for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), January 2005.

<sup>12</sup> SCAQMD, Preliminary Cost Effectiveness Summary, Attachment B (Refinery Heaters), transmitted to WSPA via email, 2 Feb 2015.

expert report (as suggested to WSPA on 10 April), nearly 40 units would be impacted by this analysis error.<sup>13</sup>

- In reviewing the BARCT costs for the Refinery Sector presented at the Working Group, we are unable to discern if Staff considered our request for changes as outlined in our April 22, 2015 letter. Therefore, WSPA requests the data used to compile these costs.
- At the April 10, 2015 SCAQMD – WSPA meeting, we also discussed various other issues we have with the Staff’s NOx RECLAIM shave proposal. One of the topics included the Staff’s use of the discounted cash flow (DCF) method instead of the levelized cash flow (LCF) method as used by several other Air Districts. Staff did provide the LCF analysis as a comparison to the DCF method at the Working Group. WSPA believes that the LCF method is a better representation of cost effectiveness than the DCF method. Accordingly, WSPA recommends that the LCF method be used for the rule as well as the same cost effectiveness threshold of \$50,000/ton (as currently indicated for the DCF method).

### Preliminary BARCT Analysis

- WSPA understands that BARCT should represent a level of performance which is technically feasible and cost effective for most units on a retrofit basis in a given source category. Based on the data provided to the Working Group by Staff, it does not appear that 2 ppm is an acceptable BARCT determination for refinery heaters and boilers. The data provided by Staff and confirmed by a confidential WSPA survey<sup>14</sup>, conducted by a third party contractor, suggests that less than 6.5% of the existing refinery heaters and boilers which have been retrofitted with SCR technology, are currently performing at or below 2 ppm<sup>15</sup>. This includes a number of units which had been retrofitted in recent years. This does not represent a considerable proportion of the units in this source category. (In fact, only 3.5% of new installations can meet 2 ppm).
- WSPA recommends that 5 ppm is a more appropriate endpoint for refinery boilers/heaters because of the following reasons:
  - Currently, there are 87 installed SCRs of the 212 total boilers and heaters<sup>16</sup>. As noted above, WSPA’s confidential survey indicates that only two of the four heaters that SCAQMD identified as performing below 2 ppm NOx are retrofitted units (i.e. with SCR). This represents only 6.5% of the total retrofitted units (31 units). Additionally, only one more retrofitted unit performs between 2 ppm and 5 ppm.
  - As presented by combustion expert, Rich Smirnoff at our April 10, 2015 meeting<sup>17</sup>:
    - Current commercial burner technology typically produces 16-20 ppm NOx @ 3% O2 in ideal furnace conditions, as in burner test furnaces, with single burners. A target NOx reduction of 90% may not be sufficient if the heater produces 30 ppm NOx.

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<sup>13</sup> SCAQMD, Preliminary Analysis – Refinery Boilers/Heaters, July 2014 (posted on AQMD website October 2014).

<sup>14</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, Mar 2015.

<sup>15</sup> SCAQMD, NOx RECLAIM Working Group Meeting, 19 September 2013.

<sup>16</sup> SCAQMD, NOx RECLAIM Working Group Meeting, 19 September 2013.

<sup>17</sup> “Refinery Fired Heaters, NOx Emissions Reductions Retrofit Limitations”, presented by Rich Smirnoff, April 10, 2015 at WSPA-AQMD meeting.

- When burning natural gas, the fuel heating value is constant and furnace adjustments can be set with minimal difficulties. However, when burning refinery gas, the heating value will vary significantly.
- The NEC report, as represented at the January 2015 SCAQMD NOx RECLAIM Working Group meeting, indicates that 5 to 10 ppm NOx is feasible for calciner sources. However, given that the technology is unproven in a calciner situation, WSPA recommends that even a higher BARCT endpoint than 10 ppm may be warranted.

Energy Efficiency Projects

Staff presented a slide on Energy Efficiency Projects that stated there could be an additional 0.7 tpd NOx reductions from energy efficiency projects completed from 2007, yet not included in the inventory baseline. WSPA opposes any attempt to include this additional tpd as the projects and benefits reported under the energy efficiency and co-benefits reports would have been largely, if not entirely, reflected in the 2011 emissions baseline being used for this rulemaking. In short, any co-benefits contained in those reports are not additive.

Thank you for considering the comments addressed in this letter. We look forward to continuing to work with you and your Staff on this important rulemaking.

Sincerely,



cc: Phil Fine  
Joe Casmassi  
SCAQMD Board Assistants

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October 6, 2015

**BY EMAIL (BRADLEIN@AQMD.GOV) AND U.S. MAIL**

Barbara Radlein (c/o CEQA)  
South Coast Air Quality Management District  
21865 E. Copley Drive  
Diamond Bar, CA 91765-4178

**Re: Comment Letter on Draft Program Environmental Assessment for Proposed  
Amended Regulation XX; Cities of Burbank and Pasadena**

Dear Ms. Radlein:

On behalf of the City of Burbank, Department of Water and Power ("BWP"), and the City of Pasadena, Water and Power Department ("PWP") (collectively "the Cities"), we are submitting the following comments on the Draft Environmental Assessment ("Draft PEA") for the proposed amendments to Regulation XX, Regional Clean Air Incentives Market ("RECLAIM") ("NOx shave proposal"), for which a Notice of Completion was published on August 13, 2015. The Draft PEA purports to contain an analysis of the potential adverse environmental impacts that could be generated from the proposed project. Unfortunately, the Draft PEA does not contain any analysis of the potential adverse environmental impacts of the potential shortage of RECLAIM Trading Credits ("RTCs") for future power plant needs, which is of great concern to the Cities.

While the NOx shave proposal appears to include provisions that would mitigate some of its worst impacts on the Cities' well-controlled power plants, it still does not provide the needed certainty that adequate RTCs will be available at a reasonable price to cover these plants' anticipated emissions and other needs related to resource adequacy and utility-specific operating contingencies. We have suggested some improvements to the proposal that would provide the needed certainty and address other issues (see the Cities' comment letter on the proposed rule

dated August 21, 2015). In the absence of these improvements, the NO<sub>x</sub> shave proposal may have significant adverse air quality impacts that should be addressed in the Final PEA.

Both Cities operate their own power plants containing peaking units, and BWP also operates the Magnolia Power Plant (“MPP”), a baseload unit, on behalf of the Southern California Public Power Authority (“SCPPA”). Participants in MPP include Burbank, Pasadena, and four other municipalities. The Cities operate these power plants to serve their municipal customers. RTCs are required not only to cover anticipated annual emissions, but also to meet resource adequacy needs and prepare for utility-specific operating contingencies, such as grid reliability, increased cycling to support integration of renewables, and potential electrification of the transportation system. Unlike other industrial facilities operating under the RECLAIM program, the Cities’ power plants are obligated to operate to serve load. If they are unable to serve load, there may be blackouts with serious adverse economic and other consequences.

The staff proposal would require a 47% reduction in the NO<sub>x</sub> RTC allocations for these power plants. The proposed reductions are so severe that insufficient RTCs would remain to cover Pasadena’s and MPP’s anticipated emissions, not to mention RTCs needed for resource adequacy and utility-specific operating contingencies. Pasadena and MPP may need to purchase additional RTCs to cover the shortfall. If these additional RTCs are prohibitively expensive or unavailable, then the Cities may be forced to curtail the output from these facilities in order to remain in compliance with the RECLAIM program.

One possible consequence of a curtailment of output from the Cities’ facilities is that other facilities may generate replacement power. These facilities may be located either inside or outside of the South Coast Air Basin. Wherever they are located, these other facilities are unlikely to have emission rates as low as the emission rates from the Cities’ own facilities. The increased emissions from these other facilities, and their potential adverse impacts, should be assessed in the Final PEA.

For example, replacement power may be generated by facilities that are located in the South Coast Air Basin that are not included in the RECLAIM program or that are included in the program but are not subject to the NO<sub>x</sub> shave proposal, such as certain co-generation facilities. The emissions would be generated in locations different from the locations of the Cities’ facilities, and there are likely to be more emissions than would be generated by the Cities’ own well-controlled units. These emissions and their potential adverse impacts, including their impacts on local receptors, should be assessed. These adverse impacts may trigger environmental justice concerns.

Replacement power may also be generated by facilities that are not located in the South Coast Air Basin. It is possible, for example, that replacement power may be generated by coal-fired units in other states. The potential adverse impacts of these emissions should be assessed.

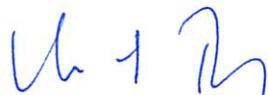
Barbara Radlein  
October 6, 2015  
Page 3

When we made a similar comment on the Notice of Preparation of the Draft PEA, the District staff responded by stating that the Cities could purchase whatever RTCs are needed to operate and pass the cost through to our ratepayers. This response is not adequate if the cost of RTCs is exorbitant or if RTCs are not available.

District staff also responded by stating that the NOx shave proposal now includes a provision addressing the need for RTCs to cover the so-called "NSR holding requirement" (See our January 30, 2015, comment letter and District staff responses (see Draft PEA, Appendices, pages G-55 and 56). The Draft PEA also refers to a provision providing additional RTCs in the event of a State of Emergency as declared by the Governor (see Draft PEA at 1-16). In our comment letter on the rule proposal, we point out that these various provisions do not adequately protect the Cities against having to obtain additional RTCs when their prices are exorbitant or they are not available. Only our suggested safeguards would provide that needed protection. Absent those safeguards, an analysis of potential adverse impacts is required.

We appreciate your consideration of our comments. Please let us know if you have any questions.

Sincerely,



Charles F. Timms, Jr.

cc: Philip Fine, Deputy Executive Officer (by email)  
Jill Whynot, Assistant Deputy Executive Officer (by email)

ERIC GARCETTI  
*Mayor*

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
MICHAEL F. FLEMING  
CHRISTINA E. NOONAN  
BARBARA E. MOSCHOS, *Secretary*

MARCIE L. EDWARDS  
*General Manager*

October 6, 2015

Ms. Barbara Radlein  
Program Supervisor, CEQA Special Projects  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Subject: Los Angeles Department of Water and Power (LADWP) Comments on the Draft Program Environmental Assessment Report for Proposed Amendments to NOx RECLAIM Regulation XX (Draft EA)

Dear Ms. Radlein:

The LADWP appreciates the opportunity to provide the following comments on the Draft EA. In so doing, LADWP remains committed to working with the South Coast Air Quality Management District (SCAQMD) to develop additional workable and cost-effective policies to reduce NOx emissions from all source categories in order to meet the federal ozone standards in the South Coast Air Basin.

Appendix G of the Draft EA contains SCAQMD's responses to LADWP's comment letter of January 30, 2015. In its comment letter, LADWP stated that the Notice of Preparation (NOP) did not address the potential impacts on energy supply as a result of a significant shave in RECLAIM trading credits (RTCs) allocations in the power plant sector. In response, SCAQMD states that Proposed Amended Rule 2002 has been revised such that the proposal includes an Adjustment Account specifically for power generating facilities for access to additional RTCs if needed by power plants. Although SCAQMD sets up the framework and mechanism for accessing additional RTCs from the adjustment account, it is unclear whether there would be sufficient RTCs in the Adjustment Account for the Power Producing Facilities given that the proposed 14 ton per day shave would dramatically reduce the number of RTCs in the RECLAIM program.

SCAQMD proposes in its amendments (Rule 2002(f)(4) and (5)) to have an Adjustment Account comprised of RTCs set aside for power producing facilities' access under

certain conditions. The draft preliminary staff report states that the Adjustment Account RTCs “would be derived from the proposed programmatic 14 tons per day in NO<sub>x</sub> reductions.” In previous NO<sub>x</sub> RECLAIM working group meetings, SCAQMD stated that Adjustment Account RTCs derived from the 14 tons per day NO<sub>x</sub> reductions would not be submitted to the State Implementation Plan (SIP). However, throughout the Draft EA, it is stated that the proposed shave is 14 tons per day without any qualification or limitation on their use for meeting NO<sub>x</sub> SIP reduction requirements under the Clean Air Act. As a result, it is unclear whether there would be sufficient RTCs in the Adjustment Account for the power producing facilities to address the following purposes:

- New Source Review offset needs
- Ability of power producing facilities such as LADWP to meet native load (obligation to serve its customers)
- Ability of power producing facilities to meet reliability standards implemented through the Energy Policy Act of 2005
- Ability of power producing facilities to support increased electrification of transportation and other sources

SCAQMD also states in the Draft EA that “further analysis of the actual BARCT NO<sub>x</sub> emission control opportunities for the various equipment/process categories demonstrated that the proposed project could achieve 14 tons per day of NO<sub>x</sub> emission reductions by 2023.”<sup>1</sup> We believe that the SCAQMD analysis so far provided does not demonstrate that the power producing facilities have the ability to achieve their share of the NO<sub>x</sub> RTC reductions while simultaneously meeting their obligations to meet native load. For example, SCAQMD does not address that fact that all of LADWP’s generating units in the Los Angeles basin are already retrofitted with BARCT or the most stringent Best Available Control Technology to minimize NO<sub>x</sub> emissions to the maximum extent technically feasible. This means that a deep shave of 47 percent from current RTC allocations could result in LADWP having to procure RTCs if they are even available or face the inability to meet native load and/or meet reliability standards. Thus, LADWP urges SCAQMD to provide additional information as to how the Adjustment Account would be funded, confirm through analysis that sufficient RTCs would be available for power producing facilities, and provide well-reasoned responses to stakeholder rule recommendations related to access to the RTCs (e.g., that a Reliability Coordinator be able to declare an energy emergency).

In addition, LADWP remains concerned that the impacts of electrification of transportation and other sources have so far not been addressed in the rulemaking.

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<sup>1</sup> Draft EA, page 1-1

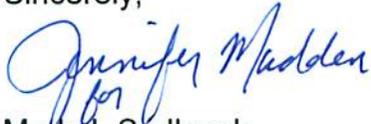
Ms. Barbara Radlein  
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Although SCAQMD staff has indicated that such impacts would be addressed at some point in the future, it is unclear what regulatory mechanisms would be available to supply RTCs back to the RECLAIM program once they are submitted to EPA and thereby effectively surrendered for SIP purposes. For these reasons, and as explained in detail in our comments on the SCAQMD proposal, LADWP urges the development of a SIP crediting mechanism that can account for and provide credit the net decrease in NOx as a result of electrification measures.

In summary, SCAQMD has not explained whether there would be sufficient RTCs available in the Adjustment Account or in the overall RECLAIM market for power producing facilities affected under the RECLAIM program. Without a clear understanding of this crucial issue, SCAQMD's analysis of the energy impacts on power producing facilities associated with the NOx RECLAIM amendments is incomplete. This matter needs to be addressed fully before SCAQMD can finalize its proposed amendments to RECLAIM Regulation XX.

LADWP appreciates the opportunity to provide comment on the Draft EA. If you have any questions or would like additional information, please contact Ms. Jodean Giese of my staff at (213) 367-0409.

Sincerely,



Mark J. Sedlacek  
Director of Environmental Affairs

JG:dms

c: Philip Fine, Ph.D, SCAQMD  
Ms. Jill Whynot, SCAQMD  
Mr. Joe Cassmassi, SCAQMD  
Ms. Jodean Giese



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10/6/2015

Ms. Barbara Radlein  
Program Supervisor, CEQA Special Project  
Planning, Rules and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**Subject: Phillips 66 Comments on Draft PEA for NOx RECLAIM Amendments  
PHILLIPS 66 COMPANY - LOS ANGELES REFINERY**

**Dear Ms. Radlein:**

Phillips 66 Company supports and adopts the comments on the South Coast Air Quality Management District's (SCAQMD or District) proposed regulation to reduce emissions of oxides of (NOx) from the Regional Clean Air Incentives Market (RECLAIM) Program that were submitted by the Western States Petroleum Association today. Attached to this letter is a copy of those comments.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Waller".

Marshall Waller  
Director, Environmental Services, Los Angeles Refinery

Attachments

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October 6, 2015

VIA ELECTRONIC & FIRST CLASS MAIL

Barbara Radlein  
Program Supervisor, CEQA Special Projects  
Planning, Rules, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Re: Draft Program Environmental Assessment for Proposed Amended  
Regulation XX – Regional Clean Air Incentives Market

Dear Ms. Radlein:

We respectfully submit, on behalf of the Western States Petroleum Association (“WSPA”) and its members, these comments on the draft Program Environmental Assessment (“PEA”) for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (“RECLAIM”). WSPA is a non-profit trade association that represents oil and gas exploration, production, refining and marketing companies, some of whom own and operate facilities in the RECLAIM program.

The draft PEA suffers from fundamental problems that undermine the entire environmental analysis. The draft PEA purports to consider a project to implement the Air Quality Management Plan (“AQMP”) and to evaluate best available retrofit control technology (“BARCT”), but narrowly focuses on construction activities associated with the replacement NOx emissions control equipment for selected facilities to achieve 14 tons per day (“TPD”) in NOx reductions. Further, the construction activities that are evaluated in the draft PEA have not been confirmed by the District’s independent expert, resulting in a proposed project that is likely infeasible. The District’s improper focus on 14 TPD in NOx reductions is particularly apparent in the alternatives analyses where the majority of the alternatives require 14 TPD or more of NOx reductions – a skewed selection of alternatives which fails to meet the “reasonable range of alternatives” requirement. Aside from these fundamental problems, the draft PEA lacks adequate analysis in several individual resource areas.

Attachment 1 to this letter provides more detailed comments on this draft PEA from WSPA's technical consultant, and are hereby incorporated by reference. ("Attachment 1").

WSPA has previously submitted numerous comments on the proposed regulation itself, as well as the notice of preparation and initial study ("NOP/IS") for the draft PEA, but these comments have received insufficient attention from the District in its environmental analyses.<sup>1</sup> The District responds to the NOP/IS Letter by claiming that technical analyses have been considered, when an in-depth evaluation of the industry's technical concerns has not been performed.

WSPA has serious concerns with both the proposed rule amendments and the draft PEA, and believe that the requirements under the California Environmental Quality Act ("CEQA") have not been satisfied. Furthermore, both the proposed amendments and the draft PEA must be revised and recirculated to address the comments raised by WSPA and the numerous other commenters in order to correct errors, disclose all significant impacts, and allow the consideration of feasible mitigation measures or project alternatives to reduce or avoid these impacts.

## **I. Fundamental Problems With The Draft PEA Undermine The Environmental Analysis**

Under CEQA, an EIR is an informational document designed to provide public agencies and the public with detailed information about the impacts that a proposed project is likely to have on the environment, analyze the ways in which the significant effects of a project might be minimized, and identify alternatives to the project.<sup>2</sup> The District's draft PEA, as a substitute EIR under its certified regulatory program, is also subject to the substantive provisions of CEQA.<sup>3</sup>

Fundamental flaws in the draft PEA's project description and objectives, the scope of review, and the selection and analysis of alternatives, pervade the document, ultimately resulting in a misleading document in specific resource areas as well. Many of the errors in the draft PEA are related to problems with the methodology, assumptions,

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<sup>1</sup> See, in particular, the letter submitted by WSPA dated August 21, 2015 on the preliminary draft staff report ("PDSR") and Attachments 1 and 2 (hereinafter referred to as "WSPA's August 21 Letter"). See also the January 30, 2015 letter submitted by WSPA as part of the Industry RECLAIM Coalition commenting on the NOP/IS (the "NOP/IS Letter"), and WSPA's May 27, 2015 letter on the April 29, 2015 SCAQMD NOx RECLAIM Working Group Meeting. For convenience, these letters are provided as Attachments 2, 3 and 4 to this letter.

<sup>2</sup> Pub. Resources Code §§21002, 21002.1(a), 21061; 14 Cal. Code Regs. §15362; see also Pub. Resources Code §§21100, 21150.

<sup>3</sup> 14 Cal. Code Regs. §15250; *City of Morgan Hill v. Bay Area Air Quality Management District*, 118 Cal.App.4th 861, 874-875 (2004).

which WSPA described in detail in its August 21 Letter and which are reiterated here as they also relate to inadequacies under CEQA. WSPA believes that the draft PEA must be revised and recirculated for further public review and comment, all in compliance with CEQA.

**A. The Project Description is Flawed, Misleading and Hinders Analysis**

“An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.”<sup>4</sup> An accurate project description is an essential requirement because an EIR must be “prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences.”<sup>5</sup> If the project description contains inaccurate or misleading information, the entire analysis may be tainted. “A curtailed, enigmatic or unstable project description draws a red herring across the path of public input.”<sup>6</sup>

**1. The project description includes amendments to Regulation XX, but the draft PEA evaluates only environmental effects of BARCT construction activities**

The proposed project is described as “amendments to Regulation XX – Regional Clean Air Incentives Market (RECLAIM) to achieve additional NOx emission reductions to address best available retrofit control technology (BARCT) requirements and to modify the RECLAIM trading credit (RTC) ‘shaving’ methodology.”<sup>7</sup> However, the draft PEA examines only the construction activities that purportedly achieve a reduction of 14 TPD of NOx emissions, and fails to evaluate in any manner the potential environmental effects of effectively eliminating the NOx RTC market.

The RECLAIM program is a cap and trade program, and it is misleading for the District to characterize the proposed severe changes to this program as merely a series of construction projects to achieve BARCT requirements. Depending on how they are implemented, changes to the marketplace can have wide-ranging impacts that are not limited to BARCT construction, but also to the operation of the RECLAIM facilities subject to the District’s proposed severe shave. The District’s focus on NOx emissions reduction – and the PEA’s correspondingly limited analysis – has resulted in foreseeable consequences that are neither considered in the District’s rulemaking nor analyzed in its environmental assessment in the form of the draft PEA.

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<sup>4</sup> *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 185, 192 (1977).

<sup>5</sup> *Dry Creek Citizens Coalition v County of Tulare*, 70 Cal.App.4th 20, 26 (1999).

<sup>6</sup> *Inyo*, 71 Cal.App.3d at 197-198.

<sup>7</sup> Draft PEA, p. 1-1.

While the District certainly has the authority to prepare a CEQA document solely for BARCT requirements, and if that is the District's intention with the draft PEA, then the draft PEA needs to clearly state that intention in the project description. "[I]ncessant shifts among different project descriptions" undermines the CEQA process "as a vehicle for public participation."<sup>8</sup> However, the project description purports to include an RTC "shave," and the CEQA document needs to evaluate it. For this reason alone, the draft PEA must be revised and recirculated for further public review and comment.

**2. The draft PEA does not substantiate the fundamental assumptions that form the basis of the BARCT construction activities**

As explained above, the draft PEA improperly focuses solely on BARCT construction activities for its analysis, but the viability of those construction activities being adequately represented and analyzed in the draft PEA cannot be substantiated, creating further uncertainty for the project description. "An EIR may not define a purpose for a project and then remove from consideration those matters necessary to the assessment of whether the purpose can be achieved."<sup>9</sup> Given that the District has narrowly defined the purpose of the project as implementing BARCT, it still must be able to substantiate that those BARCT construction activities can actually be performed.

The District erroneously assumes all its proposed BARCT requirements are not only technologically feasible but can be achieved unilaterally despite evidence suggesting the proposed BARCT levels may not be cost effective or feasible for all RECLAIM facilities subject to the District's proposed severe shave. As WSPA has explained previously, most recently in its August 21 Letter, this is not the case. In November 2014, Norton Engineering Consultants ("NEC"), the third party expert hired by the District to "ground truth" the District's technical analysis in this rulemaking, presented findings in its BARCT Feasibility and Analysis Review.<sup>10</sup> However, when the preliminary draft staff report for the proposed amendments was released on July 21, 2015, it was apparent that many of NEC's findings were ignored, misunderstood, or misstated by the District. As described in WSPA's August 21 Letter, failure to correct some of the assumptions and errors in the staff report for this rulemaking skews the analysis for nearly 40 operating units (i.e., RECLAIM NOx sources).

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<sup>8</sup> *Inyo*, 71 Cal.App.3d at 197.

<sup>9</sup> *County of Inyo v. City of Los Angeles*, 124 Cal.App.3d 1, 7-9 (1981).

<sup>10</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM – BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014, [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/regxx/noxreclaimbarct-nonconf-refinery\\_112614.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/regxx/noxreclaimbarct-nonconf-refinery_112614.pdf?sfvrsn=2) (last accessed September 13, 2015).

Moreover, there is no support for the District's assumption that certain NOx sources subject to this rulemaking can achieve 2 ppm NOx levels using new or upgrade selective catalytic reduction systems ("SCR"). This 2 ppm NOx level assumption is an integral component of the District's calculus justifying the currently proposed severe shave. While CEQA provides that disagreements among experts does not make an EIR inadequate, that is not the case here with the draft PEA.<sup>11</sup> As a threshold matter, the District cannot claim to be an expert in specific applications unique to the refining and petrochemical industry; indeed that is apparently the reason for its hiring of an outside third party expert to verify (i.e., "ground truth") the District's technical assumptions. Importantly, the District has been presented with a highly technical analysis from its own third party expert on the ability – or inability – of certain types of NOx sources to achieve 2 ppm NOx levels using SCR, and effectively dismissed this information in favor of unsubstantiated assertions that certain equipment can, indeed, meet such NOx levels and reductions.<sup>12</sup>

The District also assumes that the installation of the BARCT can and will be implemented in the specified timeframe, which is fairly aggressive. This aggressive time frame is unrealistic and again, has not been substantiated. A number of internal and external factors influence when a company can and will undertake a construction project. WSPA members report that completion of all needed projects to implement the proposed NOx reductions would likely require at least eight (8) years. (Attachment 1, p. 13).<sup>13</sup> It is also a possibility that, depending on the economic climate and incentives, a project would not be implemented at all. In the current economic climate for the oil and gas industry, a more realistic schedule is required for an adequate CEQA review.

The draft PEA also purports to conduct a site-specific analysis for certain resource areas, but makes unsubstantiated conclusions to eliminate further environmental analysis. For example, the PEA determines noise impacts will not occur from the project because any increase in noise levels will be within the thresholds of the industrial facilities. The PEA makes similar extrapolations from a site specific review of the aesthetics, taking a specific example of a facility where a wet gas scrubber ("WGS") had been installed, resulting in a characteristic steam plume. The PEA essentially states that because these refineries are in industrial areas, additional WGS plumes would not have an aesthetic impact.<sup>14</sup> The PEA's assumptions and extrapolations make an informed analysis difficult.

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<sup>11</sup> See, e.g., *Karlson v. City of Camarillo*, 100 Cal.App.3d 789, 805 (1980).

<sup>12</sup> See letter from NEC to the District dated August 10, 2015, and included as Attachment 2 to WSPA's August 21 Letter, attached to this letter as Attachment 2.

<sup>13</sup> WSPA also recommended that the shave implementation schedule be "back-loaded" to accommodate a longer, more realistic project implementation period with at least 2 of the proposed 4 TPD (currently being proposed for 2016) being moved to 2019 or later. WSPA's August 21 Letter, p. 3, attached to this letter as Attachment 2.

<sup>14</sup> Draft PEA, p. 4.1-4.

The draft PEA should identify realistic assumptions based on facts to properly evaluate potential environmental effects of construction activities, and a one-size fits all approach that dismisses the potential for environmental effects based on the industrial locations of the facilities is not sufficient.

In short, the PEA makes unsubstantiated industry-wide generalizations in determining that technology is feasible, implementation timeframes are reasonable, the site specific impacts will be negligible, and the individual businesses will perform as expected. These generalizations cannot support the PEA's assumptions, particularly in light of the District's own third party expert's efforts to correct the errors in its technical analysis. If an EIR is "so fundamentally and basically inadequate and conclusory in nature" that public comment on the draft is essentially meaningless, or if significant new information is added to an EIR, it must be recirculated for further public review.<sup>15</sup> The PEA should be revised to substantiate its assumptions and reevaluate its conclusions accordingly, and should then be recirculated for further public review and comment.

**B. The PEA Purports To Be A Program-Level Document, But Construction Activities Generally Require Project-Level Review**

The draft PEA is described as a "program CEQA document" ostensibly because it consists of proposed amendments to Regulation XX.<sup>16</sup> As noted above, however, the draft PEA appears to evaluate BARCT construction activities, and specific construction projects generally require a project-level analysis. This distinction is important because a program-level review can be more abbreviated and the District apparently seeks to utilize that approach, but it has now embarked on a partial project-level review of BARCT construction activities. As noted above, noise is dismissed in the PEA and not evaluated at all, even though noise is an environmental topic commonly reviewed in a project level EIR for a construction project. If the District seeks to transform a rule-making into a construction project, it needs to do so in compliance with CEQA.

Furthermore, the draft PEA, which is a "substitute CEQA document" pursuant to the District's certified regulatory program, states that the "program" CEQA document may be used by other agencies for "future related actions." Section 15253 of the CEQA Guidelines addresses use of a substitute CEQA document by responsible agencies, and the District should clarify how the provisions of that Section have been satisfied.

The draft PEA's insufficient project level analysis for BARCT construction activities reinforces WSPA's main critique of the District's proposed amendments to Regulation XX—the technical analysis to support the proposed amendments is

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<sup>15</sup> *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.*, 6 Cal.4th 1112 (1993); 14 Cal. Code Regs. §15088.5(a).

<sup>16</sup> Draft PEA, p. 1-3.

inadequate.<sup>17</sup> If these construction activities had been properly evaluated in the CEQA document at a project level, the infeasibility of the proposed BARCT would have become apparent.

### **C. The PEA Overlooks Impacts From the “Whole Of The Project”**

An EIR must consider the whole of an action.<sup>18</sup> "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is an activity directly undertaken by any public agency.<sup>19</sup> An “indirect physical change” may be one resulting from any economic and social effects of a project, and that change too must be evaluated.<sup>20</sup> The CEQA Guidelines provide: “Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project.”<sup>21</sup> While not all projects evaluated under CEQA have sufficient economic and social effects to warrant further analysis regarding consequential physical effects, this project is unique in that it consists of amendments to a market system – economic consequences are integral to RECLAIM operations.

#### **1. The Draft PEA fails to consider the physical effects resulting from reasonably foreseeable economic and social effects**

The draft PEA summarily asserts: “No indirect or indirect physical changes resulting from economic or social effects have been identified as a result of implementing the proposed project.”<sup>22</sup> No citation is provided for this conclusion, and no analysis was performed to support this conclusion. As a result and the clear fact that the draft PEA proposes such a severe RTC “shave” that it could potentially eliminate the NOx RTC market, an analysis must be performed to evaluate the potential physical changes that might result from the reasonably foreseeable economic and social effects of the project.

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<sup>17</sup> See also WSPA’s August 21 Letter.

<sup>18</sup> Because the District has adopted a Certified Regulatory Program under California Public Resources Code §21080.5, an environmental assessment (“EA”) may be prepared instead of an EIR or negative declaration. An EA is the equivalent of an EIR under the Certified Regulatory Program.

<sup>19</sup> Cal. Code Regs. § 15378(a)(1).

<sup>20</sup> CEQA Guidelines Section 15131. See, e.g., *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal.App.4th 1184 (2004) (holding that CEQA requires consideration of social or economic impacts if they may lead to adverse changes in the physical environment such as "urban decay").

<sup>21</sup> 14 Cal. Code Regs. §15064(e).

<sup>22</sup> Draft PEA, p. 1-16.

More specifically, the draft PEA fails to consider the physical impacts of an analysis in which the economic consequences of the rule result in reasonably foreseeable changes in the regulated sectors. The District is well aware of the statistic it cites in its staff report and PEA: since the start of the RECLAIM program, the number of facilities in the program has shrunk by approximately 30 percent.<sup>23</sup> Where there were once 392 RECLAIM facilities in the South Coast Air Basin, there are now only 276. While the District cites this statistic, it makes no effort to analyze or consider the significance of it, or to examine the physical changes in the environment that resulted in the PEA.

This reduction in RECLAIM facilities means that some productivity within the Basin has been lost, and the draft PEA should evaluate the potential for future loss of productivity from sources within the RECLAIM system, particularly those RECLAIM facilities subject to the District's proposed severe shave. This analysis in the PEA should evaluate the Basin's energy needs and assess whether there would be adequate sources of reliable power if the proposed project were to result in lowered productivity within RECLAIM facilities and the businesses that support and supply these facilities. It should also consider whether lowered production of the affected products could result in adverse environmental impacts within or outside of the Basin. It should consider the environmental impacts of leakage, which is a well-known, and thus, foreseeable consequence of sub-regional cap and trade schemes. CEQA provides that "[a]ny emissions or discharges that would have a significant effect on the environment in this state" are subject to CEQA.<sup>24</sup> Accordingly, the District is obligated to analyze whether potential changes in operations resulting from the imposition of this aggressive RTC shave would result in potential environmental impacts, including increased emissions due to needing to source products from outside the South Coast Air Basin where the RECLAIM program applies.

The District's incomplete and selective approach neglects to consider potential environmental impacts beyond the narrow scope of construction associated with installation of the anticipated BARCT required by the proposed project. In the District's own words, RECLAIM is a market-based program which was "designed to use the power

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<sup>23</sup> Draft PEA, p. 2-2.

<sup>24</sup> Cal. Pub. Resources Code § 21080. In certain instances, the mandate of CEQA to ensure a high level of environmental protection extended to considering out of state activities as part of the project due to resulting in-state impacts. (See 58 Ops. Cal. Atty. Gen. 614 (1975), opining that where California cities were joining forces with Utah cities to construct a coal plant in Utah that would provide power to California, and related transmission lines would have to be built from Utah into California, any project-related EIRs had to examine the environmental consequences of the project as a whole. Additionally, because the project area spanned multiple states, local California agencies were required to look at the impacts of the project as a whole.)

of the marketplace” to reduce air emissions from stationary sources.<sup>25</sup> A proposed shave effectively manipulates that marketplace. It stands to reason that an aggressive, deep manipulation – like the one proposed by the District – will impact RECLAIM facilities differently than one that is less drastic. The District is proposing a massive change in the marketplace designed to change behavior and cause reactions, yet the District assumes that the only reaction will be small scale construction projects involving installation of NOx control equipment to meet shave requirements. The District is proposing a massive change that will cause RECLAIM facilities and the businesses that support and supply these facilities to *react* in ways that are reasonably foreseeable by the District. These reactions, in turn, will have environmental impacts, which should have been analyzed in the PEA.

The RECLAIM program was introduced as an alternative to traditional command and control requirements, and was intended to provide business within the South Coast Air Basin with greater flexibility and financial incentive to reduce air pollution. As set forth in WSPA’s August 21 Letter, the District has accomplished the substantial NOx emissions reductions achieved to date by reducing RTCs across the board. With the present project, not only is the District proposing deep cuts to the remaining RTCs, but it is imposing these cuts in a targeted, uneven manner. This is a significant manipulation of the marketplace, with foreseeable consequences that the PEA has neglected to analyze. The likely impacts resulting from the District’s chosen methodology occur in various resource areas, as described further in this letter. However, by not recognizing the market-driven business considerations, the PEA has neglected to analyze and disclose the “whole of the project,” in violation of CEQA.

CEQA prohibits segmenting a project into separate actions in order to: avoid environmental review of the “whole of the action”<sup>26</sup>; defer environmental analysis; ignore the foreseeable environmental impacts of the end result of a project; or, avoid considering potential cumulative impacts. Thus, a lead agency may not limit environmental disclosure by ignoring other activities that will ultimately result from approval of a particular project. The District’s limited focus on technical equipment related to control of NOx emission reductions to achieve the severe RTC shave, to the exclusion of other foreseeable impacts is evidence of the District’s failure to consider the entire project and its potential environmental impacts.

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<sup>25</sup> SCAQMD RECLAIM website, <http://www.aqmd.gov/home/programs/business/business-detail?title=reclaim> (last accessed September 12, 2015).

<sup>26</sup> Cal. Pub. Resources Code § 21065.

**2. The draft socioeconomic report is deficient, and a revised report should be prepared and recirculated concurrently with a revised draft PEA**

The draft Socioeconomic Report for the RECLAIM amendments provides little assistance in evaluating this issue as it considers only a limited number of potential economic and social issues, based solely on BARCT construction activities, and does not delve into the potential for physical effects resulting from the severe RTC “shave.” WSPA will be submitting comments on the draft Socioeconomic Report, and once those comments have been considered and addressed, the draft PEA should be revised and recirculated for public review and comment to reflect the District’s analysis of the potential environmental effects of any physical changes resulting from these economic and social effects.

Furthermore, the Draft Socioeconomic Report was only circulated on September 7, 2015 – weeks after the completion of the PEA. Failure to consider socioeconomic impacts in conjunction with the environmental review hampers the environmental review of the whole of the project. A proper socioeconomic analysis should have been completed in advance of, or at minimum in conjunction with, the draft PEA, and the draft PEA should have analyzed the resulting physical changes based on the socioeconomic effects of the RECLAIM amendments.

For example, the socioeconomic analysis with respect to the BARCT cost effectiveness could well have environmental impacts which were not adequately analyzed in the PEA. Health and Safety Code §39616 requires RECLAIM to achieve emissions reductions “at equivalent or less cost” than otherwise applicable command and control regulations. The project proposes cost effectiveness of \$50,000/ton threshold, above which the District assumes, for purposes of CEQA analysis, that a facility would decline to install the given air pollution control technology. However, as discussed in greater detail below, this \$50,000 is more than twice the AQMD’s cost effectiveness threshold for command-and-control programs. The socioeconomic impacts of adopting new BARCT threshold, and setting such a high cost effectiveness figure, could result in operational changes which have physical impacts on the environment. In order to comply with CEQA, the PEA must analyze the foreseeable impacts of this component of the project.

**D. The Project Objectives Are Disconnected From The Project Evaluated In The Draft PEA**

An EIR is required to have a “statement of objectives sought by the proposed project.”<sup>27</sup> The statement of objectives should include the underlying purpose of the project, and it should be clearly written to guide the selection of alternatives to be

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<sup>27</sup> 14 Cal. Code Regs. §15124(b).

evaluated in the EIR.<sup>28</sup> Here, however, the objectives do not appear to inform the alternatives; instead, they appear to be independent of the proposed project. In fact, the Alternatives section of the draft PEA contains little analysis of whether the project objectives can be satisfied because they have become irrelevant, thereby infecting the Alternative analysis in its entirety (as discussed below).

The draft PEA appears instead to apply an unstated objective – reduce NO<sub>x</sub> RTCs by 14 TPD or more – which actually creates inconsistencies with the District’s own plans and with the Health & Safety Code provisions with which it purports to comply. The District’s 2012 Air Quality Management Plan (“AQMP”) included NO<sub>x</sub> reduction control measure CMB-01. This control measure provided that additional reductions of NO<sub>x</sub> RTCs in the range of 3 to 5 tons per day (“TPD”) would occur. The PEA states that one of the project objectives is to “[a]chieve the proposed NO<sub>x</sub> emission reduction commitments” of CMB-01. Yet the current project’s proposal to reduce NO<sub>x</sub> RTCs by 14 TPD goes far beyond the control measure’s initial recommendation of 3 to 5 TPD target.

WSPA and the Industry RECLAIM Coalition commented on this issue in their NOP/IS Letter. The District’s response is that the current project “is the result of a much more rigorous and in-depth analysis as compared to the analysis that supported control measure CMB-01.”<sup>29</sup> However, it is apparent that the analysis conducted by the District focused primarily on assessing the maximum number of remaining NO<sub>x</sub> emissions that could be reduced, to the exclusion of other analyses. As described above, the proposed project has the potential to trigger unintended consequences that were not considered in the draft PEA. The new, aggressive reduction in NO<sub>x</sub> RTCs, combined with the ambitious timeframe and questionable assumptions about facility performance suggest that the District did not undertake the same holistic view of the RECLAIM program and market as it did when it adopted the 2012 AQMP. Again, it appears that in its zeal to reduce NO<sub>x</sub> emissions by as much as possible, the District has ignored the potential repercussions of such a severe reduction.

Another unstated, but unsubstantiated, objective is the establishment of a \$50,000/ton cost effectiveness threshold that justifies its severe shave. However, this is inconsistent with the stated District’s objective: to “[c]omply with the requirements in Health and Safety Code ...§39616 by conducting a BARCT assessment of the NO<sub>x</sub> RECLAIM program and reducing the amount of available NO<sub>x</sub> RTCs to reflect emission reductions equivalent to implementing available BARCT.”<sup>30</sup> Compliance with that provision of the Health and Safety Code requires that the market-based emissions program should result in (1) emissions reductions equivalent to or greater than reductions that would have resulted under command and control, **and** (2) “*at equivalent or less cost*

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<sup>28</sup> 14 Cal. Code Regs. §15124(b).

<sup>29</sup> Draft PEA, p. 1-15.

<sup>30</sup> Draft PEA, p. 2-4.

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.”<sup>31</sup> The currently proposed emissions reductions may well provide greater reductions of NO<sub>x</sub> than would occur under traditional command and control regulation. However, this comes at a cost which far exceeds what implementation of BARCT would cost under command and control.

More specifically, the project proposes a \$50,000/ton cost effectiveness threshold, above which the District assumes, for purposes of a CEQA analysis, a facility would decline to install a given NO<sub>x</sub> air pollution control technology to meet the severe shave requirements.<sup>32</sup> However, this \$50,000 is more than twice the District's cost effectiveness threshold for command-and-control programs. As WSPA explains in its August 21 Letter, the 2012 AQMP used a cost threshold for NO<sub>x</sub> control measures of \$22,500 per ton.<sup>33</sup> As another point of reference, the District's current Best Available Control Technology (“BACT”) guidance document presents a discounted cash flow (“DCF”) cost effectiveness threshold of only \$19,100 per ton.<sup>34</sup>

The District, in its preliminary draft staff report for the NO<sub>x</sub> shave rulemaking, has also made misleading cost analysis assumptions which have the effect of making the overall costs for the severe shave look lower than actual. For example, in its staff report, the District proposed a 25-year Useful Life when calculating equipment cost effectiveness. This is misleading because the District rulemaking – which is often technology forcing – occurs on a more frequent basis. For example, the District last amended the NO<sub>x</sub> RECLAIM rules only 10 years ago. As WSPA explains in its August 21 Letter, assuming a 25-year project life dilutes the capital cost over a longer period of time than what the company is likely to actually realize.

As discussed below, Alternative 3 (the Industry Approach) meets project objectives, with fewer impacts. Thus, the project, as currently proposed, does not meet CEQA's requirements, and the PEA must be revised and recirculated for public review and comment.

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<sup>31</sup> Cal. Health & Saf. Code § 39616(c)(1), emphasis added.

<sup>32</sup> Draft PEA, p. 4.2-7.

<sup>33</sup> SCQAMD, 2012 AQMP, December 2012, pp. 4-43.

<sup>34</sup> SCAQMD, BACT Guidelines, Part C: Policy and Procedures for Non-Major Polluting Facilities, 2006.

**E. The Alternatives Analysis Is Flawed**

**1. The analysis of alternatives is inadequate to allow for informed comparison**

The alternatives analysis is critical to the integrity of an EIR.<sup>35</sup> Under CEQA, an EIR must describe a reasonable range of alternatives to the proposed project, or to its location, that would feasibly attain most of the project's basic objectives while reducing or avoiding any of its significant effects, and must evaluate the comparative merits of those alternatives.<sup>36</sup> The alternatives analysis has been described as “the core of an EIR.”<sup>37</sup>

An EIR’s analysis of alternatives and mitigation measures must focus on those alternatives with the potential to avoid or lessen a project's significant environmental effects.<sup>38</sup> The alternatives discussed in an EIR should be ones that offer substantial environmental advantages over the proposed project.<sup>39</sup>

Here, the PEA evaluates 5 alternatives, and except for the Alternative 4 (No Project) and Alternative 3 (Industry Approach), all other alternatives propose 14 TPD or more of NOx emission reductions. Given that the proposed project has remaining significant environmental effects with the proposed project at 14 TPD, the failure to include any additional alternatives other than Alternative 3 (Industry Approach) at a lesser reduction of NOx emissions does not satisfy CEQA’s requirement for a “reasonable range of alternatives.” Furthermore, CEQA generally prohibits a selection of “straw man” alternatives which are intended to be knocked down in favor of the proposed project.<sup>40</sup> The majority of the alternatives require 14 TPD or more of NOx reductions, including an alternative for 15.87 TPD, suggesting that the District’s selection of alternatives was guided not by the ability to reduce environmental effects, but by an effort to support the proposed project.

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<sup>35</sup> *In re Bay Delta Programmatic Evtl. Impact Report Coordinated Proceedings*, 43 Cal.4th 1143, 1162 (2008) [“The EIR is the heart of CEQA, and the mitigation and alternatives discussion forms the core of the EIR.”]

<sup>36</sup> 14 Cal. Code Regs. §15126.6(a).

<sup>37</sup> *Citizens of Goleta Valley v Board of Supervisors*, 52 Cal.3d 553, 564 (1990).

<sup>38</sup> Pub. Resources Code §21002; 14 Cal. Code Regs. §15126.6(a)-(b).

<sup>39</sup> *Citizens of Goleta Valley v. Board of Supervisors*, *supra*, 52 Cal.3d at 566.

<sup>40</sup> *Sierra Club v. Contra Costa County*, 10 Cal.App.4th 1212, 1217 (1992).

## **2. Alternative 3 is the environmentally superior alternative**

The PEA's alternatives analysis is flawed because it appears to reject alternatives based solely on the total TPD of emissions reduced, rather than a more comprehensive analysis that evaluates the remaining significant effects associated with the proposed project. The CEQA Guidelines provide that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives..."<sup>41</sup> Alternative 3 achieves the project objectives and is the environmentally superior alternative. As such, the District should adopt Alternative 3 rather than the proposed project.

Here, the District has chosen, as the proposed project, to employ a methodology that has significantly greater potential environmental impacts than Alternative 3. Specifically, the District proposes that NO<sub>x</sub> RTC holdings for major refineries be "shaved" by 67 percent; NO<sub>x</sub> RTC holdings for non-major refineries and other facilities among the top 90 percent of RTC holders be shaved by 47 percent. This aggressive "shaving" method would remove nearly all of the unused NO<sub>x</sub> RTCs from the RECLAIM market, ostensibly to reduce NO<sub>x</sub> emissions from RECLAIM facilities. However, the PEA suffers from a narrow view of the RECLAIM universe: by focusing almost exclusively on potential benefits from NO<sub>x</sub> emissions, the District fails to analyze the environmental impacts that such a drastic NO<sub>x</sub> RTC reduction is likely to have.

On the other hand, the Industry Approach (Alternative 3) to NO<sub>x</sub> reduction would take a more measured and holistic approach, resulting in fewer environmental impacts while still achieving a reduction in NO<sub>x</sub> emissions. More specifically, the Industry Approach proposes to reduce the unused RTCs in an amount equivalent to those reductions that could be directly attributable to an appropriate and valid BARCT.<sup>42</sup> The Industry Approach would result in an across the board reduction of 33 percent of the unused NO<sub>x</sub> RTCs – a significant reduction of RTCs and advancement of BARCT – without many of the environmental impacts resulting from the District's methodology.

The draft PEA downplays that Scenario 3 (Industry Alternative) will require less operational use of ammonia, by claiming that it is "not quantifiable."<sup>43</sup> However, no evidence is provided to support that conclusion. In the alternatives air quality analysis, the District asserts that if Alternative 3 were implemented, it would be too difficult to

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<sup>41</sup> 14 Cal. Code Regs. § 1526.6(a).

<sup>42</sup> The Industry Approach is described in section 5.3.2.4 of the draft PEA, as well as in the January 30, 2015 letter to the District regarding the NOP/IS, submitted by WSPA and the other members of the Industry RECLAIM Coalition.

<sup>43</sup> Draft PEA, Table 1-4.

predict the number of facilities that would install NOx control equipment.<sup>44</sup> First, the District should have acknowledged the unpredictability of facilities implementing the proposed project, which is more aggressive and could trigger correspondingly more drastic business reactions. Instead, the District assumes there that all facilities will fall in line to install NOx control equipment as it predicts. Second, the likely NOx control equipment installation projects can be quantified.

Furthermore, the alternatives analysis in the PEA fails to explain why the proposed project will only reduce NOx emissions 8.72 TPD when history suggests a 1:1 relationship between RTC reductions and program emissions.<sup>45</sup> If the project objective is to meet BARCT at 8.7 TPD, Alternative 3 meets that objective with fewer environmental impacts, and thus, should be the environmentally preferred alternative.

The lead agency has the flexibility to approve an alternative to the proposed project if that alternative better addresses the agency's environmental concerns.<sup>46</sup> An EIR's failure to analyze an adequate range of alternatives deprives the lead agency of the ability to provide this sort of meaningful review and selection. Recirculation of a new draft PEA will be required by CEQA because the current PEA has not considered alternatives that have not been previously adequately analyzed but must be analyzed as part of a reasonable range of alternatives.

## **II. Specific Resource Areas Lack Adequate Analysis**

### **A. Energy Reliability Impacts Were Not Considered**

The District's proposal will dramatically increase the costs for the facilities it has selected to be regulated and the businesses that support and supply these facilities. The PEA acknowledges that if the BARCT is implemented at these selected facilities, there will be an increase in the amount of energy used both during construction, and more significantly, during operation of the facilities. But the PEA only considered whether there would be sufficient energy when all the facilities installed and implemented the BARCT. Given that 100 facilities have ceased to exist in the District's RECLAIM market since its inception, the District needs to consider not only whether there will be sufficient energy to power the BARCT NOx control equipment, but whether important energy reliability needs of the region and State can be met or whether they will be impacted by the District's proposal.

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<sup>44</sup> Draft PEA, p. 5-15.

<sup>45</sup> See, e.g., Draft PEA, Table 1-4; SCAQMD Annual RECLAIM Audit Report, March 2015.

<sup>46</sup> *Sierra Club v. City of Orange*, 163 Cal.App. 4th 523, 533 (2008).

There is a complete absence of any analysis of electricity or fuel supply impacts. The potential for outages, interruptions and severe price spikes should be considered and analyzed. Also, the future growth in energy demand should be assessed and the impact of this proposed project on the ability to maintain adequate energy supply. This analysis should consider proposed population growth and growth in use of power-consuming electronics (e.g., hospital diagnostic and treatment tools such as high proton lasers are replacing lower-energy using tools) and growth in electrification and energy use more generally.

## **B. Air Quality Impacts Were Not Fully Addressed**

### **1. Direct impacts of new and expanded ammonia sources are not addressed**

The PEA notes that the proposed project will increase operational use of ammonia, a toxic air contaminant, by 39.5 TPD.<sup>47</sup> The increase is due to the large number of new and expanded ammonia emissions sources associated primarily with the larger number of SCRs that would be required to be installed to meet the severe NOx shave requirements. However, the PEA does not address the impacts from a program which results in increased ammonia emissions. Additionally, as the District's other documents acknowledge,<sup>48</sup> ammonia is a precursor to PM2.5. Accordingly, the PEA should have analyzed the regional impacts from increased secondary formation of PM2.5.

Furthermore, the draft PEA's analysis of ammonia slip depends on physical conditions which are explicitly omitted from the project description (e.g., use of Ammonia Slip Catalysts or ASC) despite recommendations by Norton to use ASC.<sup>49</sup> Without the ASC, the ammonia slip could be as great as 20 ppmv, but the draft PEA underestimates the ammonia slip to be 5 ppmv, ostensibly based on permit conditions for new SCRs. However, existing SCRs are not necessarily subject to those permit conditions, and thus, ammonia slip of up to 20 ppmv should be considered in the health risk assessment for ammonia emissions.<sup>50</sup>

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<sup>47</sup> Draft PEA, Table 1-4; p. 4.4-9.

<sup>48</sup> See, e.g., Supplement to 24-hour PM2.5 State Implementation Plan for South Coast Air Basin proposed at February 6, 2015 Governing Board meeting, agenda item no. 22 (link: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-feb6-022.pdf?sfvrsn=2> last accessed on September 16, 2015).

<sup>49</sup> Norton Engineering Consultants, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for FCCUs, Document No. 14-045-7, July 21, 2015, p. 3; see also Draft PEA, Table 2-3.

<sup>50</sup> Draft PEA, Tables 4.2-18 and 4.2-21.

## **2. Cumulative impacts from air emissions are not adequately considered**

An EIR must discuss the cumulative impacts of a project when its incremental effects are “cumulatively considerable.”<sup>51</sup> Moreover, in the specific context of a programmatic EIR, one of the key purposes of the EIR is to “ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis.”<sup>52</sup> Programmatic EIRs play an instrumental role in allowing the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems in program implementation, or cumulative impacts.<sup>53</sup> Accordingly, the CEQA Guidelines require lead agencies to explain how implementing the particular requirements in the plan, regulation or program under review “ensure[s] that the project’s incremental contribution to the cumulative effect is not cumulatively considerable.”<sup>54</sup>

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”<sup>55</sup> “Cumulatively considerable” impacts are present when “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” and activities.<sup>56</sup> A lead agency’s threshold findings of significance with regard to cumulative impacts must “be supported by substantial evidence”; and, where found, cumulatively considerable impacts must be adequately mitigated.<sup>57</sup>

As discussed above, there are indirect air impacts from increased ammonia emissions for SCRs. The District also fails to provide substantial evidence that cumulative impacts from increased ammonia emissions for SCRs (which could number in the dozens at a single refinery) will not result in cumulative health risk impact. The PEA makes the conclusory statements that “[e]ven if multiple SCRs are installed at one refinery facility, the locations of all the stacks would not be situated in the same place within the affected facility’s property. As such, even with multiple SCR installations, the acute and chronic hazard indices would not be expected exceed the significance

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<sup>51</sup> Pub. Resources Code § 21083(b)(2); CEQA Guidelines § 15130(a).

<sup>52</sup> 14 Cal. Code Regs. § 15168(b)(2).

<sup>53</sup> 14 Cal. Code Regs. § 15168(b)(4).

<sup>54</sup> 14 Cal. Code Regs. § 15064(h)(3).

<sup>55</sup> 14 Cal. Code Regs. § 15355.

<sup>56</sup> Pub. Resources Code § 21083(b)(2); 14 Cal. Code Regs. § 15065(a)(3).

<sup>57</sup> 14 Cal. Code Regs. § 15064.7 (b).

threshold.”<sup>58</sup> However, no evidence is provided to support this assumption, and the draft PEA should base its analysis on a conservative assumption regarding the locations of SCRs, and not dismiss the potential environmental effect by relying on unsupported and result-driven assumptions.

Furthermore, the PEA’s conclusions with respect to potential cumulative health impacts are contradicted by recent District statements that recognize a potential need to control SCR ammonia slip. In a presentation on August 26, 2015, the District proposes possible “short-term” implementation for such a control.<sup>59</sup> Although CEQA does not require compliance with rule or programs that have not yet been adopted, the PEA should address, in its air quality analysis, the underlying concerns driving the proposed 2016 AQMP control measure. However, the project appears to value NOx RTC reductions above all other concerns, and accordingly the lopsided analysis does not acknowledge the related potential ammonia issues.

### **C. Water Supply Impacts Are Not Adequately Mitigated**

The EIR “must assume that all phases of the project will eventually be built and will need water, and must analyze, to the extent reasonably possible, the impacts of providing water to the entire proposed project.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal.4th 412, 431 (2007).) Also, “the future water supplies identified and analyzed must bear a likelihood of actually proving available; speculative sources and unrealistic allocations (‘paper water’) are insufficient bases for decision-making under CEQA.” (*Id.* at 432.)

The draft PEA acknowledges “significant adverse water demand impacts from hydrotesting” requiring the imposition of mitigation measures.<sup>60</sup> The mitigation measures consist of a requirement to use recycled water “if available” and if not, a declaration from the water purveyor indicating why the recycled water cannot be supplied to the project.<sup>61</sup> The draft PEA summarily states that “the potential increase in potable water use cannot be fully supplied either with all potable water or with a combination of recycled water and potable water, since some potable water may still be required.” The draft PEA also states: “[T]here is no absolute guarantee at the time of this writing that future supplies of potable or recycled water will be available to all of the affected facilities.”

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<sup>58</sup> Draft PEA, p. 4.2-23.

<sup>59</sup> Draft Potential Control Measures Concepts for 2016 AQMP August 2015, at p. 9 (link: <http://www.aqmd.gov/docs/default-source/Agendas/aqmp/advisory7-item5-attachment.pdf?sfvrsn=2>, last accessed September 16, 2015).

<sup>60</sup> Draft PEA, p. 4.5-9.

<sup>61</sup> Draft PEA, pp. 4.5-9 – 4.5-10.

CEQA requires a more in-depth evaluation of the availability and reliability of both potable and recycled water for the project.<sup>62</sup> It is insufficient to conclude that a significant impact for water supply exists without providing a more detailed analysis of the amount of water available, the reliability of such water, all of which has become more important as California is facing one of the most serious droughts in history. While the draft PEA identifies the existence of emergency drought regulations, it does not analyze the effect of these regulations – or of local water restrictions – on the facilities subject to the rule.

A similarly deficient analysis was presented in the draft PEA for the water usage associated with the wet gas scrubbers.<sup>63</sup> In that section, the District states that it cannot confirm or verify the use of recycled water and that “it is not known at this time whether water purveyors would be able to supply potable water for those facilities.” CEQA requires an actual analysis of the water availability and reliability, and the inability to verify the use of recycled water means that the use of potable water must be evaluated, including an understanding of whether it is available at all.

Furthermore, the draft PEA fails to evaluate any further mitigation measures, other than a commitment to use recycled water, if available. Such mitigation measures are speculative, and may be found to be legally inadequate if they are so undefined that it is impossible to gauge their effectiveness.<sup>64</sup> Feasible – and therefore defensible – mitigation could include provisions in the rule that allow for alternative technologies and additional NOx RTCs in the foreseeable event that water supply is increasingly restricted, and the cost of water increases accordingly.

#### **D. Noise Impacts Should Have Been Analyzed**

The NOP/IS for the project determined that noise was among the environmental areas which would not be significantly adversely affected by the project. The PEA, in explaining why noise is not considered, states that the facilities are generally industrial in nature, and any increase in noise levels due to construction and installation of BARCT NOx control equipment would be within acceptable limits for an industrial facility. However, this is an example of the District’s programmatic review failing to take into account site-specific conditions which could have an adverse impact. Rather than make generalizations about the facilities and extrapolated that there will be no adverse noise levels, the PEA should have undertaken a more conservative analysis to assess whether noise could, in fact, adversely affect receptors in the vicinity of the facilities, including on

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<sup>62</sup> *California Oak Foundation v. City of Santa Clarita*, 133 Cal.App.4<sup>th</sup> 1219, 1237 (2005) (EIR requires “forthright discussion of a significant factor that could affect water supplies).

<sup>63</sup> Draft PEA, p. 4.5-12 – 4.5-13.

<sup>64</sup> *Federation of Hillside & Canyon Ass’ns v. City of Los Angeles*, 83 Cal.App.4<sup>th</sup> 1252, 1260 (2000); *Preserve Wild Santee v. City of Santee*, 201 Cal.App.4<sup>th</sup> 260 (2012).

nearby roadways based on the local noise ordinances or requirements. Noise impacts could occur from the use of large construction equipment to construct and install NOx control equipment and increase in construction traffic, which can include large trucks, trailers and cranes. Additionally, there could be an increase in noise impacts associated with the operation of the NOx control equipment and the ammonia delivery trucks.

#### **E. Solid And Hazardous Waste Is Not Adequately Considered**

The PEA fails to adequately analyze potential impacts of hazardous waste as a result of the project. The significant NOx RTC reductions necessitate a high degree of BARCT NOx control installation, most of which consists of SCR technology. While SCR technology has been used in a wide variety of applications and industries over the decades, it nonetheless is generates a hazardous wastestream in the form of spent catalyst which, in turn, requires potential on site storage and off-site transport and disposal.<sup>65</sup> Section 4.6 of the PEA acknowledges that the hazards exist and acknowledges that the generation of hazardous waste and materials will increase. The PEA should also evaluate the impact on communities near hazardous waste landfills, such as Kettleman Hills, where the impacts may be greater without any corresponding benefit from the District's proposed action. Also, as discussed earlier, the emissions implications of the increased ammonia from the SCR have been overlooked in the District's PEA.

#### **F. Growth-Inducing Impacts Analysis Is Flawed**

An EIR must describe any growth-inducing impacts of the proposed project.<sup>66</sup> As part of the analysis, the EIR must discuss ways in which the project could directly or indirectly foster economic or population growth,<sup>67</sup> and should also describe growth-accommodating features of the project that may remove obstacles to population growth. An EIR must discuss growth-inducing effects even though those effects will result only indirectly from the project.<sup>68</sup> A discussion on growth-inducing effects should not necessarily make assumptions about whether the growth is beneficial, detrimental, or inconsequential to the environment.<sup>69</sup> The purpose of the EIR is to act as an informational document.

Here, not only does the draft PEA fail to consider the significance of the shrinking number of RECLAIM facilities (as discussed in Section I.C. of this letter), but the PEA also fails to consider the possibility that the facilities within the RECLAIM universe

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<sup>65</sup> See, e.g., "Alternative Control Techniques Document – NOx Emissions from Process Heaters, (U.S. EPA, September 1993), <http://www3.epa.gov/ttn/catc/dir1/procheat.pdf>.

<sup>66</sup> Pub. Resources Code §21100(b)(5); 14 Cal. Code Regs. §15126(d).

<sup>67</sup> 14 Cal. Code Regs. §15126.2(d).

<sup>68</sup> *Napa Citizens for Honest Gov't v Napa County Bd. of Supervisors*, 91 Cal.App.4th 342, 368 (2001).

<sup>69</sup> 14 Cal. Code Regs. §15126.2(d).

could grow. In a footnote, the PEA assigns a “growth factor” to different categories of RECLAIM facilities.<sup>70</sup> No explanation is provided about how that growth factor was derived, nor whether it is current or likely to change. The PEA must consider a scenario which allows for more growth of those industries within the RECLAIM universe, and modify the growth-inducing impacts analysis accordingly.<sup>71</sup>

### **III. Conclusion**

The District has a very admirable – but narrow – statutorily defined focus: to promulgate rules and regulations which promote air quality in its jurisdiction. Under CEQA, the District is the lead agency for purposes of its own rulemaking. The District must be able to square its obligations as a lead agency to fully analyze and disclose impacts of its discretionary approvals with the narrow focus required of the District’s mission to promote air quality within a specific geographic area. The District has failed to adequately balance those obligations here, which has resulted in a PEA that presents a skewed analysis of the potential benefits and impacts of the proposed rule amendments. The District must address the numerous inadequacies of the draft PEA raised in this comment letter, and then, revise and recirculate the draft PEA for public review and comment in order to meet its mandate under CEQA.

Sincerely,



Nicki Carlsen  
ALSTON & BIRD LLP

NC:dte  
LEGAL02/35874006v4

cc: Sue Gornick, WSPA (w/enclosures)

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<sup>70</sup> Draft PEA, p. 2-6.

<sup>71</sup> The Growth Inducement section is in Section 4.8.3 of the draft PEA.

## ATTACHMENT 1

### ADDITIONAL WSPA COMMENTS ON DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT (PEA) FOR NO<sub>x</sub> RECLAIM AMENDMENTS

Page/Section	WSPA Comment
Page 1-1, 3 <sup>rd</sup> paragraph	<p>This paragraph describes the project as “amendments to Regulation XX – Regional Clean Air Incentives Market (RECLAIM) to achieve additional NO<sub>x</sub> emission reductions to address best available retrofit control technology (BARCT) requirements <u>and to modify the RECLAIM trading credit (RTC) “shaving” methodology.</u>” [emphasis added]</p> <p>This description is not consistent with the project description contained in the AQMD’s Notice of Preparation issued 4 December 2014,<sup>1</sup> nor is the description consistent with Project Description contained in the Initial Study.<sup>2</sup> Specifically, neither the NOP Project Description nor the Initial Study Project Description includes any reference to modifying “the RECLAIM trading credit (RTC) “shaving” methodology” in the description of the project or the project objectives.</p>
Page 1-1, 4 <sup>th</sup> paragraph	<p>The Draft PEA states that “further analysis of the actual BARCT NO<sub>x</sub> emission control opportunities for the various equipment/process categories demonstrated that the proposed project could achieve 14 tons per day of NO<sub>x</sub> emission reductions by 2023 which is much higher than estimates provided in the 2012 AQMP.”</p> <p>While this value is certainly much higher than contemplated in the 2012 AQMP, it is also <u>not supported</u> by the AQMD Staff’s technical analysis.<sup>3</sup> The Staff’s analysis does not support a 14 ton per day (TPD) shave as necessary for BARCT equivalency. Rather, the Preliminary Draft Staff Report (PDSR) very clearly demonstrates that not more than 8.79 TPD of emission reductions from the RECLAIM program can be attributed to BARCT advancement; a conclusion that is later echoed in the Draft PEA.<sup>4</sup></p> <p>Furthermore, a 14 TPD shave reduction of the RECLAIM market may violate the project objectives under the California Health &amp; Safety Code (H&amp;SC). Contrary to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is absolutely no consideration of the economic impacts which would be incurred by RECLAIM facilities under a 14 TPD market adjustment that goes beyond BARCT.</p>

<sup>1</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>2</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

<sup>3</sup> AQMD, Preliminary Draft Staff Report (PDSR) for Proposed Amendments to NO<sub>x</sub> RECLAIM, 21 July 2015.

<sup>4</sup> AQMD, Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Table 1-3.

	<p>And contrary to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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</b>. Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>5</sup>). This higher cost threshold clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations. But the Staff proposal to shave 14 TPD, which goes beyond BARCT, exposes RECLAIM facilities to even greater costs than would have been incurred under a command-and-control program. According the Staff’s analysis, BARCT equivalency is not more than 8.79 TPD and even that value is overstated since adjustments are needed to account for the findings of the AQMD’s third-party refinery expert (Norton Engineering) would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>6</sup></p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the district’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>7</sup> The BARCT levels being proposed by AQMD Staff represent performance levels that have not been demonstrated as broadly achievable for most of the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.). The resultant impacts would be disproportionate and that is in conflict with H&amp;SC §39616(c)(7).</p> <p>For these reasons, the Draft PEA must be revised to address inconsistencies between the AQMD Staff’s proposal and the project objectives, as well as inconsistencies with the Health &amp; Safety Code.</p>
Page 1-2, 1 <sup>st</sup> full paragraph	This paragraph suggests that the proposed project will be limited to specific types of equipment/source categories in the RECLAIM program. While these types of equipment/source categories are certainly in the

<sup>5</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>6</sup> AQMD, Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>7</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality Management Plans (1997, 2003, 2007, 2012) and AQMP NOx RECLAIM Working Group Meeting #5, Agenda Item #3.

	<p>RECLAIM program, the program is a market-based program; not a command-and-control program. Furthermore, the stated objectives of Control Measure CMB-01 Phase I and Phase II which this rulemaking intends to implement are for <b>programmatically equivalency</b>. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p> <p>The language in the referenced section needs to be revised to reflect that (a) proposed project is seeking programmatic equivalency <u>within the requirements and limitations of the California Health &amp; Safety Code</u> and (b) acknowledge that there may be impacts on other RECLAIM facilities given the market-based design of the RECLAIM program. Those impacts must be analyzed to the extent practicable.</p>
Page 1-2, 2 <sup>nd</sup> full paragraph	As discussed above (see comments on Page 1-1, 4 <sup>th</sup> paragraph), the Draft PEA must be revised to address inconsistencies between the AQMD Staff's proposal and the project objectives.
Page 1-13, Table 1-1, Areas of Controversy  Line 1, Amount of proposed NOx shave and availability of RTCs	<p>Draft PEA claims "The staff analysis shows that after the proposed shave is imposed, there will be sufficient NOx RTCs available to maintain trading within the NOx RECLAIM program given foreseeable opportunities for emissions reductions." This statement is without technical foundation; neither the PEA nor the PDSR includes such a market analysis.</p> <p>On the contrary, the Staff's proposal would reduce the quantity of RECLAIM Trading Credit (RTCs) to levels without historical precedent and that action, according to Staff's own analysis, would result in a level of "unused" RTCs (i.e., RTCs not used to cover facility emissions) for which the only historical precedent was observed during the RECLAIM market collapse during the California power crisis of 2000-2001.<sup>8</sup> WSPA and the Industry RECLAIM Coalition have repeatedly expressed concerns about shaving the RECLAIM program to this level when such action is clearly beyond what is needed for BARCT equivalency and in conflict with California Health &amp; Safety Code requirements.</p> <p>Table 1-1 must be revised to accurately reflect the actual technical record; not assert conclusions without technical foundation.</p>
Page 1-14, Table 1-1, Areas of Controversy  Line 2, Equity of proposed NOx shave	The Draft PEA states that for 210 facilities holding 10% of the available NOx RTCs that "no NOx RTC shave is proposed because no new BARCT (not cost effective and/or infeasible) was identified...for the types of equipment and source categories." This statement is factually incorrect and should be corrected. In actuality, AQMD Staff <u>elected not to review</u> BARCT for these facilities under this RECLAIM rulemaking. And contrary to the statement, AQMD and other California air districts have previously made BARCT determinations that do apply to the types of equipment and operations at those smaller emitting facilities (e.g., boilers, heaters, etc.) were they not under RECLAIM. <sup>9</sup>

<sup>8</sup> AQMD Annual RECLAIM Audit Report, March 2015.

<sup>9</sup> See SCAQMD Regulation XI for examples.

<p>Page 1-14, Table 1-1, Areas of Controversy</p> <p>Line 3, Results of the BARCT analysis</p>	<p>The Draft PEA states “While staff believes the engineering assumptions in the staff BARCT analysis are appropriate, the difference in BARCT reductions attributable to the alternate engineering assumptions suggested by the consultant is relatively small. To account for this difference and to provide a compliance margin, staff is proposing a shave of 14 tpd, reduced from the initial BARCT result of 14.85 tpd.” We disagree.</p> <p>There continues to be a significant number of unresolved issues which result in uncertainty in the Staff’s BARCT analysis as presented in the PDSR. This includes, but is not limited to the Staff’s decision to selectively ignore the findings of the agreed upon third-party expert for the Refinery Sector, Norton Engineering Consultants. These issues are fundamental to the engineering design basis of the Staff’s proposed BARCT determinations for most refinery sector source categories. These discrepancies were exhaustively described in Norton Engineering’s expert analysis of the AQMD Staff’s analysis,<sup>10</sup> as well as reiterated in NEC’s letters dated 10 August 2015<sup>11</sup> and 4 September 2015.<sup>12</sup> Norton’s comments are incorporated herein by reference.</p> <p>Furthermore, Staff’s “after-the-fact” 0.85 TPD adjustment to the overall shave (i.e., reduces proposed shave from 14.85 to 14.0 TPD) is an improper application of the adjustments necessitated by Norton Engineering’s expert findings. Such an adjustment, which is necessary, must be applied to the quantity of BARCT equivalency emission reductions attributed to refinery sector source categories. By failing to properly adjust this value, the AQMD Staff have distorted their own methodology to increase the burden of this shave on one sector (i.e., refineries). This is disproportionate and without technical foundation.</p>
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<sup>10</sup> Norton Engineering Consultants (NEC), SCAQMD NOx RECLAIM - BARCT Feasibility and Analysis Review, Non-Confidential Final Report No. 14-045-4, 26 November 2014.

<sup>11</sup> James Norton, NEC, letter to Dr. Phillip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for FCCUs Document No. 14-045-7, 10 August 2015.

<sup>12</sup> James Norton, NEC, letter to Dr. Phillip Fine, SCAQMD, Comments on Preliminary Draft Staff Report Proposed Amendments to Regulation XX Regional Clean Air Incentives Market (RECLAIM) NOx RECLAIM – SCRs for Fired Heaters & Boilers Document No. 14-045-8, 4 September 2015.

<p>Page 1-14, Table 1-1, Areas of Controversy</p> <p>Line 4, Equivalency with command-and-control</p>	<p>The Draft PEA asserts that the proposed shave amount of 14 tpd is consistent with previous RECLAIM rule amendments, the California Health &amp; Safety Code, and the purpose of the program. As noted above (see above comments on Page 1-1, 4<sup>th</sup> paragraph), the AQMD Staff have not demonstrated that the Staff proposal is consistent with certain provisions of the California Health &amp; Safety Code.</p> <p>Table 1-1, Line 4 must be revised to describe how the Staff proposal will comply with the project objective requiring compliance with all applicable H&amp;SC requirements.</p> <p>The Draft PEA goes on to state "...This approach will result in approximately 8.79 tons per day of BARCT reductions of actual NOx emissions attributable to installing and operating additional controls. Otherwise, actual emissions reductions of only about two tpd over the next seven years would be achieved." WSPA agrees that under the AQMD Staff's analysis, BARCT equivalency as currently presented is not more than 8.79 TPD. And with adjustments needed to fully account for the findings of the AQMD's third-party refinery expert, Norton Engineering, the shave needed for BARCT equivalency is not more than 7.94 TPD.<sup>13</sup> Staff has provided no information to support the assertion that 14 TPD must be shaved to achieve the 8.79 TPD (or 7.94 TPD) required for BARCT equivalency. And RECLAIM program history does not support that conclusion. Under the 2005 Shave, a 23% reduction in RTCs resulted in a 24% reduction in NOx RECLAIM emissions; a nearly 1:1 relationship.<sup>14</sup></p> <p>The Staff proposal must be revised to reflect the project objective of BARCT equivalency. That has not been demonstrated as any more than 8.79 TPD.</p>
<p>Page 1-15, Table 1-1, Areas of Controversy</p> <p>Line 5, 2012 AQMP Commitment in the State Implementation Plan (SIP)</p>	<p>The Draft PEA states: "This staff proposal recommends a reasonably available 14 tpd of NOx RTC reductions, based on BARCT, as required by state law." In fact, the PDSR presents BARCT equivalency as not more than 8.79 TPD, and the AQMD Staff have not explained how its proposal will comply with H&amp;SC §40406, since there is no consideration of the economic impacts which would be incurred under a 14 TPD market adjustment that goes beyond BARCT. Furthermore, AQMD Staff's proposal is contrary to H&amp;SC §39616(c)(1), which requires the market to perform 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.</p> <p>The Draft PEA must be revised to fully demonstrated compliance with the project objectives and relevant H&amp;SC requirements.</p>

<sup>13</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>14</sup> SCAQMD Annual RECLAIM Audit Report, March 2015. Under the 2005 shave, RTCs were reduced from 34.2 to 26.5 TPD between 2005 and 2011 and emissions declined from 26.4 to 20 TPD over the same period.

<p>Page 1-16, Table 1-1, Areas of Controversy</p> <p>Line 6, Availability of RTCs for future power plant needs</p>	<p>The Draft PEA states” The staff proposal would establish a separate adjustment account to hold RTCs for power plants to meet their NSR holding obligations. Many newer peaking plants are required to hold RTCs at the potential to emit level each year even though their actual emissions are far below this level. The adjustment account would relieve power producing facilities from the obligation of holding RTCs in order to meet the NSR holding requirements of Rule 2005.”</p> <p>The AQMD Staff proposal for a separate “adjustment account” has not been fully defined, and the Staff proposal and Draft PEA fail to address how such a mechanism would comply with U.S. EPA requirements for New Source Review. The PDSR and Draft PEA must be revised to demonstrate how such a proposed adjustment account would function, and demonstrate that it is approvable by U.S. EPA.</p> <p>Furthermore, Staff’s proposal would apparently not apply to new peaking power plants. The California Air Resources Board prepared assessment of electrical grid reliability needs in the South Coast air basin which suggested a significant amount of peaking power plant capacity would be needed to ensure reliability in the future.<sup>15</sup> This report was prepared in conjunction with the California’s power sector regulators (i.e., California Public Utilities Commission, California Independent System Operator, and California Energy Commission). Contrary to the CARB report, AQMD Staff’s analysis depends on a negative growth rate for power sector emissions and RTC demand. This is a significant difference.</p> <p>The Draft PEA should be revised to clarify that the Staff proposal would provide no relief to any new peaking power plants. The Draft PEA should also be revised to demonstrate how the Staff proposal will accommodate new power sector facilities which may be needed to ensure electric reliability and integration of renewable electricity.</p>
<p>Page 1-17, 3<sup>rd</sup> paragraph</p>	<p>The Draft PEA states “For the remaining 210 facilities that hold 10 percent of the 26.5 tpd of the NOx RTCs, no NOx RTC shave is proposed because no new BARCT (not cost effective and/or infeasible) was identified for the types of equipment and source categories at these facilities.” This statement is factually incorrect and should be revised. As noted above, AQMD Staff elected not to review BARCT for these smaller facilities for this RECLAIM rulemaking (i.e., no analysis was performed).</p>

<sup>15</sup> CARB, Assembly Bill 1318: Assessment of Electrical Grid Reliability Needs and Offset Requirements in the South Coast Air Basin, Draft Final Report, October 2013.

<p>Page 1-20, 1<sup>st</sup> paragraph, 3<sup>rd</sup> sentence</p> <p>Air Quality and Greenhouse Gases</p>	<p>The Draft PEA states “For the 275 facilities that are in the NOx RECLAIM program, the 14 tpd of NOx RTC reductions will affect 65 facilities plus the investors, who collectively hold 90 percent of the NOx RTC holdings.” This paragraph suggests that the proposed project will be limited to specific facilities in the RECLAIM program. While the application of the shave may be limited to these facilities, the impacts of the proposed shave will be broader. RECLAIM is a market-based program; not a command-and-control program. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p> <p>For example, smaller facilities without Infinite Year Basis (IYB) RTC holdings may incur higher RTC prices to meet their future compliance obligations. Alternatively, such facilities may find themselves unable to purchase RTCs at any price similar to the RTC supply crisis observed during the 2000/2001 power crisis which nearly collapsed the RECLAIM program. Also, Staff has not considered potential impacts to new or expanding facilities which are required to participate in RECLAIM. Or the potential consequences to the regional economy if those facilities are unable to obtain RTC supply. Or the potential environmental impacts of those operations if they are forced to locate outside of the South Coast air basin where they would presumably be subjected to lessor regulation. These are all issues and impacts which have been identified and should be disclosed as potential impacts from the project.</p> <p>The Draft PEA must be revised to clarify that market impacts may be broader than intended or even recognized by Staff, and those impacts must be quantified to the extent possible.</p>
<p>Page 1-20, 2<sup>nd</sup> paragraph</p>	<p>The Draft PEA states “...only 44 facilities are expected to comply with the proposed NOx RTC shave through the purchase of RTCs which will have no environmental impact.” The Draft PEA should be revised to present supporting analysis demonstrating how this conclusion was reached.</p> <p>RECLAIM is a market-based program; not a command-and-control program. Since this is a market-based system, it cannot be assumed that all impacts from the proposed rulemaking will be exclusively borne by specific equipment/source categories even where AQMD Staff have clearly attempted to target those impacts on specific facilities as is clearly the case here.</p>
<p>Table 1-3, Summary of Proposed Project &amp; Alternatives</p> <p>Alternative 3</p>	<p>This table reports the NOx Reduction Potential (tons/day) for Alternative 3 at 8.00 TPD. As proposed by the Industry, RECLAIM Coalition, Alternative 3 would result in BARCT equivalent reductions. Using the AQMD Staff’s latest BARCT analysis, which needs to be revised downward as discussed earlier herein, the Proposed NOx RTC “Shave” for this alternative should be 8.79 TPD. The Draft PEA should be revised.</p>

<p>Table 1-3, Summary of Proposed Project &amp; Alternatives</p> <p>Proposed Project Page 1-26</p>	<p>This table clearly shows that the AQMD Staff proposal, which would shave 14 TPD, would include removing 5.21 TPD of RTCs from the RECLAIM market that cannot be attributed to BARCT. The table even labels these 5.21 TPD as “NOx RTCs Needed to Fulfill Shave <u>Post-BARCT.</u>” [Emphasis Added] This proposal is beyond BARCT. Furthermore, a 14 TPD shave reduction of the RECLAIM market could violate the project objectives under the California Health &amp; Safety Code (H&amp;SC).</p> <p>Contrary to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is absolutely no consideration of the economic impacts which would be incurred under a 14 TPD market adjustment that goes Beyond BARCT.</p> <p>Contrary to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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.</b> Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>16</sup>). This clearly imposing a greater cost on RECLAIM sources than would be incurred under command and control regulations.</p> <p>Furthermore, Staff has proposed a market shave of 14 TPD which goes beyond BARCT. Under AQMD Staff’s analysis, BARCT equivalency is currently presented as not more than 8.79 TPD. Even that value is overstated since adjustments needed to fully account for the findings of the AQMD’s third-party refinery expert, Norton Engineering, would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>17</sup> Thus, RECLAIM facilities would have greater costs under the Staff proposal than would have been incurred under a command-and-control program.</p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the District’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>18</sup> The BARCT levels being proposed by</p>
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<sup>16</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>17</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.

<sup>18</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality

	<p>AQMD Staff generally represent performance levels that have not been demonstrated as broadly achievable for the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.).</p> <p>For these reasons, the Draft PEA must be revised to address inconsistencies between the AQMD Staff’s proposal and the project objectives.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p>	<p>This table reports for Alternative 3 “Less operational NOx reductions than proposed project but not quantifiable.” As correctly reported in Table 1-3, Alternative 3 would actually reduce emissions by 8.79 TPD so it clearly is quantifiable. Table 1-4 must be revised to correctly report the emission reduction potential for Alternative 3.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p> <p>Page 1-29</p>	<p>For the proposed project, the table reports “Increases operational use of NH3 (a TAC) by 39.5 tpd.” But for Alternative 3, the table reports that ammonia (NH3) use is not quantifiable. However, no evidence is provided to support that conclusion. In the alternatives air quality analysis, the District asserts that if Alternative 3 were implemented, it would be too difficult to predict the number of facilities that would install NOx control equipment. First, the District should have acknowledged the unpredictability of facilities implementing the proposed project, which is more aggressive and could trigger correspondingly more drastic business reactions. Instead, the District assumes there that all facilities will fall in line to install equipment as it predicts (i.e., command and control). Second, the likely NOx control installation projects can be quantified at a program level since it is a function of the same stoichiometric relationship used in the Staff’s analysis for the proposed project. The Draft PEA should be revised to provide an estimate of the operational ammonia use for Alternative 3. Since this value will be lower than the proposed project, Alternative 3 would have lower ammonia emissions by comparison and would therefore be environmentally preferable on this issue.</p> <p>Is Staff’s estimate for increased operational use of ammonia based on 8.79 TPD of NOx emission reductions (i.e., BARCT equivalency)? Since the Staff’s 14 TPD proposal would require significantly greater emission reductions (i.e., beyond BARCT), the Draft PEA should be revised to explain the basis for this ammonia use figure to ensure that project’s potential environmental impacts are fully disclosed. The ammonia figure also drives traffic and construction impacts which may be greater than disclosed in the Draft PEA.</p> <p>For similar reasons, the Staff’s statement that Alternative 3 emissions for construction are “not quantifiable” is not accurate. As reported in Table 1-3, Alternative 3 would require emission controls sufficient to reduce NOx emissions by 8.79 TPD (again, using the Staff’s BARCT analysis). The</p>

	<p>Draft PEA must be revised to include a quantified estimate of the construction emissions needed to deliver those emissions control using a methodology similar to the Staff’s analysis of the proposed project.</p>
<p>Table 1-4, Comparison of Adverse Environmental Impacts of the Alternatives</p> <p>Row 3: Air Quality &amp; GHGs</p> <p>Page 1-30</p>	<p>The Alternative 3, the Draft PEA reports impacts are “Less than significant; achieves net NOx emission reductions during operation (less reductions than the proposed project <u>but not quantifiable</u>).” [emphasis added]</p> <p>This is not correct. As reported in Table 1-3, Alternative 3 would require emission controls sufficient to reduce NOx emissions by 8.79 TPD (again, using the Staff’s BARCT analysis) so clearly the impacts from Alternative 3 are quantifiable. The Draft PEA must be revised to include a quantified estimate of the NOx emission reductions during operation for Alternative 3.</p>
<p>Page 2-2, Section 2.2 Project Objectives</p>	<p>The Draft PEA states: “The objectives of the proposed project are to: 1) Comply with the requirements in Health and Safety Code (HSC) §§40440 and 39616 by conducting a BARCT assessment of the NOx RECLAIM program and reducing the amount of available NOx RTCs to reflect emission reductions equivalent to implementing available BARCT; 2) Modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment; 3) Ensure that RECLAIM facilities, in aggregate, achieve the same emission reductions that would have occurred under a command-and-control approach; 4) Achieve the proposed NOx emission reduction commitments in the 2012 AQMP Control Measure #CMB-01: Further NOx Reductions from RECLAIM; and, 5) Achieve NOx emission reductions to assist in attaining the NAAQS.” This highlights several problems with the Draft PEA and the Staff proposal.</p> <p>WSPA agrees that AQMD has a legal obligation to comply with the requirements in Health and Safety Code (HSC) §§40440 and 39616. However, Staff has oversimplified what those obligations are by suggesting this is entirely about conducting a BARCT assessment. The AQMD Staff’s proposed 14 TPD shave reduction from the RECLAIM market could violate the project objectives under the California Health &amp; Safety Code (H&amp;SC).</p> <p>With respect to H&amp;SC §40406, Staff have failed to take into account the economic impacts for each class or category of source. The Staff analysis only considers costs and cost effectiveness for the BARCT equivalency amount of 8.79 TPD (i.e., advancement from 2005 BARCT to 2015 BARCT). There is no consideration of the economic impacts which would be incurred under a larger 14 TPD market adjustment that goes beyond BARCT.</p> <p>With respect to H&amp;SC §39616(c)(1), AQMD Staff has failed to demonstrate that the RECLAIM program will result in an equivalent or greater reduction in emissions <b>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</b></p>

	<p><b>District’s plan for attainment.</b> Staff has instead applied a cost effectiveness threshold for this RECLAIM rulemaking of \$50,000 per ton of NOx reduction which is more than double the cost threshold used for command-and-control rules within the District (i.e., \$22,500 per ton<sup>19</sup>). This clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations.</p> <p>Furthermore, Staff has proposed a market shave of 14 TPD which goes beyond BARCT. Under AQMD Staff’s analysis, BARCT equivalency is currently presented as not more than 8.79 TPD. Even that value is overstated since adjustments needed to fully account for the findings of the AQMD’s third-party refinery expert, Norton Engineering, would reduce the shave for BARCT equivalency to not more than 7.94 TPD.<sup>20</sup> Thus, RECLAIM facilities would have greater costs under the Staff proposal than would have been incurred under a command-and-control program.</p> <p>And contrary to H&amp;SC §39616(c)(7), AQMD has failed to demonstrate that the RECLAIM program as amended will not result in disproportionate impacts, measured on an aggregate basis, to those stationary sources included in the program as compared to other permitted stationary sources in the District’s plan for attainment. RECLAIM program sources have already reduced NOx emissions by 69% since 1994, whereas command-and-control stationary sources have only reduced NOx emissions by about 44% during that same period.<sup>21</sup> The BARCT levels being proposed by AQMD Staff generally represent performance levels that have not been demonstrated as broadly achievable for the source categories in question. Furthermore, these performance levels go well beyond the command-and-control standards adopted by AQMD under Regulation XI (i.e., the District’s command-and-control program), and are well beyond BARCT determinations made by other major California air agencies administering command-and-control programs (e.g., SJVAPCD, BAAQMD, etc.).</p>
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<sup>19</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.  
<sup>20</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18.  
<sup>21</sup> “RECLAIM Sources” data is computed from data presented in AQMD’s RECLAIM Audit Report (March 2015). Command-and-control stationary sources NOx emissions is computed from data presented in AQMD Air Quality Management Plans (1997, 2003, 2007, 2012) and AQMP NOx RECLAIM Working Group Meeting #5, Agenda Item #3.

<p>Page 2-2, Section 2.2 Project Objectives (continued)</p>	<p>Next, the Draft PEA suggests an objective to “modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment.” That is not consistent with the project description contained in the Notice of Preparation issued 4 December 2014,<sup>22</sup> nor is it consistent with project description contained in the Initial Study.<sup>23</sup> Specifically, neither the NOP Project Description nor the Initial Study Project Description included any reference to modifying “the RECLAIM trading credit (RTC) “shaving” methodology” in the description of the project or the project objectives. And this is also inconsistent with the objectives approved by the Governing Board under Control Measure CMB-01. For these reasons, all references to “modifying “the RECLAIM trading credit (RTC) “shaving” methodology” should be removed from the Draft PEA.</p>
<p>Page 2-2, Section 2.2 Project Objectives (continued)</p>	<p>This section also suggests an objective “Achieve NOx emission reductions to assist in attaining the NAAQS.” This is also not consistent with the Project Description contained in the Notice of Preparation issued 4 December 2014,<sup>24</sup> or the description contained in the Initial Study Project Description.<sup>25</sup></p>

<sup>22</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>23</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

<sup>24</sup> AQMD, Notice of Preparation of a Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 4 December 2014. See “Description of Nature, Purpose, and Beneficiaries of Project.”

<sup>25</sup> AQMD, Initial Study for Draft Program Environmental Assessment, Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), December 2014. See page 1-7, Project Description.

<p>Page 2-6, 4<sup>th</sup> paragraph</p>	<p>The Draft PEA states “the proposed project is estimated to reduce four tons per day of NOx emissions starting in 2016 because the amount of unused RTCs in the NOx RECLAIM program over the past five years (e.g., from 2009 to 2013) ranged from five tpd to eight tpd, demonstrating that there is enough cushion to support reduction of four tpd in 2016.” While the quantities of “unused” RTCs are a matter of historical record, Staff has provided no evidence to support that supposition that the RECLAIM market has “enough cushion to support reduction of four tpd in 2016.” And if this was just a reduction of unused RTCs, that would not equate to an emissions reduction in 4 TPD. The Draft PEA needs to be revised to include a market analysis to support that supposition or this statement should be deleted.</p>
<p>Page 2-6, 4<sup>th</sup> paragraph (continued)</p>	<p>The Draft PEA goes on to state “it could take from two to four years for the affected facilities to plan, obtain permits, and install air pollution control equipment or modify existing equipment in response to the proposed project.” According to information from WSPA members, this estimate is too short.<sup>26</sup> While some individual projects might be complete able in 2-4 years, the proposed project would require dozens and dozens of emission control projects to be completed. For the refinery sector, such projects would need to be planned, engineered, and sequenced for construction in consideration of unit turnaround schedules. WSPA members report that completion of all needed projects for the proposed project would likely require not less than eight (8) years. The Draft PEA should be revised to reflect this timetable and the Proposed Amended Rules and PDSR should be similarly adjusted.</p>
<p>Page 2-9, PAR 2005 Requirements for New or Relocated RECLAIM Facilities – Subdivision (b)</p>	<p>The AQMD Staff have yet to provide a complete description of the amendments to this rule. AQMD Staff have also not obtained U.S. EPA approval that such amendments would even be approvable into the State Implementation Plan (SIP). The Draft PEA and PAR 2005 should be revised to reflect these important details <u>after</u> AQMD Staff have obtained the U.S. EPA approval needed for such amendments to be legal.</p>
<p>Page 2-10, top of page</p>	<p>The Draft PEA states “Further, only 44 facilities are expected to comply with the proposed NOx RTC shave through the purchase of RTCs which will have no environmental impact.” The Draft PEA should be revised to present supporting analysis demonstrating how this conclusion was reached.</p>
<p>Page 3.2-34, 2<sup>nd</sup> paragraph, GHG Tailoring Rule</p>	<p>This section should be revised to note that the courts vacated significant portions of the GHG Tailoring Rule. The applicability criteria as described in the Draft PEA are not consistent with current regulations.</p>
<p>Page 4.1-3, Section 4.1.3.1</p>	<p>The Draft PEA states “Because each affected facility is located in heavy industrial areas, the construction equipment is not expected to be substantially discernable from what exists on-site for routine operations and maintenance activities. Further, the construction activities are not expected to adversely impact views and aesthetics resources since most of the heavy equipment and activities are expected to occur within the confines of each existing facility and are expected to introduce only minor visual changes to areas outside each facility, if at all, depending on the location of the construction activities within the facility.”</p>

<sup>26</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, March 2015.

	<p>This statement oversimplifies the range of physical settings existent for RECLAIM facilities. In actuality, some refinery or non-refinery RECLAIM facilities are located areas where additional vertical obstructions from cranes or new emission control structures could be “discernable” and may adversely impact views and aesthetics resources for adjacent communities. The Draft PEA should be revised to clarify the range of settings which would be impacted by the proposed project and acknowledge the range of potential impacts associated with the proposed project.</p>
<p>Page 4.2-2, Table 4.2-1 Estimated Number of NOx Control Devices Per Sector and Equipment/Source Category</p>	<p>As shown in this table, the Draft PEA states that Staff has assumed 74 SCRs would be installed on Refinery Process Heaters and Boilers under the proposed project. Staff does not explain the basis for this value, which conflicts with the Preliminary Draft Staff Report (PDSR). The PDSR suggests that the proposed project would result in 76 SCRs (25 upgraded, 51 new) for refinery heaters and boilers,<sup>27</sup> in which case the Draft PEA would be understating the potential project impacts. It should also be noted that AQMD’s third-party refinery sector expert, Norton Engineering, found that only 48 refinery heaters and boilers could be cost effectively retrofit with new or upgraded SCRs.<sup>28</sup> Staff have done nothing to reconcile this discrepancy which is material. The Draft PEA must be revised to clarify the technical basis for the assumed emission controls outcome and associated potential impacts to the environment. The Draft PEA should also explain how emission controls which are not cost effective, according to AQMD’s own third-party expert, will be implemented.</p>
<p>Page 4.2-4, Section 4.2.3.1, first paragraph</p>	<p>The Draft PEA states “Further, operators at each affected facility who construct NOx control equipment that utilize chemicals as part of the NOx control equipment operations, such as a new ammonia or caustic storage tank, may also need to build a containment berm large enough to hold 110 percent of the tank capacity in the event of an accidental release, pursuant to U.S. EPA’s spill prevention control and countermeasure regulations.”</p> <p>While other regulations and good engineering practices would require containment features for these tanks, the Spill Prevention Control and Countermeasure (SPCC) regulations actually don’t apply to ammonia or caustic storage vessels. The Draft PEA should be clarified accordingly.</p>
<p>Page 4.2-7, last paragraph</p>	<p>The Draft PEA states “if a particular technology was identified as having a cost that exceeds \$50,000 per ton, this CEQA analysis assumed that the facility operator would not install this type of air pollution control technology in response to the project.” This statement is inconsistent with the project objectives which require compliance with the California Health &amp; Safety Code. The \$50,000 threshold fails in this regard.</p> <p>Under H&amp;SC§39616(c)(1), the RECLAIM program is required to result in “an equivalent or greater reduction in emissions <b>at equivalent or less cost compared with current command and control regulations</b> and future air quality measures that would otherwise have been adopted as part of the District’s plan for attainment.” AQMD Staff has failed to demonstrate that the proposed amended RECLAIM program will be <b>at equivalent or less</b></p>

<sup>27</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, Table B.10.

<sup>28</sup> AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, Table B.9.

	<p><b>cost compared with current command and control regulations.</b> On the contrary, Staff’s proposed \$50,000 cost effectiveness threshold for this RECLAIM rulemaking is more than double the cost threshold used by AQMD for command-and-control rules (i.e., \$22,500 per ton<sup>29</sup>). This clearly imposes a greater cost on RECLAIM sources than would be incurred under command and control regulations. The Draft PEA and Proposed Amended Rules must be revised to be consistent with the project objectives and all applicable H&amp;SC requirements.</p>
Page 4.2-8, Section 4.2.3.1, first paragraph	<p>The Draft PEA states “In order to operate SCR and UltraCat technology, ammonia is necessary and, as such, tanks to store ammonia would also need to be installed. The size of each ammonia tank needed to operate the SCR units and one UltraCat filtration unit have been estimated to range between 2,000 and 11,000 gallons in capacity.”</p> <p>While this statement may be appropriate for characterizing <u>new</u> tanks which are likely to handle aqueous ammonia, it ignores the fact that some <u>existing</u> ammonia tanks are used to store anhydrous ammonia. The PEA should be revised to address this description. Staff should consider whether this condition requires revision of the offsite consequence analysis presented in the Draft PEA.</p>
Page 4.2-8, Section 4.2.3.1, 5 <sup>th</sup> paragraph	<p>The Draft PEA states “From a construction point of view, the installation of a NOx control technology at a refinery is a complex process. For example, if a facility operator chooses to install NOx control equipment, time will be needed for pre-construction/advance planning activities such as engineering analysis of the affected equipment, engineering design of the potential control equipment, contracting with a vendor, securing financing, ordering and purchasing the equipment, obtaining permits and clearances, and scheduling contractors and workers. The amount of lead time can vary from six months (e.g., for a SCR for refinery/boiler heater or gas turbine) to up to 18 months for a scrubber (either a WGS or DGS).”</p> <p>AQMD permitting for new emission controls can easily take as much as 18 months for Title V facilities. This could easily increase the amount of lead time a company requires to 2-3 years. Some of the pre-construction activities cannot be conducted until the Permit to Construct has been issued.</p>
Page 4.2-11, top of page	<p>The Draft PEA states “...the analysis also includes an analysis of the overlapping impacts spread out over a five- and seven-year period.” According to information from WSPA members, this estimate is too short. While some individual projects might be complete in 2-4 years, the proposed project would require dozens and dozens of emission control projects to be completed. For the refinery sector, such projects would need to be planned, engineered, and sequenced for construction in consideration of unit turnaround schedules. WSPA members report that completion of all needed projects for the proposed project would likely require not less than eight (8) years.<sup>30</sup> The Draft PEA should be revised to reflect this timetable and the Proposed Amended Rules and PDSR should be similarly adjusted.</p>

<sup>29</sup> AQMD, 2012 Air Quality Management Plan (AQMP), December 2012.

<sup>30</sup> WSPA/ERM confidential survey of WSPA members concerning refinery heaters/boilers, March 2015.

<p>Page 4.2-13, 1<sup>st</sup> paragraph</p> <p>Combined Construction Emissions From Non-Refinery and Refinery Facilities</p>	<p>The Draft PEA does not disclose the assumed basis for construction impact estimates. Are these impacts based on construction of emission controls to deliver 8.79 TPD (i.e., BARCT equivalency), or has Staff assumed construction sufficient to deliver the proposed 14 TPD of emission reductions (i.e., beyond BARCT equivalency)? The amount of construction activity for modification of existing SCRs will be different than the activity needed for entirely new SCR installations. The Draft PEA must be revised to fully disclose the technical basis of this analysis so the public can understand whether the impacts presented are complete.</p>
<p>Page 4.2-13, last paragraph</p> <p>Combined Construction Emissions From Non-Refinery and Refinery Facilities</p>	<p>The Draft PEA notes "...it is likely that only minimal, if any, construction activities would occur at any refinery facilities during 2016." This is exactly why the Staff proposal to remove four (4) TPD of RTCs in 2016 is too much, too fast. Staff has provided no evidence to support that supposition that the RECLAIM market has "enough cushion to support reduction of four tpd in 2016."</p>
<p>Page 4.2-18, 1<sup>st</sup> paragraph</p>	<p>The Draft PEA states "Implementation of the proposed project is expected to result in direct air quality benefits from the reduction of 14 tons per day of NOx RTCs by 2022. Because of the RECLAIM market system, the actual reduction in NOx emissions each year may be less than the reduction in RTC holdings imposed by the project." This statement conflicts with Page 1-1, 4<sup>th</sup> paragraph. Please see our comment to that prior statement.</p>
<p>Page 4.2-20, Refinery Facilities</p>	<p>This section presents impacts from operation of the proposed project for refinery facilities in the South Coast air basin. The Draft PEA does not disclose the assumed basis for these impact estimates. Are these impacts based on operation of emission controls to deliver 8.79 TPD (i.e., BARCT equivalency), or has Staff assumed operations sufficient to deliver the proposed 14 TPD of emission reductions (i.e., beyond BARCT equivalency)? The Draft PEA should be revised to explain the basis of the technical analysis so the public can understand whether the impacts presented are complete.</p>
<p>Page 4.2-22, 1<sup>st</sup> paragraph</p>	<p>The Draft PEA states "Ammonia slip is limited to five parts per million (ppm) by permit condition." This is an oversimplification since some existing SCRs are permitted with higher ammonia slip limits. These existing units may not be required to open their permits, in which case they could continue to operate with higher than 5 ppmv ammonia slip performance.</p> <p>Furthermore, the Draft PEA analysis of ammonia slip for new SCR installations depends on physical conditions which the Staff analysis explicitly omitted from the project description (e.g., use of Ammonia Slip Catalysts or ASC) despite recommendations by the AQMD's third-party expert, Norton Engineering, to use ASC.<sup>31</sup> Without the ASC, ammonia slip from individual devices could be as great as 20 ppmv, but the draft PEA underestimates the ammonia slip by assuming it will universally be 5 ppmv. However, existing SCRs are not necessarily subject to those permit</p>

<sup>31</sup> Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Table 2-3.

	<p>conditions, and thus, ammonia slip of up to 20 ppmv should be considered in the health risk assessment for ammonia emissions.<sup>32</sup></p> <p>The Draft PEA should be revised to more accurately reflect the range of ammonia slip conditions which could exist. Importantly, the screening Health Risk Assessment results presented in the Draft PEA would need to be revised to reflect that broad range of ammonia slip performance.</p>
Section 4.2.4, Cumulative Air Quality Impacts	The Draft PEA does not discuss the potential secondary impacts on air quality associated with increased emissions of ammonia from the numerous SCRs mandated by this rulemaking. Ammonia is a precursor to PM2.5 formation for which the South Coast AQMD is in nonattainment, so the PEA should consider whether additional ammonia emissions would represent a cumulatively considerable impact.
Page 4.2-26, 1 <sup>st</sup> full paragraph	The Draft PEA states "...based on regional modeling analyses performed for the 2012 AQMP, implementing control measures contained in the 2012 AQMP, in addition to the air quality benefits of the existing rules, is anticipated to bring the District into attainment with all national and most state ambient air quality standards by the year 2023." This statement is at best incorrect. A significant portion of the control strategy presented in the 2012 AQMP was still 182(e) "black box" measures which have not been defined.
Chapter 5, Alternatives	<p>In this section, the Draft PEA presents 5 alternatives to the proposed project, but except for Alternative 4 (No Project) and Alternative 3 (Industry Approach), all other alternatives propose 14 TPD or more of NOx emission reductions. Given that the proposed project has remaining significant environmental effects with the proposed project at 14 TPD, the failure to include any additional alternatives other than Alternative 3 (Industry Approach) at a lesser reduction of NOx emissions does not satisfy CEQA's requirement for a "reasonable range of alternatives."</p> <p>In addition, the Draft PEA repeatedly claims that the impacts from the alternatives are "not quantifiable" for unspecified reasons. But these figures are not unknowable. In most cases, Staff could have easily made bounding or other technical assumptions to complete the quantification to allow the public to understand how the impacts from the alternatives compare to the Staff's proposed project. The Draft PEA must be revised to include this additional technical detail.</p>

<sup>32</sup> Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), 15 August 2015. See Tables 4.2-18 and 4.2-21.



Regulatory  
Flexibility  
Group



VIA ELECTRONIC MAIL

October 6, 2015

Ms. Barbara Radlein  
Program Supervisor, CEQA Special Projects  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**SUBJECT: NO<sub>x</sub> RECLAIM INDUSTRY COALITION COMMENTS ON DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT FOR PROPOSED AMENDMENTS TO REGULATION XX**

Dear Ms. Radlein:

The NO<sub>x</sub> RECLAIM Industry Coalition ("the Coalition") consisting of the industry trade associations listed below submits these comments on the Draft Program Environmental Assessment ("DPEA") for Proposed Amendments to Regulation XX.

California Asphalt Pavement Association (CalAPA)  
California Construction & Industrial Materials Association (CalCIMA)  
California Council for Environmental and Economic Balance (CCEEB)  
California Manufacturers and Technology Association (CMTA)  
California Metals Coalition (CMC)  
California Small Business Alliance (CSBA)  
Regulatory Flexibility Group (RFG)

Southern California Air Quality Alliance (SCAQA)  
Western States Petroleum Association (WSPA)  
Los Angeles Business Federation (BizFed)

## **I. PROJECT DEFINITION NOT CONSISTENT WITH THE PROJECT ANALYZED**

The Project is defined as the amendment of Regulation XX to implement a reduction in NOx RECLAIM Trading Credits (“RTCs”) of 14 tons per day. However, the project analyzed is only the installation of BARCT at various facilities. These are not the same things. The construction activities related to the potential installation of BARCT at various facilities is only a subset of the proposed Project, and represents only 8 tons per day of the proposed 14 tons per day reduction. The cost of removing the additional 6 tons per day to get to 14 tons per day must be included in this analysis.

The project as actually proposed and defined would virtually eliminate the NOx RTC market. The RECLAIM program is a cap-and-trade program that relies on the availability of RTCs to provide structural buyers a source of credits, provide for NSR holdings required by RECLAIM NSR rules, and provide for construction of new facilities and expansion of existing facilities. The removal of 14 tons per day of NOx RTCs will adversely impact all of these uses but there is no analysis even attempted in the DPEA of such impacts. Since the DPEA only analyzes a subset of the entire project, it fails to comply with CEQA’s requirement to evaluate impacts from the “whole of the action” being proposed. CEQA Guidelines §15378(a). It appears that removal of 14 tons per day of NOx RTCs and the potential destruction of the NOx RTC market is “assumed” to have no effect.

## **II. REMOVAL OF 14 TONS PER DAY OF NOX RTCS WOULD HAVE SIGNIFICANT IMPACTS**

There are potential impacts on energy supply and reliability in the event insufficient RTCs are available to provide for increased energy demand (which will be exacerbated by District plans, as expressed in ongoing air quality planning activities related to the 2016 AQMP, to electrify large segments of the Southern California industrial, service, and residential sectors). There is no analysis whatsoever of the potential impacts on structural buyers or any other RECLAIM participants (including many NOx RECLAIM Industry Coalition members), other than those who the District expects to have to install emission control equipment.

## **III. USE OF A PROGRAM ENVIRONMENTAL ASSESSMENT IS INAPPROPRIATE WHEN PROJECT LEVEL IMPACTS ARE BEING ASSESSED**

The PEA states that it is a program level document. However, it only evaluates BARCT related construction activities which are really “project level” activities. The DPEA should include a project level review of impacts, which it does not do.

#### **IV. THE PROPOSED PROJECT IS INCONSISTENT WITH THE STATED OBJECTIVE OF COMPLYING WITH HEALTH AND SAFETY CODE SECTION 39616**

The stated objective of the Project is to comply with the requirements in Health and Safety Code §39616 by conducting a BARCT assessment of the NOx RECLAIM program and reducing the amount of available NOx RTCs to reflect emission reductions equivalent to implementing BARCT. However, compliance with that section also requires that RECLAIM emission reductions be equivalent or greater than reductions that would have resulted under command and control at equivalent or less cost compared with command and control. The Project fails to meet the cost equivalency of that requirement. The District uses a cost-effectiveness figure of \$50,000 per ton for RECLAIM BARCT and \$22,500 per ton for command and control BARCT. This is inconsistent with state law and thus with the stated objective of cost equivalency and results in a reduction of RTCs that will necessitate emission reductions beyond what can be achieved by application of BARCT (relative to a command and control rulemaking). Furthermore, only a portion of the shave has received any cost estimate at all. SCAQMD has only provided cost estimates for 8.8 tons per day (related to installing technology) of a 14 tons per day shave. Obviously shaving beyond the portion of the shave attributable to technology will exceed costs for equivalent command and control regulations.

There is also no analysis of potential business closures as a result of such a severe shave that would reduce the availability and increase the cost of RTCs. While the District has noted that the number of facilities in RECLAIM has dropped from 392 facilities to 276, there has been no effort to evaluate the significance of this change and whether the proposed 14 ton per day shave would be consistent with the requirements of §39616(c)(4). That section requires that the RECLAIM program “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.”

#### **V. THE DPEA FAILS TO ANALYZE A REASONABLE RANGE OF ALTERNATIVES THAT COULD MEET THE OBJECTIVE OF THE PROJECT WITH LESSER IMPACTS**

The PEA fails to analyze whether alternatives to the 14 ton per day proposed shave could also meet the objective of obtaining emissions reductions from the RECLAIM universe equivalent to the BARCT reductions identified by staff. For example, staff could have reviewed past shaves to determine the ratio between the amount shaved and the amount of actual emission reductions that occurred from the RECLAIM universe. This would at least provide an empirically derived alternative to the District's 14 ton per day NOx shave, which is beyond any previously imposed shave and would seem to be (empirically) much greater than necessary to achieve 8.7 tons per day of actual emission reductions (actually 8 tons per day after the 0.7+ tons per day are given back on BARCT as a result of the Norton Engineering kerfuffle). If the BARCT reduction could be achieved with less than 14 tons per day of RTC reductions, it would significantly reduce, and possibly avoid, many if not all of the impacts of the 14 ton per day proposed reduction.

## VI. CONCLUSION

In summary, the PEA needs to be redone to address all of the potential project impacts, not just the construction related impacts, and additional alternatives can and should be identified that could achieve the project's objective while avoiding the significant impacts and inconsistency with Health and Safety Code Section 39616 associated with a 14 ton per day shave.

Respectfully,

A handwritten signature in cursive script that reads "Curtis L. Coleman". The signature is written in black ink and is positioned above the printed name and title.

Curtis L. Coleman  
Executive Director, Southern California Air Quality Alliance  
On behalf of the NO<sub>x</sub> RECLAIM Industry Coalition

cc: Dr. Phil Fine, SCAQMD



October 06, 2015

*Via Electronic Mail*

Ms. Barbara Radlein  
South Coast Air Quality Management District  
[bradlein@aqmd.gov](mailto:bradlein@aqmd.gov)

***Re: Program Environmental Assessment  
Proposed Amended Regulation XX (RECLAIM)***

Dear Ms. Radlein,

The following comments are provided by the Natural Resources Defense Council, Sierra Club, Earthjustice, and Communities for a Better Environment regarding the South Coast Air Quality Management District Program Environmental Assessment (PEA) for Proposed Regulation XX (RECLAIM).

The RECLAIM project has not proven its value as a cheaper or more efficient way to reduce NOx emissions in the South Coast Air Basin compared to a command and control model. If it is to be retained, it needs to be substantially strengthened and accelerated.

With respect to the PEA, there are three major flaws, all of which flow from the PEA's overly-narrow reading of its own project objectives: failure to include ending the RECLAIM program as an alternative, failure to choose the environmentally superior alternative among the alternatives presented, and failure to assess RECLAIM in connection with the NOx reduction needs to be covered in the 2016 AQMP and beyond. We will discuss the project objectives and the ensuing flaws in turn.

***Project Objectives***

The PEA lists these project objectives:

- 1) Comply with the requirements in Health and Safety Code (HSC) §§40440 and 39616 by conducting a BARCT assessment of the NOx RECLAIM program and reducing the amount of available NOx RTCs to reflect emission reductions equivalent to implementing available BARCT;
- 2) Modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment;

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- 3) Ensure that RECLAIM facilities, in aggregate, achieve the same emission reductions that would have occurred under a command-and-control approach;
- 4) Achieve the proposed NOx emission reduction commitments in the 2012 AQMP Control Measure #CMB-01: Further NOx Reductions from RECLAIM; and,
- 5) Achieve NOx emission reductions to assist in attaining the NAAQS. PEA 2-4.

However, the discussion in the PEA, particularly with respect to alternatives, seems to ignore objectives 3 and 5 by tinkering with the existing RECLAIM rules rather than asking whether the rules serve the purposes of RECLAIM and its governing statute. If the scope of the PEA truly matched up with the project objectives, the errors that we discuss below would not have occurred.

### ***Ending RECLAIM***

The goal of RECLAIM is to reduce NOx emissions as efficiently and quickly as possible; this is recognized in project objective no. 3. Although emissions have dropped, it is not at all clear that this has been because of or in spite of RECLAIM. The over-allocation of RECLAIM credits has depressed their price and diminished the economic drivers to reduce actual emissions. When staff completed its most recent BARCT analysis, it became clear that there are too many cheap credits in the market and that a deep “shave” is required. The PEA should take this finding to its logical conclusion and examine whether RECLAIM can, in fact, provide the same emissions reductions as would be achieved under a command and control system.

### ***Failure to Choose the Environmentally Superior Alternative***

The PEA states that Alternative 2, most stringent shave, is the environmentally superior alternative in that it will lead to the greatest NOx reductions. PEA at 5-43. But the PEA rejects Alternative 2 on the basis that it does not “satisfy Objective No. 2 “to modify the RTC “shaving” methodology to implement the emission reductions per the BARCT assessment.”” PEA at 5-44. In addition, the PEA states: “the proposed project is considered to provide the best balance between emission reductions and the adverse environmental impacts due to construction and operation activities while meeting the objectives of the project.” *Id.*

This only makes sense if a very strained view of the objectives of RECLAIM is adopted and objectives and project objectives 3 and 5 are ignored. The construction and operational impacts from maximizing the “shave” are tiny in comparison to the benefits to be obtained. It seems more likely that the rejection of Alternative 2 is the result of a political calculation of how strongly the regulated community will complain.

## *NOx Reductions and the Ozone NAAQS*

South Coast has not met the 1979 1-hour ozone standard, the 1997 8-hour ozone standard, nor the 2008 8-hour ozone standard, and will continue to be hard pressed as it seeks to meet the just-announced 70 ppb standard. The PEA needs to evaluate RECLAIM against the statutory background of the Clean Air Act and the NAAQS ozone limits, as recognized in project objective no. 5, but has not done so in a meaningful way.

Thank you for your consideration of this letter.

Yours truly,



David Pettit  
Staff Attorney  
Natural Resources Defense Council



Evan Gillespie  
Deputy Director, Beyond Coal Campaign  
Sierra Club

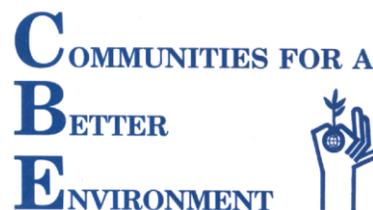


Angela Johnson Meszaros  
Staff Attorney  
Earthjustice



Shana Lazerow  
Staff Attorney  
Communities for a Better Environment

October 6, 2015  
Barbara Radlein  
South Coast Air Quality Management District  
[bradlein@aqmd.gov](mailto:bradlein@aqmd.gov).



**Re: Comments on SCAQMD Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM)**

Dear Ms. Radlein,

Thanks for your work on this important issue. We submit the following comments regarding the Draft Program Environmental Assessment (PEA) for the Proposed Amended RECLAIM regulations,<sup>1</sup> in addition to the comments submitted today by Natural Resource Defense Council and Sierra Club. Additional reductions beyond those proposed in the PEA are readily achievable, cost-effective, and necessary, given the severe impacts on health of these air pollution sources in the South Coast. Incorporating these additional reductions into Regulation XX would “reduce the allowable NOx emission limits based on current Best Available Retrofit Control Technology (BARCT) to achieve additional NOx emission reductions,” and must be included in any rule purporting to reflect BARCT for refinery boilers and heaters. The PEA must be recirculated, and must include a preferred alternative that, at a minimum, reflects these reductions.

Additional reductions are readily achievable from Refinery Boilers and Heaters

The proposed Draft PEA NOx reductions for Refinery Boilers and Heaters in the South Coast is 0.96 tons per day (tpd), using the addition of SCR (Selective Catalytic Reduction).<sup>2</sup> There is substantial evidence that much higher reductions could be achieved. In 2010, CBE evaluated data provided by the California Air Resources Board (CARB) on Refinery Boilers and Heaters.<sup>3</sup> CARB listed many additional control options for improving the efficiency of Boilers and Heaters

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<sup>1</sup>Draft Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), August 2015, SCAQMD No. 12052014BAR, State Clearinghouse No: 2014121018, Author Barbara Radlein, **hereafter the DRAFT PEA**, available at: [https://mail.google.com/mail/u/0/#advanced-search/subset=inbox&has=RECLAIM&within=1d&sizeoperator=s\\_sl&sizeunit=s\\_smb/14ffc615d913d4d?projecto=1](https://mail.google.com/mail/u/0/#advanced-search/subset=inbox&has=RECLAIM&within=1d&sizeoperator=s_sl&sizeunit=s_smb/14ffc615d913d4d?projecto=1)

<sup>2</sup>*Id.* at p. 1-26.

<sup>3</sup> The CARB Boiler and Heater data was downloaded from <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm> at the bottom of the page, “Supplemental Material,” Compliance Pathways Analysis – Boilers, and Compliance Pathways Analysis—Heaters.

statewide. CARB focused on greenhouse gas emissions reductions, but because these control options save fuel, they also substantially reduce emissions of co-pollutants, including NOx.

The measures identified are an indication that there is a much higher potential to reduce NOx from Refinery Boilers and Heaters, beyond SCR controls. The CARB data identified many measures to improve the efficiency of the fleet of refinery boilers and heaters, ranging from simply stopping leaks and improving insulation, to completely replacing old boilers. These measures were found not only to be cost-effective, but to actually *save* money for oil refineries. The RECLAIM PEA, by contrast, did not provide such a wholesale evaluation of clean-up measures for Boilers and Heaters.

CBE took the CARB data (which provided fuel use, GHG emissions, and cost of various measures), and calculated tables showing NOx co-pollutant reductions that would be associated with these GHG reductions and fuel use reductions.<sup>4</sup> CBE reported these in the December 14, 2010 comments to CARB (pages 27-30, in the NOx tables), which are attached. We are also attaching the original CARB spreadsheets, which have CBE's calculations added.

These resulted in 15.08 tpd in NOx reductions from Refinery Boilers (16.44 for all Boilers sources) and 7.1 tpd for Refinery Heaters (7.35 tpd for all sources), for a total of 22.18 tpd statewide for refineries (and 23.79 for all sources). Oil refineries within the South Coast make up about 54% of the state's refining capacity,<sup>5</sup> and 54% of 22 tpd from the statewide oil refinery Boiler and Heater NOx reduction opportunities would result in about 12 tpd in NOx reductions, far above the .96 tons per day proposed. These do not include the other sources listed by CARB (non-refinery Industrial Boilers and Heaters). This data provides substantial evidence that much higher reductions could be achieved from this one source.

The PEA should therefore be revised to provide a more refined and updated analysis specific to the South Coast data. SCAQMD should re-circulate this revised PEA, providing a detailed alternative evaluation of NOx reductions achievable through the measures identified by CARB, including:

1. Replacing low and medium efficiency Boilers
2. Optimizing Boilers by reducing excess air
3. Retrofitting Feedwater Economizers
4. Retrofitting with Air Preheaters
5. Blowdown Reduction With Controls and with Feedwater Cleanup
6. Blowdown Heat Recovery
7. Optimizing Steam Quality
8. Optimizing Condensate Recovery
9. Minimizing Vented Steam
10. Insulation Maintenance
11. Steam Trap Maintenance
12. Steam Leak Maintenance

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<sup>4</sup> For this calculation, CBE applied standard AP-42 Boiler and Heater NOx emissions factors.

<sup>5</sup> CA.gov Energy Almanac, listing capacity of each California refineries, November 2014, <http://energyalmanac.ca.gov/petroleum/refineries.html> <http://energyalmanac.ca.gov/petroleum/refineries.html>

13. Replacing Low and Medium Efficiency Heaters
14. Optimizing Heaters
15. Recovering Flue Gas Heat
16. Replacing Refractory Brick
17. Insulation Maintenance

These reduction measures in total would also achieve about 4 million tonnes CO<sub>2</sub> equivalent/year, and save about \$46 million dollars, as determined by the CARB data. CBE has noted that despite the savings that oil refineries could achieve from cleaning up old boilers and heaters, they frequently put off doing so until they can use the reductions as offsets for other refinery expansions planned, leaving boilers and heaters to go on unnecessarily polluting for decades. We urge the AQMD to provide the public with a detailed analysis of the additional reductions that could be achieved through *requiring* such measures.

Sincerely,

Shana Lazerow, Staff Attorney

Julia May, CBE Senior Scientist

Attachments

December 14, 2010

Mary Nichols, Chairman  
James Goldstene, Executive Officer  
California Air Resources Board  
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P.O. Box 2815  
Sacramento, CA 95812  
Via email: [mnichols@arb.ca.gov](mailto:mnichols@arb.ca.gov), [jgoldstene@arb.ca.gov](mailto:jgoldstene@arb.ca.gov)

**Re: CBE Comments on Draft Cap and Trade Regulation: Draft Cap & Trade Regulation Misses California GHG and Pollution Reduction Opportunities, Job Opportunities, and Contains Egregious Errors**

Dear Chairman Nichols and Mr. Goldstene,

In our October and December 2008 comments on ARB's Scoping Plan, Communities for a Better Environment raised numerous substantial concerns and described the significant pitfalls of cap and trade schemes. We specifically described why cap and trade programs do not work to significantly reduce greenhouse gas emissions and how they harm low-income communities and communities of color. ARB did not respond to these concerns. Indeed the proposed regulation would animate some of CBE's greatest fears.

Overwhelmingly, cap and trade programs suffer from credit overallocation, monitoring and equivalency problems, loss of innovation, unverifiability of offsets, unverifiable accounting practices, and lack of additionality. Cap and trade schemes also exacerbate environmental injustice by increasing hotspots, creating price volatility, and leading to oppression through high risk and fraudulent offset projects that too often also result in displacement. The proposed regulation does nothing to avoid the known pitfalls inherent to cap and trade.<sup>1</sup> Instead, the regulations bend over backwards to accommodate polluters' desire for zero cost compliance, ease and flexibility at the expense of true significant reductions, health protection (avoiding increases in other pollution), and environmental justice. It also used a flawed calculation of emissions as the foundation for

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<sup>1</sup> For more information on these issues, please see further exploration and elaboration in comments written by the Center on Race, Poverty & the Environment and cosigned by CBE.

all of its estimates. Throughout its pages, the proposed regulation violates the letter and spirit of AB32.

AB32 specifically requires that ARB “ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.”<sup>2</sup> The regulations may not “interfere with efforts to achieve and maintain federal and state ambient air quality standards to reduce toxic air contaminants,”<sup>3</sup> must minimize leakage,<sup>4</sup> “consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, the environment and public health”,<sup>5</sup> and “consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases<sup>6</sup>. But if ARB adopts a cap and trade program, AB32 additionally requires ARB to affirmatively “design” the program “to prevent any increase in emissions of toxic air contaminants or criteria pollutants,”<sup>7</sup> consider direct, indirect and cumulative emission impacts from the program, and direct private and public funds to disadvantaged communities.<sup>8</sup> The proposed regulations overwhelmingly ignore these requirements, and ARB’s failure to analyze reasonable alternatives makes adoption of the draft regulations even more irrational.

The comments below find:

- **Industrial GHG emission sources are massive** (largely oil industry emissions), but still underestimated in CARB documents
- **Despite the volume and toxicity of industrial co-pollutants (especially oil industry), there are zero tonnes of direct controls required for this source** – all are allowed to be completed through buying pollution credits from outside any particular industry, and carried out outside California or the U.S.
- **Furthermore, industrial sources are not required even to buy credits under the proposal** – they are 100% free.
- **Large California NOx, CO, and other co-pollutant reductions can be achieved if an alternative is adopted requiring direct control measures<sup>9</sup>**

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<sup>2</sup> H&S Code § 38562(b)(2).

<sup>3</sup> H&S Code § 38562(b)(4).

<sup>5</sup> H&S Code § 38562(b)(6).

<sup>6</sup> H&S Code § 38562(b)(9).

<sup>7</sup> H&S Code § 38570(b)(2).

<sup>8</sup> H&S Code § 38565.

<sup>9</sup> Termed by CARB as measures “complementary” to Cap and Trade, and agreed by CARB and other agencies to be key for overall success of the program.

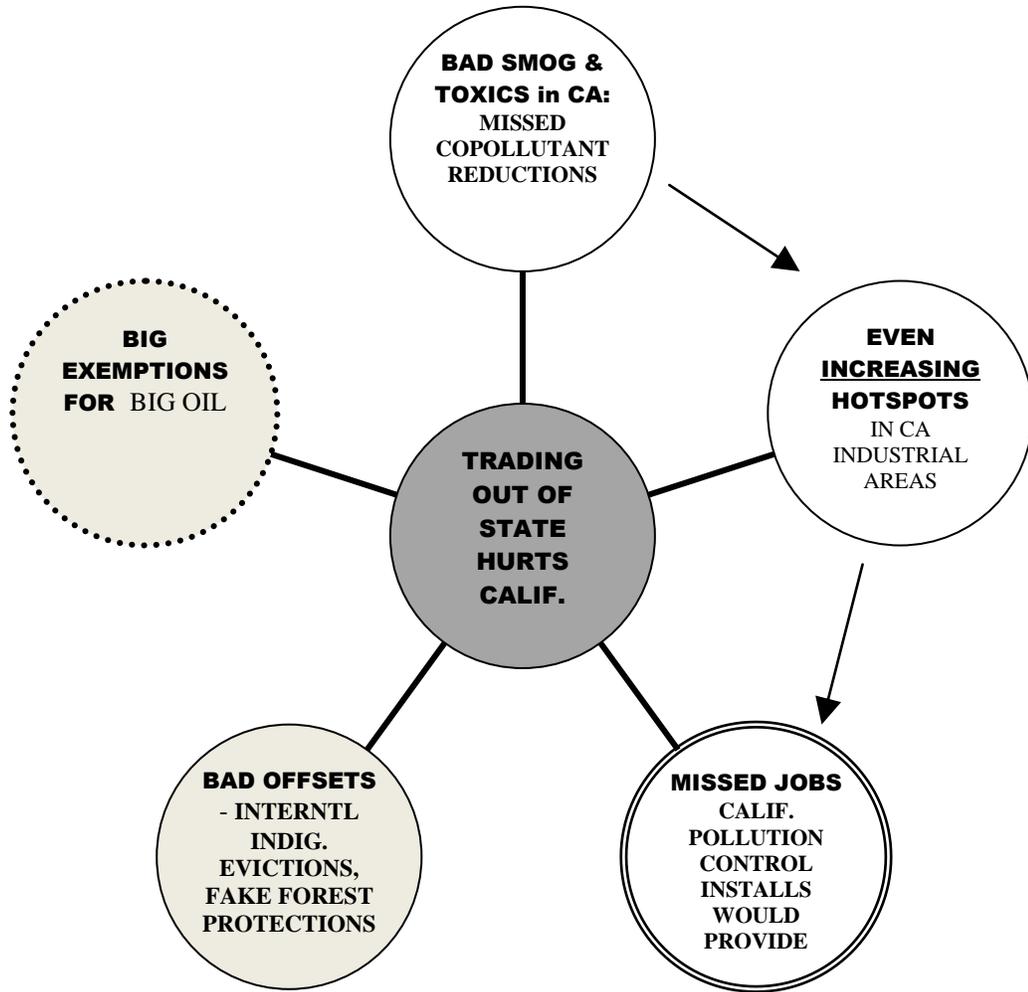
using methods known by CARB (e.g. for boilers and heaters). These co-pollutants otherwise cause large cumulative impacts in communities of color. Similarly CARB should evaluate other co-pollutants including pm2.5 and toxics which feasible direct controls would achieve. AB32 requires addressing the co-pollutants issues, but the proposed Cap and Trade regulation and Scoping Plan do not.

- **Such project alternatives just described would create California jobs, California health improvements,** and the best model for regions outside California to replicate. They were not considered. Cost effectiveness calculation of such controls should include the benefits of reducing GHGs, reducing smog and toxics, and reducing health impacts.
- **The current project not only misses these opportunities, but allows harms to California,** for instance, by allowing increasing industrial pollution in heavily industrialized California communities, and by causing evictions of indigenous people through fake forest offset projects.
- **Outright exemption from regulation is provided for large portions of oil refinery sources,** which must also be removed (see below).
- Available measures for industrial sources that should be added, include:
  - Implementing **industrial boiler and heater replacement** listed by CARB in the published spreadsheets
  - **Removing methane exemptions** present in California smog regulations, which will reduce both GHGs and regional smog co-pollutants.
  - Requiring implementation of specific refinery by refinery measures identified in the **industrial energy efficiency audits**
  - **Limits on the use of dirty crude oil,** which is similar to what the electric power industry must meet.
  - **A thorough evaluation of Reasonably Available Control Measures** at oil refineries and industrial sources, minimizing both GHGs and co-pollutants
  - Additional measures discussed in this document
- **CARB originally considered direct control of oil refinery reduction measures and found them feasible,** but later lumped oil refineries and industrial sources in with all other Cap and Trade sources, despite findings that direct controls were

feasible. If CARB made these fixes for industrial sources and as well for other sources causing health impacts in California (such as agricultural and electrical sources), the severe impacts caused by Cap and Trade, and the ineffectiveness of it, would be greatly lessened.

- **CARB must include a strategy to implement the requirement to direct monetary benefits to disadvantaged communities.**

**Overview of Cap & Trade harms:**



**I. Cap & Trade Industrial GHG reductions are tiny & can be beefed up; if instead achieved in-state, they would generate local jobs, health benefits, and be verifiable**

**A. Industrial emissions, especially oil industry, are big but underestimated**

The success of cap and trade programs is dependent on identifying the correct number of reductions needed, requiring those reductions, and setting a low enough cap, but CARB systemically miscalculates industrial emissions, making it difficult or impossible to verify reductions in comparison to the targets and initial allocations.

Moreover, AB32 requires ARB to adopt regulations to achieve the maximum technologically feasible GHG reductions from sources and categories of sources.<sup>10</sup> Here, GHG industrial sources are very large, but reductions in the proposed Cap and Trade plan, especially for oil refineries, are miniscule, despite many available options for reductions. Total emissions from the capped portion of this sector were found by CARB at 75.69 million metric tonnes CO2 equivalent (or MM tonnes CO2e) in 2008. An excerpt from CARB's document *2020\_ghg\_emissions\_forecast\_2010-10-28* (attached), last updated 10/28/2010 shows the large contribution of different industrial subsectors to California (shown projected without Scoping Plan reductions):<sup>11</sup>

Category	2008	2009	2010	2011	2012
<b>Grand Total</b>	<b>474.64</b>	<b>457.65</b>	<b>462.04</b>	<b>463.23</b>	<b>470.37</b>
<b>Industrial (Capped)</b>	<b>75.69</b>	<b>74.15</b>	<b>73.26</b>	<b>73.42</b>	<b>73.66</b>
Cement Plants	8.64	8.64	8.64	8.64	8.64
Cogeneration Facilities	11.13	10.37	10.02	9.87	9.81
Hydrogen Plants	2.22	2.20	2.18	2.18	2.18
Petroleum Refining	34.58	34.24	33.89	33.89	33.87
Other	0.21	0.20	0.20	0.21	0.22
General Stationary Combustion	18.91	18.50	18.32	18.63	18.94

2013	2014	2015	2016	2017	2018	2019	2020
<b>480.40</b>	<b>487.35</b>	<b>492.01</b>	<b>494.66</b>	<b>497.88</b>	<b>500.76</b>	<b>503.76</b>	<b>506.78</b>

<sup>10</sup> H&S Code §38560.

<sup>11</sup> *California GHG Emissions - Forecast (2008-2020)*, 10/28/2010, *2020\_ghg\_emissions\_forecast\_2010-10-28*, [http://www.arb.ca.gov/cc/inventory/data/tables/2020\\_ghg\\_emissions\\_forecast\\_2010-10-28.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/2020_ghg_emissions_forecast_2010-10-28.pdf)

74.03	74.10	74.12	74.17	74.20	74.20	74.21	74.21
8.64	8.64	8.63	8.63	8.63	8.63	8.63	8.63
10.08	10.27	10.46	10.65	10.83	11.01	11.19	11.38
2.18	2.18	2.17	2.17	2.17	2.17	2.17	2.17
33.85	33.82	33.80	33.77	33.75	33.72	33.69	33.66
0.23	0.23	0.23	0.24	0.24	0.24	0.25	0.25
19.06	18.97	18.83	18.70	18.57	18.43	18.28	18.13

The table shows industrial emissions at about 74 MM tonnes CO<sub>2</sub>e from 2008 to 2020. Oil refineries, the largest industrial subsector, is shown at about 34 MM tonnes CO<sub>2</sub>e over this period. The whole industrial sector in fact is even larger when uncapped industrial sources are included. Another CARB chart (*Gross emissions and sinks* excerpted below) provides the total for all industrial sources at about 100 MM tonnes CO<sub>2</sub>e.

Oil industry sources are even bigger than they appear, because the listings split them into separate categories, with some categories not clearly labeled. Oil refineries should be added to Hydrogen Plants (which produce hydrogen at oil refineries for oil refinery use, by burning fossil fuels), and added to a large portion of the Cogeneration total, since large numbers of cogeneration comes from oil refinery sources.

It appears that another hidden oil industry source is also contained under the label “General Stationary Combustion.” This can be determined by reviewing the CARB table below. “Oil & Gas Extraction” at 17.04 MM apparently makes up most of the 18.91 MM tones of “General Stationary Combustion.” Because the oil industry is not only a major contributor to GHGs and toxics, the breadth of the oil industry sources should be made clear in the inventories.

**California Greenhouse Gas Inventory for 2000-2008 — Summary by Economic Sector<sup>12</sup>**

<sup>12</sup> [http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_sector\\_00-08\\_sum\\_2010-05-12.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_00-08_sum_2010-05-12.pdf)

<i>Gross emissions &amp; sinks</i>	<i>2008</i>
<b>Industrial</b>	<b>100.03</b>
<i>CHP: Industrial</i>	10.47
<i>Landfills</i>	6.71
<i>Manufacturing</i>	22.47
<i>Mining</i>	0.19
<i>Not Specified Industrial</i>	2.24
<i>Oil &amp; Gas Extraction</i>	17.04
<i>Petroleum Marketing</i>	0.00
<i>Petroleum Refining</i>	35.60
<i>Pipelines</i>	2.62
<i>Wastewater Treatment</i>	2.70

This puts the oil industry sources in the CARB documents at:

- Oil refineries 34 MM tonnes
- + Hydrogen plants about 2MM tonnes
- + Oil and gas extraction at 17 MM tonnes
- + Cogeneration -- some large portion of 11 MM tonnes

**= about 55 to 60 MM tonnes from the oil industry,**  
currently required to achieve zero direct emission reductions

Even this large sum of emissions is an underestimation.

Hydrogen Plant emissions are underestimated:

For example, hydrogen plants at oil refineries are growing at a fast rate, in order to allow refineries to process heavier, more contaminated crude oil. Just one hydrogen plant can emit over a million tonnes per year of CO<sub>2</sub>e (such as at the ConocoPhillips Rodeo facility<sup>13</sup>), so it is almost certain that the total of 2.22 MM tonnes listed for hydrogen plants now is actually much higher and getting even bigger than listed in the CARB chart.

CBE has previously provided a partial list of additional hydrogen plant projects in comments to CARB, and we incorporate those by reference. CBE also previously requested that CARB perform a more detailed assessment of planned hydrogen plants expansions at refineries, and we included the following chart in both written comments

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<sup>13</sup> Excerpt of ConocoPhillips Rodeo Refinery Clean Fuels Expansion Project, Final Environmental Impact Report, Volume 1 – Response to Comments, cover and table of GHG emissions, Attachment CBE 1 - ConocoPhillips Rodeo H2 Plant GHGs

submitted,<sup>14</sup> and in testimony at a CARB hearing. This chart shows that just due to new hydrogen plants added, or in the process of being built, in the last decade, about 6 million tonnes per year of CO2 emissions were added.. This is a continuing trend that needs to be reigned in; it is caused by huge GHG increases that appear not to be accounted for by CARB, as well as by big local pollution increases during these oil refinery expansions that are occurring for the purpose of switching to heavier, more contaminated, cheaper crude feedstocks at oil refineries.

<b>Examples of CA Refinery Hydrogen Plant Expansions</b> (not comprehensive) (million standard cubic feet)	<b>Approximate CO2 Emissions</b> (metric tonnes /yr)
2007 ConocoPhillips Rodeo --120 MMscf	at least 1,250,000
2007 Chevron Richmond -- 100 MMscf	at least 900,000
2007 Valero Benicia – unknown MMscf	≈ 860,000
2003 Chevron El Segundo -- 90MMscf	≈ 940,000
1999 Air Products Wilmington for area refineries -- 96 MMscf	≈ 1,000,000
1996 Air Products for Ultramar, Wilmington --83 MMscf	≈ 860,000
<b>493 MMscf (million standard cubic feet)</b>	<b>Almost 6 million metric tons per year</b>

Furthermore, GHGs from oil refineries overall are getting worse due to switches to dirtier crude oil, running counter to other industries (such as electric power plants), which are switching to lighter feedstocks. The recent peer-reviewed study published by CBE Senior Scientist Greg Karras in the journal *Environmental Science and Technology*<sup>15</sup> found that very large increases in GHG emissions are occurring due to the switching to dirtier crude oil at oil refineries, underlining the importance of accurate inventories and

<sup>14</sup> Attachment C -- Comments on CARB AB32 Scoping Plan, Oil Refineries, by CBE (part of a 3-part comment by EJ groups, previously submitted to CARB, May 2008, attached, Attachment CBE 2 – Previous CBE Comments May 2008

<sup>15</sup> *Combustion Emissions from Refining Lower Quality Oil: What Is the Global Warming Potential?*, *Environ. Sci. Technol.*, 2010, 44 (24), pp 9584–9589, DOI: 10.1021/es1019965, November 30, 2010, Copyright © 2010 American Chemical Society <http://pubs.acs.org/doi/abs/10.1021/es1019965>, Attachment CBE 3 – GKarras Environ Sci Technol paper High GHGs Dirty Crude

forecasts, and controls and limits addressing this switch. While CBE has testified on this issue to CARB for a number of years, and CARB is well aware of this general trend, the new study provides a detailed evaluation of data nationally, which shows in detail how sharp this increase is. The paper found: *“Fuel combustion increments observed predict that a switch to heavy oil and tar sands could double or triple refinery emissions and add 1.6–3.7 gigatons of carbon dioxide to the atmosphere annually from fuel combustion to process the oil.”* We urge CARB to review the attached publication, and to address this issue.

#### Pressure for growth in polluting oil refinery cogeneration of electricity

In addition, oil refineries have pushed for subsidized cogeneration, a truly bad idea, which would replace clean energy electricity, with oil refinery-generated electricity. While industrial energy efficiency is essential, and while existing refinery processes should be required to capture waste heat, adding unneeded, expanding oil refinery electricity is directly counter to the RPS (Renewable Portfolio Standard), which is aiming at converting fossil fueled electricity into clean electricity. **CARB must not allow oil refinery-generated electricity to subvert this process and take us backwards.**

#### Large portions of refineries have been removed from regulation by redefining them as non-refineries

Even the seemingly straightforward category of “oil refineries” is being parsed into bits, with oil refineries that process intermediate materials being exempted, and even removed from the definition of oil refineries in the regulation, despite the fact that they are inherently part of an oil refining company’s overall production process. It is unclear whether the re-defined refinery portions are included in the capped emission estimation of 34 MM tonnes or not, but it is clear they are exempted from the caps. This approach undermines the requirement to adopt regulations that achieve technologically feasible GHG reductions from sources and categories of sources because it allows large unregulated oil refining emissions.<sup>16</sup> The proposed Cap and Trade oil regulation definition states:

*“Petroleum refinery” or “refinery” means any facility engaged in producing gasoline, gasoline blending stocks, naphtha, kerosene, distillate fuel oils, residual fuel oils, lubricants, or asphalt (bitumen) through distillation of petroleum or through re-distillation, cracking, or reforming of unfinished petroleum*

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<sup>16</sup> H&S Code § 38560.

*derivatives. Facilities that distill only pipeline transmix (off-spec material created when different specification products mix during pipeline transportation) are not petroleum refineries, regardless of the products produced.*<sup>17</sup>

**Recommendation:** **The last sentence in the regulation definition should be struck**, as this definitional difference has no relation in determining whether such facilities emit large amounts of GHGs, criteria pollutants, or toxics. CARB should use standard industrial classification codes for oil refineries used by EPA and remove baseless exemptions, to prevent large unregulated oil refining emissions.

CARB provided no evaluation of the environmental impacts caused by exempting these sources. This definition is another means by which the oil industry has received special unnecessary exemptions from regulation under the Scoping Plan and its implementation. Many individual oil refining companies own geographically separated facilities that nevertheless are operated together as an integrated refining operation whether or not one portion treats intermediate materials. Regional smog regulators routinely treat these facilities as one facility, and would never consider exempting them from regulatory standards, such as Clean Air Act requirements, based on whether they process “transmix” materials, rather than based on their actual air emissions and impact on the environment. For greenhouse gas purposes, there is similarly no justification for treating some refinery facilities as exempt without at least providing an emission threshold above which they are subject to regulation. Other entities must abide by simple emission thresholds (>25,000 metric tonnes), so this exemption also represents an unfair business practice, with oil refineries getting a sweetheart deal.

## **B. Oil industry reductions are small or non-existent**

The industrial sector has zero tonnes of specific reduction requirements, as provided by CARB in the chart below, including for the largest sources, the oil industry. This most polluting industrial sector has been successful in winning the complete abandonment in control requirements, a fact which is nothing less than shameful for our State. AB32 requires ARB to consider the significance of the contribution of each source or category of sources (in adopting a regulation).<sup>18</sup> There is no way this can be argued as

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<sup>17</sup> Regulation Definitions, page A-28, <http://www.arb.ca.gov/regact/2010/capandtrade10/capv1appa.pdf>

<sup>18</sup> H&S Code §38562(b)(9).

meeting AB32's requirement to maximize reductions, and to reduce co-pollutants.<sup>19</sup>  
 CBE urges CARB to correct this egregious error.

**Greenhouse gas Reductions from Ongoing, Adopted and Foreseeable Scoping Plan Measures<sup>20</sup>**

*Million tonnes of CO2 equivalent*

<b>Total of All Measures</b>	<b>62.0</b>
<b>Measures in Capped Sectors</b>	<b>49.0</b>
<i>Transportation</i>	<b>24.4</b>
T-1 Advanced Clean Cars	3.8
T-2 Low Carbon Fuel Standard	15.0
T-3 Regional Targets (SB375)	3.0
T-4 Tire Pressure Program	0.6
T-5 Ship Electrification	0.2
T-7 Heavy Duty Aerodynamics	0.9
T-8 Medium/Heavy Hybridization	0.0
T-9 High Speed Rail	1.0
<i>Electricity and Natural Gas</i>	<b>24.6</b>
E-1 Energy Efficiency and Conservation	7.8
CR-1 Energy Efficiency and Conservation	4.1
CR-2 Solar Hot Water (AB 1470)	0.1
E-3 Renewable Electricity Standard (20%-33%)	11.4
E-4 Million Solar Roofs	1.1
<i>Industry</i>	<b>0.0</b>
I-1 Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	0.0
<b>Measures in Uncapped Sources/Sectors</b>	<b>12.9</b>
H-1 Motor Vehicle A/C Refrigerant Emissions	0.2
H-2 SF6 Limits on non-utility and non-semiconductor applications	-
H-3 Reduce Perfluorocarbons in Semiconductor Manufacturing	0.2
H-4 Limit High GWP use in Consumer Products	0.2
H-6 Refrigerant Tracking/Reporting/Repair Deposit Program	5.8
H-6 SF6 Leak Reduction and Recycling in Electrical Applications	0.1
F-1 Sustainable Forests	5.0
RW-1 Landfill Methane Control Measure	1.5

*Last Updated: 10/28/2010*

According to CARB's regulation notice document, the entire Cap and Trade regulation will get 18 to 27 MMTCO<sub>2</sub>e reduction by 2020, but none of these reductions are required to be achieved by oil refineries.<sup>21</sup> The regulation and staff report documents make it clear that no entity is required to reduce emissions at their site.

<sup>19</sup> H&S Code §§ 38560, 38562(b)(6), 38570(b)(2).

<sup>20</sup> CARB, reproduced above and available at:

[http://www.arb.ca.gov/cc/inventory/data/tables/reductions\\_from\\_scoping\\_plan\\_measures\\_2010-10-28.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/reductions_from_scoping_plan_measures_2010-10-28.pdf)

<sup>21</sup> "Staff estimates that implementation of the proposed regulation would reduce GHG emissions by 18 to 27 MMTCO<sub>2</sub>e in 2020." *Notice of Public Hearing to Consider the Adoption of a Proposed California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms Regulation, including Compliance Offset Protocols*, <http://www.arb.ca.gov/regact/2010/capandtrade10/capnotice.pdf>

A highly preferable alternative proposal would have been a thorough evaluation of Reasonably Available Control Measures necessary to meet CARB's requirements under AB32 for maximum reductions, to reduce smog in non-attainment zones, and toxics in overburdened heavily industrial areas. The following sections identify specific sources that should have been considered. For example, additional reductions could be achieved from:

- Requiring In-State reductions from industrial **boilers and heaters**, which CARB has already identified
- Removing **industrial exemptions for methane** from smog regulations,
- Requiring implementation of specific refinery by refinery measures identified in the **industrial energy efficiency audits**
- Limiting emissions and conversion to processing **Heavier Crude** at oil refineries (which is not cancelled out by adding polluting ethanol to gasoline)
- Requiring oil refineries to **switch fossil fuel electricity** use to clean alternative energy sources (since oil refineries use significant electricity)

More detail is provided below. CARB also found during the Scoping Plan process that many of these refinery control measures are feasible, but never required that these be carried out.

### **C. Boiler and Heater NOx and CO Co-pollutant emissions are large and if directly controlled would yield large local health benefits**

AB32 requires ARB to design the program to *prevent* any increase in emissions of toxic air contaminants or criteria pollutants.<sup>22</sup> It also requires it to consider the overall societal benefits of reducing other air pollutants and benefits to the environment and public health.<sup>23</sup> Yet the draft regulation demonstrates that reductions could have been achieved to substantially reduce co-pollutant emissions but was rejected.

CARB provided two spreadsheets calculating available measures for reducing CO2 emissions from industrial boilers and heaters, which are major pollution sources.<sup>24</sup> Measures include replacing old boilers of low or medium

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<sup>22</sup> H&S Code § 38570(b)(2).

<sup>23</sup> H&S Code § 38562(b)(6).

<sup>24</sup> Compliance Pathways Analysis – Boilers, available at <http://www.arb.ca.gov/cc/capandtrade/capandtrade/compathboiler.xls> and Compliance Pathways Analysis -

efficiency, optimizing combustion, improving insulation maintenance, etc. (listed below and in the attached spreadsheets). CARB identified how much energy would be saved for each of these measures in MMBTU (million British Thermal Units). CARB provided these reduction opportunity calculations not because these are being directly mandated, but to show possible ways that industrial sources *could* reduce, but are nevertheless allowed to buy their way out of under Cap and Trade. There was no showing that these reductions would not have been cost-effective. Regardless, the CARB list underscores the availability of measures for direct control. If these controls were implemented locally instead of traded, they would not only result in the CO2 emissions reductions identified by CARB, but would also result in very substantial co-pollutant reductions. **CARB should have considered such an alternative project to address co-pollutant impacts.**

It is a simple matter to calculate the co-pollutants associated with the energy savings identified in the boiler and heater spreadsheets. For example, standard AP42 emission factors for NOx and CO are available, based on natural gas combustion.<sup>25</sup> This will generally underestimate emissions because more polluting fuels are often used by these boilers and heaters, but applying the natural gas factors provides a conservative estimation, and still comes out to large emissions. The result, in tons per day, is provided below. The detailed tables are attached as an appendix. The full spreadsheets are separately attached.

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Process Heaters, available at <http://www.arb.ca.gov/cc/capandtrade/capandtrade/compathprocessheat.xls>, also attached with CBE calculation sheet added to original CARB spreadsheet, Attachment CBE 4 – CBE calcs added to CARB Boiler data, and Attachment CBE 5 – CBE calcs added to CARB Heater data

<sup>25</sup> AP42 Chapter 1.4 provides the emission factors in units of lbs/scf (standard cubic feet of natural gas). Calculating as if all the units used natural gas, which is about 1020 btu/scf, we can convert the emissions factors to lbs NOx and CO per MMBTU. Since CARB provides the MMBTU, our spreadsheet provides the results in lbs NOx and CO. CARB's data was for 2008 annual emissions. Converting lbs/year to tons per day (a standard form used to evaluate the significance of criteria pollutants or smog precursors) yields the data provided in the chart below. CBE's spreadsheet, which includes the CARB spreadsheets plus CBE's NOx and CO calculations, is attached., Attachment CBE 6 – AP42 Chapter 1.4

The results are:

**Boiler NOx** reductions of 16.44 tpd + **Heater NOx** reductions of 7.35 tpd  
= **about 24 tons per day NOx**

**Boiler CO** reductions of 5.7 tpd + **Heater CO** reductions of 2.47 tpd  
= **about 8 tons per day CO**

For comparison, the following South Coast Air Quality Management District's ("SCAQMD") 2007 Clean Air Plan chart<sup>26</sup> shows total NOx for all the region's oil refineries averaged at about 13 tpd and total refinery CO emissions averaged at about 20 tpd:

**Total Criteria Emissions South Coast Oil Refinery Emissions Data**

(tons per day)	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Average of 2001-2002 & 2002-2003 time periods
ROG	8.0	7.7	7.3	8.2	7.9	7.7
NOx	20.1	15.5	13.4	12.8	12.3	13.1
SOx	21.3	19.9	17.2	15.8	14.0	16.5
CO	18.4	14.6	18.2	22.0	21.8	20.1
PM	4.0	4.0	4.0	3.6	3.7	3.8

**This demonstrates that NOx and CO reductions achievable statewide from directly controlling industrial boilers and heaters is large,** using the methods identified by CARB. Reductions are on a par with the entire NOx and CO refinery emissions in the Los Angeles region. This region is the biggest refining area in the state. The Cap and Trade program on the other hand, allows refineries to buy their way out of achieving these reductions through credits obtained from other states or countries. Since most of these refinery sources are located in heavily industrial area, in communities of color, these sources create cumulative impacts in these areas, and allowing refineries to do buy pollution credits instead of directly controlling these sources, is inconsistent with environmental justice.

**D. Methane is exempted from smog regulations, statewide**

<sup>26</sup> *Refinery Trends – Criteria Pollutants*, 8/18/05, [http://www.aqmd.gov/prdas/refinery/pdf/emission\\_trend.pdf](http://www.aqmd.gov/prdas/refinery/pdf/emission_trend.pdf), attached, Attachment CBE 7 – SCAQMD Refinery Criteria Pollutants

Comments submitted to CARB by CBE in May of 2008 on the Scoping Plan identified, based on CARB data, methane emissions that are exempt from regulation. For example, three categories of Stationary Sources listed (Fuel Combustion, Petroleum Production and Marketing, and Industrial Processes) emitted about 466 tons per day (about 170,000 tons methane per year) of exempt compounds, which is likely to be mostly methane. This is about 4 million tons CO<sub>2</sub>e per year. There is no reason to continue exempting these emissions, either for smog, or for GHG impacts. Please see the attached comments, page 10.<sup>27</sup> It is now known that methane is a considerable contributor to smog, as also discussed in this earlier comment. AB32 requires the maximum technologically feasible GHG reductions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride; carbon is only one GHG.<sup>28</sup> Furthermore, CARB should remove entirely the methane exemptions for all sources in the state, including transportation sources. CBE proposed this, and CARB found it to be a feasible reduction measure, but never implemented it. Now CARB should evaluate adding this measure as a complementary reduction, as an alternative to the current Cap and Trade proposal, in order to achieve the maximum technologically feasible reductions.

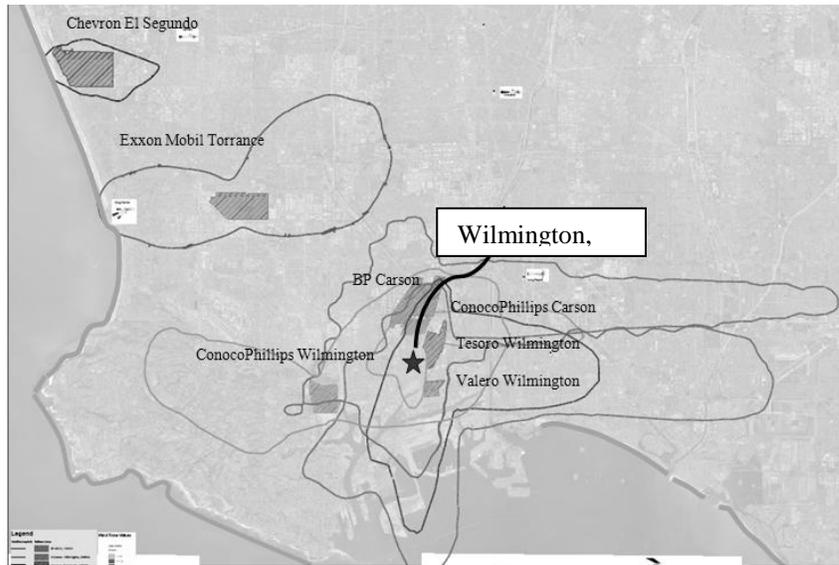
#### **E, Needed Co-Pollutant reductions do not address Environmental Justice issues**

Any area with one refinery in it is impacted by a major pollution source. One example of extreme Environmental Injustice impacts due to the oil industry, with the very highest concentration of oil refineries in the state, is the Wilmington/Carson area in Southern California which contains about a third the state's refining capacity. This area includes about half of Los Angeles' refining capacity (five refineries and about 650,000 bpd). In the Los Angeles region overall, refineries dominate the top 15 VOC (Volatile Organic Compound) emitters, out of many hundreds of Stationary Sources listed by SCAQMD in the 2007 Air Quality Management Plan. The Wilmington Area includes about half the refinery VOCs emissions<sup>1</sup> (about 1,600 out of 3,200 tons per year) in the LA region. A plume map provided by SCAQMD graphically displays that Wilmington receives the air pollution from five overlapping refining plumes (isopleths) generated over this area (two ConocoPhillips refineries, Valero, BP, and Tesoro):

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<sup>27</sup> Ibid, Attachment C -- Comments on CARB AB32 Scoping Plan, Oil Refineries, by CBE (part of a 3-part comment by EJ groups, this portion provided by CBE, attached), May 2008

<sup>28</sup> H&S Code §§ 38505(g), 38560.



Wilmington has the following demographics,<sup>29</sup> which demonstrate that people of color and low income people are bearing the brunt of the heavy industry concentration in this area.

	<b>Wilmington</b>	<b>LA</b>
Hispanic or Latino of any race	85%	45%
Median household income	\$30,260	\$42,190
Individuals below the poverty level	27%	18%

As if this extreme concentration of oil refineries was not enough to warrant local cleanup efforts, this area also includes oil drilling operations (Wilmington is the third largest oil field in the U.S.), extreme heavy diesel truck traffic (as a major goods movement corridor), the biggest Ports in the Country (Ports of LA and Long Beach which are the biggest single pollution sources in the area), and hundreds of other industrial sources. Clearly, refining areas are in need of direct, local pollution controls, not the potential for further concentration and expansions that the Cap and Trade proposal makes likely, through allowing refineries to buy their way out of local pollution control.

<sup>29</sup> U.S. Census Bureau, Zip Code Tabulation Area 90744, Census 2000 Demographic Profile Hlghlights

## **II. The Cap and Trade regulation can cause Co-Pollutant hotspots, especially due to foregoing reductions of more toxic emitters for more benign ones**

Pollution hotspots are areas where pollution concentrates locally rather than dispersing. (Greg Karras, *Flaring hot spots: Assessment of episodic local air pollution associated with oil refinery flaring using sulfur as a tracer* CBE Report (July 2005). Hotspots can have dire health and other quality of life consequences. For instance, modeling has shown that RECLAIM actually increased NO<sub>x</sub> concentrations in Wilmington, a low income community of color in Los Angeles, beyond what would have resulted without RECLAIM. (See Raul P. Lejano et al, *Testing the assumptions behind emissions trading in non-market goods: the RECLAIM program in Southern California*, ENV'T SCIENCE & POLICY 8 (2005) pp. 371, 374)

Hotspots are an issue in the carbon trading context because carbon dioxide is almost always released with other pollutants, or “co-pollutants. These co-pollutants can include particulate matter including heavy metals, VOCs such as benzene, sulfur compounds, and hundreds of other toxic compounds. If a facility located in an overburdened community “buys” carbon from other facilities so that it can increase its GHG emissions, it is also increasing its emissions of toxic compounds. Said another way, by taking pollution that occurs across a large area and concentrating that pollution in an environmental justice community, the toxic load in that community increases.

In addition, by mixing many different sources together into one big Cap and Trade program, the differences in co-pollutants emitted by different facilities and equipment is lost, and left unaddressed. Consequently an oil refinery CO<sub>2</sub> source that happens to have high benzene or high mercury, or high PM<sub>2.5</sub> co-pollutants emissions, is treated the same as a food industry source CO<sub>2</sub> that burns natural gas, but has low co-pollutant emissions. This allows an oil refinery source to avoid regulation, or even expand, by buying it's way out through clean up of a facility with less toxic co-pollutants. If the oil refinery uses forest credit offsets, it definitely means that a more toxic source (an oil refinery) is offset by a less toxic source.

The proposed regulation does nothing to avoid hotspots or co-pollutant emissions. Yet AB32 requires that,

*“Prior to the inclusion of any market-based compliance mechanism in the regulations . . . the state board shall . . . (1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution; (2) Design any market-based compliance*

mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.”<sup>30</sup>

This failure must be corrected. In fact, ARB failed to take the first step necessary to do the analysis to determine cumulative impacts.

***Framework for the Co-Pollutant Emissions Scenarios is flawed***

CARB did not properly assess the co-pollutant risk. Co-Pollutant Emissions Assessment is limiting in that it only identifies four “impacted communities” for the purposes of demonstrating the hypothetical bounding exercise and has a problematic boundaries for the communities. ARB should reduce the scale of this assessment to magnify the local communities that are experiencing high exposures to pollution. It is unclear why CARB chose to exclude the West Oakland community and the Port of Oakland and yet, include predominately white, upper class and upper middle class cities such as Piedmont, Orinda and Regional Parks areas in East Contra Costa County. If the intent was to give a regional assessment, CARB should have included the East Bay communities where local PM 2.5 daily concentrations are exceeding federal standards. Low-income communities of color such as in East Oakland are overburdened by exposure to fine particulates and other pollutants and are vulnerable to cumulative impacts<sup>31</sup>.

ARB should adopt and utilize the Environmental Justice Screening Method (EJSM) to identify and monitor communities highly impacted by the cumulative emissions.<sup>32</sup> The report states that this is not available on a statewide level, but the academic researcher team stated otherwise to the Environmental Justice Advisory Committee (EJAC) at their June 9, 2010 meeting. The EJAC strongly recommended that CARB utilize the tool to screen for impacted communities throughout the state to meet the requirements and the intent of AB 32<sup>33</sup>. The EJSM may also be used to screen for other categories of impacted communities, whether they are highly impacted or not in order to ensure pollution reductions in communities highly impacted and that no new hot spots are being created, especially in a “medium” impacted community. ARB includes three scenarios for Community Case Studies (Appendix P-50). We find Scenario 1 – where all covered facilities reduce within the community and use offsets within the community – highly unlikely in the regulation’s proposed form in Richmond and Wilmington, due to expected trends in increasing refinery capacities and the unlimited geographic boundaries of the offset program. There are no requirements or

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<sup>30</sup> § 38570(b)(1),(2). (Emphasis added)

<sup>31</sup> Communities for a Better Environment, Lee. East Oakland Particulate Matter 2.5 Community-based Air Monitoring Research Report. 2010. Available at: <http://www.cbecal.org/campaigns/oakland.html>

<sup>32</sup> See final EJAC comment letter. August 25, 2010.

<sup>33</sup> The final EJAC comment letter on the ‘Proposed Screening for Low-Income Communities Highly Impacted by Air Pollution for AB 32 Assessments’ dated August 25, 2010 is available for download at: <http://www.arb.ca.gov/cc/ejac/ejac.htm>

incentives to do this; in fact the whole regulation is stated to be designed for trading across state and international lines. However, this scenario could be more likely if the regulation is amended to geographically restrict trading and offsets. Scenario 2 – where all covered facilities increase their emissions – seems very likely, especially for sources like refineries, which are attempting to expand and will have to purchase offsets or additional allowances. Scenario 3 – where a new combined heat and power unit at an existing refinery is built in the community – there is a major deficiency in the analysis because it does not account for the possibility that refineries will utilize this increased efficiency in one area of the refinery to allow increased capacity to refine heavier, dirtier crude, resulting in a net increased emissions and exacerbating localized impacts. For example, CARB and the Air Quality Management Districts are well aware that this is the standard approach used in air permitting, and routinely carried out during expansions. Furthermore, due to the flexibility of the proposed regulation, we find the equally apportioned 4% greenhouse gas reduction at every cap-and-trade industrial and electricity generation facility in the community region extremely unrealistic.

***Restricted trading zones within already impacted communities***

The cap and trade regulation as currently proposed allows significant flexibility and benefits to polluters, but it impermissibly creates environmental justice problems. For example, because the regulation allows off-site reductions, we lose the potential for localized benefits and ARB creates a hard-to-track system that defeats the purpose of public vigilance and accountability. In highly impacted communities, there should be restrictions to trading to ensure meeting the requirements to not exacerbate hot spots of pollutions. Refineries will purchase additional credits or offsets if the cost of reducing greenhouse gases on-site exceeds the costs for other sectors because they can buy credits for a much lower cost. Oil refineries are expanding to accommodate a switch to process heavy crude oil in and around the Richmond and Wilmington communities.<sup>34</sup> Refinery emissions from fuel combustion are predicted to increase two to three times and add 1.6 to 3.7 billion tons greenhouse gas emissions annually from a switch to heavy crude oil or tar sands.<sup>35</sup> If trading is restricted to within these communities, reducing local emissions of criteria and air toxics will benefit the health of these same communities that are already overburdened by pollution. Furthermore, including direct emission reduction measures will ensure real, placed-based reductions, reduce cumulative impacts, and ensure meeting the maximum feasible reductions requirement of AB 32.

**II. Many inappropriate exemptions are provided in the proposed regulation**

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<sup>34</sup> See CBE's and the EJAC's comments on the Proposed AB 32 Scoping Plan.

<sup>35</sup> Ibid, Karras, G.

Despite the large emissions and low reductions for industrial pollution sources, the regulation goes even further to protect these sources from regulation by providing outright exemptions. For example:

§ 95852.2. Emissions without a Compliance Obligation.

**Emissions from the following source categories** as identified in sections 95100 through 95199 of the Mandatory Reporting Regulation count toward applicable reporting thresholds but **do not count toward a covered entity's compliance obligation set forth in this regulation.** These source categories include:

(f) Fugitive and process emissions from:

**(4) At petroleum refineries: asphalt blowing operations, equipment leaks, storage tanks, and loading operations; or**

**(5) At the facility types listed in section 95101(e) of the Mandatory Reporting Regulation, Petroleum and Natural Gas Systems: leak detection and leaker emission factors, and stationary fugitive and "stationary vented" sources on offshore oil platforms.**

Neither a justification for this exemption, nor an evaluation of impacts was provided, nor could we imagine any possible justification. These exemptions are entirely inconsistent with requirements for maximizing reductions and should be struck.

Another exemption is provided for the use of ethanol:

**§ 95852.2. Emissions without a Compliance Obligation.**

Emissions from the following source categories as identified in sections 95100 through 95199 of the Mandatory Reporting Regulation count toward applicable reporting thresholds but do not count toward a covered entity's compliance obligation set forth in this regulation. These source categories include:

(c) Fuel ethanol:

(1) Cellulosic biofuel produced from lignocellulosic or hemicellulosic material that has a proof of at least 150 without regard to denaturants;

(2) Corn starch; or

(3) Sugar cane.

Again, no justification can be provided for this exemption, since ethanol introduction has many environmental impacts in California, the rest of the U.S., and

internationally, since it greatly increases smog, water pollution, and causes displacement of better land uses. These impacts were documented in CBE's comments on the Scoping Plan, and we refer CARB to those comments, as well as comments made by SCAQMD regarding the problem of the inclusion of ethanol causing increased smog in the region. It is a bad idea to exacerbate this further by giving ethanol a free ride.

### **III. CARB's accounting systems, particularly the International Forest protection programs (REDD) are vulnerable to fraud, and causes indigenous people's evictions**

Three major criticisms of cap and trade schemes are that either the offsets themselves or the trading practices used to account for them are often not verifiable and are fraudulent, and that they can lead to oppression for indigenous communities.<sup>36</sup> The scoping plan proposes to expand a California cap and trade system to other countries where others might benefit from offsets. Put differently, AB32 would allow more pollution in California, including co-pollutants that would concentrate in low-income communities of color, with the hope that other countries will allow clean development. This vision fails to consider that these trades are not verifiable, they are often not surplus, they exacerbate the equivalency problem, and they increase the likelihood of oppression. AB32 specifically requires that the regulations do not disproportionately impact low-income communities,<sup>37</sup> that ARB consider the overall societal benefits of any regulation,<sup>38</sup> and that regulations minimize leakage<sup>39</sup>. These requirements have not been met.

The Indigenous Environmental Network (IEN) has documented severe impacts due to carbon credit trading involving forests, including fake forest protection projects that also cause harm to indigenous people. For example, a company which is responsible for large deforestation projects can clear cut old growth in Southeast Asia, then grow monocropped junk non-native junk trees on the same land, and be paid by fossil fuel polluters to do so. The land must be purchased by the forestry company in order to get paid for the credits. For these reasons, indigenous people are being evicted from lands after large companies purchase these lands. This is a lose-lose situation for the

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<sup>36</sup> For example, the regulations define (#143) "permanent" offsets as offsets that are permanent *or* have a system in place to replace them when they expire. This multilayered system of verification, particularly in an international context, will be extremely hard to monitor.

<sup>37</sup> H&S Code § 38562(b)(2).

<sup>38</sup> H&S Code § 38562(b)(6).

<sup>39</sup> H&S Code § 38562(b)(8).

environment – no reductions in fossil fuel are carried out because the polluter buys credits from the forestry operator. No forests are protected, and human rights are violated. California’s Cap and Trade program, which is seeking to expand internationally its linkage to other trading programs, is vulnerable to such bad offsets. IEN has published a popular education piece that graphically explains these problems. The publication includes detailed citations documenting examples of such occurrences. We urge CARB to evaluate this information, attached.<sup>40</sup>

#### **IV. The Proposed Regulation Fails to Fulfill the Mandate for Community Investment**

Nowhere in the regulations or even in the staff report did ARB describe a strategy to implement the requirement to direct monetary benefits to disadvantaged communities. Yet AB32 requires that,

The state board shall ensure that the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities in California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.<sup>41</sup>

In its discussion of the incomplete Health Impact Assessment, ARB notes that it will explore potential uses of revenue generated by the program to improve public health in California.<sup>42</sup> It also notes that distribution of revenues is an issue that deserves further discussion.<sup>43</sup> While the draft regulation does *recommend* a Community Benefit Fund, as noted in , none of these recommendations commits ARB to any concrete action that would actually move private and public money into disadvantaged communities. Moreover, the section lacks a clear vision on the mechanism for giving a value to the

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<sup>40</sup> IEN (Indigenous Environmental Network) Popular Education Piece: *We Want Your Land for Our Climate Fraud!* at <http://www.ienearth.org/REDD/redd.pdf> ; Top10 - What’s Wrong with REDD: <http://www.redd-monitor.org/2010/12/03/the-top-10-whats-wrong-with-redd/> ; Forest Destroying Oji Paper company and REDD:

<http://www.redd-monitor.org/2010/11/29/forest-destroyer-oji-paper-to-carry-out-redd-feasibility-study-in-laos/#more-6560>, Attachment CBE 8 – IEN We Want Your Land for Our Climate Fraud, Attachment CBE 9 – IEN Whats wrong with REDD, and Attachment CBE 10 – IEN Forest Destroying Paper Company

<sup>41</sup> H&S Code § 38565.

<sup>42</sup> Staff Report, page VII-2.

<sup>43</sup> *Id.*, VII-4.

carbon credits, determining the allocation to the CBF and the best way to direct investments to the communities most impacted by air pollution.

### ***Community Benefits Fund***

Communities for a Better Environment was a co-sponsor of AB 1405, De León, California Global Warming Solutions Act of 2006: California Climate Change Community Benefits Fund, which was vetoed by Governor Schwarzenegger recently. This bill would have ensured that the most impacted and disadvantaged communities would get their fair share of revenues and mitigations from the implementation of AB 32. In this piece of legislation, there were three essential components – the creation of the fund, a percentage of revenues generated to fund direct health and environmental mitigations, and a clear definition of the communities to benefit from the fund<sup>44</sup>. Though it did not pass, the inception and development of the bill provides a framework that the staff at CARB could use with amendments.

The amount going to these communities should be significant enough to fund sizeable projects that will have significant environmental benefits to local communities, especially communities living “fenceline” to pollution. Low-income communities tend to pay a higher proportion of their income on water, energy, and food than higher income people and this is expected to increase with the effects of climate change<sup>45</sup>. We recommend allocating no less than 30% of the total revenues generated from the annual purchase of allowances and offsets that will be allocated to CBF. The revenues should directly benefit local communities most impacted by climate change in California to mitigate the costs of reducing carbon, which disproportionately falls on low-income communities<sup>46</sup>. These communities need funds for planning, adaptation, mitigation, local solutions to reducing greenhouse gases and protecting their health now.

CARB should evaluate communities based on exposure to pollution as well as socioeconomic vulnerability that exacerbate the impacts of pollution. The academic research team of Rachel Morello-Frosch, Manuel Pastor, and Jim Sadd has been working on the EJSM as a product from contract work with the Air Resources Board and we believe this is the closest to the optimal statewide screening methodology for determining communities at the census tract level most impacted by pollution or cumulative impacts.<sup>47</sup> These indicators include: criteria and toxic air pollutant levels, proximity to

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<sup>44</sup> AB 1405 information is available at: [http://www.leginfo.ca.gov/cgi-bin/postquery?bill\\_number=ab\\_1405&sess=PREV&house=B&author=de\\_leon](http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_1405&sess=PREV&house=B&author=de_leon)

<sup>45</sup> Shonkoff SB, Morello-Frosch R, Pastor M, Sadd J. 2009. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature. Publication # CEC-500-2009-038-D. Available at: <http://www.climatechange.ca.gov/publications/cat/index.html>

<sup>46</sup> Shonkoff, *et al.* 2009.

<sup>47</sup> Environmental Justice Screening Methodology. Rachel Morello-Frosch, Jim Sadd, Manuel Pastor. June 9, 2010 Environmental Justice Advisory Committee Meeting. Presentation available for download at: <http://www.arb.ca.gov/cc/ejac/meetings/060910/presentation.pdf>

hazards, sensitive land use, poverty level, educational attainment, percent home ownership, housing value, sensitive populations (less than 5 years and older than 60 years old), birth outcomes, linguistic isolation, and voter turnout. AB 1405 included unemployment level, while the EJSM does not. We recommend that ARB use the EJSM in the development of the CBF to adequately screen for eligible communities, but also include the communities that may not be included in the screening due to non-incorporated status. The EJSM should also be updated on a frequent and regular basis to accommodate new and developing research and statewide databases.

CARB must develop specific criteria for how the CBF should be used in order to meet AB 32 requirements to ensure low-income communities are not disproportionately impacted and that there are other benefits beyond greenhouse gas reductions<sup>48</sup>. To address the need for stimulating the clean green tech industries, creating job training opportunities for low-income communities, job creation for low-income communities and to address possible disasters such as Hurricane Katrina, CBE recommends including, but not limiting the CBF funding these types of projects:

- projects that reduce both GHGs and co-pollutants in highly impacted communities, including stationary and mobile source pollution;
- non-fossil fuel electricity generating projects in and by local communities;
- green jobs training for low-income residents;
- disaster planning and preparedness, such as flooding, wildfires and other extreme weather events;
- creating community and specific plans to mitigate land use conflicts;
- reducing heat-island effects with strategies such as tree shade planting and “cool pavements”;
- improving access to mass transit for low-income riders;
- improving training of industry workers and reducing exposure to pollutants;
- supporting local sustainable agriculture;
- water conservation programs including water catchment projects for homes, roadways and buildings, and greywater use;
- improving water quality in low-income communities;
- and improving or creating park space in low-income communities.

### **Health Analysis Is Needed**

CARB needs to complete and include a health analysis before taking action on the proposed regulation. This assessment would include the existing localized health burdens, the impacts of free allowances, trading, out-of-state offsets, economic impacts

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<sup>48</sup> AB 32 requires consideration of “overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.” Health & Safety Code §38562(b)

and directing investments into the most impacted communities. This analysis is crucial to evaluating the proposed regulation.

Thank you for your consideration of our comments.

Sincerely,

Bill Gallegos, Executive Director, EJAC Representative  
Adrienne Bloch, Senior Attorney  
Julia May, Senior Scientist  
Anna Yun Lee, Staff Researcher/ Scientist, Alternate EJAC Representative  
Sally Newman, Legal Fellow

**Appendix:**

CBE's calculation of NOx Co-Pollutant Reductions achieved if the Industrial Boilers GHG reduction measures CARB identified were achieved In-State<sup>49</sup> (tons per day)

	1. REPLACE BOILERS		2. OPTIMIZE BOILERS		3. FEEDWATER ECONOMIZ		TOTAL 1-3
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	1.26	0.83	0.56	0.23	0.25	0.10	3.23
Food	0.08	0.06	0.05	0.02	0.04	0.02	0.27
Wood Prods	0.09	0.06	0.04	0.02	0.03	0.01	0.26
Chemicals	0.19	0.12	0.08	0.03	0.04	0.02	0.48
Oil and Gas	1.14	0.53	0.36	0.15	0.28	0.11	2.57
<b>Total</b>	<b>2.76</b>	<b>1.61</b>	<b>1.10</b>	<b>0.45</b>	<b>0.64</b>	<b>0.26</b>	<b>6.81</b>
	4. AIR PREHEATER		5. BLOWDOWN PRCTC		6. BLOWDWN HEAT RECOV		TOTAL 4-6
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.06	0.03	0.07	0.14	0.13	0.05	0.48
Food	0.01	0.00	0.01	0.02	0.01	0.00	0.05
Wood Prods	0.01	0.00	0.01	0.02	0.01	0.00	0.04
Chemicals	0.01	0.00	0.01	0.02	0.02	0.01	0.07
Oil and Gas	0.05	0.02	0.07	0.13	0.08	0.03	0.38
<b>Total</b>	<b>0.13</b>	<b>0.05</b>	<b>0.16</b>	<b>0.33</b>	<b>0.24</b>	<b>0.10</b>	<b>1.03</b>
	7. OPT STEAM QUAL		8. OPT COND REC		9. MINIM. VENTD STEAM		TOTAL 7-9
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.05	0.02	0.07	0.03	0.09	0.03	0.28
Food	0.01	0.00	0.01	0.00	0.01	0.00	0.04
Wood Prods	0.01	0.00	0.01	0.00	0.01	0.00	0.03
Chemicals	0.01	0.00	0.01	0.00	0.01	0.01	0.04
Oil and Gas	0.06	0.02	0.04	0.02	0.08	0.03	0.26
<b>Total</b>	<b>0.13</b>	<b>0.05</b>	<b>0.13</b>	<b>0.05</b>	<b>0.20</b>	<b>0.08</b>	<b>0.65</b>
	10 INSUL. MAINT.		11 STEAM TRAP MAINT.		12 STEAM LEAK MAINT.		TOTAL 10-12
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	1.17	0.21	1.26	0.85	0.42	0.17	4.08
Food	0.10	0.02	0.11	0.08	0.04	0.02	0.36
Wood Prods	0.09	0.02	0.09	0.06	0.03	0.01	0.31
Chemicals	0.17	0.03	0.19	0.13	0.06	0.03	0.60
Oil and Gas	0.75	0.14	0.80	0.54	0.27	0.11	2.60
<b>Total</b>	<b>2.28</b>	<b>0.41</b>	<b>2.45</b>	<b>1.66</b>	<b>0.82</b>	<b>0.33</b>	<b>7.95</b>
<b>GRAND TOTAL</b>						<b>Tons per day</b>	<b>16.44</b>
<b>Total from Petroleum, Chemicals, Oil &amp; Gas is biggest portion</b>						<b>Tons per day</b>	<b>15.08</b>

<sup>49</sup> Using AP42 NOx Emission Factors, based on data CARB provided for MMBTU energy saved for measures above

(Total shown excludes the small portion from Food & Wood Products)		
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**CO Co-Pollutant Reductions for Industrial Boilers (tons per day)**

	1. REPLACE BOILERS		2. OPTIMIZE BOILERS		3. FEEDWATER ECONOMIZ		TOTAL 1-3
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.38	0.37	0.17	0.10	0.08	0.05	1.14
Food	0.02	0.03	0.01	0.01	0.01	0.01	0.09
Wood Prods	0.03	0.03	0.01	0.01	0.01	0.01	0.09
Chemicals	0.06	0.05	0.03	0.02	0.01	0.01	0.17
Oil and Gas	0.34	0.23	0.11	0.06	0.08	0.05	0.88
<b>Total</b>	<b>0.83</b>	<b>0.71</b>	<b>0.33</b>	<b>0.20</b>	<b>0.19</b>	<b>0.12</b>	<b>2.37</b>
	4. AIR PREHEATER		5. BLOWDOWN PRCTC		6. BLOWDWN HEAT RECOV		TOTAL 4-6
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.02	0.01	0.02	0.06	0.04	0.02	0.18
Food	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Wood Prods	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Chemicals	0.00	0.00	0.00	0.01	0.01	0.00	0.03
Oil and Gas	0.01	0.01	0.02	0.06	0.02	0.01	0.14
<b>Total</b>	<b>0.04</b>	<b>0.02</b>	<b>0.05</b>	<b>0.15</b>	<b>0.07</b>	<b>0.04</b>	<b>0.38</b>
	7. OPT STEAM QUAL		8. OPT COND REC		9. MINIM. VENTD STEAM		TOTAL 7-9
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.01	0.01	0.02	0.01	0.03	0.02	0.10
Food	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Wood Prods	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Chemicals	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Oil and Gas	0.02	0.01	0.01	0.01	0.02	0.01	0.09
<b>Total</b>	<b>0.04</b>	<b>0.02</b>	<b>0.04</b>	<b>0.02</b>	<b>0.06</b>	<b>0.04</b>	<b>0.22</b>
	10 INSUL. MAINT.		11 STEAM TRAP MAINT.		12 STEAM LEAK MAINT.		TOTAL 10-12
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.35	0.09	0.38	0.38	0.13	0.08	1.40
Food	0.03	0.01	0.03	0.03	0.01	0.01	0.12
Wood Prods	0.03	0.01	0.03	0.03	0.01	0.01	0.11
Chemicals	0.05	0.01	0.06	0.06	0.02	0.01	0.21
Oil and Gas	0.22	0.06	0.24	0.24	0.08	0.05	0.89
<b>Total</b>	<b>0.68</b>	<b>0.18</b>	<b>0.73</b>	<b>0.73</b>	<b>0.24</b>	<b>0.15</b>	<b>2.73</b>
<b>GRAND TOTAL</b>						<b>Tons per day</b>	<b>5.70</b>
<b>Total from Petroleum, Chemicals, Oil &amp; Gas is biggest portion</b> (Total shown excludes the small portion from Food & Wood Products)						<b>Tons per day</b>	<b>5.23</b>

**NO<sub>x</sub> Co-Pollutant Reductions for Industrial Heaters** (tons per day)

	1. REPLACE HEATERS		2. OPTIMIZE HEATERS		3. RECOV. FLUE GAS HEAT		TOTAL 1-3
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	3.03	1.29	1.05	0.43	0.47	0.19	6.44
Food	0.06	0.02	0.02	0.01	0.02	0.01	0.13
Iron & Steel	0.03	0.01	0.01	0.00	0.01	0.00	0.06
Chemical	0.07	0.03	0.02	0.01	0.01	0.00	0.15
<b>Total</b>	<b>3.19</b>	<b>1.35</b>	<b>1.10</b>	<b>0.45</b>	<b>0.50</b>	<b>0.20</b>	<b>6.79</b>
	4. REPL BRICK		5. INSULATION MAINT.				TOTAL 4-5
	Cat. 1	Cat. 2	Cat. 1	Cat. 2			
Petroleum	0.06	0.03	0.07	0.14			0.30
Food	0.00	0.00	0.01	0.02			0.03
Iron & Steel	0.00	0.00	0.01	0.02			0.02
Chemical	0.00	0.00	0.01	0.02			0.03
<b>Total</b>	<b>0.07</b>	<b>0.05</b>	<b>0.10</b>	<b>0.33</b>			<b>0.55</b>
<b>GRAND TOTAL</b>						<b>Tons per day</b>	<b>7.35</b>
<b>Total from Petroleum, Chemicals, Oil &amp; Gas is biggest portion</b> (Total shown excludes the small portion from Food & Wood Products)						<b>Tons per day</b>	<b>7.10</b>

**CO Co-Pollutant Reductions for Industrial Heaters** (tons per day)

	1. REPLACE HEATERS		2. OPTIMIZE HEATERS		3. RECOV. FLUE GAS HEAT		TOTAL 1-3
	Cat. 1	Cat. 2	Cat. 1	Cat. 2	Cat. 1	Cat. 2	
Petroleum	0.91	0.57	0.31	0.19	0.14	0.08	2.20
Food	0.02	0.01	0.01	0.00	0.00	0.00	0.05
Iron & Steel	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Chemical	0.02	0.01	0.01	0.00	0.00	0.00	0.05
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	4. REPL BRICK		5. INSULATION MAINT.				TOTAL 4-5
	Cat. 1	Cat. 2	Cat. 1	Cat. 2			
Petroleum	0.02	0.01	0.02	0.06			0.12
Food	0.00	0.00	0.00	0.01			0.01
Iron & Steel	0.00	0.00	0.00	0.01			0.01
Chemical	0.00	0.00	0.00	0.01			0.01
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>			<b>-</b>
<b>GRAND TOTAL</b>						<b>Tons per day</b>	<b>2.47</b>
<b>Total from Petroleum, Chemicals, Oil &amp; Gas is biggest portion</b> (Total shown excludes the small portion from Food & Wood Products)						<b>Tons per day</b>	<b>2.38</b>

**List of Attachments to CBE Comment 12/15/2010 to CARB on Cap and Trade Regulation**

-  Attachment CBE 1 - ConocoPhillips Rodeo H2 Plant GHGs
-  Attachment CBE 2 – Previous CBE Comments May 2008 REFINERIES
-  Attachment CBE 3 – GKarras Environ Sci Technol paper High GHGs D...
-  Attachment CBE 4 – CBE calcs added to CARB Boiler data
-  Attachment CBE 5 – CBE calcs added to CARB Heater data
-  Attachment CBE 6 – AP42 Chapter 1.4
-  Attachment CBE 7 – SCAQMD Refinery Criteria Pollutants
-  Attachment CBE 8 – IEN We Want Your Land for Our Climate Fraud
-  Attachment CBE 9 – IEN Whats wrong with REDD
-  Attachment CBE 10 – IEN Forest Destroying Paper Company
-  Attachment CBE 11 – CBE Wilmington\_Refineries report

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<sup>i</sup> Attachment D, Draft 2007 AQMP Appendix III, Base and Future Year Emissions Inventories, 10/06,