APPENDIX G

RESPONSE TO COMMENTS RECEIVED ON THE PROPOSED PROJECT DURING THE RULE 1714 PUBLIC COMMENT PERIOD

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APPENDIX G – COMMENTS AND RESPONSES TO COMMENTS RECEIVED DURING THE RULE 1714 PUBLIC COMMENT PERIOD ULTRAMAR, INC. WILMINGTON REFINERY PROPOSED COGENERATION PROJECT

RESPONSE TO ADAMS AND BROADWELL LETTER

MAY 23, 2014

INTRODUCTION

These comments respond to comments provided by Adams and Broadwell on May 23, 2014 during the public comment period under SCAQMD Rule 1714 – Prevention of Significant Deterioration for Greenhouse Gases in preparation to issue SCAQMD Permits to Construct for the Ultramar Inc. Wilmington Refinery Cogeneration Unit.

On June 23, 2014, the U.S. Supreme Court held in *Utility Air Regulatory Group v U.S. Environmental Protection Agency (EPA)* that the U.S. EPA's regulations requiring a permit to operate for major sources of greenhouse gas (GHG) emissions under the Prevention of Significant Deterioration (PSD) were invalid to the extent the sources are not subject to PSD for other pollutants (i.e., nitrogen dioxide, sulfur dioxide, particulate matter, carbon monoxide, ozone, and lead), as is the case of the Cogeneration (Cogen) Unit. Subsequently, EPA promulgated a guidance memo on July 24, 2014, advising that EPA will "no longer apply or enforce PSD SIP provisions that require a stationary source to obtain a PSD permit if GHGs are the only pollutant (i) that the source emits or has the potential to emit above the major source thresholds, or (ii) for which there is a significant emission increase and a significant net emissions increase from a modification." Therefore, the SCAQMD will not be issuing a PSD permit for GHG on this Cogeneration Unit, and will not respond to those comments that relate to the PSD GHG permit. The responses to comments that relate to other aspects of the proposed Project analysis are included herein.

Comment Letter #1
Adams Broadwell Joseph & Cardozo – May 23, 2014

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May 23, 2014

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Re: Comments on the Proposed "Permits-to-Construct" for the Ultramar, Inc. (Valero Wilmington Refinery) Cogeneration Project and Supplemental Comments on the Negative Declaration Prepared for the Ultramar Inc. Wilmington Refinery Cogeneration Project

Dear Mr. Luong and Mr. Koizumi:

We are writing on behalf of California Unions for Reliable Energy ("CURE") to provide comments on the proposed Permits-to-Construct for the Ultramar, Inc. (Valero Wilmington Refinery) Cogeneration Project. These comments also supplement our June 4, 2013 comments on the Draft Initial Study and Negative Declaration ("IS/ND"), prepared by the South Coast Air Quality Management District ("SCAQMD" or "District") pursuant to the California Environmental Quality Act ("CEQA")[1] for the Ultramar Inc. Cogeneration Project ("Project"). Our supplemental comments address the draft IS/ND as it relates to the proposed Permits-to-Construct. Despite numerous requests from our office, the District has not released the final IS/ND to us. For this reason, we reserve the right to supplement these comments once the District's final CEQA document is made available to us. 1-1

Ultramar, Inc. ("Applicant") proposes to install and operate a 35 MW Cogeneration Unit at the existing Valero Wilmington Refinery. The Project 1-2

[1] Pub. Resources Code, §§ 2100 et seq.

includes a natural gas-fired turbine electric generator, a heat recovery steam generator equipped with a refinery fuel gas-fired duct burner for supplemental steam production, a selective catalytic reduction ("SCR") unit and catalyst, and an evaporative cooler, a new control room, two new natural gas supply pipelines, one process water pipeline, one fuel gas pipeline, and piping to connect to an existing aqueous ammonia tank to supply ammonia to the SCR unit. The steam needed to operate the Project would be provided primarily by existing refinery gas-fired boilers (86-B-9000, 86-B-9001, and 86-B-9002) with up to 10 percent of the steam provided by the adjacent Air Products Hydrogen Plant.[2]

According to the District, the purpose for the Project is to allow the Refinery to rely mainly on on-site power generation to supply the Refinery's electricity demand.[3] Currently, at least 70 percent of the electricity required to operate the Refinery is supplied by the Los Angeles Department of Water and Power ("LADWP") and the remaining 30 percent is supplied by the adjacent Air Products Hydrogen Plant facility.[4] The Project would provide a substitute power source for most of the generation that is now delivered by LADWP.

1-2 cont.

The Project is proposed to be located within the existing Ultramar/Valero Wilmington Refinery, located at 2402 East Anaheim Street, in the Wilmington District of the City of Los Angeles. In addition to Permits-to-Construct and Permits-to-Operate from the District, the Project requires a Coastal Development Permit from the California Coastal Commission.

Based upon our review of the IS/ND and supporting documentation, we conclude that the District failed to comply with CEQA.[5] In particular, the proposed Permits-to-Construct are deficient and must be withdrawn because they are inconsistent with the Project analyzed in the IS/ND. Moreover, the IS/ND is inadequate because it fails to include a complete Project description and relies on an inappropriate baseline to evaluate the Project's air quality impacts. Finally, a negative declaration is inappropriate and the District is required to prepare an Environmental Impact Report ("EIR") because the Project will result in potentially significant, unmitigated impact to air quality and public health. The District may not approve a permit for the Project until it complies with CEQA's requirements.

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[2] IS/ND, at p. 1-7.
[3] *See* IS/ND, at p. 1-1; *see also* SCAQMD, Notice of Intent to Issue Title V Permit "Permits-to-Construct" According to SCAQMD Rule 1714.
[4] *Ibid.*
[5] Pub. Resources Code, §§ 21000 et seq.
2899-013cv

We prepared these comments with the assistance of air quality expert Dr. Petra Pless. We request that the District address and respond to the comments of Dr. Pless separately. 1-3 cont.

I. STATEMENT OF INTEREST

CURE is a coalition of labor unions whose members encourage responsible and sustainable development that protects the environment where the coalition members and their families live, work, and recreate. CURE helps solve California's energy problems by building, maintaining, and operating conventional and renewable energy power plants. However, poorly designed power plants may degrade the environment by reducing ambient air quality, releasing hazardous and toxic substances into soils, groundwater and surface waters, and causing noise and visual intrusion. This in turn jeopardizes future development by causing construction moratoriums and otherwise reducing future employment opportunities for CURE's members.

Additionally, union members live and work in the vicinity of the Wilmington Refinery and have a direct interest in protecting the air, water, and soil resources on and around the Project site. Union members also have a direct interest in ensuring a safe workplace for workers during Project construction and operation. Finally, CURE members are concerned about projects that risk serious environmental harm without providing countervailing economic benefits. The CEQA process allows for a balanced consideration of a project's socioeconomic and environmental impacts, and it is in this spirit that we offer these comments. 1-4

Based on these concerns, CURE has a strong interest in ensuring projects comply with the CEQA, as well as applicable federal, state, and local regulations. While CURE recognizes the benefits of efficient power generation processes, it is also cognizant of the health and safety and environmental risks associated with intensive industrial processes, such as those involved in the Project.

II. THE PROPOSED PERMITS-TO-CONSTRUCT ARE DEFICIENT AND MUST BE WITHDRAWN

The proposed Permits-to-Construct are deficient because they fail to limit Project operations as contemplated by the IS/ND. In particular, the District omitted from the proposed Permits-to-Construct two operational limitations that 1-5

were critical to the District's conclusions regarding the Project's environmental impacts. First, the IS/ND assumed that boiler 86-B-9000 would be off during Project operations: "During operation of the Cogen Unit ... boiler 86-B-9000 would be prohibited from operating."[6] However, as discussed by Dr. Pless in her comments, the District imposed no source-specific operational limitation on boiler 86-B-9000 in the proposed Permits-to-Construct or through other District permits.[7]

1-5 cont.

Second, the IS/ND assumed that the other two refinery gas-fired boilers (86-B-9001 and 86-B-9002) would be required to operate at reduced loads."[8] This condition was also omitted from the proposed Permits-to-Construct. Dr. Pless documented in her comments that the proposed Permits-to-Construct exclude unit-specific operational limitations on boilers 86-B-9001 and 86-B-9002.[9] While the proposed Permits-to-Construct impose a monthly mass-emission limit on the combined operation of the Cogen Unit and the three existing boilers, boilers 86-B-9001 and 86-B-9002 need not operate at reduced levels for the Applicant to comply with the monthly emissions limit in the proposed Permits-to-Construct.[10] Dr. Pless also documented in her comments that no other District permit ensures that the operation of boilers 86-B-9001 and 86-B-9002 will be restricted consistent with the operational assumptions in the IS/ND.[11]

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The District should prepare revised Permits-to-Construct which incorporate the operational assumptions relied upon in the IS/ND. The revised Permits-to-Construct should be made available for public review and comment before the District issues Permits-to-Construct to the Applicant. If the Applicant objects to the operational limitations that were described in the IS/ND, the District is required to prepare and circulate a revised environmental document that addresses the Applicant's Project proposal.

1-7

III. THE DISTRICT MAY NOT PROCEED THROUGH A NEGATIVE DECLARATION AND THE IS/ND IS OTHERWISE INADEQUATE

CURE's June 4, 2013 comments on the draft IS/ND identified numerous deficiencies in the District's environmental analysis. Our initial comments also

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[6] IS/ND, at p. 2-19.
[7] Pless Comments at pp. 7-9, attached as **Attachment 1**.
[8] IS/ND, at p. 2-19.
[9] *See* Pless Comments, at pp. 7-9.
[10] Pless Comments, at pp. 7-9.
[11] *See ibid.*
2899-013cv

urged the District to withdraw the IS/ND and prepare an EIR to study the Project's potentially significant and unmitigated air quality, greenhouse gas ("GHG"), cancer risk and hazards impacts. CURE's initial comments were prepared with the assistance of air quality and hazards experts who opined that the Project would result in potentially significant impacts due to Project construction and operational emissions of criteria air pollutants and toxic air contaminants, and due to residual contamination in the Project site soils and the groundwater underlying the Project site.

1-8 cont.

We incorporate by reference our June 4, 2013 comments on the IS/ND and provide the following supplemental comments. Our supplemental comments are informed by the conditions included in the proposed Permits-to-Construct and the documentation the District provided to us following the close of the comment period on the draft IS/ND. The District is required to withdraw the IS/ND because it fails to accurately describe the Project and relies on an inappropriate baseline to evaluate the Project's air quality impacts. Finally, because the IS/ND itself provides substantial evidence of significant emissions of oxides of nitrogen ("NO_x") and GHGs, a negative declaration is inappropriate and the District is required to prepare an EIR.

A. The Project Description in the IS/ND is Inadequate

1-9

In *Communities for a Better Environment v. City of Richmond*, the First District Court of Appeal held that a CEQA document prepared for a refinery project must disclose whether the proposed equipment and facility changes would allow the refinery to process different feedstocks, where a feedstock change is reasonably foreseeable.[12] The California Attorney General and the Governor's Office of Planning Research concur in the Court's determination that for refinery projects, CEQA requires the disclosure of foreseeable changes in fuel, by source and chemical composition.[13] The IS/ND fails to adequately address the changes in Refinery processes that are reasonably foreseeable from the Project.

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[12] *See Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 89.
[13] *See* Letter from the Office of the Attorney General to the City of Pittsburg Planning Department regarding Recirculated Environmental Impact Report for the WesPac Pittsburg Energy Infrastructure Project (SCH # 2011072053), Jan. 15, 2013, attached as **Attachment 2**; Letter from the Governor's Office of Planning and Research to The City of Pittsburg Planning Department, regarding WesPac Pittsburg Energy Infrastructure Project, Tar Sands, Dec. 3, 2013, attached as **Attachment 3**.
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The IS/ND states that that the Project involves "no change in the processing of crude and no increase in crude throughput at the Refinery."[14] This statement is the District's sole documentation of the Project's relationship to the various complex processes involved in the daily operations of the Refinery. However, the Project proposes a substantial increase in steam production at the Refinery. This is a clear indication that the Project may affect refining processes and this issue should have been central to the District's environmental review of the Project. The IS/ND's description of the Project's relationship to the Refinery is insufficient to meet CEQA's public disclosure requirements because it is incomplete and ambiguous. The District's claim that the Project will not affect Refinery process is also simply not credible. 1-10

As an initial matter, the IS/ND fails to state whether there would be no change in throughput as compared to ***permitted*** throughput limits or as compared to ***normal operating conditions***. If the statement in the IS/ND refers only to the permitted capacity, then the District failed to address the possibility of a throughput increase as compared to normal operations. Second, the IS/ND fails to disclose whether there would be a change in Refinery feedstock – i.e. the source and chemical composition of the crude – even if crude "processing" at the Refinery remains unchanged. 1-11

Finally, the District's claim that the Project would not affect the Refinery is contradicted by substantial evidence in the record, as well as the Applicant's public representations. As documented by Dr. Pless in her written comments, the Project increases the Refinery's steam supply, allowing for the refining of a wider range of crude blends than the baseline feedstock.[15] The Project also comes on the heels of Valero's recent proposal to deliver 60,000 barrels per day of imported crudes to the Refinery.[16] A change in feedstock is also consistent with Valero's overall strategy to transition its refineries to cost-advantaged North American crudes.[17] Advantaged crudes are competitively priced because they are stranded with no pipeline access and must be delivered by rail. Advantaged crudes include Canadian tar sands crudes and crude oil from the Bakken formation in North Dakota. 1-12

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[14] *See* IS/ND, at p. 1-1.
[15] Pless Comments, at pp. 2, 6-10, 16.
[16] Jack Eidt, WilderUtopia.com, Valero Moves to Ship Tar Sands by Rail into LA Harbor, October 18, 2013; http://www.wilderutopia.com/environment/energy/tar-sands/valero-moves-to-ship-tar-sands-by-rail-into-la/, attached as **Attachment 4.**
[17] *See* Valero, *Basics of Refining and Processing Additional Light Sweet Crude Oil*, Feb. 25, 2014, slides 18-23, attached as **Attachment 5.**
2899-013cv

It is reasonably foreseeable that the Project would facilitate process changes at the Refinery, including but not limited to a change in Refinery feedstock. A change in the Refinery feedstock will expand the scope of the Project's environmental impacts, including the Project's impacts on air quality and public health.[18] The District is required to prepare an EIR which includes a complete Project description and, in particular, the reasonably foreseeable changes to Refinery processes. The revised Project description should also clearly identify the permitting and physical constraints on the Refinery that inform the District's analysis of the Project's environmental impacts.

1-12 cont.

B. The IS/ND Relies on an Inappropriate Baseline to Evaluate Impacts to Air Quality

CEQA requires the lead agency to include a description of the physical environmental conditions in the vicinity of a project as they exist at the time environmental review commences.[19] "This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant."[20]

Describing the environmental setting accurately and completely for each environmental condition in the vicinity of the project is critical to an accurate and meaningful evaluation of environmental impacts. The courts are clear that, "[b]efore the impacts of a Project can be assessed and mitigation measures considered, an [environmental review document] must describe the existing environment."[21] It is:

> a central concept of CEQA, widely accepted by the courts, that the significance of a Project's impacts cannot be measured unless the DEIR first establishes the actual physical conditions on the property. In other words, baseline determination is the first rather than the last step in the environmental review process.[22]

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[18] *See* Pless Comments, at p. 4.
[19] CEQA Guidelines, § 15125 subd. (a); *see* also *Communities For A Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 321.
[20] CEQA Guidelines, § 15125 subd. (a).
[21] *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.
[22] *Save our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 125.
2899-013cv

In *Communities for a Better Environment v. South Coast Air Quality Management District* (*"CBE v. SCAQMD"*), the California Supreme Court held that CEQA requires that the impacts of a proposed project ordinarily be compared to the ***actual environmental conditions*** existing at the time of CEQA analysis.[23] That is, the lead agency is required to consider "***real conditions on the ground*** . . . rather than the level of development or activity that *could* or *should* have been present according to a plan or regulation."[24]

In *CBE v. SCAQMD*, the Court struck down the SCAQMD's Initial Study and Negative Declaration because the District relied on a hypothetical baseline, rather than real conditions on the ground, to evaluate the impacts of project proposed at the ConocoPhillips Wilmington Refinery. The Court explained:

> [T]he District's baseline operational level was the collective maximum capacity of the boilers; under the Negative Declaration's analysis, all four boilers could be run at maximum capacity simultaneously without creating any potential environmental impact. ***Yet the District acknowledged that in ordinary operation any given boiler ran at the maximum allowed capacity only when one or more of the other boilers was shut down for maintenance; operation of the boilers simultaneously at their collective maximum was not the norm.***[25]

1-13 cont.

Accordingly, the Court concluded that the District relied on an inadequate, hypothetical baseline to evaluate project impacts, and invalidated the District's analysis. The District repeated this same error here.

Here, the District again relies on a baseline of hypothetical maximum operating conditions that are not representative of typical operations. Specifically, the IS/ND relies on the highest operations of boilers 86-B-900, 86-B-9001 and 86-B-9002 – occurring on eight isolated days in 2011 – as the baseline for the air quality impacts analysis.[26] As in *CBE v. SCAQMD*, the District's own analysis shows that the selected baseline is not typical of normal operations. In particular, the IS/ND states:

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[23] *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 321.
[24] *Id.* at p. 321, emphasis added and in original.
[25] *Id.* at p. 322, emphasis added.
[26] IS/ND, at p. 2-18.
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> To derive baseline emissions, emissions from the boilers were combined to identify the ***maximum documented daily emissions from operating boilers*** 86-B-9000, 86-B-9001, and 86-B-9002 . . . [these emissions represent] the top 98th percentile (***or the top two percent of operating conditions***) . . . .[27]

1-14 cont.

CEQA prohibits this approach.

The District's selected baseline is invalid also because it is unsupported. It is axiomatic that the lead agency's decision to select a particular range and period of operations must be supported by substantial evidence.[28] The CEQA Guidelines define "substantial evidence" as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion."[29] "Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." "[U]nsubstantiated opinion or narrative [and] evidence which is clearly inaccurate or erroneous . . . is not substantial evidence."[30] The District's conclusion that eight days of maximum operations in calendar year 2011 is representative of typical operations is utterly unsupported and contradicted by the IS/ND.

1-15

The IS/ND fails to provide any justification to support the District's baseline determination. The IS/ND claims that the methodology and calculations for deriving baseline boiler emissions can be found in Appendix B. The statements in the IS/ND are inaccurate. Contrary, to the IS/ND, Appendix B excludes historical emissions data.

In addition to the District's failing to include relevant baseline information in the IS/ND, the District also suppressed historical emissions data from public disclosure. Our office requested all Project materials more than a year ago. The District released records which the Applicant previously claimed were confidential in October 2013 – four months after the close of the public comment period on the IS/ND – but improperly redacted historical emissions data. Accordingly, the

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[27] *Ibid.*, emphasis added.
[28] *See* CEQA Guidelines, §15063 subd. (a)(3) ("An initial study may rely upon expert opinion supported by facts, technical studies or other substantial evidence to document its findings.").
[29] CEQA Guidelines, §15384.
[30] Pub. Resources Code, § 21082.2 subd. (c).
2899-013cv

District's conclusion that just eight days of maximum operations in calendar year 2011 are representative of typical operations cannot be verified. 1-16 cont.

The District must prepare a revised analysis which considers normal operations as the baseline for its impact analysis. In selecting an air quality baseline, the District should, at a minimum, consider emissions data for each criteria pollutant for boilers 86-B-9000, 86-B-9001, 86 B-9002 and each day for calendar years 2009 through 2011.[31] The revised analysis should also include sufficient information to enable those that did not prepare the revised analysis to determine whether the District's conclusions are adequately supported. This information should include a description of how emissions data were determined, e.g., via CEMS or calculated based on source test emissions data and the physical and legal constraints on the fuel throughput of boilers 86-B-9000, 86-B-9001 and 86 B-9002. 1-17

C. The District Failed to Identify Potentially Significant NO_x Emissions

A "negative declaration" is "a written statement by the lead agency briefly describing the reasons that a proposed project . . . will not have a significant effect on the environment and therefore does not require the preparation of an EIR."[32] However, a negative declaration is inappropriate and an EIR must be prepared where there is a fair argument supported by substantial evidence that a project may result in potentially significant impacts.[33] Even if other substantial evidence supports the opposite conclusion, the agency must prepare an EIR.[34] 1-18

A lead agency's failure to admit a potentially significant impact in plain language in a CEQA document "is not merely harmless procedural failing . . . . this short-cutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision-making and informed public participation."[35] The First District Court of Appeal recently held in *Lotus v. Department of Transportation*, that a lead agency's failure to separately identify and analyze the significance of an impact is prejudicial error which subverts

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[31] *See* Pless Comments at p. 5.
[32] CEQA Guidelines, § 15371.
[33] CEQA Guidelines § 15064(f), (h).
[34] *See No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75.
[35] *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 658.
2899-013cv

CEQA's purpose and goals.[36] As explained by the *Lotus* Court, a significance finding triggers the need to consider a range of specifically targeted mitigation measures, including analysis of whether the project itself could be modified to lessen the impact and the need to adopt an enforceable monitoring program.[37]

1-18 cont.

The IS/ND concludes that Project operations will cause NO_x emissions at a rate of 98.8 pounds per day.[38] The IS/ND then states that compliance with District regulations would ensure no increase in emissions.[39] However, pursuant to the SCAQMD Air Quality Handbook, projects proposed in the South Coast Air Basin with daily operation-related NO_x emissions exceeding 55 pounds per day result in potentially significant impacts to air quality.[40] Accordingly, Project NO_x emissions are ***significant***. The District failed to identify this impact. This omission is fatal to the IS/ND.

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There is a fair argument based on substantial evidence that the Project will result in potentially significant NO_x emissions. Here, CEQA prohibits the District from proceeding through a negative declaration. The District is required to prepare a revised environmental review document which identifies the Project's significant NO_x emissions and proposes mitigation measures that can reduce emissions to a less than significant level. The Project's significant NO_x emissions must be evaluated in an EIR.

D. The IS/ND Fails to Identify Potentially Significant GHG Emissions

The District's analysis of the Project's GHG emissions suffers from the same legal inadequacy as the District's analysis of the Project's NO_x emissions. The IS/ND states that the Project's unmitigated GHG emissions of 43,813 metric tons of carbon dioxide equivalent gases (MT/CO_{2E}) per year far exceed the District's significance threshold of 10,000 MT/CO_{2E} per year.[41] Accordingly, the Project's GHG emissions are ***significant***. The District failed to identify this significant impact. This omission is fatal to the IS/ND.

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[36] *See ibid.*
[37] *See id.* at pp. 656-57.
[38] IS/ND at Table 2-5, p. 2-19.
[39] *Id.* at p. 2-20.
[40] SCAQMD, CEQA Air Quality Handbook (1999), at p. 6-2, excerpts attached as **Attachment 6**.
[41] IS/ND at p. 2-30.
2899-013cv

There is a fair argument based on substantial evidence that the Project will result in potentially significant GHG emissions. Here, CEQA prohibits the District from proceeding through a negative declaration. As described in the following sections, the Project's significant GHG emissions must be evaluated in an EIR.

1-20 cont.

IV. THE DISTRICT IS REQUIRED TO PREPARE AN EIR PRIOR TO APPROVING THE PROJECT

CEQA's purpose and goals must be met by preparing an EIR, except in certain limited circumstances.[42] CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the "fair argument" standard. Under that standard, a lead agency ***must prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.***[43] The fair argument standard creates a "low threshold" favoring environmental review through an EIR.[44] An agency's decision ***not*** to require an EIR can be upheld only when there is no credible evidence to the contrary.[45]

1-21

CEQA defines "substantial evidence" as "fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact."[46] The California Natural Resources Agency regulations further define "substantial evidence" as:

> Enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.[47]

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[42] *See* Pub. Resources Code, § 21100.
[43] Pub. Resources Code § 21082.2; CEQA Guidelines § 15064(f), (h); *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1993) (*"Laurel Heights II"*) 6 Cal. 4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1601-1602.
[44] *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754.
[45] *Sierra Club v. County of Sonoma*, (1992) 6 Cal.App.4th, 1307, 1318; *see also Friends of "B" Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002 ["If there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an [environmental impact report] and adopt a negative declaration, because it could be 'fairly argued' that the project might have a significant environmental impact"].
[46] Pub. Resources Code, § 21080 subd. (e)(1).
[47] CEQA Guidelines, § 15384, subd. (a).
2899-013cv

"If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences."[48]

1-21 cont.

A. The Project Will Result in Potentially Significant Unmitigated VOC Emissions

Dr. Pless has shown that the so-called "worst-case" operational emissions analyzed in the IS/ND are actually lower than the Project's VOC emissions rate.[49] In particular, the proposed Permits-to-Construct authorize the Project together with boilers 86-B-9000, 86-B-9001, 86 B-9002 to emit VOCs at a rate of 2,891 pounds per month (lbs/mo), which equals 95 pounds per day (lbs/day) over a 30-day averaging period.[50] This emissions rate exceeds the worst-case daily VOC emissions scenario analyzed in the IS/ND by 17 lbs/day.[51] Thus, Dr. Pless has shown that even when relying on the baseline emissions rate identified in the IS/ND, the incremental VOC emissions increase caused by the Project is 57 lbs/day.[52]

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According to the District's CEQA significance thresholds, operational VOC emissions of 55 or more pounds per day result in a potentially significant air quality impact.[53] The daily VOC emissions increase of 58 lbs/day exceeds the District's CEQA threshold of significance. As fully documented by Dr. Pless in her comments, the District has failed to identify this potentially significant Project impact.[54] There is a fair argument based on substantial evidence that the Project will result in potentially significant, unmitigated VOC emissions. CEQA requires the District to study this impact in an EIR.

1-23

[48] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.
[49] Pless Comments, at pp. 7-8.
[50] *See ibid.*
[51] *See ibid.*
[52] *See* Pless Comments, at p. 9.
[53] *See* SCAQMD, CEQA Air Quality Handbook (1999), at p. 6-2.
[54] Pless Comments, at pp. 7-8.
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B. The Project Will Result in Potentially Significant Unmitigated Emissions of Fine Particulate Matter

Since 1996, more than 2,000 peer-reviewed studies have been published validating earlier epidemiologic studies that link both acute and chronic fine particle pollution with serious morbidity and mortality.[55] Overwhelming scientific evidence shows that long-term exposure to fine particulate air pollution contributes to pulmonary and systemic oxidative stress, inflammation, progression of atherosclerosis, and risk of ischemic heart disease and death.[56] Another recent study found that each 10-µg/m^3 increase in fine particulate matter (particulate matter with a diameter of 2.5 micrometers or less or "PM2.5") air pollution was associated with an approximately six percent increase in cardiopulmonary mortality and an eight percent increase in lung cancer mortality.[57]

Additionally, studies show that short-term exposure to emissions of PM2.5 is equally damaging and contributes to complications of atherosclerosis, such as plaque vulnerability, thrombosis, and acute ischemic events.[58] The U.S. EPA concluded with respect to short-term exposure studies that epidemiological evidence was found to support likely causal associations between PM2.5 and both mortality and morbidity from cardiovascular and respiratory diseases.[59]

1-24

The District's analysis of the Project's PM2.5 emissions suffers from the same error as the District's analysis of Project VOC emissions. Here again, the IS/ND failed to analyze the emissions rate authorized by the Permits-to-Construct and to identify the Project's significant operational emissions of PM2.5. As documented by Dr. Pless in her comments, the "worst-case" emissions scenario analyzed in the IS/ND underestimated operational emissions of PM2.5 by more than 42 lbs/day.[60] Dr. Pless also demonstrated in her comments that the proposed Permits-to-Construct authorize an incremental PM2.5 emissions increase of more than 63 lbs/day.[61]

1-25

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[55] *Id.* at pp. 9-10.
[56] *Ibid.*
[57] *Ibid.*
[58] *Ibid.*
[59] *Ibid.*
[60] *See* Pless Comments, at p. 9.
[61] *See ibid.*
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According to the District's CEQA significance thresholds, operational PM2.5 emissions of 55 or more pounds per day result in a potentially significant air quality impact.[62] The daily PM2.5 emissions increase of 63 lbs/day identified by Dr. Pless exceeds the District's CEQA significance threshold.[63] The District has failed to identify this potentially significant Project impact. There is a fair argument based on substantial evidence that the Project will result in potentially significant, unmitigated emissions of PM2.5. CEQA requires the District to study this impact in an EIR.

1-26

C. The Project Will Result in Potentially Significant Unmitigated NO_x Emissions

As described above, the IS/ND disclosed that the Project will cause NO_x emissions at a rate of 98.8 pounds per day, which is a significant impact under the District's CEQA significance thresholds.[64] The Project NO_x emissions will remain significant even if the Applicant complies with the District's RECLAIM program. Under the District's own CEQA significance thresholds, a NO_x emissions increase of 55 pounds ***in one day*** is a significant impact for the purpose of CEQA.[65] The Applicant's participation in the RECLAIM program does not ensure that Project NO_x emissions will remain below 55 pounds per day.

1-27

Under the RECLAIM program, a facility receives a single permit that encompasses all emission sources.[66] Each facility receives an annual emissions allocation for all sources within the facility that emit NO_x and SO_x.[67] The District determines a facility's compliance with its emissions allocation on a quarterly and on annual basis.[68] As documented by Dr. Pless in her comments, RECLAIM authorizes the Applicant to exceed the daily CEQA significance threshold emissions limit for NO_x. For example, under RECLAIM, the Project could emit NO_x at a rate of 55 or more pounds on certain days out of the compliance year, as long as ***annual***

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[62] *See* SCAQMD, Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds (2006), at p. 8, attached as **Attachment 7**.
[63] *See* Pless Comments, at p. 9.
[64] Comments, *supra*, at Section III. C.
[65] *See* SCAQMD, CEQA Air Quality Handbook (1999), at p. 6-2.
[66] SCAQMD, RECLAIM; The Regional Clean Air Incentives Market, A Market Incentive Air Pollution Reduction Program for Nitrogen Oxides (NO_x) and Sulfur Oxides (SO_x) Vol.1 (1993), at p. EX-3, excerpts attached as **Attachment 8**.
[67] *Ibid.*
[68] *Ibid.*; *id.* at p. EX-14-15.
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emissions remain below the Applicant's annual allocation.[69] Accordingly, the Project's NO_x emissions remain significant and unmitigated for the purpose of CEQA.

1-27 cont.

Dr. Pless concludes that implementation of adequate mitigation – in other words, mitigation that actually reduces significant NO_x emissions occurring on any one day to offset the increase in air pollution from the Project – is crucial given the location of the Refinery.[70] The Refinery is located in the Wilmington/Carson City area, which is home to five refineries with a combined throughput of 650,000 barrels per day ("bpd").[71] This rate of production represents approximately one third of the state's total oil refining capacity.[72] The Project is also located in the vicinity of numerous other sources of air pollution, including the Port of Los Angeles, the Port of Long Beach, the Wilmington oil fields and area freeways.[73] CEQA requires the District to study the Project's significant NO_x emissions in an EIR and to propose adequate mitigation measures to reduce the Project's significant air quality impacts.

1-28

V. CONCLUSION

The District should withdraw the proposed Permits-to-Construct because they are inconsistent with the Project analyzed in the IS/ND. The District also may not grant Permits-to-Construct to the Applicant unless the District first prepares an EIR that evaluates and addresses the Project's significant air quality and public health impacts, consistent with CURE's comments.

1-29

Sincerely,

Elizabeth Klebaner

EK:clv
Attach.

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[69] Pless Comments at pp. 11-13.
[70] *Ibid.*
[71] *Ibid.*
[72] *Ibid.*
[73] *Ibid.*

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Response to Comment Letter #1
Adams Broadwell Joseph & Cardozo – May 23, 2014

Response 1-1

The South Coast Air Quality Management District (SCAQMD) acknowledges that the commenter is writing on behalf of the California Unions for Reliable Energy.

In compliance with California Environmental Quality Act (CEQA) Guidelines §§ 15072, 15073, 15105, and 15371, the SCAQMD provided greater than the required 30-day public comment period on the Draft Negative Declaration for the proposed Ultramar Inc. Cogeneration Project. The public comment period initially ran from April 12, 2013 through May 14, 2013, and at the request of Adams Broadwell Joseph & Cardozo, the SCAQMD extended the comment period through June 4, 2013, which provided for a 54-day public comment period. These comments received on May 23, 2014 were received during the public comment period required under SCAQMD Rule 1714 - Prevention of Significant Deterioration for Greenhouse Gases to address the preconstruction review requirements for GHG emissions from the proposed Cogen Unit, which is outside the public comment period under CEQA.

The SCAQMD has not yet finalized the Draft Negative Declaration for the proposed Project and, therefore, it is not yet publicly available.

Response 1-2

Comment 1-2 summarizes the proposed Ultramar Cogen Unit Project (proposed Project), the purpose of the proposed Project, the Project location, and required permits, so no further response is required.

Response 1-3

The SCAQMD staff disagrees with the comment that the Draft Negative Declaration fails to comply with CEQA. As discussed in the following responses as well as the responses to comments provided on June 4, 2013, the commenter has not provided a fair argument supported by substantial evidence that the proposed Project may have any potentially significant adverse impacts that would require preparation of an Environmental Impact Report (EIR). The basis for the commenter's conclusion that there will be adverse impacts that were not analyzed is an unsubstantiated theory based on a misunderstanding of refinery operations that this project is part of some larger nonexistent project that will increase refinery throughput. There are no changes to the crude unit or any other Refinery process equipment. Please see the responses below to the more detailed comments in Responses 1-8 through 1-29. As discussed in Responses 1-5 and 1-6, the Project Description was adequate and fully complies with the requirements of CEQA. This Refinery was built following a CEQA review and subsequent modifications have been performed in compliance with CEQA. Therefore, while use of permitted boiler operations could have been

used as the baseline, the SCAQMD chose to use actual emissions data to establish the baseline (see Response 1-13).

As discussed in the responses to comments, when the appropriate information and accurate data regarding the proposed Project are used, it is demonstrated that the proposed Project would not result in significant adverse air quality impacts or any other environmental impacts. As stated in CEQA Guidelines § 15064(f)(5), "Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence." (see also, Public Resources Code (PRC §21082.2(c))) When accurate and appropriate data and assumptions are used, the proposed Project is not expected to result in significant adverse environmental impacts. Accordingly, if the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment, the lead agency shall prepare a negative declaration (CEQA Guidelines § 15064(f)(3)). As such, an EIR is not warranted or required.

Response 1-4

The commenter's description of its members and their concerns are noted. The commenter expresses a concern that "poorly designed power plants may degrade the environment by reducing ambient air quality, releasing hazardous and toxic substances into soils, groundwater and surface waters, and causing noise and visual instruction." The proposed Project is to install a state-of-the-art cogeneration unit (also known as a combined heat and power plant). The use of cogeneration facilities is supported by the U.S. Environmental Protection Agency[1], California Air Resources Board[2], National Resources Defense Council[3] and others because, as energy efficient technology, cogeneration facilities reduce emissions of pollutants including criteria pollutants, toxic air contaminants, and greenhouse gas emissions when compared to conventional electricity and steam generation.

Response 1-5

The commenter is incorrect. Condition A63.x of the draft SCAQMD Permit to Construct limits the overall total emissions from the proposed Cogen Unit and boilers combined. Condition A63.x states, "The operator shall limit emission from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
VOC	Less than or equal to 2,981 LBS IN ANY ONE MONTH
PM10	Less than or equal to 4,897 LBS IN ANY ONE MONTH

For the purposes of this condition, the above emission limits shall be based on the combined emissions from Boiler 86-B-9000, Boiler 86-B-9001, Boiler 86-B-9002, Gas Turbine 79-GT-1, and Duct Burner."

[1] http://www.epa.gov/chp/basic/index.html
[2] http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf
[3] http://www.nrdc.org/energy/files/combined-heat-power-ip.pdf

In order to comply with emissions limitations of this condition, the refinery cannot operate the boilers and the Cogen Unit at maximum firing all at once. Thus, the permit condition adequately limits the operation of the boilers. As discussed in the Operation Emission Impacts section of the Draft Negative Declaration pages 2-15 through 2-20, operation of the Boilers and the Cogen Unit are designed to meet the steam demands of the Refinery, which is the purpose for this equipment. Peak scenarios were used to estimate the worst-case daily emissions from the proposed Project and were based on various operating conditions that would meet the Refinery steam demands. Producing steam in excess of the Refinery demand would be unutilized, vented to the atmosphere, waste energy, could cause excess emissions that could violate the permit condition, and adds unnecessary cost to the operation of the equipment. The operating scenario that has the potential to generate the greatest emissions would occur when Boiler 86-B-9000 is not operating, Boiler 86-B-9001 is operating, and Boiler 86-B-9002 is operating at reduced load (54 percent), which is evaluated as Scenario 4 in the Draft Negative Declaration. Operation of boiler 86-B-9000 did not produce a worst-case emissions scenario that met the steam demand; therefore, the four scenarios presented are the most likely operating scenarios that produce the greatest emissions and meet the current steam demand. No equipment included in the proposed Project requires steam and no permit applications have been received by the SCAQMD to modify refining processes or equipment that would require the increase in demand for steam. Therefore, the proposed Project would not increase steam demand from the implementation of the proposed Project. Condition A63.x limits operational emissions from all combustion sources associated with the proposed project (i.e., the Cogen Unit, and boilers 86-B-9000, 86-B-9001, and 86-B-9002) and, in conjunction with numerous other conditions and physical restrictions imposed on various devices in the Title V permit, limits steam production to that which is necessary to meet the current Refinery steam demand.

Response 1-6

The permit conditions adequately restrict the operation of the boilers and limit the loads at which the boilers may operate. As discussed in Response 1-5, the various operational scenarios analyzed in the Draft Negative Declaration were analyzed to determine the maximum emissions expected to be generated from operating the Cogen Unit along with the boilers to meet the steam demand of the Refinery. Again, the Cogen Unit and boilers do not create the demand for steam as steam demand is dependent on refining processes and equipment needing the steam such as pumps, compressors, and heat exchangers. The proposed Project does not include any modifications to the refining processes, so the steam demand is will not change as a result of the project. The monthly emission limits in the draft permit condition A63.x are based on 30 days of operation at the maximum daily emissions analyzed in the Draft Negative Declaration. Therefore, the permit emissions limits in A63.x restrict the operations to those analyzed on a daily basis in the Draft Negative Declaration.

Response 1-7

As discussed in Responses 1-5 and 1-6, the draft SCAQMD Permits to Construct are consistent with the analysis in the Draft Negative Declaration. The SCAQMD regulations require a 30-day public comment period. Typically, the SCAQMD provides a consolidated comment period for

all applicable permitting rules (e.g., Rules 3006, 1714, etc.). However, for this proposed Project, the SCAQMD has provided separate comment periods: (1) under Regulation 3006 for Title V the public comment period was from May 31, 2013 to June 30, 2013, during which no comments were received; and (2) under Regulation 1714 PSD for GHG the public comment period was from April 24, 2014 to May 24, 2014, but with the U.S. Supreme Court decision and the subsequent U.S. EPA memo, no GHG permit is necessary for the proposed Project. The regulations do not require additional public comment periods. Therefore, no further public participation is required prior to issuance of Permits to Construct. As discussed in Responses 1-5, 1-6, and 1-7, the draft Permits to Construct are consistent with the Draft Negative Declaration and there have not been substantial revisions to the Negative Declaration. Therefore, no revision to the Draft Negative Declaration is required that would warrant recirculation under CEQA Guidelines § 15073.5.

Response 1-8

The SCAQMD received the comments submitted June 3, 2013 and, as required under CEQA, has prepared responses to the comments as part of the preparation of the Final Negative Declaration. The June 3, 2013 comments on the Draft Negative Declaration did not provide a fair argument of a significant impact, and thus did not change the analysis or conclusions of the Draft Negative Declaration. Therefore, consistent with CEQA Guidelines § 15073.5 (d), an EIR is not warranted.

The commenter is incorrect that the Draft Negative Declaration provides substantial evidence of significant emissions of NOx and GHGs. Consistent with *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 141, the proposed Project is designed to comply with laws and regulations that require emission offsets under RECLAIM for NOx and CARB's AB32 Cap and Trade Program for GHG emissions. Thus, NOx and GHG reductions are part of the unmitigated emissions, and as such, are less than the SCAQMD significance thresholds. Therefore, as correctly analyzed in the Draft Negative Declaration, the proposed Project does not provide substantial evidence of significant air quality impacts. See the Air Quality and Greenhouse Gases analysis on pages 2-9 through 2-32 of the Negative Declaration.

Response 1-9

Unlike the Chevron Refinery Project that was the subject of the *Communities for a Better Environment (CBE) v. City of Richmond* case that is cited by the commenter, the proposed Project does not modify refining process equipment at the Refinery. The installation of the Cogen Unit is designed to improve reliability of electricity supplied to the Refinery and more efficiently produce steam. No modifications to increase steam demand of refining units such as the Crude Unit, which is the first processing unit in the refining process, have been proposed and proven by the fact that no permit modification has been submitted. For a refining process to require more steam, a process change within the unit would need to occur. No refining process changes have been proposed and no applications to modify permitted process units have been submitted. In contrast, the Chevron Project proposed both process and permit changes.

Therefore, there are no reasonably foreseeable changes to the Refinery that would alter other operations at the Refinery, so the Project Description is complete and accurate in the Draft Negative Declaration.

Response 1-10

As discussed in Response 1-9, the proposed Project is designed to improve reliability of electricity supplied to the Refinery and more efficiently produce steam. No changes to the crude unit or any other Refinery process units have been proposed. The proposed Project is designed to more efficiently produce the steam at the level currently generated by less efficient direct-fired boilers (referred to as the design basis). The emission limits established for the Cogen Unit and boilers combined would prohibit additional steam production above the design basis for the proposed Project (i.e., the current steam demand). The commenter's sole basis for opining that the project entails modifications to the Refinery is a misunderstanding that the project will produce more steam than the refinery is currently producing and using. As stated in CEQA Guidelines § 15064(f)(5), "Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence." However, in order to use more steam, the Refinery would need to modify the refining processes and the Refinery would need to apply for and obtain modifications to its existing permit. No such modifications are contemplated and no such permit applications have been submitted. Therefore, the proposed Project will not alter the operations of the refining processes at the Refinery.

Given that the project will not modify any processing units nor modify any permit conditions that would allow an increase in Refinery throughput, the statement that "no change in the processing of crude and no increase in crude throughput at the Refinery" is sufficient.

Response 1-11

The proposed Project is for the installation of a Cogen Unit to improve reliability of electricity supplied to the Refinery and more efficiently produce steam. As discussed in Responses 1-9 and 1-10, no changes to the processing units or crude throughput are proposed or foreseeably expected. Additionally, the Cogen Unit does not use crude oil to operate. The ability to produce reliable electricity and steam efficiently works to reduce emissions from process upsets when the third-party power is interrupted and excess emissions occur due to emergency flaring. The ability to refine crude oil, both quantity and type, are not affected by the proposed project. The refining processes (e.g., crude units, light ends processing units, delayed coking unit, etc.) necessary to process crude oil have previously been analyzed under CEQA and no modifications to the refining processes are proposed. Therefore, the baseline and post-project crude oil processing information (i.e., quantity or type) is not required to adequately and properly assess the potential environmental impacts from the installation of the proposed Project. Further, the Negative Declaration very clearly analyzes emissions from actual operating conditions, see pages 2-18 through 2-20, most notably. See also Response 1-13.

Response 1-12

As discussed in Responses 1-9, 1-10, and 1-11, the proposed Project is for installation of a Cogen Unit to improve reliability of electricity supplied to the Refinery and more efficiently produce steam at the current rate of demand. The emissions limits established for the Cogen Unit and boilers in Condition A63.x in conjunction with numerous other conditions and physical restrictions imposed on various devices in the Title V permit prohibit additional steam production above the design basis for the proposed Project (i.e., the current steam demand). The Refinery currently processes a variety of crude oils and will continue to do so irrespective of the proposed Project. Contrary to the commenter's opinion, it I not reasonably foreseeable that the proposed Project would "facilitate process changes" when such changes would require a permit modification and no such permit modifications applications have been submitted.

While Valero had publicly announced the referenced rail project, the project has subsequently been canceled and permit applications submitted to the SCAQMD were canceled on March 14, 2014, as well. That rail project was independent of and unrelated to this project, and either could be completed without the other. The rail project also did not contemplate any modifications to the Refinery processes, rather just to the delivery system for crude oil. With no applications for process modifications submitted to the SCAQMD to allow for process changes, there are no reasonably foreseeable changes to the Refinery. Therefore, the Project Description is complete and accurate in the Draft Negative Declaration and does not require modification. The analysis presented in the Draft Negative Declaration correctly does not identify any significant impacts and, as such, a Negative Declaration is the appropriate CEQA document.

Response 1-13

The commenter quotes the *CBE v SCAQMD* case[4] where the court held that the maximum permit limit for a boiler that had not undergone prior CEQA review was not the appropriate baseline because operation of the boiler at its maximum capacity was not consistently achieved. The case also concluded that the lead agency has the discretion to decide how the existing physical conditions without the project can most realistically be measured. When determining a baseline, the lead agency must evaluate the daily activity to determine a criteria pollutant's mass daily significance and ensure that the baseline properly reflects "real conditions on the ground." The SCAQMD criteria pollutant significance thresholds are based on mass daily activity, so it is appropriate to use actual daily emissions for comparison to the SCAQMD criteria pollutant significance thresholds.

For the proposed Project, the Refinery as a whole, including the boilers, has undergone prior CEQA review thereby allowing for the use of daily maximum actual emissions that are routinely achieved as the baseline. In this case, the SCAQMD identified the maximum actual boiler emissions and reduced that activity level to the 98th percentile - two percent less than the maximum actual emissions. The 98th percentile is based on the US EPA's Primary National Ambient Air Quality Standards (NAAQS) for Nitrogen Dioxide (February 9, 2010) that established the 1-hour standard for NO2 based on the 98th percentile of the yearly emissions (see

[4] *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310.

Federal Register http://www.epa.gov/ttn/naaqs/standards/nox/fr/20100209.pdf). This same standard is used for sulfur dioxide. Since NOx and SOx are the primary pollutants emitted at refineries, there is substantial evidence to support the use of the 98th percentile of emissions data in determining the daily actual baseline emissions. Therefore, consistent with the *CBE v SCAQMD* decision, the SCAQMD used actual emissions data, not hypothetical maximum operating conditions, to determine the baseline daily emissions (see Table 2-5 on page 2-19 of the Draft Negative Declaration). Thus, there was no error in determining the baseline as implied by the commenter.

Response 1-14

The commenter incorrectly contends that using the 98th percentile of actual emissions data is prohibited by CEQA. See Response 1-13 for discussion of why using the 98th percentile of the maximum actual emissions is not an analysis of hypothetical maximum operating conditions. The commenter suggests that the selected baseline is not typical of normal operations. However, normal operations at the Refinery vary widely on a daily basis due to the complex nature of the refining activities so the corresponding emissions from the various activities will be different on a daily basis. The SCAQMD significance thresholds are daily thresholds and as such represent a peak daily emission rate. Therefore, the SCAQMD appropriately compared the 98th percentile of the maximum actual daily emissions in 2011to maximum permitted daily emissions of the proposed project (see Table 2-5 on page 2-19 of the Draft Negative Declaration).

The reliance on "eight isolated days in 2011" as the baseline, as noted by the commenter, requires some clarification. The eight days are not isolated but rather the number of days that equate to the two percent reduction from the maximum actual emissions based on the 98th percentile methodology explained in Response 1-13. In addition, as discussed in the Draft Negative Declaration on page 2-18, "the emissions data for each pollutant for those eight days were averaged to establish average peak [maximum actual] daily baseline boiler emissions".

Response 1-15

SCAQMD disagrees with the commenter that the baseline is invalid because it is unsupported. As discussed in Response 1-13, the baseline was established based on an approved US EPA method of emission data collection for the NO_2 and SO_2 NAAQS, which was published in the Federal Register in 2010. The selection of criteria pollutant emissions data from year 2011 is based on the most current, available annual data set at the time when the NOP/IS was published in early 2012. This is consistent with CEQA Guidelines Section 15125(a), which requires a description of the "physical environmental conditions in the vicinity of the project, as they exist at the time the NOP is published."

As discussed in Response 1-14, the eight days of emissions equate to the two percent reduction from the maximum actual emissions based on the 98th percentile methodology explained in Response 1-13. Further, the typical operations from the facility vary due to the complex nature of the refining activities including, but not limited to, fluctuating market demand and intermittent maintenance activities.

The commenter also contends that Appendix B excludes historical emissions data. However, Appendix B represents a summary of the complete historical data set that is maintained on-file and audited by the SCAQMD. This actual operating emissions data used for establishing the baseline for the existing equipment was reported to the SCAQMD under its Regulation XX, the RECLAIM program and is summarized in Appendix B (page B-11) of the Draft Negative Declaration. Presentation of the baseline emissions data in the Draft Negative Declaration and Appendix B is consistent with CEQA Guidelines Section 15147 which states, "The information contained in an EIR [or Negative Declaration] shall include *summarized* technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the Public."

Response 1-16

The information withheld from the public information request was properly withheld trade secret/business confidential information as defined in the Government Code § 6254.7(d), and as exempted from disclosure by CEQA, Public Resources Code § 21160. Emissions data was released as required from the original request. The April 23, 2014 additional information request is currently being prepared.

Response 1-17

As discussed in Response 1-14, the SCAQMD evaluated the proposed project maximum impacts compared to a slightly less than actually achieved maximum in the recent past. The actual emissions are reported and audited by the SCAQMD and are considered factual emissions information. The use of the 98^{th} percentile for the baseline yields a potentially larger project impact than the use of the maximum baseline value or the use of the permitted maximum emissions and accommodates any possibility in variability of operations. Therefore, the Draft Negative Declaration provided an analysis that represents a maximum potential impact.

Response 1-18

Comment 1-18 discusses prior CEQA litigation and CEQA Guidelines citations, but makes no comment on the Draft Negative Declaration. No response is required.

Response 1-19

The commenter failed to consider the proposed Project as a whole in their comment by failing to consider the Refinery is subject to RECLAIM and must comply with the offset provisions of RECLAIM. The SCAQMD significance thresholds are for the project's overall impacts. This project differs from the project that underwent review in the *Lotus v. Department of Transportation* case cited by the commenter. In the Lotus matter, the agency combined project impacts with mitigation measures, some of which were unenforceable, to reach the conclusion that the project would not have any significant impacts. The Court also noted a distinction between mitigation measures and the project as designed. The Court noted that in some

instances, trying to separate out an element of the project simply to analyze impacts of an alternate element is "nonsensical":

> "The distinction between elements of a project and measures designed to mitigate impacts of the project may not always be clear. For example, in the present case the use of "Cement Treated Permeable Base (CTPB) to minimize the thickness of the structural section, provide greater porosity, minimize compaction of roots, and minimize thermal exposure to roots from Hot Mix Asphalt paving" might well be considered to define the project itself. It would be nonsensical to analyze the impact of using some other composition of paving and then to consider use of this particular composition as a mitigation measure." *See, Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, at footnote 8.

The Refinery, as a RECLAIM facility under SCAQMD's authority, is subject to regulatory requirements that the project must comply with in order to receive Permits to Operate. As such, the evaluation of the NOx emissions prior to the required RECLAIM Trading Credit (RTCs) offsets is not an evaluation of the whole project. The evaluation as presented in the Draft Negative Declaration evaluates the project in compliance with laws and regulations, which include the required NOx emission RTCs that must be surrendered to offset the emissions. Asking the agency to ignore its own regulations and to assume the project would not be designed to comply with the law, simply to provide an alternate that does not comply with the law just to analyze impacts that cannot legally occur would be nonsensical and counter to the *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 141 decision. Therefore, the overall effect of the proposed Project on NOx emissions in the South Coast Air Basin, as correctly evaluated in the Draft Negative Declaration, are less than the significance threshold and a Negative Declaration is the appropriate CEQA document for the proposed Project.

Response 1-20

As explained in Response 1-19, the commenter fails to consider the whole of the action, which includes the regulations in place that the proposed Project must comply with in order to receive Permits to Construct and Operate. The correct GHG emissions are included in Table 2-10, page 2-31, of the Draft Negative Declaration which demonstrates that the overall GHG associated with the Cogen Unit will be zero. This is because the Refinery is subject to the requirements of the AB 32 Cap and Trade Program regulated by CARB, which requires the facilities subject to the program to offset any GHG emissions in excess of their total allocation. Since the Cogen Unit is a new unit, it will require GHG offsets as part of the operation of the unit, thus reducing any potential GHG emissions to less than significant. Similar to Response 1-19, the GHG emissions and required offsets are part of the whole of the action. Thus, there is no substantial evidence for a fair argument that GHG impacts are significant and therefore, an EIR is not warranted or required.

Response 1-21

The comment explains the "fair argument" standard that requires an EIR to be prepared if a fair argument can be made that there is substantial evidence that the project will have a significant effect on the environment. In addition, this comment claims that CEQA must be interpreted to afford the fullest protection to the environment and that the "fair argument" standard is a low threshold which favors environmental review through an EIR over a Negative Declaration. Multiple citations of case law are provided to support this comment.

The Negative Declaration already provides a detailed project description and analyses of the 17 environmental resource areas pursuant to the CEQA Guidelines and environmental checklist. The Negative Declaration was distributed for a 54-day public review and comment period. Thus, the proposed Project has met the CEQA mandates and requirements for public participation and provided in good faith all the information relevant to a range of impacts. The Negative Declaration does not, nor is the agency required to include, an analysis of a hypothetical project, as that presented by the commenters.

SCAQMD staff is aware of the purpose of CEQA, the fair argument standard and the corresponding case law citations that elaborate how the fair argument standard has been interpreted by the various courts. It is important to understand, however, that in order to apply the fair argument standard, evidence based on facts must be presented to support any allegation that a proposed project may cause a significant effect on the environment. As stated in CEQA Guidelines § 15064(f)(5), "Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence." When accurate and appropriate data and assumptions are used, the proposed Project is not expected to result in significant adverse environmental impacts. Accordingly, if the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment, the lead agency shall prepare a negative declaration (CEQA Guidelines § 15064(f)(3)). As explained in these responses to comments, no evidence based on facts has been presented that supports a fair argument that the proposed Project may cause a significant effect on the environment.

Response 1-22

As explained in Responses A1-13 and A1-14, when calculated and analyzed correctly, no significant impacts are identified. Therefore, an EIR is not warranted.

Response 1-23

As explained in Responses A1-13 and A1-14, when analyzed correctly, no significant impacts are identified. Therefore, an EIR is not warranted.

Response 1-24

The comment provides information on PM2.5 studies and health effects which SCAQMD staff notes. No further response is required.

Response 1-25

As explained in Responses A1-11 and A1-16, when calculated and analyzed correctly, no significant impacts are identified. Therefore, an EIR is not warranted.

Response 1-26

As explained in Responses A1-11 through A1-16, when analyzed correctly, no significant impacts are identified. Therefore, an EIR is not warranted.

Response 1-27

As explained in Response 1-19, the proposed Project includes compliance with existing law, including the SCAQMD's RECLAIM program. The RECLAIM regulation was subject to CEQA analysis since its inception and most recently in 2010 (http://www.aqmd.gov /docs/default-source/ceqa/documents/aqmd-projects/2010/final-program-environmental-assess ment-for-proposed-amended-regulation-xx.pdf?sfvrsn=4). The SCAQMD requires an applicant to hold in their RTC bank sufficient RTCs for the first year of operation of a new source as imposed on this proposed Project in the draft Permit Conditions I297.x1 and 297.x2. As such, the expected emissions from the proposed Project are offset prior to operation of the proposed Project. Therefore, the analysis as presented in the Draft Negative Declaration is correct with no significant impacts from NOx emissions.

Response 1-28

As discussed in Responses 1-19 and 1-27, no significant impacts from NOx emissions are reasonably foreseeable. Therefore, an EIR is not warranted.

Response 1-29

As discussed in the Responses above, the SCAQMD disagrees with the comments concluding that the proposed permits to construct should be withdrawn and an EIR should be prepared because the comment are based on a misunderstanding of the project. The analysis in the Negative Declaration fully examines the proposed project as a whole and maintains that there will be no significant environmental impacts as a result of this project.

Comment Letter #1, Attachment 1
Pless Environmental, Inc. – May 23, 2014

Pless Environmental, Inc.
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San Rafael, CA 94903
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May 23, 2014

Via Email

Elizabeth Klebaner
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Re: Comments on Negative Declaration and Draft Title V Permits-to-Construct for Ultramar Inc. Wilmington Refinery Cogeneration Project

Dear Ms. Klebaner,

Per your request, I have reviewed the documents you provided for the proposed Ultramar Inc. Wilmington Refinery Cogeneration Project ("Project"). These documents include the Negative Declaration ("NegDec") for the Project published for review by the South Coast Air Quality Management District ("SCAQMD" or "District") as the lead agency under the California Environmental Quality Act ("CEQA") on April 12, 2013;[1] the Draft Title V Permits-to-Construct ("Draft Permits-to-Construct") posted by the SCAQMD for review pursuant to SCAQMD Rule 1714 in April 2014 and the associated engineering evaluation[2]; technical analyses and comments on the NegDec that were submitted to SCAQMD by your firm on June 4, 2013; and Project-related materials provided by the SCAQMD in response to your firm's Public Records Act requests dated April 23, 2013. My comments address both, the NegDec and the Draft Permits-to-Construct. A1-1

My qualifications as an environmental expert include a doctorate in Environmental Science and Engineering from the University of California Los Angeles. I have provided expert comments on air quality in the permitting process of a number

[1] SCAQMD, Ultramar Inc. Wilmington Refinery, Draft Negative Declaration, Proposed Cogeneration Project, SCH No. 2012041014, April 2013.

[2] SCAQMD, Ultramar Inc. (Valero Wilmington Refinery), Notice of Intent to Issue Title V Permit "Permits-to-Construct" According to SCAQMD Rule 1714, Project Description: Construction of One New Cogeneration System and Associated Air Pollution Control Equipment, April 24, 2014; http://www3.aqmd.gov/webappl/publicnotices2/SearchResults.aspx?&DateFrom=11/5/2013&DateTo=5/5/2014&CompanyName=ultramar; and SCAQMD, Ultramar Inc., SCAQMD ID NO. 800026, Permit to Construct Evaluation, Application No. 527789-Master, May 14, 2013, hereafter "Engineering Evaluation."

of cogeneration plants and refineries under the federal and state Clean Air Acts and in the environmental review process under CEQA. My résumé is attached to this letter.

A1-1 cont.

I. Project Description

Ultramar Inc. ("Applicant"), a Valero Energy Company, proposes to construct and operate a new 34-Megawatt ("MW") cogeneration unit ("Cogen Unit") to produce electricity and steam on-site at its 2402 East Anaheim, Wilmington Refinery ("Refinery"). The Refinery currently does not operate any cogeneration equipment nor routinely produce electricity on-site. At least 70 percent of the electricity required to operate the Refinery is currently supplied by Los Angeles Department of Water and Power ("LADWP") with the remaining 30 percent supplied by the adjacent Air Products Hydrogen Plant ("Air Products") facility, which also provides supplemental steam to the Refinery.[3]

The Cogen Unit would consist of one natural gas-fired General Electric LM500+G4 gas turbine with a refinery gas-fired heat recovery steam generator ("HRSG") with duct burner for supplemental steam production; a selective catalytic reduction ("SCR") system and a carbon monoxide ("CO") catalyst unit for emissions control of nitrogen oxides ("NOx") and CO; a Continuous Emissions Monitoring System ("CEMS") for NOx and CO; the necessary piping to connect to an existing aqueous ammonia tank to supply ammonia to the SCR unit; an evaporative cooler, and a control room.[4]

A1-2

Steam is used for many purposes at refineries, *e.g.*, to provide heating for processing and for steam-cracking, and the demand for steam within the Refinery, like electricity demand, fluctuates continually. During normal operations, the Cogen Unit would allow the Refinery to generate the amount of electricity that was previously supplied by LADWP, with the remaining 30 percent of pre-Project Refinery electricity demand continuing to be provided by Air Products. In addition, the Cogen Unit would replace up to approximately 70 percent of the steam production capacity of the Refinery's three existing refinery fuel-fired boilers (86-B-9000, 86-B-9001, and 86-B-9002); the remaining steam demand would be provided by some combination of steam from Air Products (varying between zero and 10 percent) and existing on-site unfired boilers.[5] As discussed in Comments IV and IX, the combination of the new cogeneration plant plus the existing fired and unfired boilers in addition to the steam supplied by Air Products would allow for increased steam demand from the Refinery.

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[3] NegDec, Project Description and pp. 2-16–2-18 and Engineering Evaluation.

[4] *Ibid.*

[5] *Ibid.*

II. The NegDec's Project Description Is Inadequate

The NegDec provides a one-paragraph description of processes and operations at the Refinery and the above summary of the Project components. However, the NegDec fails to put the Project into context of current and future operations at the Refinery. Specifically, the NegDec fails to discuss whether the Project would enable a potential increase in throughput and production at the Refinery. The NegDec claims that "[t]he proposed Project would involve physical changes within the Refinery while providing operational and functional stability and reliability with no change in the processing of crude and no increase in crude throughput at the Refinery."[6] This statement is ambiguous with respect to the increase in crude throughput at the Refinery as the NegDec does not specify whether the "increase in crude throughput" relates to the actual baseline throughput or the permitted throughput at the Refinery. Further, neither the NegDec nor the Draft Permits-to-Construct specify any existing permit limitations and/or physical restrictions that would prohibit a change of operations and/or an increase in crude throughput. Without such restrictions, a change in crude oil processing and/or throughput increase with associated emissions increase must be considered, especially since the Refinery could substantially increase steam supply without exceeding the proposed permit emission limits on the existing boilers and the proposed Cogen Unit. (*See* Comments IV and IX.)

A1-3

What's more, in October 2013, Valero submitted an application to the SCAQMD to construct a 50-car rail unloading system that would permit importing 60,000 barrels per day of diluted bitumen ("dilbit") from Canadian tar sands via rail to the Refinery.[7] While the company has shelved their plans and withdrawn their application[8], the Project would facilitate such a change in crude supply because processing tar sands dilbit requires more energy and steam than the heavy crude oils currently processed at the Refinery due to their unique chemical composition of the heavy ends or residuum. These heavy ends have higher molecular weight chemicals and are deficient in hydrogen[9] and would require large increases in energy in the form of steam and electricity to convert them into the same slate of refined products. Thus, most fired sources in the refinery – flares, heaters, boilers, etc. – will have to work harder to generate the same quality of refined products. The new Cogen Unit plus existing

A1-4

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[6] NegDec, p. 1-1.

[7] Jack Eidt, WilderUtopia.com, Valero Moves to Ship Tar Sands by Rail into LA Harbor, October 18, 2013; http://www.wilderutopia.com/environment/energy/tar-sands/valero-moves-to-ship-tar-sands-by-rail-into-la/.

[8] Communities for a Better Environment, Some Good News in the World of Oil and Gas! Valero in Wilmington Withdraws Crude-By-Rail Application; City of Carson Votes for a Moratorium on Oil and Gas Extraction, March 24, 2014; http://www.cbecal.org/valero-in-wilmington-withdraws-crude-by-rail-application/.

[9] *See*, for example, Barclays, Equity Research Energy, U.S. Independent Refiners, Valero Energy Refining Technical Teach-In Call Transcript, March 14, 2014; http://valero.investorroom.com/download/Barclays_Valero_Energy_Refining_Technical_Teach-In_Call_Transcri.

sources would allow for this increase in energy and steam demand. (*See* Comment IX.) Further, the composition of dilbit is chemically different from other heavy crudes currently processed at the Refinery. Tar sands dilbits contain large quantities of volatile diluent full of volatile organic compounds ("VOCs") and toxic air contaminants ("TACs") and a change in processing to this feedstock would result in substantial increases in these air pollutants.[10]

A1-4 cont.

III. The NegDec Relies on an Unsupported and Improper Baseline for Determining Significance of Daily Project Emissions

In order to determine the potential impacts on air quality from the proposed Project under CEQA, it is necessary to establish baseline emissions from the existing three boilers to which future emissions will be compared. The NegDec explains how it developed baseline emissions data for the Project:

> Boiler operations fluctuate as steam demands within the Refinery vary, calendar year 2011 operations were analyzed to identify the top 98th percentile (or the top two percent of operating conditions) to represent the maximum emissions achieved during boiler operations. Eight days of operations comprise the top two percent of operating days. The emissions data for each pollutant for those eight days were averaged to establish average peak daily baseline boiler emissions.[11]

A1-5

In other words, the NegDec relies on a baseline that is calculated as the average peak daily emissions from the existing boilers on eight days in 2011 when maximum emissions were achieved. This baseline is not representative of real, on-the-ground pre-Project conditions.

As recognized by the NegDec, the 98th percentile emissions data represent peak daily boiler emissions that occurred on eight days during the year 2011.[12] In other words, the baseline is not representative of typical operations of the facility, but rather of maximum operations during two percent of the year only. A comparison of maximum historical operations and future potential emissions fails to establish the incremental emissions increase between typical pre-Project emissions – which by definition are lower than maximum pre-Project emissions – and post-Project emissions. As a result, the NegDec fails to address the emissions increase, and the impacts on air

A1-6

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[10] Diluent contains high concentrations of benzene (0.52% to 0.98%); toluene (1.03% to 2.53%); ethyl benzene (0.09% to 0.29%); and xylenes (0.46% to 2.39%). *See* Crude Monitor:
Condensate Blend (CRW) - http://www.crudemonitor.ca/condensate.php?acr=CRW;
Fort Saskatchewan Condensate (CFT) - http://www.crudemonitor.ca/condensate.php?acr=CFT;
Peace Condensate (CPR) - http://www.crudemonitor.ca/condensate.php?acr=CPR;
Pembina Condensate (CPM) - http://www.crudemonitor.ca/condensate.php?acr=CPM;
Rangeland Condensate (CRL) - http://www.crudemonitor.ca/condensate.php?acr=CRL;
Southern Lights Diluent (SLD) - http://www.crudemonitor.ca/condensate.php?acr=SLD.

[11] NegDec, p. 2-18.

[12] *Ibid.*

quality and public health, from pre-Project to post-Project conditions. The Project could cause a significant increase in emissions when Project impacts are compared to emissions that occurred on any one of the other 357 days of the 2011 calendar year when facility emissions were lower.

A1-6 cont.

The NegDec also lacks analysis documenting why calendar year 2011 was deemed representative for developing baseline emissions data, rather than a multi-year average as is more typical for CEQA review. The NegDec fails to provide any supporting documentation for the baseline operation of the three existing boilers.

A1-7

Finally, SCAQMD's use of emissions data that occurred on only eight days in one year as a CEQA baseline is inconsistent with prior CEQA analyses prepared by the District. For example, in the Final Subsequent Environmental Impact Report for the Sunshine Gas Producers Renewable Energy Project, the SCAQMD determined baseline emissions data based on three prior operating years (2007-2009).[13] The use of 2011 data as the baseline for air quality impacts is further inconsistent with the NegDec's baseline determination for greenhouse gas ("GHG") emissions, which relies on data from calendar years 2009 and 2010.[14] The NegDec provides no discussion of this discrepancy.

A1-8

At a minimum, the NegDec and supporting materials should have included the following data to substantiate the baseline used by the SCAQMD for the purpose of Project air quality impact analysis:

- Emissions data for each criteria pollutant for boilers 86-B-9000, 86-B-9001, 86-B-9002 and each day for calendar years 2009 through 2011;
- A description how emissions data were determined, *e.g.*, via CEMS or calculated based on source test emissions data and boiler fuel throughput;
- A demonstration that emissions data did not exceed permit limits or emission limits set by Consent Decree(s) and did not include emissions during malfunctions; and
- An analysis demonstrating that the emissions baseline is representative of actual on-the-ground conditions.

A1-9

I understand that your firm requested emissions data for the three boilers from the SCAQMD but was denied review due to the Applicant's confidentiality concerns. Yet, without any of the supporting data or a sufficient discussion by the SCAQMD

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[13] SCAQMD, Final Subsequent Environmental Impact Report for the Sunshine Gas Producers Renewable Energy Project, certified April 27, 2012, Appendix D-4; http://www.aqmd.gov/ceqa/documents/2012/nonaqmd/Sunshine/Final_SEIR_Appendix_D_May_4.pdf.

[14] *See* NegDec, Appendix B, p. B-17.

regarding their pertinence, the baseline, and consequently, the conclusions in the NegDec regarding Project impacts on air quality, cannot be verified.

A1-9 cont.

IV. The Draft Permits-to-Construct Are Inconsistent with the NegDec's Analysis of Potential Impacts on Air Quality from Project Operations and the NegDec Fails to Identify Significant Impacts

The NegDec calculates maximum daily operational emissions from the Project as the difference between the baseline emissions, as discussed above, and the maximum daily emissions for four (4) future operating scenarios. Each operating scenario assumes that the Cogen Unit would be operating at full capacity (100% load), boiler 86-B-9000 would be off and the other two refinery gas-fired boilers, 86-B-9001 and 86-B-9002, would be operating at **varying loads**:

Scenario 1: Cogen Unit operating at full capacity (100% load), boiler 86-B-9000 off (0% load), boiler 86-B-9001 operating at reduced capacity (**38% load**), boiler B-9002 operating at minimum level (**31% load**);

Scenario 2: Cogen Unit operating at full capacity (100% load), boiler 86-B-9000 off (0% load), boiler 86-B-9001 operating at reduced capacity (**75% load**), boiler 86-B-9002 off (**0% load**);

Scenario 3: Cogen Unit operating at full capacity (100% load), boiler 86-B-9000 (0% load), boiler 86-B-9001 operating at minimum level (**30% load**), boiler 86-B-9002 operating at reduced capacity (**36% load**); and

Scenario 4: Cogen Unit operating at full capacity (100% load), boiler 86-B-9000 off (**0% load**), boiler 86-B-9002 operating at reduced capacity (**54% load**).[15]

A1-10

For each pollutant and scenario, the NegDec compares the increase of maximum emissions over to the above-discussed 2011 98th-percentile baseline emissions to the SCAQMD's daily thresholds of significance[16] to determine the Project's impacts on air quality. The NegDec finds that emission increases attributable to the Project would be less than significant.[17] The Engineering Evaluation for the Draft Permits-to-Construct refers to the NegDec's findings of no significant adverse impacts[18] but does not include adequate permit conditions to limit Project emissions to the four scenarios analyzed in the NegDec. As a result, the NegDec fails to analyze potential operating scenarios that would be permitted under the Draft Permits-to-Construct and fails to identify

A1-11

[15] NegDec, Table 2-4, p. 2-17.

[16] NegDec, Table 2-5, p. 2-19.

[17] NegDec, p. 2-20.

[18] Engineering Evaluation, p. 109.

significant impacts from the Project and the Draft-Permits-to-Construct are inconsistent with the CEQA analysis presented in the NegDec.

First, all four future operating scenarios evaluated in the NegDec assume that boiler 86-B-9000 would be off during operation of the Cogen Unit.[19] The NegDec specifically asserts: "During operation of the Cogen Unit … boiler 86-B-9000 would be prohibited from operating."[20] Yet, the Draft Permits-to-Construct contain no such corresponding permit condition and operation of this boiler is not otherwise restricted by unit-specific permit mass emission limits but only by concentration limits.[21] Thus, this boiler, which is more than 30 years old, could operate in addition to the other two existing boilers and the new Cogen Unit.

A1-11 cont.

Second, while the NegDec asserts that "[d]uring operation of the Cogen Unit, boilers 86-B-9001 and 86-B-9002 would be required to operate at reduced loads…,"[22] this statement is not reflected in the proposed permit conditions in the Draft Permits-to-Construct:

a) For NOx emissions, the Draft Permits-to-Construct require compliance with Refinery-wide annual mass emission limits set by the District's REgional CLean Air Incentives Market ("RECLAIM") program for this pollutant.[23] The Draft Permits-to-Construct do not establish a separate NOx mass emission limit for the combined operations of the Cogen Unit and the three boilers. Such a condition is required to ensure that the Project equipment will not emit regulated pollutants above the significance thresholds relied upon in the NegDec. Absent such a condition, throughput at the Cogen Unit and the three boilers is only limited by their physical capacity as long as the Refinery complies with facility-wide RECLAIM emission limits, which is determined on an annual basis, not a daily basis.

A1-12

b) For emissions of volatile organic compounds ("VOC") and particulate matter smaller than or equal to 10 micrometers ("PM10") the Draft Permits-to-Construct propose mass emissions limits on a monthly basis for combined emissions from the Cogen Unit and all three boilers of 2,891 and 5,197 pounds per month ("lbs/month"),[24]

A1-13

[19] NegDec, Table 2-4, p. 2-17, Footnote (a).

[20] NegDec, p. 2-19.

[21] The Engineering Evaluation lists existing mass emission limits for boiler 86-B-9000; however, I was unable to source the origin of these limits from the conditions in the Draft Permit-to-Construct.

[22] NegDec, p. 2-19.

[23] RECLAIM is an emissions trading program, established in 1994, that requires polluting facilities to reduce their emissions of NOx and sulfur oxides ("SOx"). Under the system, which operates as a cap-and-trade program, each participating facility was initially given a certain number of emission rights (the 'cap') for free. In each consecutive year, the number of emission rights given is reduced such that the facilities have to either reduce their emissions or buy emission rights in the form of credits from facilities with enough to trade. (Source: Wikipedia.)

[24] Draft Permits-to-Construct, Device Conditions A1.2, A1.x, and A63.x.

respectively. Compliance with these so-called "bubble limits" would be determined based on calculations using monthly fuel throughput and VOC and PM10 emission rates obtained from annual source tests.[25] As explained below, these bubble mass emission limits in the Draft Permits-to-Construct authorize substantially higher combined daily VOC and PM10 emissions than the "worst-case" scenario analyzed by the NegDec.

The table below presents combined operational VOC and PM10 emissions from the Cogen Unit and three boilers for each of the four scenarios analyzed in the NegDec and the monthly bubble limits for these pollutants in the Draft Permits-to-Construct.

Combined operational VOC and PM10 emissions from Cogen Unit and three boilers as analyzed by NegDec (Scenarios 1 through 4) compared to Draft Permits-to-Construct bubble limits

Row		Combined operational emissions for Cogen Unit and three boilers VOC	PM10	Unit
1	Scenario 1[a]	2,233.73	3,885.97	(lbs/month)
2	Scenario 2[a]	1,967.79	3,745.10	(lbs/month)
3	Scenario 3[a]	2,265.47	3,893.48	(lbs/month)
4	Scenario 4[a] (worst-case for VOC and PM10)	2,380.90	3,922.12	(lbs/month)
5	Draft Permits-to-Construct monthly bubble limit[b]	2,891	5,197	(lbs/month)
6	30-day average daily bubble limit[c]	95	171	(lbs/day)
7	Additional permitted monthly emissions over Scenario 4[d]	510.10	1,274.88	(lbs/month)
8	Additional permitted 30-day average daily emissions over Scenario 4[e]	17.00	42.50	(lbs/day)

a NegDec, Appendix B, pp. B-12–B-16
b Draft Permits-to-Construct, Device Condition A63.x.
c Engineering Evaluation, p. 43.
d = (Monthly bubble limit) – (Scenario 4)
e = (Additional permitted monthly emissions over Scenario 4) / (30 days/month)

As shown, the monthly (Row 5) and 30-day average daily (Row 6) VOC and PM10 emissions authorized by the bubble limits are substantially higher than the "worst-case" scenario analyzed by the NegDec (Scenario 4, Row 4). Specifically, on a monthly basis, the proposed bubble limits authorize 510 lbs/month more VOC emissions and 1,275 lbs/month more PM10 emissions than estimated for Scenario 4 (Row 7). On a 30-day average basis, the bubble limits permit 17.0 lbs/day more VOC emissions and 42.5 lbs/day more PM10 emissions than estimated for Scenario 4 (Row 8).

A1-13 cont.

Because the NegDec does not analyze the maximum scenario permitted under the Draft Permits-to-Construct, it fails to disclose maximum Project emissions and potentially significant Project impacts: For example, assuming for the sake-of-argument that the baseline assumed by the NegDec were the appropriate baseline, a comparison of baseline emissions presented by the NegDec (38.0 lbs/day VOC and 62.2 lbs/day PM10) with the 30-day average daily emissions permitted under the Draft Permits-

A1-14

[25] Draft Permits-to-Construct, Device Conditions A63.x.

to-Construct, (95 lbs/day VOC and 171 lbs/day PM10[26]) results in daily emissions increases of 57 lbs/day and 108.8 lbs/day for VOC and PM10, respectively. The daily VOC emissions increase of 57 lbs/day exceeds the SCAQMD's CEQA threshold of significance for VOC emissions of 55 lbs/day by 2 lbs/day. This is a significant impact that the NegDec fails to identify.

A1-14 cont.

Importantly, because refinery operations, and, therefore, steam demand and boiler operations, fluctuate continually, the increase in combined emissions from the Cogen Unit and the three boilers on any one day in a 30-day period could be substantially higher than the 30-day calculated average as long as monthly bubble emission limits or other permit limits are not exceeded. Consequently, there may be many days during the year on which significance thresholds for PM10 and other pollutants will be exceeded as well.

A1-15

The NegDec assumes that all PM10 emissions from existing boilers are 2.5 micrometers or smaller.[27] The Draft Permits-to-Construct do not set a separate limit for emissions of particulate matter equal to 2.5 micrometers or smaller ("PM2.5"); thus PM2.5 emissions are only limited by the monthly bubble limit for PM10, which authorizes 42.5 lbs/day more PM10/PM2.5 emissions than the "worst-case" scenario analyzed by the NegDec (Scenario 4). Adding 42.5 lbs/day of PM2.5 emissions to the "worst-case" scenario estimated by the NegDec (20.6 lbs/day of PM2.5 emissions) results in total PM2.5 emissions of 63.1 lbs/day, which exceeds the SCAMQD's daily threshold of significance for PM2.5 by 8.1 lbs/day. Thus, PM2.5 emissions from the Project constitute a significant impact, which the NegDec fails to identify and, consequently, fails to mitigate.

A1-16

To understand the Project's individual and cumulative adverse impacts on public health and welfare, it is important to understand the severity of health impacts caused by elevated concentrations of PM2.5 in the ambient air. Since 1996, more than 2,000 peer-reviewed studies have been published validating earlier epidemiologic studies that link both acute and chronic fine particle pollution with serious morbidity and mortality. This research has also expanded the list of health effects associated with fine particle pollution and has identified health effects at considerably lower exposure levels than previously reported.

A1-17

Overwhelming scientific evidence shows that long-term exposure to fine particulate air pollution contributes to pulmonary and systemic oxidative stress, inflammation, progression of atherosclerosis, and risk of ischemic heart disease and death. A recent study found that a decrease in the concentration of PM2.5 of 10 $\mu g/m^3$ in ambient air is associated with an increase in life expectancy of 0.6 years.[28] Another

[26] Engineering Evaluation, p. 43.

[27] NegDec, Footnote (b) to Table 2-5, p. 2-19.

[28] Pope C. A. III, Ezzati M., and Dockery D. W., Fine-Particulate Air Pollution and Life Expectancy in the United States, The New England Journal of Medicine, January 22, 2009, vol. 360, pp. 376-386.

recent study found that each 10-µg/m³ increase in PM2.5 air pollution was associated with an approximately six percent increase in cardiopulmonary mortality and an eight percent increase in lung cancer mortality.[29] Short-term exposure is equally damaging and contributes to complications of atherosclerosis, such as plaque vulnerability, thrombosis, and acute ischemic events. The U.S. Environmental Protection Agency ("EPA") concluded with respect to short-term exposure studies that "epidemiological evidence was found to support likely causal associations between PM2.5 and both mortality and morbidity from cardiovascular and respiratory diseases."[30] In response to this new information, EPA tightened the federal 24-hour PM2.5 ambient air quality standard from 65 µg/m³ to 35 µg/m³, effective December 17, 2006.[31,32]

A1-17 cont.

A study of 12,865 patients evaluated the role of fine particulate matter exposure in triggering acute ischemic heart disease event. The study found a sharply elevated risk of heart attacks for people with clogged arteries after just a day or two of short-term exposure to fine particulate matter. This study was published in the American Heart Association's peer-reviewed journal *Circulation*.[33] One coauthor of the study stated that the results should prompt heart doctors to advise those with coronary heart disease to stay indoors as much as possible on particularly sooty days and that he was already changing his advice to patients based on the results – even advising in severe cases to move to a less polluted environment.[34]

V. The Draft Permits-to-Construct Fail to Implement Adequate Monitoring Provisions for VOC Emissions, Invalidating the District's Analysis of Best Available Control Technology

A1-18

The Cogen Unit is subject to the District's Best Available Control Technology ("BACT") requirements under District Rule 1303(a) for any new or modified source which results in an emission increase of any nonattainment air contaminant of

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[29] Pope C.A. III, Burnett R.T., Thun M.J., Calle E.E., Krewski D., Ito K., and Thurston G.D., Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution, Journal of the American Medical Association, v. 287, no. 9, pp. 1132-1141, 2002.

[30] EPA, National Center for Environmental Assessment, Office of Research and Development, Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure, EPA/600/R-06/063, July 2006; http://www.epa.gov/oar/particlepollution/pdfs/ord_report_20060720.pdf.

[31] EPA, Office of Air Quality Standards and Planning, September 2006 Revisions to the National Ambient Air Quality Standards for Particle Pollution, September 2006.

[32] EPA, National Ambient Air Quality Standards for Particulate Matter, Final Rule, Federal Register, 40 CFR Part 50, Vol. 71, No. 200, pp. 61144-61233, October 17, 2006.

[33] Pope C.A. III, Muhlestein J.B., May H.T., Renlund D.G., Anderson J.L., and Horne B.D., Ischemic Heart Disease Events Triggered by Short-Term Exposure to Fine Particulate Air Pollution, Circulation, No. 114, pp. 2443-2448; abstract available at http://circ.ahajournals.org/cgi/content/abstract/114/23/2443.

[34] Los Angeles Times, Dire Health Effects of Pollution Reported, Diesel Soot from Construction Equipment Is Blamed for Illnesses and Premature Deaths, December 6, 2006; http://articles.latimes.com/2006/dec/06/local/me-dig6.

1.0 lbs/day on a maximum daily basis.[35] The proposed Cogeneration Unit is a new source with an increase in VOC emissions.[36] The District finds Ultramar's proposal of 3 parts per million ("ppm") of VOC concentrations in emissions from the Cogen Unit acceptable as BACT.[37] The Draft Permits-to-Construct require that VOC emissions from the gas turbine and duct burner be source-tested annually.[38] However, an annual source test is inadequate for determining compliance with the BACT VOC emissions limit. Source tests are announced well ahead of time and the company has ample time to optimize combustion processes for the test. During the remainder of the year, VOC concentrations are only limited by compliance determination with the above-discussed "bubble" emission limit for the boilers and Cogen Unit. This bubble limit does not ensure that the Cogen Unit maintains a BACT level of VOC emissions throughout the year.

A1-18 cont.

To ensure continuous compliance with the VOC BACT emissions limits, the District could require a continuous emissions monitoring system ("CEMS"). These systems are available[39] and are feasible here. At the very least, the District should require quarterly source testing of VOCs instead of annual source testing and develop a methodology to demonstrate compliance on a short-term basis. The District should not grant the Permits-to-Construct without addressing this monitoring and compliance issue.

VI. RECLAIM Credits Cannot Be Used to Demonstrate Compliance with the District's CEQA Daily Significance Thresholds and Do Not Constitute Valid CEQA Mitigation

The NegDec calculates a total increase of 30-day average daily NOx emissions due Project operations of 98.8 lbs/day.[40] This emissions increase by far exceeds the CEQA significance threshold for NOx of 55 lbs/day established by the SCAQMD: by 43.9 lbs/day or 80 percent.[41] Instead of finding a significant impact due to operational NOx emission increases, the NegDec applies credits under the RECLAIM program of 98.8 lbs/day of NOx stating that the Refinery is required "to annually surrender RECLAIM trading credits (RTCs) equal to the actual emissions of NOx and

A1-19

[35] Engineering Evaluation, p. 67.

[36] Engineering Evaluation, p. 70.

[37] Engineering Evaluation, p. 72.

[38] Permits-to-Construct, Permit Condition D29.x3.

[39] *See*, for example, EPA, Performance Specification 8, Performance Specifications for Volatile Organic Compound Continuous Emission Monitoring Systems in Stationary Sources; http://www.epa.gov/ttn/emc/perfspec/ps-8.pdf; and Altech Environment U.S.A., VOC – Volatile Organic Compounds Monitored with CEMS Systems; http://www.altechusa.com/pollutants_measured_voc.php.

[40] NegDec, Table 2-5, p. 2-19.

[41] (43.9 lbs/day)/(55 lbs/day) = 0.80.

SOx from new or modified projects. Therefore, no increase in NOx or SOx is expected to occur as a result of the Project."[42] As discussed below, the use of RECLAIM RTCs is not acceptable to offset significant impacts under CEQA.

A1-19 cont.

First, this approach ignores the fact that RECLAIM RTCs are surrendered/traded on an annual, *i.e.*, long-term, basis for facility-wide emissions whereas the SCAQMD's significance thresholds for project emissions were established on a daily, *i.e.*, short-term, basis. Thus, the use of RECLAIM RTCs cannot guarantee that Project emissions are not significant on a daily basis. As an extreme example, one could assume that all emissions from the Project would occur on a single day resulting in substantial exceedances of short-term ambient air quality standards; yet, according to the NegDec's logic, as long as sufficient RECLAIM RTCs were provided on annual basis, Project emissions would not be significant. On a common sense basis, this is clearly not the case, as the annual credits would do nothing to alleviate the health impacts associated with exceedance of short-term ambient air quality standards.

A1-20

Second, the RECLAIM program was established by the SCAQMD in 1993 as an alternative regulatory program by the District to meet the air quality improvement goals for the South Coast air basin, specifically to meet the Reasonable Further Progress ("RFP") goals for ozone and nitrogen dioxide ("NO_2") under the federal Clean Air Act. The program specified an initial allocation of RTCs for facilities emitting over four tons per year ("tons/year") of NOx and sulfur dioxide ("SOx") based on historical reported peak emissions for the years immediately prior to implementation of the program. RTCs represent a limited authorization to emit a fixed amount of NOx or SOx and have a term of one year. Each facility is required to meet specific annual mass emissions reduction targets which are implemented by reducing the initial allocations by a specific amount each year. The program is implemented as a cap-and-trade program, where businesses that beat their reduction targets can trade any excess credits on the open market.

A1-21

Operators of RECLAIM sources must not emit more than the total number of RECLAIM credits they possess, which include the annual allocation plus any credits bought and minus any credits sold. Accordingly, under the District's RECLAIM program, Ultramar is authorized to emit NOx and SOx above CEQA significance thresholds if it holds sufficient emissions credits to offset annual facility-wide emissions. Thus, mere compliance with the RECLAIM program requirements does not ensure that Project emissions are reduced below the District's CEQA significance thresholds.

Further, as stated before, the RECLAIM program was designed to bring the air basin in compliance with the federal ambient air quality standards, not the more stringent state ambient air quality standards. Thus, RECLAIM does not ensure compliance with the applicable state ambient air quality standards which must be

A1-22

[42] NegDec, p. 2-20.

considered under CEQA. Adequate mitigation of Project emissions should explore possibilities for on-site emission reduction at the Facility's numerous emission sources.

A1-22 cont.

Implementation of adequate mitigation, *i.e.*, mitigation that actually reduces air pollution to offset the increase in air pollution from the Project, is crucial given the location of the Ultramar Refinery in the Wilmington/Carson area, which is home to five refineries with a throughput of 650,000 barrels per day ("bpd") (about one third the state's capacity) as well as numerous other sources of air pollution including the Port of Los Angeles, the Port of Long Beach, drilling of the Wilmington oil field, freeways, etc.[43] The impacts of air pollution from these sources are largely borne by communities of color (Wilmington is 85 percent Hispanic),[44] raising serious environmental justice concerns, which were not addressed by the NegDec on either a Project- or cumulative basis.

A1-23

VII. The Dispersion Modeling Results for Localized Air Quality Impacts Provided by the NegDec Are Unsupported and May Underestimate Potential Impacts

The NegDec provides the results from air dispersion modeling of criteria pollutant emissions from Project sources to determine localized air quality impacts.[45] Contrary to the NegDec's claim, the "emission rates, locations, and ground level concentrations" are not "included in Appendix B,"[46] and were also not included in the documents provided to your firm by the District. Thus, the assumptions and results from the air dispersion modeling cannot be verified. Because of the above discussed discrepancies between emissions from the operating scenarios analyzed by the NegDec and the permitted emissions under the permit conditions in the Draft Permits-to-Construct, the dispersion modeling results presented by the NegDec likely do not reflect ambient pollutant concentrations that would result from Project emissions plus background concentrations. As a result, the NegDec's conclusions of no adverse significant impacts are unreliable. The assumptions and modeling runs for the dispersion modeling should be adequately supported and provided for public review.

A1-24

VIII. The District's Best Available Control Technology Determination for the Cogen Unit Is Flawed and the Draft Permits-to-Construct Fail to Limit Greenhouse Gas Emissions

According to the Engineering Evaluation for the Draft Permits-to-Construct, the Cogen Unit would emit 274,000 tons per year ("tons/year") of carbon dioxide-

A1-25

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[43] Community for a Better Environment, The Increasing Burden of Oil Refineries and Fossil Fuels in Wilmington, California and How to Clean them Up! April 2009; http://www.cbecal.org/wp-content/uploads/2012/05/wilmington_refineries_report.pdf.

[44] *Ibid.*

[45] NegDec, Table 2-6, p. 2-21.

[46] NegDec, p. 2-20.

equivalent ("CO_2e") greenhouse gas ("GHG") emissions, exceeding 100,000 tons/year emission threshold for purposes of the Prevention of Significant Deterioration ("PSD") permitting program under the federal Clean Air Act ("CAA").[47] The Draft Permits-to-Construct purport to implement the BACT requirements for greenhouse gas ("GHG") emissions under the CAA's PSD program.[48]

The District's BACT analysis for GHG emissions identifies six available control technologies to reduce GHG emissions: (1) add-on controls; (2) alternative generating/renewable energy technologies; (3) carbon capture/sequestration; (4) use of an alternative fuel; (5) energy efficiency; and (6) inherently lower-emitting GHG processes.[49] The District eliminates control technologies (1) through (4) as technically infeasible and identifies technologies (5) and (6) as feasible. The District identifies BACT for the Cogen Unit as:

1. Use of combustion turbine technology coupled with modern duct firing technology in the HRSG.
2. Use of a combination of clean fuels, *i.e.*, natural gas and refinery gas, which meet the regulations of the South Coast AQMD, as specified in the project design criteria.
3. Use of good combustion practices in both the turbine and duct fired HRSG.
4. Periodic inspection and proper maintenance of the turbine and duct fired HRSG to maintain the combustion equipment in a condition which reflects the most efficient operation, i.e., efficient fuel combustion versus power output and steam production, accounting for system age and degradation effects.
5. Maintain compliance with the Emission Performance Standard (Title 20, California Code of Regulations, section 2900).
6. Monitor and report the net energy output on a calendar year basis.[50]

Based on these criteria, the District concludes that the only option remaining for the Project for satisfying GHG BACT is use of the proposed GE LM2500+G4 – *i.e.*, the Project equipment proposed by the Applicant.[51] I disagree with the District's conclusions and the proposed permit conditions for implementing GHG BACT for the Cogen Unit.

A1-25 cont.

First, the Cogen Unit consists of two emission sources: the turbine and the HRSG with duct burner. The turbine is proposed to be fired with natural gas and the HRSG duct burner is proposed to be fired with refinery gas. In its analysis of technology (4),

A1-26

[47] Engineering Evaluation, p. 86.

[48] Engineering Evaluation, p. 87.

[49] *Ibid.*

[50] Engineering Evaluation, p. 91.

[51] *Ibid.*

i.e., the use of alternative fuel, the District's GHG BACT analysis states: "The Cogen Unit power generating section is natural-gas fired, which is a clean fuel. Natural gas is currently used and readily available at the refinery. Therefore, it is the preferred fuel for the Cogen Unit. Other fuels, such as biomass, are required in large quantities and not readily available in the vicinity of the refinery."[52] This analysis ignores alternative fuel use for the HRSG/duct burner. The use of natural gas as an alternative to the proposed use of refinery fuel gas for the HRSG/duct burner is a feasible alternative fuel technology, as evidenced by the numerous cogeneration units in California and nationwide that are fired exclusively on natural gas. Use of natural gas instead of refinery gas for the HRSG/duct burner is feasible as the facility already has natural gas supply and would result in lower GHG (and other air pollutant) emissions. Thus, GHG BACT for the HRSG/duct burner is firing natural gas.

A1-26 cont.

Second, the District's GHG BACT determination compares the CO_2e emission rate from the Cogen Unit of 585.1 pounds per Megawatt-hour ("lbs/MW-hr") only to the Environmental Performance Standard ("EPS") established by the California Public Utilities Commission ("CPUC") and California Energy Commission ("CEC") of 1,100 lbs CO_2e/MW-hr. It fails to provide any examples for GHG emission rates for other cogeneration facilities and fails to set an emission limit for GHG emissions. Under the federal Clean Air Act and applicable regulations, a PSD permit must contain emissions limitations based on application of BACT for each regulated new source review ("NSR") pollutant. The EPA explains:

> A determination of BACT for GHGs should be conducted in the same manner as it is done for any other PSD regulated pollutant. The BACT requirement is set forth in section 165(a)(4) of the CAA, in federal regulations at 40 CFR 52.21(j), in rules setting forth the requirements for approval of a state implementation plan (SIP) for a State PSD program at 40 CFR 51.166(j), and in the specific SIPs of the various states at 40 CFR Part 52, Subpart A - Subpart FFF. CAA § 169(3) defines BACT as:
>
> > an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant...[53]

A1-27

[52] Engineering Evaluation, p. 88.

[53] EPA, PSD and Title V Permitting Guidance for Greenhouse Gases, EPA-457/B-11-001, March 2011; http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf.

The Permits-to-Construct cannot issue without a proper BACT determination and corresponding emission limits for GHGs. Further, these emission limits must be accompanied by corresponding monitoring provisions. CO_2 emissions can be directly measured with a CEMS.[54]

A1-27 cont.

IX. The Draft Permits-to-Construct Appear to Allow for a Substantial Increase in Steam Demand at the Refinery

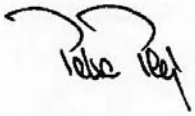
The Draft Permits-to-Construct would allow for an increase in steam supply to the Refinery because operation of the cogeneration unit and the existing on-site boilers are only restricted by compliance with the RECLAIM program for NOx and SOx emissions which is determined on an annual basis and compliance with the bubble limits for VOC and PM10 emissions which is determined on a monthly basis. (*See* Comment IV.) There is no restriction on emissions from these units on an hourly or daily basis.

Currently, throughput and processing at the Refinery appear to be limited by the steam supply from the existing on-site boilers, which operate at about 80 percent capacity, and from Air Products. In addition to this steam supply, which would continue to be available to the Refinery post-Project, the Project's Cogen Unit will provide additional steam for refinery processing through the operation of the heat recovery generator. The additional steam supply affects Refinery operations and facilitates the processing of more energy-intensive crude oils such as Canadian tar sands crudes.

A1-28

Please feel free to call me at (415) 492-2131 or e-mail me at petra@ppless.com if you have any questions or if you require a copy of any document cited in this letter.

Best regards,



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[54] EPA, Climate Leaders, Greenhouse Gas Inventory Protocol Core Module Guidance, Direct Emissions from Stationary Combustion Sources, EPA430-K-08-003, May 2008; http://www.epa.gov/climateleadership/documents/resources/stationarycombustionguidance.pdf.

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Dr. Pless is a court-recognized expert with over 20 years of experience in environmental consulting conducting and managing interdisciplinary environmental research projects and preparing and reviewing environmental permits and other documents for U.S. and European stakeholder groups. Her broad-based experience includes air quality and air pollution control; water quality, water supply, and water pollution control; biological resources; public health and safety; noise studies; California Environmental Quality Act ("CEQA"), Clean Air Act ("CAA"), and National Environmental Policy Act ("NEPA") review; industrial ecology and risk assessment; and use of a wide range of environmental software.

EDUCATION

Doctorate in Environmental Science and Engineering (D.Env.), University of California Los Angeles, 2001

Master of Science (equivalent) in Biology (focus on Limnology), Technical University of Munich, Germany, 1991

PROFESSIONAL HISTORY

Pless Environmental, Inc., Principal, 2008–present

Environmental Consultant, Sole Proprietor, 2006–2008

Leson & Associates (previously Leson Environmental Consulting), Kensington, CA, Environmental Scientist/Project Manager, 1997–2005

University of California Los Angeles, Graduate Research Assistant/Teaching Assistant, 1994–1996

ECON Research and Development, Environmental Scientist, Ingelheim, Germany, 1992–1993

Biocontrol, Environmental Projects Manager, Ingelheim, Germany, 1991–1992

REPRESENTATIVE EXPERIENCE

Air Quality and Pollution Control

Projects include CEQA/NEPA review; CAA attainment and non-attainment new source review; prevention of significant deterioration ("PSD") and Title V permitting; control technology analyses (BACT, LAER, RACT, BARCT, BART, MACT); technology evaluations and cost-effectiveness analyses; criteria and toxic pollutant and greenhouse gas emission inventories; emission offsets; ambient and source monitoring; analysis of emissions estimates and ambient air pollutant concentration modeling. Some typical projects include:

- Provided expert support for intervention in California Energy Commission ("CEC") proceedings for numerous power plants including natural gas-fired, integrated gasification combined-cycle, geothermal (flash and binary) solar (thermal and photovoltaic) facilities with respect to air quality including emission reduction credits, hazards and hazardous materials, public health, noise, and biological resources.
- Critically reviewed and prepared technical comments on the air quality, biology, noise, water quality, and public health and safety sections of CEQA/NEPA documents for numerous commercial, residential, and industrial projects (*e.g.*, power plants, airports, residential developments, retail developments, university expansions, hospitals, refineries, slaughterhouses, asphalt plants, food processing facilities, slaughterhouses, feedlots, printing facilities, mines, quarries, landfills, and recycling facilities) and provided litigation support in a number of cases filed under CEQA.
- Critically reviewed and prepared technical comments on the air quality and public health sections of the Los Angeles Airport Master Plan (Draft, Supplement, and Final Environmental Impact Statement/Environmental Impact Report) for the City of El Segundo. Provided technical comments on the Draft and Final General Conformity Determination for the preferred alternative submitted to the Federal Aviation Administration.
- Prepared comments on proposed PSD and Title V permit best available control technology ("BACT") analysis for greenhouse gas emissions from a proposed direct reduced iron facility in Louisiana.
- Prepared technical comments on U.S. Environmental Protection Agency ("EPA")'s *Inhalation of Fugitive Dust: A Screening Assessment of the Risks Posed by Coal Combustion Waste Landfills* prepared for EPA's proposed coal combustion waste landfill rule.
- Prepared technical comments on the potential air quality impacts of the California Air Resources Board's *Proposed Actions to Further Reduce Particulate Matter at High Priority California Railyards*.
- For several California refineries, evaluated compliance of fired sources with Bay Area Air Quality Management District Rule 9-10. This required evaluation and review of hundreds of source tests to determine if refinery-wide emission caps and compliance monitoring provisions were being met.
- Critically reviewed and prepared technical comments on draft Title V permits for several refineries and other industrial facilities in California.
- Evaluated the public health impacts of locating big-box retail developments in densely populated areas in California and Hawaii. Monitored and evaluated impacts of diesel exhaust emissions and noise on surrounding residential communities.
- In conjunction with the permitting of several residential and commercial developments, conducted studies to determine baseline concentrations of diesel exhaust particulate matter using an aethalometer.
- For an Indiana steel mill, evaluated technology to control NOx and CO emissions from fired sources, including electric arc furnaces and reheat furnaces, to establish BACT. This required a comprehensive review of U.S. and European operating experience. The lowest emission levels were being achieved by steel mills using selective catalytic reduction ("SCR") and selective non-catalytic reduction ("SNCR") in Sweden and The Netherlands.

- For a California petroleum coke calciner, evaluated technology to control NOx, CO, VOCs, and PM10 emissions from the kiln and pyroscrubbers to establish BACT and LAER. This required a review of state and federal clearinghouses, working with regulatory agencies and pollution control vendors, and obtaining and reviewing permits and emissions data from other similar facilities. The best-controlled facilities were located in the South Coast Air Quality Management District.
- For a Kentucky coal-fired power plant, identified the lowest NOx levels that had been permitted and demonstrated in practice to establish BACT. Reviewed operating experience of European, Japanese, and U.S. facilities and evaluated continuous emission monitoring data. The lowest NOx levels had been permitted and achieved in Denmark and in the U.S. in Texas and New York.
- In support of efforts to lower the CO BACT level for power plant emissions, evaluated the contribution of CO emissions to tropospheric ozone formation and co-authored report on same.
- Critically reviewed and prepared technical comments on applications for certification ("AFCs") for numerous natural-gas fired, solar, biomass, and geothermal power plants in California permitted by the California Energy Commission. The comments addressed construction and operational emissions inventories and dispersion modeling, BACT determinations for combustion turbine generators, fluidized bed combustors, diesel emergency generators, etc.
- Critically reviewed and prepared technical comments on draft PSD permits for several natural gas-fired power plants in California, Indiana, and Oregon. The comments addressed emission inventories, greenhouse gas emissions, BACT, case-by-case MACT, compliance monitoring, cost-effectiveness analyses, and enforceability of permit limits.
- For a California refinery, evaluated technology to control NOx and CO emissions from CO Boilers to establish RACT/BARCT to comply with BAAQMD Rule 9-10. This required a review of BACT/RACT/LAER clearinghouses, working with regulatory agencies across the U.S., and reviewing federal and state regulations and State Implementation Plans ("SIPs"). The lowest levels were required in a South Coast Air Quality Management District rule and in the Texas SIP.
- In support of several federal lawsuits filed under the federal Clean Air Act, prepared cost-effectiveness analyses for SCR and oxidation catalysts for simple cycle gas turbines and evaluated opacity data.
- Provided litigation support for a CEQA lawsuit addressing the adequacy of pollution control equipment at a biomass cogeneration plant.
- Prepared comments and provided litigation support on several proposed regulations including the Mojave Desert Air Quality Management District Rule 1406 (fugitive dust emission reduction credits for road paving); South Coast Air Quality Management District Rule 1316, San Joaquin Valley Air Pollution Control District Rule 2201, Antelope Valley Air Quality Management District Regulation XIII, and Mojave Desert Air Quality Management District Regulation XIII (implementation of December 2002 amendments to the federal Clean Air Act).
- Critically reviewed draft permits for several ethanol plants in California, Indiana, Ohio, and Illinois and prepared technical comments.

- Reviewed state-wide average emissions, state-of-the-art control devices, and emissions standards for construction equipment and developed recommendations for mitigation measures for numerous large construction projects.
- Researched sustainable building concepts and alternative energy and determined their feasibility for residential and commercial developments, *e.g.*, regional shopping malls and hospitals.
- Provided comprehensive environmental and regulatory services for an industrial laundry chain. Facilitated permit process with the South Coast Air Quality Management District. Developed test protocol for VOC emissions, conducted field tests, and used mass balance methods to estimate emissions. Reduced disposal costs for solvent-containing waste streams by identifying alternative disposal options. Performed health risk screening for air toxics emissions. Provided permitting support. Renegotiated sewer surcharges with wastewater treatment plant. Identified new customers for shop-towel recycling services.
- Designed computer model to predict performance of biological air pollution control (biofilters) as part of a collaborative technology assessment project, co-funded by several major chemical manufacturers.
- Experience using a wide range of environmental software, including air dispersion models, air emission modeling software, database programs, and geographic information systems.

Water Quality and Pollution Control

Experience in water quality and pollution control, including surface water and ground water quality and supply studies, evaluating water and wastewater treatment technologies, and identifying, evaluating and implementing pollution controls. Some typical projects include:

- Evaluated impacts of on-shore oil drilling activities on large-scale coastal erosion in Nigeria.
- For a 500-MW combined-cycle power plant, prepared a study to evaluate the impact of proposed groundwater pumping on local water quality and supply, including a nearby stream, springs, and a spring-fed waterfall. The study was docketed with the California Energy Commission.
- For a 500-MW combined-cycle power plant, identified and evaluated methods to reduce water use and water quality impacts. These included the use of zero-liquid-discharge systems and alternative cooling technologies, including dry and parallel wet-dry cooling. Prepared cost analyses and evaluated impact of options on water resources. This work led to a settlement in which parallel wet dry cooling and a crystallizer were selected, replacing 100 percent groundwater pumping and wastewater disposal to evaporation ponds.
- For a homeowner's association, reviewed a California Coastal Commission staff report on the replacement of 12,000 linear feet of wooden bulkhead with PVC sheet pile armor. Researched and evaluated impact of proposed project on lagoon water quality, including sediment resuspension, potential leaching of additives and sealants, and long-term stability. Summarized results in technical report.

Petra Pless, D.Env.

Applied Ecology, Industrial Ecology and Risk Assessment

Experience in applied ecology, industrial ecology and risk assessment, including human and ecological risk assessments, life cycle assessment, evaluation and licensing of new chemicals, and fate and transport studies of contaminants. Experienced in botanical, phytoplankton, and intertidal species identification and water chemistry analyses. Some typical projects include:

- Conducted technical, ecological, and economic assessments of product lines from agricultural fiber crops for European equipment manufacturer; co-authored proprietary client reports.
- Developed life cycle assessment methodology for industrial products, including agricultural fiber crops and mineral fibers; analyzed technical feasibility and markets for thermal insulation materials from natural plant fibers and conducted comparative life cycle assessments.
- For the California Coastal Conservancy, San Francisco Estuary Institute, Invasive Spartina Project, evaluated the potential use of a new aquatic pesticide for eradication of non-native, invasive cordgrass (*Spartina spp.*) species in the San Francisco Estuary with respect to water quality, biological resources, and human health and safety. Assisted staff in preparing an amendment to the Final EIR.
- Evaluated likelihood that organochlorine pesticide concentrations detected at a U.S. naval air station are residuals from past applications of these pesticides consistent with manufacturers' recommendations. Retained as expert witness in federal court case.
- Prepared human health risk assessments of air pollutant emissions from several industrial and commercial establishments, including power plants, refineries, and commercial laundries.
- Managed and conducted laboratory studies to license pesticides. This work included the evaluation of the adequacy and identification of deficiencies in existing physical/chemical and health effects data sets, initiating and supervising studies to fill data gaps, conducting environmental fate and transport studies, and QA/QC compliance at subcontractor laboratories. Prepared licensing applications and coordinated the registration process with German environmental protection agencies. This work led to regulatory approval of several pesticide applications in less than six months.
- Designed and implemented database on physical/chemical properties, environmental fate, and health impacts of pesticides for a major multi-national pesticide manufacturer.
- Designed and managed experimental toxicological study on potential interference of delta-9-tetrahydrocannabinol in food products with U.S. employee drug testing; co-authored peer-reviewed publication.
- Critically reviewed and prepared technical comments on applications for certification for several natural-gas fired, solar, and geothermal power plants and transmission lines in California permitted by the California Energy Commission. The comments addressed avian collisions and electrocution, construction and operational noise impacts on wildlife, risks from brine ponds, and impacts on endangered species.
- For a 180-MW geothermal power plant, evaluated the impacts of plant construction and operation on the fragile desert ecosystem in the Salton Sea area. This work included baseline noise monitoring and assessing the impact of noise, brine handling and disposal, and air emissions on local biota, public health, and welfare.

Petra Pless, D.Env.

- Designed research protocols for a coastal ecological inventory in Southern California; developed sampling methodologies, coordinated field sampling, determined species abundance and distribution in intertidal zone, and conducted statistical data analyses.
- Designed and conducted limnological study on effects of physical/chemical parameters on phytoplankton succession; performed water chemistry analyses and identified phytoplankton species; co-authored two journal articles on results.

PRO BONO ACTIVITIES

Founding member of "SecondAid," a non-profit organization providing tsunami relief for the recovery of small family businesses in Sri Lanka. (www.secondaid.org.)

PUBLICATIONS & RECOMMENDATIONS

Available upon request.

Response to Comment Letter
Adams Broadwell Joseph & Cardozo – May 23, 2014
Attachment 1
Pless Environmental, Inc. Letter – May 23, 2014

Response A1-1

The SCAQMD understands that these comments have been prepared by Dr. Pless for Adams Broadwell Joseph and Corodzo. Dr. Pless has presented her experience reviewing permits and CEQA documents. No response is necessary.

Response A1-2

Comment A1-2 summarizes the proposed Ultramar Cogeneration (Cogen) Unit Project (proposed Project), so no further response is required. However, the commenter incorrectly described the turbine as LM500+G4, but the description is LM2500+G4.

Response A1-3

Please see Responses 1-9 and 1-10 to the main letter (Comment Letter 1) that address the adequacy of the Project Description and that the proposed Project does not change Refinery processes or crude throughput.

Response A1-4

Please see Responses 1-11 and 1-12 to Comment Letter 1 that address the cancellation of the rail project and Responses 1-5, 1-6, 1-9, 1-10, and 1-12 regarding no increase in steam demand.

Response A1-5

Please see Response 1-14 to Comment Letter 1 that addresses the baseline emissions that have occurred from the boilers at the Refinery as the correct baseline.

Response A1-6

Please see Response 1-14 to Comment Letter 1 that addresses the use of the 98th percentile as a conservative baseline achieved by the Refinery to which the proposed Project is compared.

Response A1-7

It is the responsibility and discretion of the Lead Agency to determine exactly how the existing physical conditions without the project can most realistically be measured (*CBE v SCAQMD*). As discussed in Responses 1-5 and 1-14 of Comment Letter 1, the SCAQMD significance thresholds are daily thresholds and as such represent a peak daily emission rate. Therefore, it is appropriate and consistent to compare proposed Project peak day emissions to historical peak

day emissions. The SCAQMD evaluated maximum potential daily Project emissions to actual daily emissions that occurred in the baseline period. The use of 2011 data is consistent for when the environmental review commenced and is consistent with CEQA Guideline § 15125(a). The environmental review commenced with the submittal of the permit application package and subsequent release of the Notice of Preparation/Initial Study on March 30, 2012, at which time, the 2011 RECLAIM data had been submitted and reconciled. Therefore, use of the 2011 boiler emissions data is representative of historical daily emissions.

Response A1-8

First, the commenter states that the SCAQMD's use of emissions data occurred on only eight days in one year as a CEQA baseline is inconsistent with prior CEQA analyses prepared by the District. See Responses 1-14 and 1-15 of Comment Letter 1 with regard to the actual emissions data used to establish the baseline.

The commenter states that the Final Subsequent EIR for the Sunshine Gas Producers Renewable Energy Project used emissions data from three prior operating years to determine the baseline. It should be noted that different types of projects have different types of activities that affect the determination of an appropriate baseline reflective of the types of operations taking place. In the case of the Sunshine Gas Producers Renewable Energy project, a relatively constant supply of waste landfill gas was available to be used to produce power. Therefore, it was appropriate in the Sunshine Gas Producers project to use average operating conditions over a multiple year period because there is little fluctuation of emissions on a daily basis. However, as discussed in Responses 1-14 and 1-15 of Comment Letter 1, refinery operations fluctuate widely on a daily basis (e.g., boiler operations are dependent on processing unit needs throughout the Refinery and activity can vary widely from minimal operation on days when equipment is shutdown for maintenance to full operating capacity during high market demand). For this refinery project, the use of the 2011 annual data set provided sufficient representative actual daily emissions data to establish an appropriate baseline reflective of their operations.

Second, the commenter states that the use of 2011 data as the baseline for criteria pollutant impacts is inconsistent with the negative declaration's baseline determination for greenhouse gas emissions, which relies on data from 2009 and 2010. However, criteria pollutants and GHG emissions are calculated differently and compared to a different set of significance thresholds. Criteria pollutants are evaluated for peak daily emissions and compared to a mass daily significance threshold to determine potential significance; and GHG emissions impacts are evaluated on an annual basis and compared to an annual significance threshold to determine potential significance. As discussed on page 2-28 of the Negative Declaration, "the analysis of GHG emissions is a different analysis than for criteria pollutants for the following reasons:

> For criteria pollutant, significance thresholds are based on daily emissions because attainment or non-attainment is typically based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects to human health, e.g., one-hour and eight-hour. Using the half-life of carbon dioxide (CO_2), 100

> years, for example, the effects of GHGs are longer-term, affecting the global climate over a relatively long time frame. As a result, the SCAQMD evaluates GHG effects over a longer timeframe than a single day. The interim significance threshold for industrial projects is 10,000 metric tons per year of CO_2 equivalent emissions."

As discussed in Response 1-15 of Comment Letter 1, the use of 2011 criteria pollutant data is consistent with CEQA Guidelines Section 15125(a), which requires a description of the physical environmental conditions as they exist at the time the NOP is published. The environmental review commenced with the submittal of the permit application package and subsequent release of the NOP/IS on March 30, 2012. Therefore, for criteria pollutant evaluation, the use of the 2011 daily data provides a representative operating data set.

However, at the time of the publication of the NOP/IS, the most current GHG emissions data verified by CARB was from year 2010. Since GHG emissions are compared to an annual significance threshold, it is appropriate to select more than one annual data set to establish a baseline representative of the existing GHG emissions at the facility. Thus, the most current verified annual GHG emissions were from 2010 and 2009 which were used as the appropriate baseline for the GHG impact evaluation.

It should be noted that the refinery is subject the CARB's AB32 Cap and Trade program that requires affected facilities to offset GHG emissions to zero. Thus, regardless if the baseline was based on a 2009-2010 dataset or a 2009-2011 dataset, the refinery would be required to offset those GHG emissions. As discussed in the Draft Negative Declaration, the only GHG emissions that would not be subject to the AB32 Cap and Trade requirements are from the construction phases of the project. Construction emissions from the project will not change regardless of the existing baseline GHG emissions because construction emissions are new from the project. Those construction emissions were calculated to be 12 metric tons (MT) per year of CO_2e (Table 2-9, page 2-30) which is below the SCAQMD's GHG significance threshold of 10,000 MT per year of CO2e. Thus, the GHG impact from the proposed project will be less than significant.

Response A1-9

Please see Response 1-15 to Comment Letter 1 that addresses the baseline boiler emissions data that were used in the Draft Negative Declaration.

Response A1-10

Comment A1-10 restates information contained in the Draft Negative Declaration so no response is necessary.

Response A1-11

CEQA analysis of impacts is inherently different than permitting analysis for a number of reasons. First, the permitting analysis is based on pre-project and post-project permitted

allowable emissions (referred to as potential to emit) for equipment, such as the three boilers, which have undergone review pursuant to Regulation XIII – New Source Review. CEQA utilizes actual baseline emissions to compare to the proposed project potential to emit. Thus, the emission increases are calculated differently. Second, permitting regulations allow a facility to combine the emissions from a group of equipment or "bubble" equipment to limit the emissions of a group of equipment. The proposed Project, for permitting purposes is a "bubbling" project. Therefore, on a potential to emit basis, the proposed Project does not increase emissions from the Refinery, when the Cogen Unit and three boilers are grouped together. In fact, as shown in the permitting engineering analysis as published in the Notice of Intent to Issue a Title V Permit "Permits-to-Construct" and "Permits-to-Operate" According to Rule 3006, the same four operating scenarios analyzed under CEQA result in an emissions decrease pursuant to the permitting potential to emit analysis. Therefore, permit restrictions suggested by the commenter are not necessary in the permit for the Cogen Unit.

The Draft Negative Declaration, as a CEQA planning document, forecasted that the operation of 86-B-9000 would be restricted by permit conditions. However, as discussed above, the need to specifically restrict the operation of 86-B-9000 was found to be unnecessary in the Permits to Construct, since the "bubble" limits the overall emissions from the three boilers and Cogen Unit combined as stated in permit condition A63.x, "For the purposes of this condition, the above emission limits shall be based on the combined emissions from Boiler 86-B-9000, Boiler 86-B-9001, Boiler 86-B-9002, Gas Turbine 79-GT-1, and Duct Burner." The CEQA analysis shows the most likely scenarios of operation to efficiently meet the Refinery's maximum steam demand and generate the maximum emissions, but does not include all operating scenarios that would produce less steam or less emissions. The CEQA analysis compared actual emissions of the three boilers to the potential maximum emissions from the operation of the proposed Project, and therefore, encompasses the maximum emissions and impacts for the boilers and Cogen Unit combined.

Response A1-12

As discussed in Response A1-11, the proposed Project is a "bubble" project based on the potential to emit of the three existing boilers. The potential to emit for the three boilers was determined at the time the boilers were permitted and analyzed under Regulation XIII - New Source Review, which established the maximum potential to emit for the boilers as required by SCAQMD Regulation XIII. Therefore, to remain less than the maximum allowable emissions for the three boilers and Cogen Unit combined, some combination of the equipment will be required to be run at less than the maximum for each piece of equipment individually. Some of the equipment could be not operating at all with some operating at something less than maximum and some operating at maximum, but the combination of all four is restricted to the "bubble" permit limit in the SCAQMD permit (i.e., a maximum VOC and PM10 limits in draft Permit Condition A63.x). This limit allows for the steam production to fluctuate as it does today to meet the fluctuating demand of the Refinery. Under the emissions "bubble" it is not possible for all four pieces of equipment to operate at their respective design capacities concurrently because the "bubble" (emission limit) is only based on the three existing boilers maximum emissions. Therefore, emissions cannot increase above what is currently allowed. Additionally, as

explained in Responses 1-5, 1-6, 1-9, 1-10, and 1-12 of Comment Letter 1, the proposed Project is designed to meet the current steam demand of the Refinery and no modifications to the Refinery that would increase throughput or steam demand are proposed.

Response A1-13

The emissions presented in the table by the commenter are referenced as being from the Draft Negative Declaration Appendix B, pages B 12-16. However, the numbers presented in the table are not drawn from the pages referenced and appear to be from the Engineering Evaluation as shown in the corrected version in Table A1-13.1. As explained in Responses A1-11 and A1-12, CEQA analysis and permitting analysis are fundamentally different. The commenter claims the table represents emissions greater than analyzed in the CEQA document. In fact, as shown in Table A1-13.1 when interpreted correctly, it demonstrates that the proposed Project maximum operating scenarios are within the permit emissions limit set by the "bubble", and the "bubble" is more than adequate to operate the boilers and Cogen Unit combined as described in the proposed Project. As such, the three boilers combined at any time under the existing permit can emit greater emissions than the maximum operating scenarios analyzed as part of the Project in the Draft Negative Declaration (represented as negative numbers in Row 8 of Table A1-13.1.) The more appropriate conclusion is that the improved efficiency by adding the Cogen Unit to the Refinery will reduce emissions when compared to currently permitted equipment that was previously analyzed under CEQA and New Source Review regulations.

Response A1-14

The commenter again fails to recognize that the CEQA analysis and permit analysis are performed differently, as required by the different laws and regulations. The CEQA analysis is an actually achieved baseline, while the permit analysis is a potential to emit baseline. The commenter fails to recognize that the permit allows for the continued operation of the three boilers in combination up to their combined maximums when the Cogen Unit is not operating (which is allowed for the three boilers under the current permit), or any combination of the boilers and the Cogen Unit operating such that the combination does not exceed the emissions of the currently permitted three boilers operating at maximum capacity. The permitting evaluation, as discussed in Response A1-13 and publicly noticed under Rule 3006 from May 31, 2013 to June 30, 2013, would result in an emissions reduction when the Cogen Unit is operating and no emissions increase when only the boilers are operating.

TABLE A1-13.1

Corrected Combined Operational VOC and PM10 Emissions from Cogen Unit and Three Boilers as Analyzed by Negative Declaration (Scenarios 1 through 4) Compared to Draft Permits to Construct Bubble Limits

Row		Combined operational emissions for Cogen Unit and three boilers				Unit
		Draft PC		Neg Dec		
		VOC[1]	PM10[1]	VOC[2]	PM10[2]	
1	Scenario 1	2,233.73	3,885.94	1,881.00	4,704.00	(lbs/month)
2	Scenario 2	1,967.79	3,745.10	1,776.00	4,560.00	(lbs/month)
3	Scenario 3	2,265.47	3,893.48	1,887.00	4,710.00	(lbs/month)
4	Scenario 4 (worst case for VOC and PM10)	2,380.90	3,922.12	1,908.00	4,740.00	(lbs/month)
5	Draft Permits to Construct monthly bubble limit	2,891.00	5,197.00			(lbs/month)
6	30-day average daily bubble limit	96.37	173.23			(lbs/day)
7	Net Emissions[3]	(510.10)	(1,274.88)	(4,799.00)	(457.00)	(lbs/month)
8	30-day average daily emissions[4]	(17.00)	(42.50)	(159.97)	(15.23)	(lb/day)

Notes:

1 VOC emissions include both combustion and fugitive emissions; PM10 emission factor provided by manufacturer (PC Evaluation, Appendix N, pp. 1-4)

2 VOC emissions do not include fugitive emissions; Assumes Startup/Shutdown everyday; PM10 E/F based on AER default E/F (NegDec, Appendix B, pp. B-12 to B-16)

3 = Scenario 4 - Monthly bubble limit

4 = Net emissions/30 (##) represent negative numbers, which are less than currently permitted

Response A1-15

The commenter fails to recognize the proposed Project is designed to meet the current maximum steam demand for the Refinery and not for an expansion of production. For steam demand at the Refinery to increase above the current maximum, major modifications to the Refinery processing units would need to be proposed which would require permit modifications. Modifications of this nature could include for example, larger processing vessels with greater capacities, increased heater duties, or larger steam driven compressors. No such applications or any applications for processing modifications have been submitted to the SCAQMD. Therefore, there is nothing in the proposed Project or pending approval by the SCAQMD that would increase the steam demand at the Refinery. As discussed in Response A1-14, the Permit to Construct would allow the boilers to operate as they are today should the Cogen Unit not be operating, but restricts the combined operation of the Cogen Unit and the existing boilers to no more than the three boilers can currently emit. Additionally, the 30-day average is based on the peak day multiplied by 30 days, so the peak day during a 30-day period has been evaluated and the 30-day average sufficiently limits any one given day's operations.

Response A1-16

As explained in Responses A1-11 through A1-16, again the commenter has failed to recognize the permitting process is based on potential to emit before and after the proposed Project. Therefore, the permit restricts VOC and PM10 emissions to the "bubble" to the existing permitted levels, such that when the Cogen Unit is not operating, the existing boilers can be used as they are currently permitted.

The commenter has incorrectly based the PM2.5 analysis on the faulty conclusion from the incorrect data in the table in Comment A1-13. The emissions difference of 42.5 lb/day of PM10 shown in Row 8 of Table A1-13.1 is not an increase but a decrease when the Cogen Unit and boilers are operating concurrently. Therefore, it is incorrect to add it to the emissions from the proposed Project. As such, no significant impacts from PM10 or PM2.5 are expected as a result of implementing the proposed Project.

Response A1-17

The commenter opines on the health effects and ambient air quality standards established for PM2.5, but makes no specific comment on the impacts of the proposed Project. Therefore, no response is necessary.

Response A1-18

The commenter claims that because source tests are preannounced, equipment can be "optimized", but the commenter provides no specific details as to how combustion processes would be optimized so as to render the source test inadequate. This comment amounts to unsubstantiated conjecture. The Cogen Unit will be equipped with an SCR to control NOx emissions and a catalyst to control CO and VOC emissions, and must meet NOx, CO, and VOC emission limits, where CO and NOx are monitored by a continuous emission monitoring system (CEMS). The commenter infers that optimizing operations would somehow change VOC emissions without providing substantial evidence that that would occur. Because VOC, CO, and NOx emissions are interrelated and NOx and CO are monitored by CEMS, it is unclear how "optimizing" operations to improve VOC emissions for testing purposes would occur without impacting CO and NOx emissions, which are continuously monitored. Therefore, continuous monitoring of CO and annual source testing for VOC are sufficient to ensure compliance with the VOC BACT limit.

Additionally, the commenter alleges CEMS for VOCs are available by citing U.S. EPA performance specifications. However, hydrocarbon analyzers used to comply with U.S. EPA organic emissions do not meet the SCAQMD standards for organic compliance limits due to SCAQMD requirements to report organics as Total Gaseous non-Methane/Ethane Organic Compounds (TGNMEOC), which is different than the U.S. EPA definition. U.S. EPA allows hydrocarbon analyzers (e.g., flame ionization detectors (FID) or photoionization detectors (PID)) to show compliance to a "VOC" limit. The use of FID/PID hydrocarbon analyzers yield a "relative response" of the sample stream as related to a calibration gas. When the sample stream

is a mix of hydrocarbons with varying response times, actual concentrations of TGNMEOC cannot be determined. Therefore, CEMs for VOCs in the SCAQMD jurisdiction is not appropriate and, as explained above, is not required.

Response A1-19

See Responses 1-19 and 1-27 in Comment Letter 1 regarding the appropriate use of RTCs and the requirement to have the first year of RTCs for the proposed Project in the bank prior to permit approval.

Response A1-20

The commenter incorrectly assumes that "all emissions from the project would occur on a single day" to opine that annual surrendering of RTCs "do nothing to alleviate the health impacts associated with exceedance of short-term ambient air quality standards." As shown on pages 2-20 and 2-21 of the Draft Negative Declaration, compliance with federal and state 1-hour, 8-hour, 24-hour, and annual ambient air quality standards will be achieved by the proposed Project. The ambient air quality standards have been established to be protective of human health. Further, it is physically impossible for the proposed Project to emit an entire year of emissions in a single day because the equipment is not capable of producing the annual steam demand in one day nor could the Refinery consume the annual steam demand in one day. Therefore, holding the necessary RTCs required to be surrendered on an annual basis and demonstrating that at maximum daily operating conditions the proposed Project are compliant with ambient air quality standards demonstrates the proposed Project will not significantly impact air quality. The CEQA thresholds are based on the federal Ambient Air Quality Standards and the definition of a major source. Therefore, emissions less than the significance thresholds are, by design, compliant with the Ambient Air Quality Standards.

Response A1-21

The commenter outlines the RECLAIM program contending that the annual surrendering of RTCs does not ensure the daily emissions are less than significant. It is important to note that the RECLAIM program underwent full CEQA analysis at the time of adoption. However, the annual reconciliation is a mere accounting practice. The facility is required to monitor major sources, such as the Cogen Unit, every 15 minutes and submit data electronically on a daily basis to the SCAQMD, with quarterly certifications and annual RTC surrendering. The RTCs that are used for compliance, which have specific use years associated with them, are available because the emissions were previously emitted and part of the established allocation for the facility, which makes them baseline emissions, or RTCs are available from a facility that did not emit emissions in the same time period. The use of RTCs offsets emissions. The CEQA thresholds are based on the federal Ambient Air Quality Standards. Therefore, emissions less than the significance thresholds are, by design, compliant with the Ambient Air Quality Standards.

Response A1-22

As discussed in Responses A1-20 and A1-21, the proposed Project maximum operating conditions were evaluated to show compliance with federal and state ambient air quality standards. Therefore, the commenter's claim regarding the design of the RECLAIM market is not relevant to compliance of the proposed Project.

Response A1-23

As discussed in Response A1-20, A1-21, and A1-22, no significant impacts from NOx emissions are expected to occur. Therefore, no mitigation is necessary. Compliance with federal and state ambient air quality standards has been shown on pages 2-20 and 2-21 of the Draft Negative Declaration, so no significant local or regional impacts have been identified.

Response A1-24

The Ambient Air Quality Analysis Report has been included in the Final Negative Declaration beginning on page B-21. The Draft Negative Declaration included a summary in Chapter 2 of the Ambient Air Quality Analysis Report consistent with CEQA Guidelines § 15147 regarding technical detail. The modeling was performed following the SCAQMD requirements and was reviewed by the SCAQMD modeling group to verify the results. The Ambient Air Quality Analysis Report does not change the analysis or the conclusions in the Draft Negative Declaration.

Response A1-25

The commenter summarizes the GHG PSD BACT analysis and lodges disagreement with the conclusion that is detailed in subsequent comments A1-26 and A1-27. As stated in the introduction to responses for Appendix G, the recent US Supreme Court opinion in the Utility Air Regulatory case holds that the U.S. EPA's regulations requiring PSD permits for major sources of GHG emissions were invalid if those sources were not subject to PSD for other pollutants. No response is necessary to this comment.

Response A1-26

The commenter alleges that the use of refinery fuel is not GHG BACT for the heat recovery steam generator (HRSG). The SCAQMD disagrees in that in a refinery, the use of Refinery fuel gas in combustion devices is the best use for the waste gases generated from refining processes. Refinery fuel gas is generated during refining processes and, if not used in combustion devices within the Refinery, would need to be destructed using a flare or other combustion device, which would not efficiently use the available energy in the fuel and would generate additional GHG emissions from both the combustion of the waste fuel gas and the natural gas to fuel the flare or other destruction device. Destruction of the waste gas in a flare does not capture the useful work of the Refinery fuel gas, whereas in use as a fuel to the HRSG, the available energy from Refinery fuel gas that will be produced irrespectively of the proposed Project is used in lieu of

natural gas. Maintaining a balance between produced Refinery fuel gas and available combustion devices is essential to efficiently manage combustion devices. If the Refinery were to be required to use natural gas to fire the HRSG as the commenter suggests, with the reduced Refinery fuel gas consumption in the boilers, the Refinery would have excess Refinery fuel gas, which would need to be destroyed and would generate additional GHG emissions. Therefore, use of available Refinery fuel gas in the HRSG generates less GHG emissions than the alternative proposed by the commenter.

Response A1-27

In light of the June 23, 2014 Supreme Court decision in *Utility Air Regulatory Group v U.S. EPA*, a GHG PSD permit will not be required for the proposed Project. Therefore, a permit condition is not necessary.

Response A1-28

As explained in Responses A1-11 through A1-17, the proposed Project is designed to meet the current maximum steam demand of the Refinery and no modifications to steam demand in processing units has been proposed. Additionally, the "bubble", which was established from the existing boilers SCAQMD permit, limits emissions to no more than can be currently emitted.

The commenter opines that "additional steam throughput and processing at the Refinery is limited by the steam capacity from the on-site boilers, which operate at about 80 percent capacity…" This statement is contradictory on its own in that if the Refinery were truly limited by steam capacity, the boilers would be operating at 100 percent capacity. The commenter makes an unsubstantiated claim that "additional steam capacity affects Refinery operations and facilitates the processing of more energy-intensive crude oils..." As discussed in Responses A1-11 through A1-17, refining processes dictate the demand for steam and with no proposed processing changes, any additional steam capacity is unnecessary. The proposed Project is designed to more efficiently produce steam and provide reliable electricity to the Refinery under the existing boilers emission limits.