

Ultramar Inc. - Valero Wilmington Refinery Proposed Alkylation Unit Improvement Project

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The location of some of the refineries and terminals in relation to the Ultramar Inc. Valero Wilmington Refinery is a sufficient distance such that cumulative TAC impacts are not expected. The projects which may overlap with the Alkylation Improvement Project include the Equilon Refinery and Wilmington Terminal, the BP Refinery and the Port of Long Beach Pier J project. The overlap in TAC impacts from these projects would be less than 10 per million and, therefore, less than significant.

An increase in toxic air contaminants associated with other projects (port related projects and projects in nearby cities) would also be expected mainly due to an increase in mobile source emissions. The proposed project and cumulative projects will lead to increased emissions of diesel exhaust particulate matter from diesel-fueled truck exhaust, diesel-fueled marine engines, diesel fueled railroad engines. In 1998, CARB listed particulate matter in the exhaust from diesel-fueled engines (diesel particulate) as a toxic air contaminant and concluded that it is probably carcinogenic to humans.

The SCAQMD MATES II study presents the regional cancer risk levels in the Basin (SCAQMD 2000c). Of the ten monitoring sites in the MATES II study, Wilmington is the closest site to the Refinery. The cancer risk at the Wilmington site, based on monitoring data, was about 380 per million from stationary and mobile sources. The cancer risk from mobile sources (alone) was about 240 per million. The MATES II study concluded that the total carcinogenic risk in the Basin currently exceeds thresholds of significance, even without the proposed project or related cumulative projects.

Therefore, since the project-specific toxic air contaminant impacts would not be significant, they are not considered to be cumulatively considerable. Existing emissions are being addressed through the Air Quality Management Plan, which provides measures to reduce emissions and help the Basin attain federal and state ambient air quality standards and the Air Toxics Control Plan. Some of these measures are aimed at reducing emissions of diesel-fueled engines, which will also reduce emissions of TACs.

**MITIGATION MEASURES**

For the construction period, the following mitigation measure will be imposed on the proposed project, since cumulative emissions are significant:

During the project construction period, diesel powered construction equipment shall use low sulfur diesel as defined in SCAQMD Rule 431.2 to the maximum extent feasible.

The mitigation measures to minimize emissions associated with operation of the related projects include the use of BACT for all new emission sources and modifications to existing sources. The use of BACT would control localized emissions. A BACT review will be completed during the SCAQMD permit approval process for all new/modified sources. In addition, the related refinery projects would provide regional emission benefits by reducing emissions from mobile sources that use the reformulated fuels.

**CHAPTER 5: CUMULATIVE IMPACTS**

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It should be noted that the ports are working on measures to minimize port-related emissions that could provide emission reductions or minimize future emissions. Examples of these measures include: (1) the use of electric container cranes; (2) the use of electric motors to drive conveyors and rail gantry cranes and loading/unloading equipment for trains, trucks, and ships; (3) the use of dock equipment powered by propane or natural gas; (4) most of the tugboats in the port plug into electrical power while they wait for their next calls instead of idling their engines; (5) new clean diesel technologies are also being tested and installed on some tugboats and heavy work boats; (6) the use of ultra-low emission diesel engines are being tested to reduce NOx emissions from tugboats by 80 percent; (7) the development of a Clean Engines and Fuels Program to incorporate alternative fuel vehicles into fleets; and (8) investigating the feasibility of using electricity to replace marine engines while at port (Port of Los Angeles, 2003c).

Further, the ACTA Corridor and related transportation improvement projects are expected to reduce port-related transportation emissions by improving transportation efficiency, reducing congestion, and the related air emissions.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The cumulative air quality impacts due to construction and operation of the cumulative projects are expected to exceed the SCAQMD significance thresholds and are considered to be cumulatively significant. The project-specific toxic air pollutant health impacts would not be significant, and are not considered to be cumulatively considerable.

**E. HAZARDS AND HAZARDOUS MATERIALS**

**CONSTRUCTION/OPERATIONAL IMPACTS**

Although other refineries exist in the general vicinity of the Refinery, the cumulative impacts from and between the onsite operation of the other refinery projects are not expected to be significant because it is extremely unlikely that upset conditions would occur at more than one refinery at a time. It also is extremely unlikely that an upset condition at one refinery would create an upset at another nearby refinery because of the distance between other refineries to the Ultramar Inc. – Valero Wilmington Refinery. The closest refinery to Ultramar Inc. – Valero Wilmington Refinery is the Shell Refinery located about one mile north of the Refinery. The new project-related explosion or fire hazard impacts associated with the proposed project are expected to travel less than 2,500 feet, which would not reach the other local refineries, so hazard impacts are not expected to be cumulatively considerable.

Hazardous materials may be shipped by containers through the ports, which may become involved in an accident or otherwise be released thereby posing a hazard to the public. It is estimated that five to 10 percent of containers transported into/out of the ports hold hazardous materials (USACE, 2003). The storage, separation, and handling of hazardous materials in containers is governed by 49 CFR part 176. Hazardous materials can be

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shipped, transported, handled and stored as long as they are in full compliance with all local, state and federal regulations (USACE, 2003).

Containers with hazardous materials can become involved in accidents including fires, explosions, and releases of flammable and/or toxic gases. Some minor accidents have occurred at the Port of Los Angeles during transportation, handling and storage, but none have been considered serious or affected members of the public. Because of governing regulations, a fire or explosion would only be expected to cause local impacts and not adversely affect members of the public. A release of a toxic material could impact a slightly larger area depending on the material released, however, packaging constraints would still limit the potential adverse impacts to a relatively small area (USACE, 2003).

**MITIGATION MEASURES**

The proposed project impacts on hazards are considered to be significant. A number of existing rules and regulations apply to the Refinery and other refineries. Compliance with these rules and regulations is expected to minimize refinery-related hazards. Compliance with these rules and regulations should also minimize the hazards at other refineries. Site-specific mitigation measures may be required for other projects.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The impacts of the various projects on hazards are not expected to be cumulatively considerable as hazards at or within one project area are not expected to impact or lead to hazards at other facilities.

**F. HYDROLOGY AND WATER QUALITY**

**CONSTRUCTION/OPERATIONAL IMPACTS**

For the proposed project, the project's contribution to water demand is less than significant because the established thresholds would not be exceeded.

The proposed project is not expected to result in a significant water demand increase at the Refinery because the established thresholds would not be exceeded. Therefore, the water demand for the proposed project is less than significant. Additionally, none of the other related projects in the vicinity are anticipated to have substantial water demands that cannot be met by local water suppliers. The refinery projects are not expected to generate a substantial increase in water demand and the other related projects (e.g, port-related projects) are not expected to generate a substantial increase in water use. Therefore, the proposed project and the cumulative projects are not expected to produce significant adverse cumulative impacts to water demand.

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**MITIGATION MEASURES**

The proposed project impacts on hydrology/water quality were less than significant. Since no cumulative impacts were identified, no mitigation measures are required.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The cumulative impacts on hydrology/water quality are considered to be less than significant.

**G. NOISE**

**CONSTRUCTION IMPACTS**

Construction phases of each of the related projects are expected to generate localized, short-term noise impacts, some of which may be significant during construction. Construction of the related refinery projects is largely complete so that no additional cumulative impacts are expected to occur with the proposed project. The use of muffling devices, restriction of work hours, etc. are expected to mitigate the increase in noise at most of the construction sites. Construction activities associated with pile driving for the 2020 Plan are expected to be significant.

The cumulative construction impacts associated with the related refinery projects are not expected to be significant or exceed noise ordinances.

Construction of some of the ACTA projects is expected to generate noise levels as high as 90 dBA at a distance of 50 feet during excavation phases and may result in significant noise impacts in residential areas (e.g., near Pacific Coast Highway and Alameda Street due to the construction of the overpass). Construction of the port-related projects is expected to raise the noise levels as a result of the increased intensity of site activities. Most of the port projects are located a substantial distance from sensitive noise receptors (over one mile) so that adverse noise impacts would be negligible (i.e., below the 70 dBA noise level threshold for construction noise). Further, construction activities are expected to be limited to daytime hours, which would further reduce the potential for impacts on residential areas.

**OPERATIONAL IMPACTS**

The operational impacts of the related refinery projects are not expected to be significant. Most of the Wilmington area is industrialized and the cumulative increase in noise is not expected to impact residential areas since they are located about a one-half mile away from the Refinery. Also, about one mile separates the Ultramar Inc. – Valero Wilmington Refinery from other refineries, thus, it is unlikely that noise impacts will overlap.

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Existing noise levels from traffic in the vicinity are already considered unacceptable for certain residential areas. The build out of the 2020 Plan and Alameda Corridor projects are expected to result in noise impacts to residential areas adjoining Alameda Street (USACE, 1990). Operation of the Alameda Corridor concentrates train and truck noise along the corridor while reducing overall noise on other highways and railways. Therefore, the cumulative traffic noise impacts from these two projects are considered significant.

Operations of the new and expanded port facilities may raise noise levels as a result of the increased intensity of site activities such as crane loading, train traffic, truck traffic and miscellaneous vehicle movement. However, most of the port projects (especially the larger terminal projects) are located over a mile from sensitive noise receptors, which makes the potential adverse noise impacts negligible. Therefore, the noise impacts from the proposed project are not expected to be cumulatively considerable because other projects are located about a mile away from the Refinery providing sufficient distance so that noise impacts do not overlap and residential areas are located about one-half mile from the Refinery.

**MITIGATION MEASURES**

Since noise impacts from the Refinery proposed project are not considered to be cumulatively considerable, they do not contribute to significant adverse cumulative noise impacts. As a result, no mitigation measures are required. Mitigation measures to reduce noise impacts are outlined in the Alameda Corridor Final Draft EIR (ACTA, 1993) and include noise barriers and construction of portions of the Corridor below grade.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The noise impacts on construction and operation remain significant for the construction of the Port 2020 Plan and ACTA project modifications. The noise impacts associated with the related refinery projects are not expected to be significant or contribute to significant adverse cumulative noise impacts during construction or operation.

**H. TRANSPORTATION/TRAFFIC**

**CONSTRUCTION IMPACTS**

Construction of the related refinery projects is largely complete so that no additional cumulative impacts are expected to occur at the same time. Construction of the ACTA projects would require complete reconstruction of the Alameda Street and PCH intersection. Extensive disruption to the local traffic circulatory system would occur, creating detours and affecting accessibility to businesses and residences. Most construction locations included as part of the ACTA projects would be subject to traffic disruption for between two and three years. Cumulative construction impacts on traffic from these projects are considered significant.

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There will be improvement of traffic circulation once the ACTA projects have been completed. Despite the roadway improvements proposed, there would be residual adverse effects at some intersections, due to background growth in regional traffic and the fact that the improved highway would attract traffic ("latent demand"). It would fall to local jurisdictions to make improvements to the local streets affected.

Construction of the port-related projects would result in temporary adverse impacts on the roadways in the immediate project vicinity. These impacts would be due to traffic generated by construction workers' vehicles and trucks transporting soil, fill material, and equipment to and from each project site. These impacts are considered to be significant adverse short-term impacts and mitigation measures would be required to minimize them.

The traffic analysis conducted for the proposed Alkylation Improvement Project indicates that two intersections show changes in the LOS due to the construction phase of the proposed project. The Alameda Street/Anaheim Street and 9<sup>th</sup> Street/1<sup>st</sup> Street/Anaheim Street intersections will change from LOS A to LOS B. The traffic changes at these two intersections are not considered to be significant impacts since free-flowing traffic would continue (i.e., LOS B) and no significance criteria are exceeded. The LOS at the other local intersections are expected to remain unchanged. Therefore, the proposed project's contribution to cumulative impacts on traffic during the construction phase would not be considered cumulatively considerable. Because of the distance between the proposed project and other related projects, it is unlikely that traffic from the proposed project will overlap to any extent with traffic from other related projects. Therefore, the proposed project's contribution to significant adverse cumulative construction traffic impacts are expected to be less than significant due to the distance between the Refinery and the other project locations.

#### OPERATIONAL IMPACTS

Table 5-11 shows the projected LOS analysis and volume to capacity ratios due to general growth in the area plus the proposed project (see Appendix D for details). These ratios were calculated assuming an ambient traffic growth of one percent per year annual traffic growth rate from year 2003 to year 2020 and no changes in existing intersection geometrics. Cumulative impacts are not expected to result in a change in LOS at the following intersections:

- Alameda St./I-405
- Alameda St./223<sup>rd</sup> Ramp
- ICTF Entry/I-405 Ramps/Wardlow/223<sup>rd</sup> St. (a.m. peak hour)
- Alameda St./Sepulveda Blvd.
- Alameda St./PCH
- Alameda St./Anaheim St.
- Henry Ford Ave./Anaheim St (a.m. peak hour)
- Santa Fe Ave./Anaheim St.

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TABLE 5-11

CUMULATIVE OPERATIONAL TRAFFIC IMPACTS  
LEVEL OF SERVICE ANALYSIS AND VOLUME-TO-CAPACITY RATIOS

INTERSECTION	BASELINE <sup>(1)</sup>				IMPACTS <sup>(2)</sup>			
	A.M LOS	Peak Hour V/C	P.M LOS	Peak Hour V/C	A.M LOS	Peak Hour V/C	P.M LOS	Peak Hour V/C
Alameda St./I-405	A	0.426	A	0.436	A	0.481	A	0.492
Alameda St./223 <sup>rd</sup> Ramp	A	0.305	A	0.341	A	0.343	A	0.383
ICTF entry/I-405 Ramps/ Wardlow Rd./223 <sup>rd</sup> St.	A	0.519	A	0.574	A	0.588	B	0.651
Alameda St./Sepulveda Blvd.	A	0.416	A	0.365	A	0.470	A	0.412
Alameda St./PCH*	A	0.588	C	0.733	A	0.589	C	0.734
Alameda St./Anaheim St.	B	0.616	B	0.611	B	0.699	B	0.693
Wilmington Ave./223 <sup>rd</sup> St.	C	0.718	D	0.826	D	0.817	E	0.940
Wilmington Ave./Sepulveda Blvd.	A	0.588	B	0.622	B	0.668	C	0.706
Santa Fe Ave./PCH	B	0.636	B	0.671	C	0.722	C	0.762
Henry Ford Ave./Anaheim St.	A	0.476	A	0.539	A	0.539	B	0.612
Santa Fe Ave./Anaheim St.	A	0.454	A	0.462	A	0.515	A	0.523
9 <sup>th</sup> St./1 <sup>st</sup> St./Anaheim St.	A	0.597	A	0.539	B	0.678	B	0.612

(1) = based on 2003 traffic data, adjusted to 2005 when the proposed project will begin.

(2) = Impacts were calculated assuming an ambient traffic growth of one percent per year annual traffic growth rate from year 2003 to year 2020 (i.e., future growth) plus the proposed project and no changes in existing intersection geometrics.

V/C = Volume to capacity ratio (capacity utilization ratio)

LOS = Level of Service

Six intersections show a change due to long-term growth in the area. The change at the following intersections are considered less than significant impacts since free-flowing traffic would continue.

The a.m. peak hour at:

- Wilmington Ave./Sepulveda Blvd.(from LOS A to LOS B)
- Santa Fe Ave./PCH (from LOS B to LOS C)
- 9<sup>th</sup> St./1<sup>st</sup> St./ Anaheim St. (from LOS A to LOS B)

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The p.m. peak hour at:

- ICTF Entry/I-405 Ramps/Wardlow Rd./223<sup>rd</sup> St. (from LOS A to LOS B)
- Wilmington Ave./Sepulveda Blvd. (from LOS B to LOS C)
- Santa Fe Ave./PCH (LOS B to LOS C)
- Henry Ford Ave./Anaheim St. (from LOS A to LOS B)
- 9<sup>th</sup> St./1<sup>st</sup> St./ Anaheim St. (from LOS A to LOS B)

The change at the following intersection is considered significant impacts since traffic flow would be adversely impacted:

The a.m. peak hour at:

- Wilmington Ave./223<sup>rd</sup> St. (from LOS C to LOS D)

The p.m. peak hour at:

- Wilmington Ave./223<sup>rd</sup> St. (from LOS D to LOS E)

It should be noted that the proposed project impacts on traffic are considered to be less than significant since the proposed project traffic will not impact the Wilmington Avenue/223<sup>rd</sup> Street intersection (see Table 4-15 and Appendix D).

**MITIGATION MEASURES**

Mitigation measures are not required for the proposed project since the traffic impacts were less than significant (see Table 4-15). On a cumulative basis, general growth in the area may result in significant traffic impacts at the Wilmington Ave./223<sup>rd</sup> Street intersection. Traffic related to the Refinery does not impact this intersection (which is located about two miles away from the Refinery) and, therefore, does not contribute cumulative impacts to this intersection.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The cumulative impacts on traffic following construction are expected to be significant at one intersection.

DBSWORD:2185/EIR/2185EIR.5

# ATTACHMENT 4



Technical Consultation, Data Analysis and  
Litigation Support for the Environment

2503 Eastbluff Dr., Suite 206  
Newport Beach, California 92660

Matt Hagemann, P.G, C.Hg.  
Tel: (949) 887-9013  
Email: [mhagemann@swape.com](mailto:mhagemann@swape.com)

May 9, 2013

Elizabeth Klebaner  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

**Subject: Comments on the Proposed Ultramar Wilmington Cogeneration Project**

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Dear Ms. Klebaner:

I have reviewed the April 2013 Draft Negative Declaration ("Neg Dec") for the Proposed Ultramar Wilmington Cogeneration Project ("Project"). The Project would allow for electricity to be generated from a new 35 megawatt cogen unit. The new cogen unit would include a natural gas-fired turbine electric generator, a heat recovery steam generator, a catalytic reduction unit, piping to connect an aqueous ammonia delivery system, and a new control room. The Project also includes the installation of new natural gas, process water, and fuel gas pipelines. Based upon my review, I conclude that the Project may expose workers to hazardous materials during Project construction and operation.

Project construction will involve the removal of an estimated 300 -500 cubic yards of soil (p. 2-59). The Neg Dec states "If contaminated soils are encountered, it is not expected that the removal of the soil would impact ground water as the excavation for the foundations is not expected to be very deep (i.e., less than four feet below the surface) with ground water located greater than twelve feet below the surface" (p. 2-59). The claim made in the Neg Dec, that removal of soils would not impact groundwater, is not substantiated by groundwater elevation data obtained from documents at the Regional Water Quality Control Board Geotracker website.<sup>1</sup> Groundwater depths at RMW01, just 400 feet to the northeast from where Project excavation will take place, have been recorded to be as shallow as 3.4 feet below ground surface in March 2013, a depth that is shallower than the excavation depths estimated in the Neg Dec.

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A shallow groundwater table is problematic for two reasons:

1. The groundwater beneath the Project, where excavation is to take place, is likely overlain by a layer of refined products, i.e. diesel and gasoline. A map obtained from the Geotracker website shows that in the first quarter of 2013, a groundwater monitoring well (RMW27) less than 200 feet away from the Project (see figure below) where excavation is to take

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<sup>1</sup> <http://geotracker.waterboards.ca.gov/>.

place, contained a floating layer of refined “free product” identified on the map as “refined”<sup>2</sup> Past monitoring in well RM27 has shown high levels of gasoline and diesel hydrocarbons.<sup>3</sup> According to another recent report available on Geotracker, but not referenced in the Neg Dec, “refined product in RMW27 has been present since the well was installed in 1999.”<sup>4</sup> The free product has remained in well RMW27 since it was drilled, based on historical accounts and the fact that the most recent monitoring report (first quarter 2013) documents its presence.

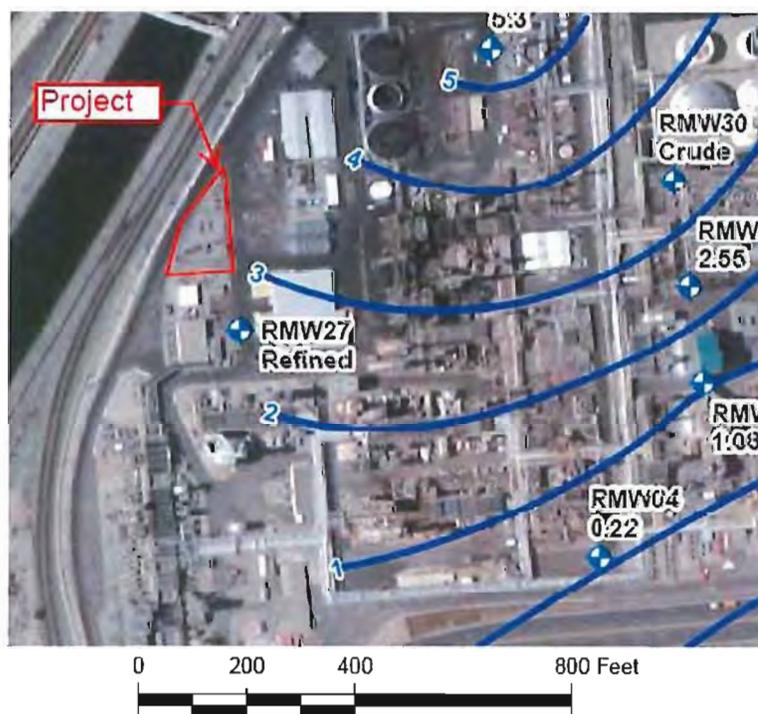


Figure excerpted from First Quarter 2013 Groundwater Monitoring Report<sup>5</sup>

Based on the excavation activities described in the Neg Dec, the shallow layer of gasoline and diesel overlying the groundwater beneath the Project site is likely to be exposed during construction. Construction workers involved in foundation work and trenching may be exposed to gasoline and diesel contaminants through skin contact and inhalation of vapors offgassing from an exposed water table. Gasoline and diesel contain benzene, a well-known human carcinogen.<sup>6</sup> In fact, benzene was detected in groundwater at concentrations up to

3-38  
cont.

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<sup>2</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/6420026659/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6420026659/SL373432446.PDF), Figure 3.  
<sup>3</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/6420026659/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6420026659/SL373432446.PDF), Appendix D.  
<sup>4</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/1249051690/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1249051690/SL373432446.PDF), p. 71.  
<sup>5</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/6420026659/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6420026659/SL373432446.PDF), Figure 2.  
<sup>6</sup> <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=38&tid=14>

3,290 ug/L in the vicinity of RMW27, a condition not disclosed in the Neg Dec.<sup>7</sup> The detection of benzene at 3,290 ug/L came from temporary wells (TW-1 – TW-3, collected “the vicinity of HP1 and HP8”), located in the southern area, or just south or southeast of where Project construction is to take place.<sup>8</sup>

3-39  
cont.

2. Construction of a control room above an area that may be underlain by a shallow layer (less than 4 feet below ground surface) of gasoline and diesel contaminants may lead to the collection of unhealthful levels of vapors of benzene and other volatile compounds. The collection of these vapors at harmful concentrations may occur through a well-known process known as vapor intrusion where vapors move into indoor air space from contaminated soil and groundwater below. At sites where volatile chemicals like benzene have been detected in shallow soil and groundwater, the California Department of Toxic Substances Control (DTSC) recommends sampling, stating:

When buildings exist over or near contaminated groundwater, the risk associated with emissions of volatile chemicals from groundwater into the vapor phase should be evaluated. Soil gas samples should be collected over areas of the contaminated groundwater, and the vapor intrusion risk associated with the contaminated soil gas should be estimated, along with the vapor intrusion risk from the contamination in the groundwater itself.<sup>9</sup>

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The San Francisco Bay Regional Water Quality Control Board has published screening levels, widely cited throughout the State, which form the basis for further evaluation of vapor intrusion risks. The Environmental Screening Level that would indicate that benzene in groundwater is a vapor intrusion concern is 27 ug/L, a concentration greatly exceeded by the detection of benzene in shallow groundwater at 3,290 ug/L in a temporary well installed in the Project vicinity as described in (1) above.

The Neg Dec makes no mention of the potential for vapor intrusion and does not disclose that contaminants -- including gasoline, diesel and benzene -- underlie the Project construction area. A DEIR needs to be prepared to disclose the potential for vapor intrusion to impact the health of future Project workers in the control room. The DEIR should include a full study of vapor intrusion risks, to conform to California DTSC guidance to fully evaluate potential health risks on future workers.

No mitigation or other measures are identified in the Neg Dec that would control vapor intrusion and limit worker exposure to contaminants during construction or operation of the Project. Two regulatory programs are cited in the Neg Dec for the control of emissions and to address impacts from contaminated soil: South Coast Air Quality Management District Rule 1166 (p. 2-15) and Title 22 of the California Code of Regulations (p. 2-59). Neither of these programs specifically address contaminated

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<sup>7</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/1249051690/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1249051690/SL373432446.PDF), p. 71.

<sup>8</sup> [http://geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/1249051690/SL373432446.PDF](http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1249051690/SL373432446.PDF), p. 71 and Appendix X, Fig. 6 (p. 704 of 719 pdf pages).

<sup>9</sup> [http://www.dtsc.ca.gov/AssessingRisk/upload/Final\\_VIG\\_Oct\\_2011.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf), p. 9.

RESPONSE TO COMMENTS

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soil and groundwater which would require investigation and cleanup to prevent unhealthful human exposure. A DEIR should be prepared that identifies an appropriate regulatory agency and a regulatory program that would guide the investigation and cleanup, if necessary, of the Project site. Since the Regional Water Quality Control Board is designated the lead agency for soil and groundwater contamination, I recommend submittal of Project plans to the Regional Board along with a request for oversight of the investigation and any necessary cleanup of the Project site.

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cont.

Sincerely,



Matt Hagemann, P.G., C.Hg.



2503 Eastbluff Dr., Suite 206  
Newport Beach, California 92660  
Tel: (949) 887-9013  
Fax: (949) 717-0069  
Email: [mhagemann@swape.com](mailto:mhagemann@swape.com)

**Matthew F. Hagemann, P.G., C.Hg., QSD, QSP**

**Geologic and Hydrogeologic Characterization  
Industrial Stormwater Compliance  
CEQA Review  
Investigation and Remediation Strategies  
Litigation Support and Testifying Expert**

**Education:**

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

**Professional Certification:**

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

**Professional Experience:**

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – present;
- Senior Environmental Analyst, Komex H2O Science, Inc (2000 – 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

**Partner, SWAPE:**

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Technical assistance and litigation support for vapor intrusion concerns.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

**Executive Director:**

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

**Hydrogeology:**

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

## RESPONSE TO COMMENTS

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- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nationwide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

### Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

**Geology:**

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

**Teaching:**

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt currently teaches Physical Geology (lecture and lab) to students at Golden West College in Huntington Beach, California.

**Invited Testimony, Reports, Papers and Presentations:**

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and Hagemann, M., 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

**Hagemann, M.F., 2001.** Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

**Hagemann, M.F., 2001.** Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

**Hagemann, M.F., and VanMouwerik, M., 1999.** Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

**VanMouwerik, M. and Hagemann, M.F. 1999,** Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

**Hagemann, M.F., 1999,** Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

**Hagemann, M.F., 1997,** The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

**Hagemann, M.F., and Gill, M., 1996,** Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

**Hagemann, M.F., Fukunaga, G.L., 1996,** The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

**Hagemann, M. F., Fukunaga, G. L., 1996,** Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

**Hagemann, M.F., 1994.** Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

**Hagemann, M.F. and Sabol, M.A., 1993.** Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

**Hagemann, M.F., 1993.** U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

**Other Experience:**

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

### **Responses to Comment Letter No. 3**

**Elizabeth Klebaner, Adams Broadwell Joseph & Cardozo**  
**June 4, 2013**

#### **Response 3-1**

The SCAQMD acknowledges that the commentator is writing on behalf of the California Unions for Reliable Energy. Comment 3-1 summarizes the proposed Ultramar Cogeneration (Cogen) Unit Project (proposed Project), the purpose of the proposed Project, the Project location and required permits, so no further response is required.

#### **Response 3-2**

The SCAQMD staff disagrees with the comment that the ND fails to comply with CEQA. As discussed in the following responses, the commentator has not provided any expert opinion 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). Please see the responses below to the more detailed comments in Responses 3-4 through 3-30. As discussed in Responses 3-5 and 3-6, the Project Description was adequate and fully complies with the requirements of CEQA. Comments raised regarding the worker safety associated with soil contamination (“environmental setting for hazards”) relied upon inaccurate and misapplied data (see Responses 3-8, 3-37, 3-40, and 3-41). Further, comments raised regarding air quality relied upon incorrect assumptions (see Responses 3-10, 3-12, 3-14, and 3-32 through 3-36). 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, worker safety impacts, or any other environmental impacts. As stated in Public Resources Code (PRC §21082.2(c)) and 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 such, an EIR is not warranted or required.

#### **Response 3-3**

The SCAQMD has prepared individual responses to comments in the letters from Elizabeth Klebaner (see Responses 3-1 through 3-31), Valorie Thompson (see Responses 3-32 through 3-36), and Matthew Hagemann (see Responses 3-8, and 3-37 through 3-41).

**Response 3-4**

The commentator's description of its members and their concerns are noted. The comment does not address the adequacy of the ND and is not relevant to the environmental analysis, so no further response is required.

**Response 3-5**

SCAQMD staff disagrees with the comment that the Project description in the IS/ND does not meet CEQA requirements. The CEQA Guidelines §15071 requires the following for a negative declaration: "(a) A brief description of the project, including a commonly used name for the project, if any; (b) The location of the project, preferably shown on a map, and the name of the project proponent; (c) A proposed finding that the project will not have a significant effect on the environment; (d) An attached copy of the initial study documenting reasons to support the finding; and (e) Mitigation measures, if any . ." As explained below, the Project Description more than complies with the requirement to provide a "brief description of the project", and the document as a whole provides a detailed explanation of the project impacts and fully documents the reasons supporting the findings. Detailed information which allows the decision maker and other readers to calculate emissions is appropriately provided in the document (see ND, Section 3, Air Quality, pages 2-9 through 2-32, and Appendix B – Air Emission Calculations).

The comment that "The IS/ND does not meet CEQA's requirements because it fails to include a complete and accurate Project description, rendering the entire impact analysis inherently unreliable" is not supported by the record. The ND provides a complete detailed description of the Ultramar Cogen Project (see Chapter 1, pages 1-1 through 1-14) including current operating conditions and modifications to existing equipment. Detailed information is provided on the Cogeneration Facilities (see page 1-6), Modifications to Existing Boilers (see page 1-7), Modifications to Existing Ammonia Delivery System (see page 1-7), and Modifications to Other Refinery Support Systems (see page 1-9). Other information regarding the proposed Project is provided including the location of the proposed Project; maps of the site location, a map of equipment locations; and associated modifications (see pages 1-3 and 1-8); the construction schedule (see page 1-9); the required permits and approvals (see pages 1-9 through 1-14), as well as an overview of current Refinery operations (see page 1-6). Further, the ND includes a description of the various operating scenarios for the Cogen Unit and the boilers and evaluates the potential impacts of these operating scenarios (see pages 2-16 through 2-19). As stated in the ND, "The operating conditions of the boilers and Cogen Unit would be restricted through permit conditions to limit emissions in any combination of equipment such that the NOx emissions from the proposed Project would not exceed the current permitted NOx emission limits on the existing boilers" (see last sentence on page 2-17 and first sentence on page 2-18). Therefore, the Project description in the ND not only complies with the requirements of CEQA Guidelines §15071 (a) and (b) to provide sufficient information to inform the public and decision makers regarding the scope of the proposed Project, but the description is robust and detailed.

Please see Response 3-6 regarding the specific comment regarding limits on operation of the proposed Cogen Unit and existing boilers.

### Response 3-6

Note that since the ND was circulated for review, the draft Permit to Construct has been circulated for public review and comment. Consistent with the ND, the draft permit contains numerous individual and combined limitations on emissions from the Cogen Unit and the boilers. See for example draft condition A63.x (attached hereto as Attachment F-1) that contains VOC and PM10 monthly limitations and states, “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 (Cogen Unit), and Duct Burner.” Thus, contrary to the commentators’ opinion, the boiler operations are limited by permit conditions.

See Response 3-5 regarding the CEQA requirements for project descriptions. The SCAQMD disagrees with the unsupported opinion of the commentator that the project description fails to describe the proposed operation of the boilers. First, the Project description does not state boiler 86-B-900 would operate infrequently, as indicated in this comment, but clearly states “86-B-9000 would normally be shut down while the Cogen Unit is operating” so the information in the ND is consistent. Moreover, if Boiler 86-B-9000 were operating, use of the other boilers would be reduced. Second, we disagree with the contention that the information in the ND is inconclusive with respect to operating scenarios. The ND clearly explains that the purpose of the Project is to install a cogeneration unit to provide reliable power to the Refinery. The Cogen Unit also will produce steam to use in various processes throughout the Refinery. The Refinery only has a limited demand for steam, therefore, with the Cogen Unit online, full use of the existing boilers will no longer be necessary. Thus, as further explained in the ND Project description, (first full paragraph on page 1-7), Boiler 86-B-9000 would be shut down during normal operating conditions of the Cogen Unit. Boilers 86-B-9001 and 86-B-9002 would continue to operate in a lower “hot standby mode” on a normal basis so they could be immediately available to produce steam in the event the Cogen Unit is unexpectedly shut down (see ND, page 2-16 under Operational Emission Impacts). This would help avoid situations where power outages result in shutdown of refinery units and would help reduce related flaring events. Full operation of the boilers when the Cogen Unit is operating would be a waste of energy and result in the production of steam that cannot be used and would have to be vented to the atmosphere. Therefore as further explained in the ND, the project proponent applied for and designed the Project to incorporate permit limitations as further insurance that the equipment will not be operated in a manner that produces unnecessary steam and therefore will limit emissions from the unit. “SCAQMD permits for the boilers would limit emission rates when the Cogen Unit is operating such that the Cogen Unit would be installed with no net increase in emissions of nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and less than significant increases in volatile organic compounds (VOC), carbon monoxide (CO), particulate matter less than ten microns in diameter (PM10), or particulate matter less than 2.5 microns in diameter (PM2.5).” (See ND page 1-7). As further described below, permit conditions have been included as part of the SCAQMD Permits to Construct/Operate. Therefore, as designed, the Project will limit the operation of the Cogen Unit and boilers, so that under any combination of operations, all four units would not exceed the emissions levels established by the current operation of the three existing boilers. Therefore, the Project description is not “inconsistent and inconclusive” as suggested by the commentator.

## RESPONSE TO COMMENTS

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With regard to the proposed quantitative operational limit, the detailed calculation analysis can be found in Chapter 2. Table 2-4 shows operating capacity of the boilers and Table 2-5 shows the operational emissions from both the baseline and the proposed Project in accordance with CEQA requirements. As discussed in Response 3-5, there is no requirement or necessity to identify the exact proposed operational limits in the Project Description, given that the purpose and function of the limits are described. Moreover, the draft Permit to Construct sets forth the proposed limits.

The opinion in Comment 3-6 that insufficient information has been provided regarding the operation of the existing boilers, is also not supported by the record. A number of different boiler operating scenarios were evaluated in the ND (see ND, page 2-16 under Operational Emission Impacts and Table 2-4, as well as Appendix B), in order to determine the worst-case operating scenario (operating scenario that generates the highest emissions). The description of the scenarios evaluated is provided on page 2-17 (last paragraph) to page 2-18 of the ND, which states the following:

As indicated in Table 2-4, scenario 1 assumes that the Cogen Unit operates at full capacity and boiler 86-B-9002 is operating up to a minimal level (31 percent load) and boiler 86-B-9001 is operating up to a level (38 percent load), where both boilers would generate supplemental steam as needed. Scenario 2 assumes that the Cogen Unit operates at full capacity, boiler 86-B-9002 is off and boiler 86-B-9001 would be ready to generate supplemental steam as needed (75 percent load). Scenario 3 assumes that the Cogen Unit operates at full capacity and boiler 86-B-9001 is operating up to a minimal level (30 percent load) and boiler 86-B-9002 is operating up to a level (36 percent load) where both boilers would generate supplemental steam as needed. Scenario 4 assumes that the Cogen Unit operates at full capacity, boiler 86-B-9001 is off and 86-B-9002 (54 percent load) would generate supplemental steam as needed. As a permit condition, when the boilers are used to supply steam instead of supplement steam to the Refinery the Cogen Unit will not operate. When the boilers are supplying steam to the Refinery, the worst-case emissions from the project would be the same as the existing setting (since the Cogen Unit would not be operating). The operating conditions of the boilers and Cogen Unit combined would be restricted through permit conditions to limit emissions in any combination of equipment such that the NOx emissions from the proposed Project would not exceed the current permitted NOx emission limits on the existing boilers. (Emphasis added)

The last paragraph on page 2-17 clearly indicates that, as part of the design of the Project, a permit condition will be imposed on the Refinery Cogen Unit and boilers that prohibit them from operating at full capacity at the same time. Therefore, enforceable permit conditions (as noted on pg. 2-19 of ND) will be imposed as part of the SCAQMD permit that will limit boiler operations when the Cogen Unit is operational and vice versa. Furthermore, as previously explained, it would be impractical to operate the existing boilers and Refinery Cogen Unit at increased loads which would result in overwhelming the steam demand of the Refinery resulting in wasted energy. Please see Response 3-32 for the response to comments from Valorie Thompson regarding air emissions. As explained in more detail in Response 3-32, because enforceable permit conditions will be imposed, no significant increase in NOx, SOx, VOC, CO, PM10 or PM2.5 emissions are expected due to the proposed Project. As stated in PRC §21082.2(c) and 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 data are used, the emissions calculations demonstrate that the proposed Project will not result in significant adverse air quality impacts, and thus an EIR is not required. Based on this discussion no revision or recirculation of the analysis is required.

The Project description clearly provides the construction schedule and required permits that dictate the start-up and operational schedule for the Project. Once in operation, the operational scenarios presented in Chapter 2 provide the public and decision-makers a discernible assessment of the potential air quality impacts from the Project.

### **Response 3-7**

CEQA Guidelines §15063(d) provides that an initial study shall contain in brief form the following elements that were included in the ND, thus complying with the CEQA Guidelines: (1) a description of the project including the location of the project (see pages 1-3 through 1-9 of the ND); (2) an identification of the environmental setting (see pages 2-4 through 2-84); (3) an identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries (see pages 2-4 through 2-84) (As stated in the CEQA Guidelines, the brief explanation may be either through a narrative or a reference to another information source); (4) a discussion of ways to mitigate the significant effects identified, if any (no significant impacts were identified); (5) an examination of whether the project would be consistent with existing zoning plans, and other applicable land use controls (see pages 2-64 and 2-65); and (6) the name of the persons who prepared or participated in the initial study (see cover page). SCAQMD performed such an initial study and found, in light of the whole record before the agency, that there was no substantial evidence that the project may have a significant effect on the environment. Therefore, CEQA Guidelines §15064(f)(3) and §15070 requires the preparation of a negative declaration. CEQA Guidelines §15071, requires the negative declaration to include an initial study. The location of where the information can be found in the Ultramar Cogen ND is shown in parentheses next to the item above. Based on the above, the ND has included all elements that are required under §15063(d) of the CEQA Guidelines.

The ND discusses the existing subsurface investigations of soil and groundwater contamination and the Cleanup and Abatement Order in effect at the Refinery on pages 2-54 and 2-55. As discussed in the ND/IS, the existing conditions with respect to soil contamination are adequately investigated as the facility is subject to cleanup and abatement orders that remain in effect for monitoring and cleanup requirements. The specific order numbers are provided to support the existing setting of soil contamination and existing site requirements to monitor and mitigate if necessary. As discussed in detail in Response 3-8, the depth to groundwater and lack of soil contamination were verified by sampling of the proposed Project site in March 2014. Additional analyses are not warranted as the information provided in the Quarterly Monitoring Reports is sufficient to adequately describe the existing environment at the Refinery with respect to soil and groundwater contamination. As indicated on page 2-55 of the ND, the Cleanup and Abatement Order would remain in effect and continue to establish requirements for site monitoring and cleanup of existing contamination with or without the proposed Project. The environmental setting for hazards is provided on pages 2-47 through 2-50 and Appendix C, which discusses:

existing and project-specific risks from releases of regulated substances and from fires and explosions; existing and project-specific risks associated with shipping, handling, storing, and disposing of hazardous materials; existing and project-specific risks associated with spills; and existing and project-related transportation risks. Therefore, as required under CEQA Guidelines §15063(d), the ND describes the existing setting, including site contamination, with more detail than a “mere conclusion” as the commentator suggests. Further, the existing environmental setting for hazards has been adequately addressed and supported in the ND.

**Response 3-8**

The commentators have submitted comments on the draft ND related to the potential presence of contaminated soil and groundwater at the Refinery. These comments are located throughout Comment Letter No. 3 (Comments 3-7 through 3-8; Comments 3-18 through 3-23; and Comments 3-37 through 3-41). In order to provide a cohesive explanation of the issues related to soil/groundwater contamination, Response 3-8 has been prepared to provide an overview of soil and groundwater setting and potential impacts in one, organized comprehensive response.<sup>1</sup> The following provides a summary of the information included in Response 3-8.

Some general principles, concepts and historical background information on soil and groundwater contamination at the Refinery are provided in Section 1 below. The ND included a thorough analysis of the possible impact of the proposed Project regarding contaminated soil and groundwater (see pages 2-58 and 2-59, which is summarized below in Section 2). As explained in further detail below, the Refinery has been under an order by the Regional Water Quality Control Board (RWQCB) to remove/reduce contaminants from the groundwater [Environmental Engineering and Contracting (EEC), 2011]. Over the past 25 years, the Refinery has been investigating the nature and extent of soil/groundwater contamination, conducting extensive site monitoring, determining the sources of contamination, and developing and implementing clean-up actions to remediate contamination, including removing and remediating contamination in the vicinity of the Cogen Unit (see Sections 3, 4 and 5). Because of the previous remediation activities, the Refinery is unlikely to encounter or expose contaminated soil or groundwater during the course of excavation and construction. Soil at the proposed Cogen Unit site and in the vicinity of the site has been evaluated and it did not contain detectable levels of benzene (see Section 5). The Refinery carefully considers the groundwater table in its project design and has not encountered groundwater in past construction projects. Measurements in the area of, and samples at the Project site, demonstrate that the water table is below the level of the proposed excavation (see Section 4). Recent groundwater measurements show partially refined free product at only two of 21 wells, where one (RMW-27) is in the vicinity, but outside the construction area, of the proposed Project. RMW-27 exhibits evidence of a non-measurable sheen on the groundwater surface. However, in the unlikely event of contaminated groundwater exposure, exposure would be limited and numerous existing regulations dictate the actions the Refinery must take in order to minimize any impacts (see Section 6 for further details), e.g., 28 CFR 1910.120, Hazardous Waste Operations and Emergency Response (Fed-OSHA,

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<sup>1</sup> The comments regarding soil and groundwater contamination have been reviewed and responses have been prepared with assistance by Brent Mecham, Registered Geologist, with a Master’s degree in Geology and over 24 years of experience with site assessment and remediation activities.

HAZWOPER); and 8 CCR 5192, Hazardous Waste Operations and Emergency Response (Cal-OSHA, HAZWOPER). Likewise, SCAQMD Rule 1166, VOC Emissions from Decontamination of Soil, delineates the actions that a facility must take in the event contaminated soil is uncovered to minimize impacts. These actions include the covering of the soil with tarps or other impermeable coverings.

The comments provided do not present a fair argument of a significant impact. The commentators attempt to utilize data from the Refinery to demonstrate the possibility of significant impacts from contaminated soil and groundwater on the workers at the Refinery, either during construction or operation. The commentators opine that this possible impact to workers amounts to a significant impact to the environment as a result of the Project. However, the data utilized by the commentators is incorrect, misinterpreted and misapplied. Therefore the comments provided amount to unsubstantiated opinion, and therefore do not constitute substantial evidence of an adverse impact either to workers or to the environment in general.

In a recent California Court of Appeals opinion, *Parker Shattuck Neighbors v. Berkeley City Council (CityCentric Investments, LLC)*, 222 Cal. App. 4<sup>th</sup> 768 (2013), the court found that the same argument under very similar circumstances as this Project, failed to present substantial evidence of a significant impact pursuant to CEQA. In *Parker Shattuck*, appellants alleged that the city violated CEQA by failing to prepare an EIR. The appellants alleged that the construction of three buildings, two mixed use and one residential, on a site previously identified as contaminated would cause adverse health impacts to construction workers and residents due to exposure to contaminated soils and groundwater and vapor intrusion. The expert in the *Parker Shattuck* case was Mathew Hagemann who contended that construction workers and future residents are at risk because vapors from VOCs may travel through the soil into buildings constructed on the site through vapor intrusion and thereby expose individuals within the buildings to contaminated air. Mr. Hagemann suggested that a vapor intrusion study be performed. While appellants provided some limited data, they requested more analysis of the possible contamination be conducted at the site as part of the environmental analysis conducted pursuant to CEQA. The court held that “Even assuming that the disturbance of contaminated soil would cause these risks, we conclude Hagemann’s contention still fails to amount to substantial evidence supporting a fair argument of a significant effect on the environment. . . Hagemann did not discuss the significance for human health of exposure to petroleum hydrocarbons . . . Instead, he simply claimed that the level of total petroleum hydrocarbons should lead to further review.” The court further held that “the health risks to workers and residents identified by petitioners do not constitute ‘substantial adverse effects on human beings’ or otherwise create a fair argument that the disturbance of contaminated soil may have a significant effect on the environment.” (*Parker Shattuck, supra* at 782.) The expert (Mr. Hagemann) for appellants provided data on the levels of contamination present in the soil to support his conclusion that soil disturbance would cause a significant environmental effect due to the health risk the sites contamination would provide to the future residents and workers and requested that a vapor intrusion study be performed. The court found that this expert opinion was “insufficient to create a fair argument of a significant effect on the environment because a suggestion to investigate further is not evidence, much less substantial evidence, of an adverse impact.” (*Parker Shattuck, supra* at 786.)

Likewise, in this current Project, the commentators failed to provide accurate, relevant data to support the expert's opinion that any possible pre-existing contamination would cause an adverse health impact to construction workers by contact with contaminated soil and to Refinery personnel through vapor intrusion. Mr. Hagemann makes a similar argument associated with the proposed Project where he provides data from one monitoring well using data submitted by Ultramar to the RWQCB. As discussed in detail in this comment (see subsection 5 below), Mr. Hagemann chose a well farther away (500 feet) from the Cogen site, which is less representative of the conditions at the site, when a more representative well is located 75 feet southeast of the site. Ultramar has been monitoring soil and groundwater at the Refinery for over 25 years, with thousands of soil and groundwater samples taken, and the Project plans will not affect any clean-up activities at the Refinery. The RWQCB is in charge of and has provided oversight of the previous cleanup and continued monitoring of the Refinery. Yet Mr. Hagemann uses the data from one monitoring well and "recommends submittal of the project plans to the Regional Board along with a request of oversight of the investigation and any necessary cleanup of the Project site." (see Comment 3-41). Just as in *Parker Shattuck*, the commentators request additional analysis to determine whether impacts would be significant, thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion requesting additional analysis is "insufficient to create a fair argument of a significant effect on the environment."

**1. Historical and General Information on Soil and Groundwater Contamination at the Ultramar Refinery**

The Ultramar Refinery is located within the Wilmington Oil Field, and has been extensively utilized for oil production since the 1930's. At least 22 oil wells were located on the Refinery property and at least seven oil wells were located on the adjacent Hydrogen Plant facility. During oil exploration and production, significant portions of the Refinery were used for sumps and spreading grounds. These sumps and spreading grounds, associated with historical oil field operations, are the primary source of residual hydrocarbons that remain in the soil and groundwater beneath the Refinery. Thirty-four acres of the southern portion of the Refinery was formerly permitted by the RWQCB as a disposal site for oil and gas drilling waste (EEC, 2011).

Groundwater is rain water or water from surface water bodies, like the lakes or ocean that soaks into the soil and bedrock and is stored underground in the tiny spaces between rocks and particles of soil. Groundwater pollution occurs when hazardous substances come into contact with and dissolve in the water that has soaked into the soil.

Groundwater can become contaminated in many ways. If rain water or surface water comes into contact with contaminated soil while seeping into the ground, it can become polluted and can carry the pollution from the soil to the groundwater. Groundwater can also become contaminated when liquid hazardous substances themselves soak down through the soil or rock into the groundwater. Some liquid hazardous substances do not mix with the groundwater but remain pooled within the soil or bedrock. Groundwater underneath the Refinery likely became contaminated from both mechanisms mentioned above, i.e., oil from historic oil field activities, aboveground tanks and/or piping moved through the soil into the groundwater and/or migrated into the groundwater by rain. Certain contaminants can migrate upward toward the ground

surface from their source (referred to as vapor migration), particularly volatile organic compounds, potentially exposing individuals. When vapors migrate beneath a building, potential vapor intrusion into the building can occur. A graphic that shows potential for vapor intrusion is shown in Figure 1.

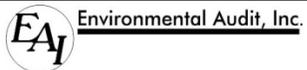
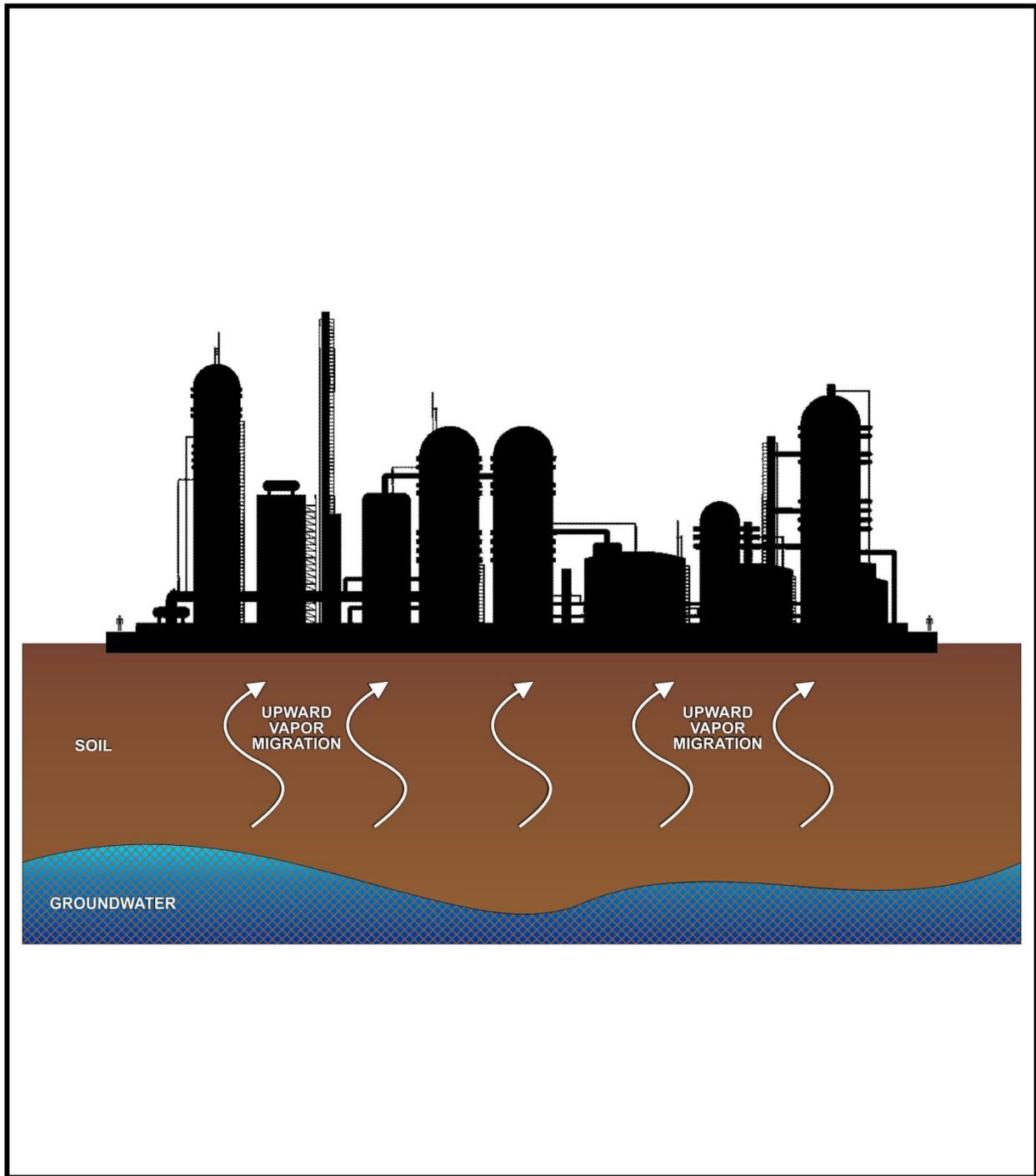
The Ultramar Refinery is located at the coast and near the ocean. Because of its location near the ocean, groundwater is relatively shallow ranging from about three feet to about 12 feet below the ground surface. In addition, the upper groundwater aquifers also contain very high levels of total dissolved solids (TDS) and chloride (salt) due to seawater intrusion. For this reason, groundwater beneath the Refinery has been designated by the RWQCB, as non-beneficial for potable use (i.e., cannot be used for drinking water) (EEC, 2011).

Various environmental soil and groundwater investigations have been conducted at the Refinery since 1985. The majority of the environmental activity was conducted in the early 1990's. These environmental activities have resulted in the identification, excavation, and offsite disposal of petroleum impacted soil. Figure 2 shows the location of the former sumps and spreading grounds and the historical locations of soil contamination in the vicinity of the proposed Cogen Unit. Note that the proposed Cogen Unit would not be located in an area which was previously contaminated.

The RWQCB continues to provide oversight of the remediation activities at the Refinery as quarterly monitoring reports are required to be submitted by Ultramar per RWQCB Order No. 85-17. Over the past 25 years, the Refinery has developed information on the nature and extent of the contamination; completed soil and water investigations to determine the source, nature, and extent of the discharge to provide the basis for decisions regarding subsequent cleanup actions; developed and implemented clean-up actions to remediate contamination; and conducted extensive site monitoring.

As part of compliance with the RWQCB Order No. 85-17, Ultramar was required to prepare a Conceptual Site Model to provide the RWQCB with a single document that identifies historic and current environmental conditions beneath the Refinery (EEC, 2011). The Conceptual Site Model includes an analysis to determine if sensitive receptors or human health could be impacted by petroleum products in soil and groundwater beneath the Refinery, based on an analysis of current and historical environmental conditions, combined with an analysis of potential onsite and offsite sources of environmental impact. The Conceptual Site Model was submitted to the RWQCB for review and approval. The RWQCB approved the Conceptual Site Model which establishes the requirements and additional remediation and monitoring activities that are required to mitigate soil and groundwater contamination at the Refinery.

The Conceptual Site Model prepared for the Ultramar Refinery evaluates the potential pathways of exposure, which is one of the criteria used to determine appropriate cleanup actions. Exposure pathways are the means by which a population comes into contact with environmental contamination and includes a source of chemicals, a release and transport mechanism from the source to a population (see Figure 1), and a route of exposure (e.g., inhalation, ingestion, dermal contact).



EXAMPLE OF VAPOR MIGRATION

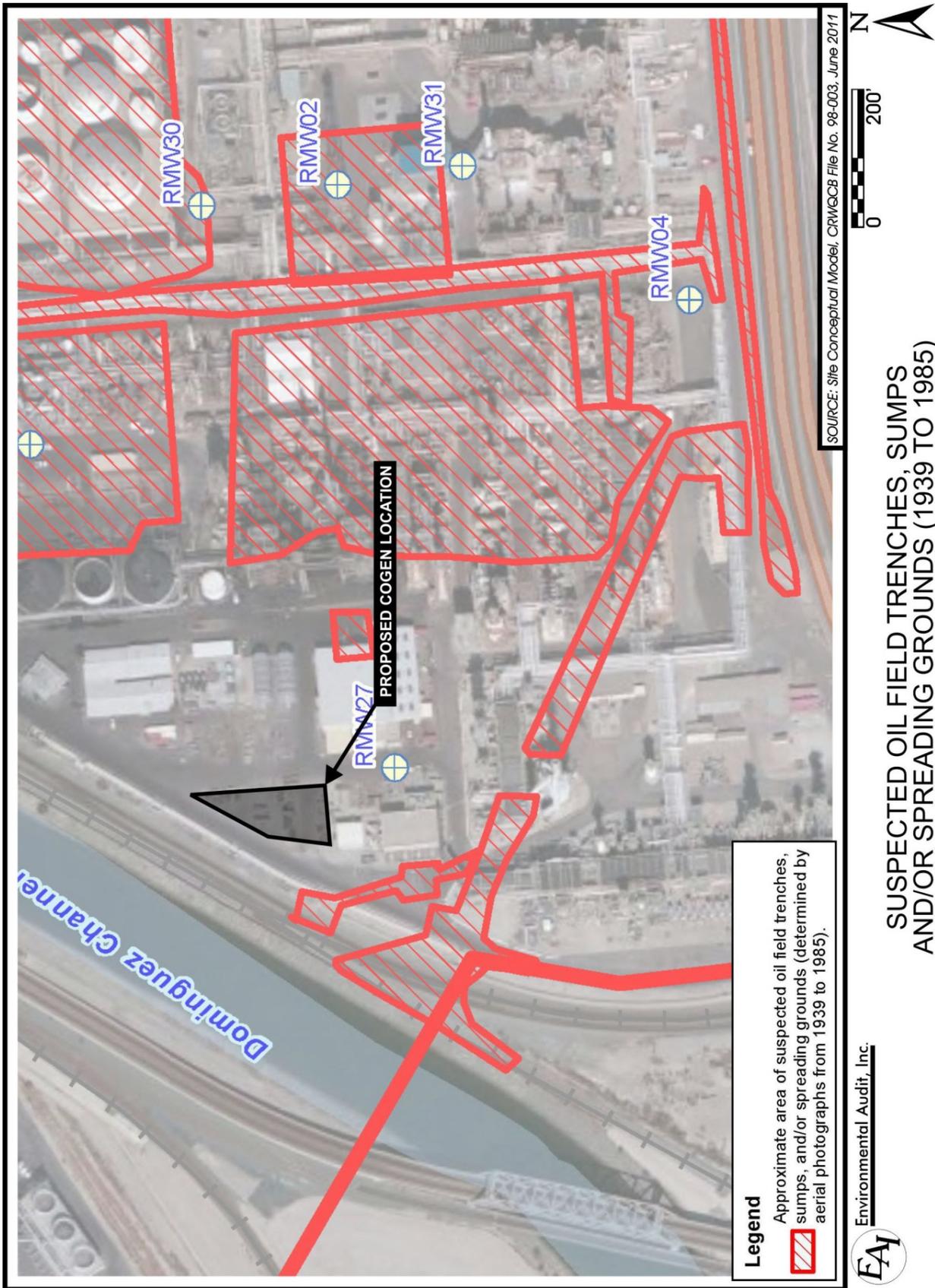


Figure 2

Project No. 2709  
 N:\2709\Suspected Oil Field Trenches.cdr

Exposure pathways for each potentially exposed population were identified as the following:

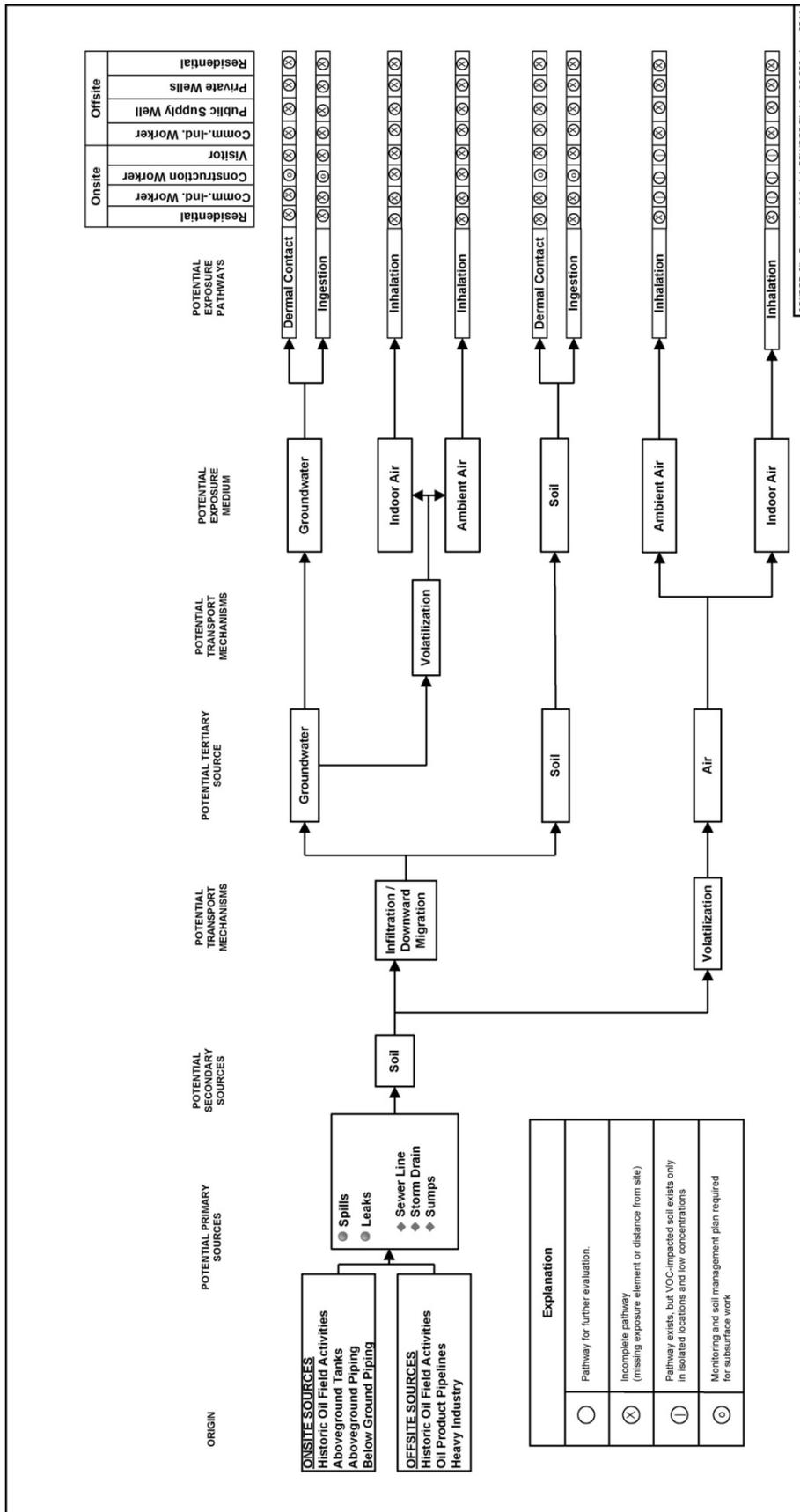
- Dermal contact and ingestion of soil and groundwater (onsite construction workers);
- Inhalation of vapors migrating from subsurface soil and groundwater to ambient air (outdoor onsite workers);
- Air (on- and offsite commercial workers and visitors);
- Inhalation of vapors migrating from subsurface soil and groundwater to indoor air (on and offsite commercial workers and visitors); and
- Ingestion of groundwater via the public water supply system (general public).

The conclusions of the Ultramar Conceptual Site Model with respect to potential exposure pathways due to existing soil and groundwater contamination at the Ultramar Refinery are summarized below and shown in Figure 3. In summary, no significant impacts are expected.

**Dermal and Ingestion of Soil and Groundwater:** The Refinery is generally paved which reduces the risk of incidental contact with soil or groundwater beneath the site. Therefore only activities that would result in removal of the asphalt and excavation of soil could result in dermal contact or ingestion of soil and groundwater. However, professional construction workers are trained and provided protective equipment to avoid contact or ingestion of soil and groundwater in compliance with existing regulations (see Section 6 of this response). Based on the exposure pathway evaluation shown on Figure 3, a minimal potential exists for construction worker exposure during potential future excavation activities (EEC, 2011). As described in Section 6 of this response, numerous procedures and regulations are applicable to worker exposure and compliance with the applicable regulations reduces the potential for worker exposure. As a result, no significant impacts are expected.

**Inhalation of Vapors Migrating from Soil and Groundwater to Ambient Air:** The Refinery is almost entirely paved with asphalt or concrete, which restricts the migration of soil and groundwater vapor to ambient air. Due to the natural dispersion of contaminants in open air areas, there are low prolonged risks associated with ambient air exposure. Along with the natural reduction of contaminants in open air spaces, breeze aids in circulating the air, resulting in a reduced health risk. With the exception of benzene, Refinery chemicals of concern in soil and groundwater do not exhibit high toxicity or carcinogenic characteristics (EEC, 2011). Potential benzene contamination is discussed further in Section 5 of this response.

**Inhalation of Vapors Migrating from Soil and Groundwater to Onsite and Offsite Indoor Air:** As previously mentioned, the Refinery is almost entirely paved with asphalt or concrete, which restricts the migration of vapor to ambient air, which also restricts migration to indoor air. Also, there are very few occurrences, and limited distribution of volatile compounds, such as benzene (see Section 5 of this response), remaining in soil or groundwater beneath the Refinery. Therefore, without a significant source and mass, a potential exposure pathway does not exist. VOCs are present at a few isolated locations; however, there does not appear to be a significant mass near a regularly occupied



EXPOSURE PATHWAY EVALUATION  
ULTRAMAR INC. WILMINGTON REFINERY



Figure 3

structure to warrant a vapor intrusion risk. The majority of hydrocarbons beneath the Refinery are heavy range crude that do not typically contain high concentrations of VOCs that are likely to result in vapor intrusion risk (EEC, 2011). Therefore, no significant impact is expected.

**Ingestion of Petroleum or Metal Impacted Groundwater:** Recent groundwater monitoring results show that Refinery groundwater generally meets drinking water standards for chemicals of concern. Further, there are no domestic supply wells located downgradient of the Refinery. The nearest public water supply well located upgradient of the Hydrogen Facility is located approximately 2.25 miles northwest of the Refinery. In addition, the Gaspar aquifer underlying the Refinery is not designated as a beneficial use aquifer due to extensive sea water intrusion as well as historical and ongoing injection of oil field brines. The Refinery is located on the seaward side of the Dominguez Gap Injection Barrier. Based upon the lack of an existing groundwater supply, combined with the lack of dissolved VOCs in groundwater, there is no anticipated exposure via the groundwater exposure mechanism (EEC, 2011).

Figure 3 shows the conclusions from the Conceptual Site Model. The RWQCB indicates that vapor intrusion is not a significant risk and that contamination is not migrating from the Refinery. Therefore, the RWQCB has concluded that the only pathway for potential exposure due to contamination at the Refinery is associated with onsite construction workers during excavation activities and potential dermal and ingestion of contaminated soil (see Section 6). For the proposed Project, potential exposure to contaminated soil or groundwater would be limited to the first three months of construction when earthmoving activities would be expected. After that time period, the site would be paved and the potential for worker exposure would be eliminated. As explained in Section 6 below, extensive training requirements, regulations, and other requirements are mandatory for workers at the Refinery to minimize the potential for exposure.

## **2. Discussion of Soil and Groundwater Contamination in the Negative Declaration**

The existing soil and groundwater conditions at the Refinery were summarized on pages 2-58 and 2-59 of the Draft ND, which states the following:

“Pursuant to the RWQCB Order No. 85-17, a groundwater monitoring program was implemented in 1985 to evaluate groundwater quality at and in the vicinity of the Refinery. Groundwater monitoring consists of a network of monitoring wells, which includes wells located within and down gradient of the Refinery. Of the 21 groundwater monitoring wells located within the Refinery, the nearest well is located approximately 25 feet southeast of the proposed Cogen Unit location. Previous groundwater contamination has been identified at the Refinery and recent groundwater monitoring results indicate that groundwater contamination still exists. The Refinery has, and continues to implement hydrocarbon removal and recovery activities for groundwater.

Construction activities to install new foundations could uncover contaminated soils, given the heavily industrialized nature of the Refinery and the fact that refining activities,

petroleum storage and distribution, have been conducted at the site for a number of years. Currently, there is no evidence that soil contamination is located within the areas proposed for grading, trenching, or excavation. The excavation activities at the Refinery are anticipated to remove about 300 - 500 cubic yards of soil.

Contaminated soil found during previous construction activities has generally not been considered hazardous waste. If contaminated soils are encountered, it is not expected that the removal of the soil would impact groundwater as the excavation for the foundations is not expected to be very deep (i.e., less than four feet below the surface) with groundwater located greater than twelve feet below the surface. Excavated soils that contain concentrations of certain substances, including heavy metals and hydrocarbons, generally are regulated under California hazardous waste regulations. No significant impacts are expected from the construction-related potential for encountering contaminated soils during excavation since there are numerous local, state (Title 22 of the California Code of Regulations) and federal rules which regulate the handling, transportation, and ultimate disposition of contaminated soils.”

Therefore, the Draft ND recognized and disclosed the historical presence of contaminated soil and groundwater in the vicinity of the proposed Cogen Unit and concluded that the proposed Cogen Unit is not expected to impact existing contaminated soil or groundwater in the vicinity for the Refinery. Impacts that are dismissed as clearly insignificant and unlikely to occur need not be further discussed in detail in an environmental document.

### **3. Additional Background Information on Existing Soil and Groundwater Contamination**

Comments on the ND were provided on existing soil and groundwater contamination at the Refinery, some of which are inaccurate. Comments such as 3-19, 3-20, 3-38, 3-39, and 3-40 alleged that soil and/or groundwater at the Refinery is known to be contaminated and that workers could be exposed to contaminants. As discussed below, these statements ignore the extensive monitoring and cleanup activities that have occurred at the site over the past 25 years and do not concur with the conclusions in the RWQCB monitoring reports. In order to provide a clear understanding of the issues, additional background information is provided below. The background information is primarily from the Conceptual Site Model (EEC, 2011) and Quarterly Groundwater Monitoring reports prepared in compliance with the groundwater monitoring program implemented in 1985 as required by RWQCB Order No. 85-17, to evaluate groundwater quality at and in the vicinity of the Refinery.

The Refinery is located in a heavily industrialized area of Wilmington, California. The Refinery itself is within the Wilmington Oil Field, and has been extensively utilized for oil production since the 1930's. At least 22 oil wells were located on the Refinery property and at least seven oil wells were located on the adjacent Hydrogen Plant facility. During oil exploration and production, significant portions of the Refinery were used for sumps and spreading grounds. These sumps and spreading grounds associated with historical oil field operations (see Figure 2) are the primary source of residual hydrocarbons that remain in the soil and groundwater beneath the Refinery (and not gasoline or diesel products as referenced in some of the comments, e.g.,

## RESPONSE TO COMMENTS

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Comment 3-39). The commentators state that the groundwater beneath the Project is “likely” overlain by a layer of refined products (Comment 3-39) but provide no data to substantiate their opinion. Thirty-four acres of the southern portion of the Refinery was formerly permitted by the RWQCB as a disposal site for oil and gas drilling waste (EEC, 2011).

Various environmental soil and groundwater investigations have been conducted at the Refinery since 1985. The majority of the environmental activity was conducted in the early 1990’s. These environmental activities have resulted in the identification, excavation, and offsite disposal of petroleum impacted soil. The site investigation and cleanup process established by the RWQCB consists of five elements:

- 1) Preliminary site assessment to confirm the discharge and the identity of the dischargers; to identify affected or threatened waters of the state and their beneficial uses; and to develop preliminary information on the nature and vertical and horizontal extent, of the discharge;
- 2) Soil and water investigation to determine the source, nature, and extent of the discharge with sufficient detail to provide the basis for decisions regarding subsequent clean-up and abatement actions, if any are determined by the RWQCB to be necessary;
- 3) Proposal and selection of clean-up action to evaluate feasible and effective cleanup and abatement actions and to develop preferred clean-up and abatement alternatives;
- 4) Implementation of clean-up and abatement action to implement the selected alternative and to monitor in order to verify progress; and,
- 5) Monitoring to confirm short- and long-term effectiveness of cleanup and abatement. [State Water Resources Control Board (SWRCB), 2013].

The RWQCB continues to provide oversight of the remediation activities at the Refinery as quarterly monitoring reports are required to be submitted by Ultramar per RWQCB Order No. 85-17 and the Project plans will not affect any clean-up activities at the Refinery. The groundwater contamination evaluation for the Refinery has progressed to Element 4 described above and Ultramar has implemented clean-up and abatement action (removed pipe and contaminated soil) and is monitoring (quarterly monitoring reports) to verify the effectiveness of the clean-up/abatement activities. These aggressive soil and groundwater remediation efforts have greatly reduced the amount of petroleum impacted soil and groundwater beneath the Refinery. In 1993, the area in the vicinity of RMW-27 and the proposed Cogen Unit location was investigated. A portion of pipe believed to be related to former oil and gas production in the area was discovered, removed, and contaminated soil was excavated. Based on studies in the area, the extent of soil contamination was determined to be localized around the pipe segment. Excavation sampling was conducted to confirm the impacted soil had been removed (the sampling results are presented in the Site Conceptual Model, Appendix L, EEC 2011). By removing the pipe segment and contaminated soil, the impact to groundwater is expected to be limited. It is for this reason that the ND concluded that soil contamination was not expected to be encountered during construction activities associated with the proposed Cogen Unit.

Groundwater has been sampled and tested for petroleum hydrocarbons and related constituents for over 25 years. Groundwater data collected beneath the Refinery has clearly established that only isolated instances of petroleum products are present beneath the Refinery, and that no significant dissolved phase plume of typical petroleum products, such as benzene, toluene, ethyl benzene or xylenes (collectively referred to as BTEX), are present (EEC, 2011). See Section 4 of this response in reference to the depth of the groundwater and Section 5 for the benzene concentration samples. Therefore, the reference in the comments (see Response 3-39) to a shallow layer of gasoline and diesel overlying the groundwater beneath the Project site is not supported by facts gathered as part of the RWQCB monitoring reports. As stated in Public Resources Code (PRC §21082.2(c)) and 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.” Information provided by the commentators is clearly erroneous and, therefore, does not constitute substantial evidence.

Samples collected after the major remedial activities indicate the following:

- In general, soil impacted by chemicals of concern is below site specific cleanup goals and where such goals have not been met, the extent of impact has been defined;
- In groundwater, 25 years of sampling has documented that only minor dissolved phase hydrocarbons are present in groundwater. These concentrations are generally below state and federal maximum contaminant levels, are generally decreasing, and are not migrating offsite (EEC, 2011). Areas where groundwater has exceeded concentrations have been subject to remediation efforts discussed earlier in this section, in compliance with RWQCB requirements.

Free product is present at several isolated locations throughout the Refinery, but investigation of this product indicate that it is predominately related to historical oil field operations, is extremely viscous, and is not migrating. It should be noted that free product on the groundwater at the Refinery is limited to two active wells (RMW-15 and RMW-27) (EEC, 2011). (See Figure 4 for the location of RMW-27. RMW-15 is located over 1,000 feet east of the proposed Cogen location). Based on sampling results reported in the Conceptual Site Model from the temporary wells (TMW-1, TMW-2, and TMW-3) installed prior to and in the vicinity of RMW-27, which did not contain free product on the groundwater (EEC, 2011), the free product in well RMW-27 is localized to the immediate vicinity of the well and is not expected to extend into the area beneath the Project site. Soil vapor has not been identified as a concern by the RWQCB, due to the lack of significant concentrations of volatile compounds in groundwater, and lack of significant soil contamination beneath the Refinery. Finally, analysis of exposure pathways shows no likely exposure routes caused by subsurface contamination at the Refinery (EEC, 2011).



#### 4. Responses to Comments on Depth to Groundwater

Comments were received that reported that groundwater may be shallow resulting in potentially significant impacts to construction workers at the site. As explained further below, there are a number of inaccuracies used by the commentators in their arguments.

First, the commentators claim that the removal of soils could impact groundwater because groundwater levels at monitoring well RMW-01 “just 400 feet to the northeast from where the Project excavation will take place, have been recorded to be as shallow as 3.4 feet below the ground surface on March 2013.” As discussed below, the document from the RWQCB referenced in this comment is a Quarterly Ground Water Monitoring Report prepared to present the results of routine groundwater monitoring at the site, in compliance with a Cleanup and Abatement Order issued by the RWQCB.

The depth to groundwater varies across the Refinery and has historically been reported as deep as 12 feet in some locations beneath the Refinery. While well RMW-01 was last reported at 3.4 feet, it is located over 525 feet (inaccurately stated as 400 feet by the commentators) northeast of the proposed Cogen Unit location, thus, not an appropriate data point to accurately describe conditions at the Project location. The closest well to the proposed Cogen Unit location, and more representative of the conditions at the proposed Project site, is RMW-27 (see Figure 4) at approximately 75 feet southeast, which historically has reported depth to groundwater between two and three feet deeper than RMW-01 (5.01 feet to 6.45 feet) (see Table 1 for dates when depth to groundwater was measured concurrently in both wells) to accurately support the conclusion made in the ND that the groundwater table will not be affected by the shallow excavation during construction. The groundwater levels on December 10 and 11, 2013<sup>2</sup> shows RMW-01 was at 4.05 feet and RMW-27 was at 5.29 feet.

**TABLE 1**

**Historical Data of Depth to Groundwater for Wells RMW-01 and RMW-27**

Date	Depth to Water (FEET BGS)	
	RMW-01	RMW-27
6/24/1999	3.02	5.75
9/15/1999	3.3	5.96
11/30/1999	3.89	6.45
2/18/2000	3.31	5.87
4/4/2011	2.65	5.01
7/26/2011	3	5.13
12/10/2013	4.05	5.29

BGS = below ground surface

Source: Quarterly Groundwater Monitoring Reports, EEC 2005 through 2013.

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<sup>2</sup> Monitoring by EEC using RWQCB methodology in December 2013 to provide current groundwater levels.

## RESPONSE TO COMMENTS

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Additional data regarding depth to groundwater is provided from soil remediation activities. As discussed in Section 3 above and Section 5 (see below), contaminated soil has been removed and soil sampling was conducted within and just south of the proposed Cogen Unit location. Soil samples collected at five feet below the proposed Project site showed no detectable benzene concentrations. In addition, the collection of these soil samples indicates that no groundwater was encountered at five feet below the ground surface. In order to thoroughly respond to the comments regarding depth of groundwater and soil contamination at the Cogen site and to confirm the conditions presented in the Draft ND, two soil samples (one each at 3.5 and 5 feet) were collected at the proposed Project site on March 31, 2014, and no groundwater or benzene was encountered (see Attachment F-2). Therefore, the depth to groundwater data provided for RMW-27 is representative of the groundwater conditions at the proposed Project site. It should be noted that because the Refinery is mostly paved and located adjacent to the Port of Long Beach and the Pacific Ocean, groundwater levels are heavily influenced by the ocean and do not change dramatically due to rain or drought conditions. Thus, the water table is not expected to rise significantly or change at the proposed Project site.

Groundwater is not expected to be encountered during site construction activities for a number of reasons that are outlined below. First, as summarized in Table 1 and confirmed on March 31, 2014, groundwater levels are expected to be below the level of excavation (3-4 feet). Due to the geology in and around the Refinery, foundations are typically supported on pilings, which reduce the depth of excavation needed to install foundations adequate to support Refinery equipment. Pilings are required to be used to provide stable foundations in locations, such as the port, and comply with the California Building Code. The use of pilings minimizes the need for excavation to provide adequate foundation so the depth of excavation for the Cogen Project is expected to be three to four feet and groundwater levels near the proposed Project site are at least five to six feet. The proposed Project is designed to include pilings to support the foundation for the proposed Cogen Unit, which will limit the depth of the excavation to no more than four feet.

Numerous construction activities have been completed at the Refinery and surrounding areas, including the Air Products Hydrogen Plant and Port of Long Beach. Construction of all structures within the surrounding area uses pilings to support the foundations. The construction of the foundations using pilings is standard practice in areas where groundwater levels are relatively shallow to provide adequate structural support in compliance with California Building Codes, while avoiding the need to excavate into groundwater. Numerous construction projects have been completed at the Refinery including the construction of various refinery units (e.g., hydrotreater and modifications to the Alkylation Unit), storage tanks, buildings, piping, and pipelines. In all cases, excavation into groundwater has been avoided. It is standard practice to avoid contact with groundwater while constructing foundations. When foundations are placed at groundwater levels, the soil would need to be dewatered by pumping the water away from the site. The foundations could then be constructed, but the site would have to be dewatered until the foundations are complete. The need to dewater the site to construct foundations increases the construction time and related construction costs, so it is avoided, and has not been required for any construction activities at the Refinery to date. Therefore, for the reasons stated above, contact with groundwater is expected to be avoided.

## **5. Responses to Comments on Soil and Groundwater Contamination**

Comments on the ND were provided on soil and groundwater contamination at the Refinery, some of which are inaccurate. Comments such as 3-19, 3-20, 3-38, 3-39, and 3-40 alleged that soil and/or groundwater at the Refinery is known to be contaminated and that workers could be exposed to contaminants. As discussed below, these statements ignore the extensive monitoring and cleanup activities that have occurred at the site over the past 25 years, the fact the areas within the proposed Cogen site have previously been remediated and that contamination at the Refinery is limited (see below and Sections 1 and 3 for further details). As discussed below the comments provided do not present a fair argument of a significant impact.

Because the groundwater table in the area of the proposed Project has been established to be deeper than the necessary depth of excavation to be conducted, (as discussed above in Section 4 of this response), the concerns raised (see Comments 3-19, 3-20, and 3-39) regarding the potential exposure of workers to vapors (benzene or other contaminants) from groundwater have no basis with relation to the proposed Project. As reported in the Conceptual Site Model prepared for Ultramar, groundwater has been sampled and tested for petroleum hydrocarbons and related constituents for over 25 years. Groundwater data collected beneath the Refinery has clearly established that only isolated instances of petroleum products are present beneath the Refinery, and that no significant dissolved phase plume of typical petroleum products (BTEX) are present (EEC, 2011). In groundwater, 25 years of sampling has documented that only minor dissolved phase hydrocarbons are present in groundwater. These concentrations are generally below state and federal maximum contaminant levels, are generally decreasing, and are not migrating offsite (EEC, 2011). There is no documentation in the RWQCB quarterly monitoring reports of gasoline and diesel products being present in the groundwater and the commentators do not provide any data supporting their opinion.

In general, soil impacted by chemicals of concern is below site specific cleanup goals and where such goals have not been met, the extent of impact has been defined. In 1993, soil excavation was conducted just south of the proposed Cogen Unit location. Soil boring samples collected at 3.5 feet on the northern end of the excavation did not contain detectable levels of benzene (see Table 2). Additional soil samples were collected in the area near the proposed Cogen Unit location that showed no detectable benzene at five feet below ground surface (see Table 2). Figure 5, excerpted from the Conceptual Site Model Figure 23, with the proposed Cogen Unit location superimposed shows no detectable level of benzene in the soil within the construction zone. Soil samples outside the proposed Cogen Unit location are not expected to affect the construction activities because those areas would be undisturbed during construction. Therefore, it is unlikely that construction workers at the Cogen site will be exposed to benzene through dermal contact or inhalation. The data from these soil samples taken within and adjacent to the proposed Project site (see Table 2 and Figure 5) are more representative of the conditions at the Cogen site because these samples were taken closer to the proposed Cogen site (including at the site), while data from monitoring well RMW-01 used by the commentators is over 500 feet from the proposed Cogen site (see Figure 4).

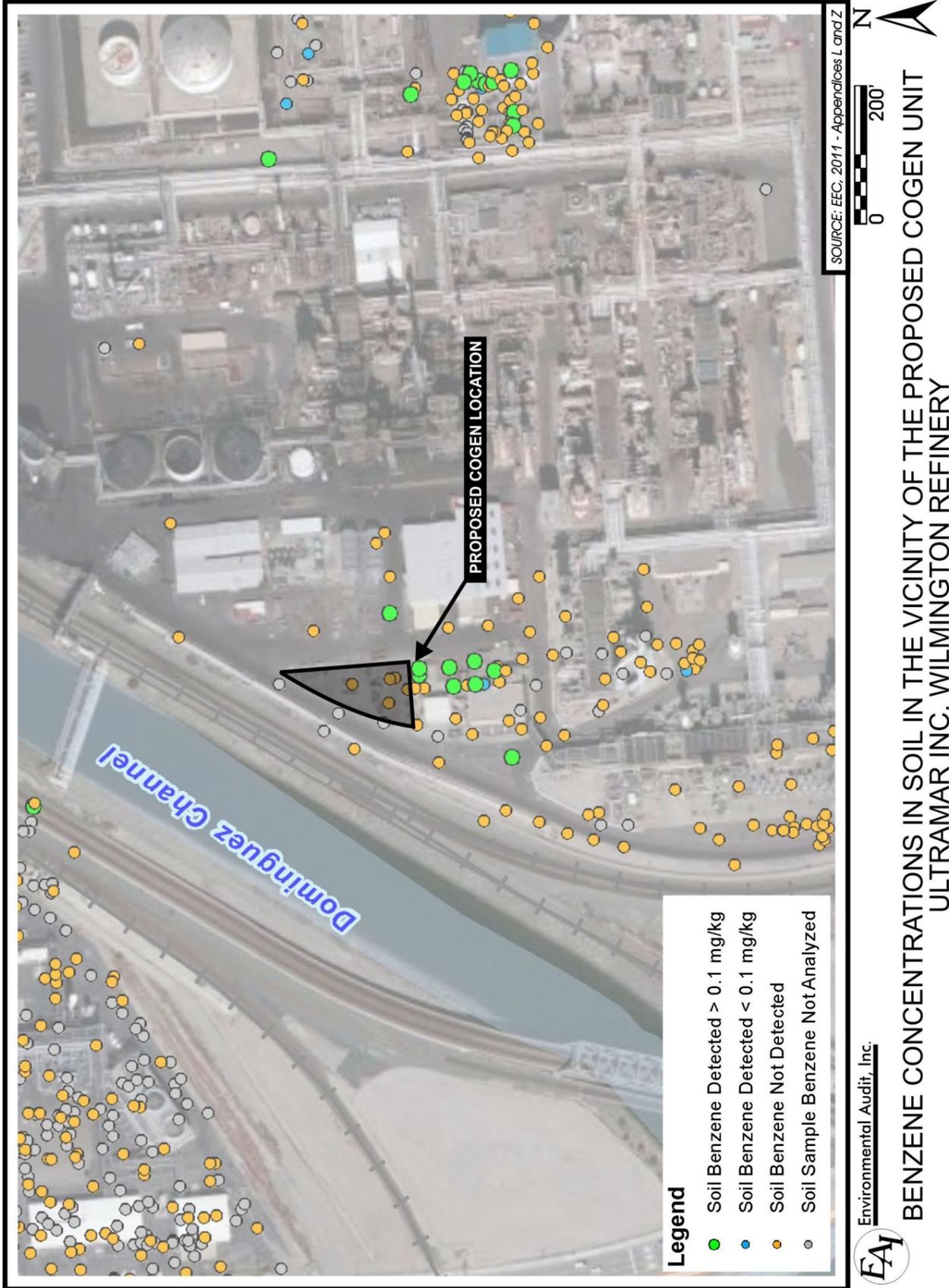


Figure 5

Project No. 2709  
N:\2709\Benzene Overlay (rev.1).cdr

**TABLE 2**  
**Soil Sample Analytical Results in the Vicinity**  
**of the Proposed Cogen Unit Location**

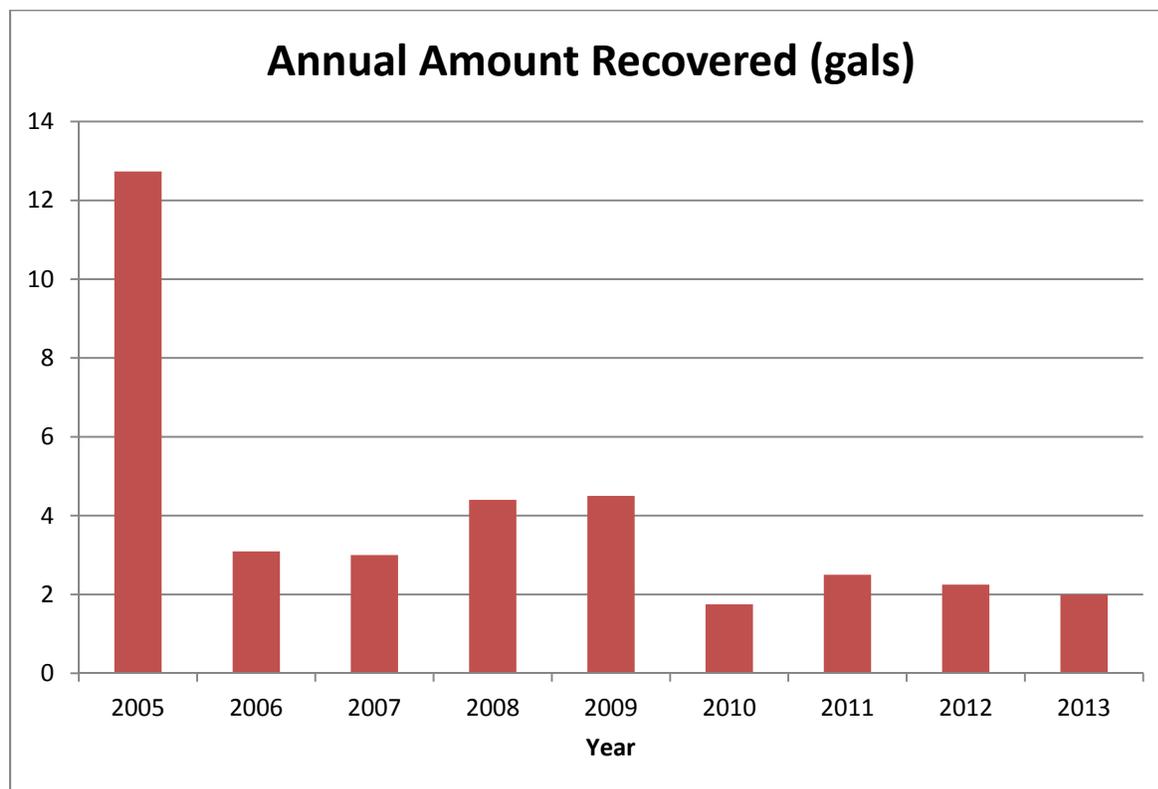
Sample Number	Sample Date	Sample Depth (ft)	Benzene Concentration (ppm)
B-46	6/15/1993	2	<0.005
S-3.5-P19	6/23/1993	3.5	<0.005
S-3.5-P20	6/23/1993	3.5	<0.005
S-3.5-P21	6/23/1993	3.5	<0.005
B-1A-5	9/18/1993	5	<0.005
B-1B-5	9/19/1993	5	<0.005
B-3-5	9/18/1993	5	<0.005
B-34-5	9/16/1993	5	<0.005
COGEN-1-3.5 <sup>(a)</sup>	3/31/2014	3.5	<0.005
COGEN-1-5 <sup>(a)</sup>	3/31/2014	5	<0.005

Source: EEC, 2011 Appendices L and Z.

< = not detected above the detection limit stated (e.g., 0.005 ppm)

(a) As reported in Attachment F-2 of this Appendix.

The groundwater contamination in the vicinity of the proposed Cogen Unit has progressed to Element 4 of the RWQCB site investigation and cleanup process as described above and Ultramar has implemented clean-up and abatement action (removed pipe and contaminated soil) and is monitoring (quarterly monitoring reports) to verify the effectiveness of the clean-up/abatement activities. The source of the contamination was identified and removed, soil was excavated, and passive free product removal is currently ongoing. The limited extent of contamination supports the use of a passive remediation system. As is typical with remediation activities where the source of contamination has been removed, the majority of the contamination is removed initially with dwindling recovery with time. This is shown in the passive remediation occurring in RMW-27. Initially 12.6 gallons of product were recovered but since that time between 0.1 and 3.0 gallons have been recovered during quarterly sampling events. While about two gallons of free product has been collected recently from well RMW-27 on an annual basis, when observed the free product is a thin sheen on top of the groundwater which is so thin (i.e., less than 1/100<sup>th</sup> of an inch) it can't be accurately measured. The rate of free product recovery has declined since the installation of RMW-27 (as shown in Figure 6). Additionally, based on sampling results reported in the Conceptual Site Model from the temporary wells (TMW-1, TMW-2, and TMW-3) installed prior to and in the vicinity of RMW-27, which did not contain free product on the groundwater (EEC, 2011), the free product in well RMW-27 is localized to the immediate vicinity of the well and is not expected to extend into the area beneath the Project site. Therefore, only a small amount of free product has been recovered at the Refinery in recent years and, as discussed above, free product is not expected to be encountered during construction of the proposed Project.



Source: Quarterly Groundwater Monitoring Reports, EEC 2005 through 2013.

**FIGURE 6**  
**Free Product Recovered from Well RMW-27**

**6. Responses to Comments on Worker Exposure to Soil and Groundwater Contamination**

Comments on the ND, such as comments such as 3-19, 3-20, 3-21, 3-38, and 3-39, alleged that soil and/or groundwater at the Refinery is known to be contaminated and that workers could be exposed to contaminants. As discussed below, these statements ignore the extensive monitoring and cleanup activities that have occurred at the site over the past 25 years, the fact that the areas within the proposed Cogen site have previously been remediated, that contamination at the Refinery is limited, and the fact that numerous rules and regulations apply to work within contaminated sites. As discussed below the comments provided do not present a fair argument of a significant impact.

Groundwater is not expected to be encountered during site construction activities for a number of reasons that are outlined above. The construction of the foundations using pilings is standard practice in areas where groundwater levels are relatively shallow to provide adequate structural support in compliance with California Building Codes, while avoiding the need to excavate into groundwater. Such construction activities have been successfully conducted at the Refinery since the 1970's and construction within groundwater has not been required or necessary. As

explained in Section 4, groundwater has not been detected at the Cogen site as deep as five feet below the surface, and the foundation is not expected to reach deeper than four feet.

Should groundwater be encountered, the water would need to be pumped away from the site so the site would be dewatered. The foundations could then be constructed, but the site would have to be dewatered until the foundations are complete. Therefore, workers would not be exposed to groundwater as the water would be removed from the construction site. Although not expected to occur, contaminated groundwater (non-measurable sheen) could be treated within the Refinery's wastewater treatment system or transported by vacuum truck to an appropriate facility, depending on the water characteristics (e.g., types of contaminants). Note that construction activities are short-term with all construction activities expected to be complete within a one year period. Earthwork required to develop foundations is expected to be completed within about three months so that any potential to encounter contaminated soil or groundwater would be limited to about a three month period.

Construction workers at the Refinery and other locations are protected by numerous existing rules, regulations and requirements and have been professionally trained to safely work around the potentially hazardous conditions that exist within a refinery. Existing laws and regulations address the discovery and remediation of contaminated sites, including the discovery of such sites during construction activities. Existing laws require health and safety plans, worker training, and various other activities which serve to protect workers from exposure to contamination and are summarized below.

- **Hazardous Waste Operations and Emergency Response Standard (HAZWOPER, Fed-OSHA, 29 CFR 1910.120):** The HAZWOP Standard applies to employees who are exposed or potentially exposed to hazardous substances, including hazardous waste, and who are engaged in clean-up operations. Facilities that use, store, manufacture, handle, process, or move hazardous materials (including remediation operations) are required to conduct employee safety training, have available and know how to use safety equipment, prepare illness prevention programs, provide hazardous substance exposure warnings, prepare emergency response plans, and prepare a fire prevention plan (29 CFR Part 1910). In California, Cal-OSHA assumes primary responsibility for enforcing workplace safety regulations (Cal-OSHA, HAZWOPER, 8 CCR 5192).
- **Cal-OSHA:** The exposure of employees, including construction workers, is regulated by Cal-OSHA in Title 8 of the CCR. Specifically, 8 CCR 5155 establishes permissible exposure levels (PELs) and short-term exposure levels (STELs) for various chemicals including benzene. These requirements apply to all construction and exposure, whether contamination is discovered as part of construction or from other activities such as direct chemical use. The PELs and STELs establish levels below which no adverse health effects are expected. These requirements protect the health and safety of the workers, as well as the nearby population including sensitive receptors.
- **Health and Safety Plans (HASP):** HASPs are prepared on a site-specific basis for contaminated sites and are developed in accordance with guidelines set forth in 8 CCR

5192 and 29 CFR 1910.120. HASPs include a review of site specific hazards and evaluation of the potential for chemical inhalation, ingestion, and absorption hazards, as well as a review of physical hazards (heat, slips, trips, falls, and noise) at the site. HASPs outline the required monitoring at the site for chemical exposures, particulate/dust, noise, and other site-specific hazards. For example, photoionization detectors (PIDs) are often used to monitor for vapors in the worker's breathing zone. Readings above 75 ppm for more than one minute generally require the use of respirators with organic vapor cartridges. Additional controls and measures are required when higher vapor readings are detected, e.g., full-face respirators, removal of workers from the site, etc. The use of respiratory protection minimizes worker exposures in the event that high levels of contaminants are encountered. HASPs outline requirements for training workers engaged in field activities on the potential health and safety hazards associated with their job function, in compliance with the HAZWOPER (29 CFR 1910.120) and other applicable OSHA standards. Other general health and safety requirements included in HASPs and enforced at contaminated worksites include site safety meetings, the use of personal protective equipment (e.g., gloves, coveralls, boots, hard hats, etc.), decontamination procedures, disposal procedures, communication procedures, emergency procedures, and recordkeeping requirements.

- **SCAQMD Rule 1166, VOC Emissions from Decontamination of Soil:** Under the SCAQMD-approved Rule 1166 monitoring plan, routine monitoring is required during excavation to detect VOC contamination that exceeds 50 ppmv. If contamination is discovered, the health and safety plan will be implemented that specifically requires the use of employees trained in hazardous material/waste procedures, personal protective clothing, and so forth that minimize employee exposure.
- **Resource Conservation and Recovery Act and Associated Hazardous and Solid Waste Amendments, 40 CFR 260:** RCRA created a major federal hazardous waste regulatory program that is administered by the U.S. EPA. The goal of RCRA, a federal statute passed in 1976, is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260-299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste. RCRA sets standards for transporters of hazardous waste. Hazardous waste removed from generating sites must be transported by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests. U.S. EPA approved California's program to implement federal hazardous waste regulations as of August 1, 1992.
- **Hazardous Waste Control Law (California Health and Safety Code, Chapter 6.5):** California's program to implement the federal RCRA requirements is referred to as the Hazardous Waste Control Law (HWCL) and administered by the Cal-EPA, DTSC.

DTSC has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes to implement the federal RCRA cradle-to-grave waste management system in California aimed at protecting human health and the environment. California hazardous waste regulations can be found in Title 22, CCR Division 4.5, Environmental Health Standards for the Management of Hazardous Wastes. The HWCL regulations establish requirements for identifying, packaging, and labeling hazardous wastes. They prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment using hazardous waste manifests. The manifests list a description of the waste, its intended destination, and regulatory information about the waste. In addition, California regulates the transportation of hazardous waste originating or passing through the state (13 CCR Title 13).

Based on the above, existing rules and regulations that apply to the Refinery require monitoring and remediation. Therefore, as concluded in the ND on page 2-59, no significant impacts are expected from the construction-related potential for encountering contaminated soils during excavation.

#### **7. Response to Comments - Vapor Intrusion Into the Control Room**

Comments were received that expressed concern that vapor intrusion into the proposed new control room associated with the Cogen Unit could occur and expose workers to hydrocarbon vapors. There are a number of reasons supporting the conclusion that the proposed control room will not be exposed to vapor intrusion and there is no evidence of any potential significant impact, as summarized below.

- As discussed above, there is no evidence of benzene in soil, which was confirmed by additional soil sampling performed at the project site recently on March 31, 2014 (see Attachment F-2). Therefore, the risk for vapor intrusion and exposure of workers within the proposed control room is low.
- In groundwater, 25 years of sampling has documented that only minor dissolved phase hydrocarbons are present in groundwater. These concentrations are generally below state and federal maximum contaminant levels, are generally decreasing, and are not migrating offsite (EEC, 2011).
- The RWQCB has not identified soil vapor as a concern at the Refinery, due to the lack of significant concentrations of volatile compounds in groundwater, and lack of significant soil contamination beneath the Refinery (see Figure 3) (EEC, 2011).
- The preliminary control room design includes a monolithic foundation free of drains or other protrusions through the foundation, thereby eliminating pathways for vapors to enter the control room.
- The control room included in the Project description on page 1-7 of the ND is not a manned location and no workers will work in the control room on a continuous basis. The operation of the proposed Cogen Unit would be controlled from the main Refinery

## RESPONSE TO COMMENTS

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control room. The control room to be installed with the proposed Cogen Unit is an auxiliary control room for use during maintenance activities and if communications with the main control room are unavailable.

- The control room will be designed to include an industrial ventilation system to provide the necessary temperature control for the electronics installed in the control room and adequate air flow. Ventilation of the control room reduces accumulation of vapors, should there be any.

Both DTSC and the RWQCB use The Conceptual Site Model (DTSC, 2011) to assess vapor intrusion. The Model describes the contaminant sources, transport/exposure pathways, and potential receptors for the site. “In order for the vapor intrusion pathway to be complete, each of these Conceptual Site Model components must be present and connected.” (SWRCB, 2012). DTSC recommends sampling when buildings exist over or near contaminated groundwater and that the potential risk associated with emissions of volatile organic compounds be evaluated. As discussed above, extensive groundwater and soil sampling have already been completed at the Refinery for 25 years and no detectable concentrations of benzene have been found in soils in the vicinity of the proposed Cogen Unit. The model also requires that receptors that would potentially be exposed need to be present (in this case, workers would need to be present). The building in the vicinity of the proposed Cogen Unit will be unmanned so receptors (workers) will not be routinely present within the building. Since the control room is not manned and, no detectable concentrations of benzene have been found in the soil in the vicinity of the proposed Cogen Unit, the lack of receptors and lack of detectable vapors eliminates the potential health risks and no further risk analysis per the DTSC or RWQCB guidance is required (see Figure 3).

Moreover, the City of Los Angeles has identified methane zones and the Refinery is located within methane zone 15 (Los Angeles, 2004). As discussed in Section 7 a), c), and d) on page 2-43 of the draft ND, the proposed Project is required to obtain building permits from the City of Los Angeles. Since the proposed Project is in a designated methane hazard zone, the proposed Project must comply with the citywide methane mitigation requirements established in the City of Los Angeles Ordinance 175790 in order to be issued building permits. Therefore, adherence to the requirements of the City of Los Angeles would protect against methane intrusion or other vapors into occupied buildings, so no significant impacts associated with vapor intrusion would be expected.

As noted in the beginning of Response 3-8 regarding the *Parker Shattuck* case, the commentators failed to provide accurate, relevant data to support the expert’s opinion that any possible pre-existing contamination would cause an adverse health impact to construction workers by contact with contaminated soil and to Refinery personnel through vapor intrusion. Just as in *Parker Shattuck*, the commentators request additional analysis to determine whether impacts associated with the proposed Cogen Unit would be significant, but have not presented any evidence of impacts being significant thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion merely requesting additional analysis without any evidence is “insufficient to create a fair argument of a significant effect on the environment.”

## 8. Conclusion

The presence of limited soil and groundwater contamination on Refinery property were identified in the early 1980s. The Refinery has been under a Cleanup and Abatement Order from the RWQCB and has performed various investigations and remediations of subsurface soil and groundwater since 1985. The requirements of the Cleanup and Abatement Order will continue regardless of whether the proposed Project occurs. The RWQCB continues to provide oversight of the remediation activities at the Refinery as quarterly monitoring reports are required to be submitted by Ultramar; the Project plans will not affect any clean-up activities so there is no requirement or need for additional oversight by the RWQCB. As discussed above, groundwater is not expected to be encountered during construction of the proposed Project, and even if it is encountered there would be no significant impacts to workers from exposure, soil borings do not indicate that contaminated soil would be encountered during construction, compliance with the City of Los Angeles' methane zone ordinance is required, and no employees will be stationed inside the control room. Therefore, no significant health risks to workers or other receptors would be expected. No significant impacts have been identified related to exposure to groundwater or benzene in soil, so no mitigation measures are required. The commentators attempt to utilize data from the Refinery to demonstrate the possibility of significant impacts from contaminated soil and groundwater. However, for the reasons discussed above, the data are either incorrect, misinterpreted, or misapplied. The comments provided amount to unsubstantiated opinion, and, therefore, do not constitute substantial evidence of a significant impact. As stated in Public Resources Code (PRC §21082.2(c)) and 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. As such, an EIR is not warranted or required.

### Response 3-9

The SCAQMD has properly evaluated the cumulative impacts associated with the proposed Ultramar Cogen Unit Project. The SCAQMD guidance on addressing cumulative impacts for air quality is as follows. "As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR." "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant." <sup>3</sup> Attachment F-3 to these Responses to Comments contains Appendix D *Cumulative Impact Analysis Requirements Pursuant to CEQA*, from the SCAQMD Cumulative Impacts Working Group 2003 White Paper that summarizes the SCAQMD approach to the preparation of cumulative air quality analysis.

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<sup>3</sup> See, SCAQMD Cumulative Impacts Working Group *White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution*, August 2003, Appendix D, *Cumulative Impact Analysis Requirements Pursuant to CEQA*, at D-3. Available at: <http://www.aqmd.gov/hb/2003/030929a.html>. Accessed: August, 2013.

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria..." "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the South Coast Air Quality Management District's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

CEQA Guidelines §15064(h)(1) requires that a "lead agency consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." As summarized in the ND (see pages 2-85 through 2-87), "Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency need not consider the effect significant, but must briefly describe the basis for concluding the incremental effect is not cumulatively considerable. Therefore the Project's contribution to air quality, hazards, noise, and traffic and all other environmental topics evaluated in this ND are not cumulatively considerable and thus not significant." (see page 2-87 of the ND). As stated above, projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. Projects that do not exceed the project-specific significance thresholds are not considered to be cumulatively considerable. The commentator has not challenged the significance thresholds utilized by the SCAQMD in its analysis. The analysis in the ND found no significant impacts. Therefore, the analysis in the ND regarding cumulative impacts (see pages 2-85 through 2-87) properly concluded that no significant adverse cumulative impacts would be expected due to the proposed Project.

### **Response 3-10**

See Response 3-9 and 3-36 for further details on the potential cumulative air emission impacts.

The SCAQMD staff disagrees that the cumulative impacts analysis in the ND is inadequate. The possible existence of cumulative effects from other projects is not a cumulative impact of this Project unless this Project contributes to that cumulative effect and the contribution is cumulatively considerable. The ND determined that this is not the case. Table 2-5 of the ND (see page 2-19) indicated that the proposed Project's operational emissions for all criteria pollutants are less than significant, based on established SCAQMD significance thresholds.

Further, the analyses of all other environmental resource topics in the ND indicate that no significant environmental impacts are expected due to implementation of the proposed Project.

Air quality impacts from the proposed Project would contribute to potentially significant cumulative air quality impacts if project-specific emissions are considered to be cumulatively considerable as defined by CEQA Guidelines §15064(h)(1). As explained in Response 3-9, the SCAQMD has established that project impacts are only cumulatively considerable if they exceed the project-specific air quality significance thresholds. Since VOC, CO, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions do not exceed their respective project-specific thresholds, they are not considered to be cumulatively considerable and are not considered to contribute to cumulative air quality impacts. This conclusion is consistent with CEQA Guidelines §15064.7.

Further, no cumulative air quality impacts are expected based on the facilities referenced in Comment 3-10. According to the CEQA Guidelines §15355, a “cumulative impact” refers to two or more individual effects that may be changes resulting from a single project or a number of separate projects whose change results in impacts closely related. Thus, the requirement to evaluate cumulative impacts does not include every nearby facility, but only those projects causing related impacts. No significant impacts were identified for the proposed Project. However, when potential significant impacts are identified and cumulative impact analyses are conducted the SCAQMD generally limits evaluation of cumulative impacts to one mile from the proposed Project as measurable localized air quality impacts tend to be limited to an area immediately surrounding a facility, based on ambient air quality modeling. The ConocoPhillips Ultra Low Sulfur Diesel (ULSD) Project is located at the Phillips 66 Wilmington Refinery located at 1660 West Anaheim Street, Wilmington, CA, which is approximately 2.25 miles (not 1,000 feet as stated in Comment 3-10) west of the Ultramar Refinery. Further, the ULSD Project began operation in 2006, so the operation of the ULSD project is part of the environmental baseline. With regard to the Southern California International Gateway Project (SCIG), which is located about 3,000 feet north of the Ultramar Refinery, “the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable (CEQA Guidelines §15064(h)(4)). The Notice of Preparation has been prepared for the Berths 212-224 Container Terminal Improvement Projects but no emission data are currently available for this project. Therefore, impacts and cumulative impacts from the Berth 212-224 project are speculative. Nonetheless, the proposed Cogen Unit emissions do not exceed the project-specific significance thresholds and would not be considered to be cumulatively considerable, even if the Berth 212-224 emissions were available. The Ponte Vista project indicated that there were potentially significant increases in ROG and NO<sub>x</sub> emissions; however, this project is located over three miles west of Ultramar and would not have cumulative impacts because of the distance. Based on this, the cumulative impacts analysis is legally adequate.

### **Response 3-11**

See Response 3-9 regarding cumulative impacts. The citation in footnote 31 (103 Cal. App. 4<sup>th</sup> 98) of the comment is to *Communities for a Better Environment v. California Resources Agency*, not to the case indicated in the comment. The correct citation is *Communities for a Better Environment v. South Coast Air Quality Management District* 71 Cal. Rptr. 3d 7 (Cal. Ct. App.

2007). The commentator has misrepresented the decision in *Communities for a Better Env't v. South Coast Air Quality Management District*. Contrary to the commentator's statement, the court made no determination regarding the adequacy of cumulative impacts analysis.

Furthermore, the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334, determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance threshold. Thus, it may be concluded that the project will not cause a significant unavoidable cumulative contribution to an air quality impact.

"The AQMD uses the same significance thresholds for project-specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR."<sup>4</sup> "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason -specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant" (SCAQMD, 2003) (see Attachment F-3).<sup>5</sup>

### Response 3-12

See Responses 3-10, 3-11, and 3-36 regarding the adequacy of the cumulative impact analysis in the ND. The commentator's opinion that the "District's failure to include facilities outside of the Refinery's boundary is also inconsistent with the District's prior CEQA documents prepared for other projects at the Ultramar Wilmington Refinery" is incorrect. Impacts from the proposed Project would contribute to potentially significant cumulative impacts if project-specific impacts are considered to be cumulatively considerable as defined by CEQA Guidelines §15064(h)(1). Impacts are considered to be cumulatively considerable by the SCAQMD if they exceed the project-specific significance thresholds. This is consistent with the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334, which determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. As stated in the

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<sup>4</sup> See, SCAQMD Cumulative Impacts Working Group *White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution*, August 2003, Appendix D, *Cumulative Impact Analysis Requirements Pursuant to CEQA*, at D-3. Available at: <http://www.aqmd.gov/hb/2003/030929a.html>. Accessed: August, 2013.

<sup>5</sup> *Id.*

ND, the proposed Cogen Project would not exceed the project-specific significance thresholds, and would therefore also not result in significant adverse cumulative impacts.

It is appropriate that the cumulative analysis in the ND for the proposed Project is different than the cumulative analysis in an EIR. Comment 3-12 references the Ultramar Inc. Wilmington Refinery Reformulated Fuels Program Draft Subsequent EIR (1994 EIR). The Reformulated Fuels Project required an EIR because it was determined that the project would result in significant environmental impacts associated with air quality for criteria pollutants (during both construction and operation) and risk of upset. Since the Reformulated Fuels Project had significant project-specific impacts, the EIR for that project included a more detailed analysis of cumulative impacts to determine if the Reformulated Fuels Project would also result in a significant cumulative impact. The Ultramar Alkylation Project referred to in Comment 3-12 has been in operation since 2008 so is properly considered as baseline for the proposed Project.

A cumulative impacts analysis for toxic air contaminants (TACs) was included in the 1994 EIR because air quality impacts associated with criteria pollutants were determined to be significant. TACs are one of many components as part of an air quality analysis. Other components of the analysis include criteria pollutant emissions from construction and operation, odors, etc. A cumulative impact analysis is not required for the proposed Project because the project significant thresholds are the same as the cumulative significance thresholds. As shown in the ND (see pages 2-7 through 2-32, and Appendices B and C) no significant air quality impacts (TACs or criteria air pollutants) are expected due to implementation of the proposed Project for any resource, therefore, no cumulative impacts are expected and no additional cumulative impact analysis is required. Regarding the TAC analysis in the 1994 EIR, the cumulative TAC impacts were determined to be beneficial. The 1994 EIR calculated the expected reduction in the background cancer risk in the vicinity of the Ultramar Refinery due to the use of reformulated gasoline in motor vehicles. The analysis indicated that the reduction in benzene emissions from on-road motor vehicles would potentially reduce the local cancer risk by 85 in one million. Comparing the estimated emission reduction to the cumulative risk resulting from future operations of the Ultramar Refinery emissions plus projects at other local refineries indicated that a large net decrease in cancer risk (64 per million) was expected.

A health risk assessment (HRA) was prepared for the proposed Cogen Unit and included in the ND (see pages 2-22 through 2-27, and Appendix C) and summarized below. The maximum cancer risk for the maximum exposed individual resident was determined to be 0.57 per million and the maximum exposure individual worker was determined to be 0.33 per million, both of which are well below the significance threshold of 10 per million. The maximum chronic hazard index was determined to be 0.024 and the maximum acute hazard index was determined to be 0.019, both of which are well below the significance threshold of 1.0. Therefore, cancer and non-cancer health risks from the proposed Project are concluded to be less than significant (see ND pages 2-22 through 2-27, and Appendix C). Further, TAC emissions are not considered to be cumulatively considerable as defined in CEQA Guidelines §15064(h)(1). Consequently, cumulative air quality impacts from the proposed Project associated with TAC emissions are not considered to be significant.

**Response 3-13**

See Responses 3-10, 3-11, 3-12, and 3-36 regarding the adequacy of the cumulative impact analysis in the ND and the difference in the cumulative analysis compared to the 1994 EIR. Comment 3-13 references the Ultramar Inc. Wilmington Refinery Alkylation Project EIR. The Alkylation Project required an EIR because it was determined that the project would result in significant environmental impacts associated with air quality (during both construction and operation) and hazard impacts. Since the Alkylation Project had significant project-specific impacts, the EIR for that project included a more detailed analysis of cumulative impacts to determine if the Alkylation Project would also result in a significant cumulative impact. The Alkylation Project has been operational since 2008 so is properly considered as baseline for the proposed Project. Impacts from the proposed Project would contribute to potentially significant cumulative impacts if project-specific impacts are considered to be cumulatively considerable as defined by CEQA Guidelines §15064(h)(1). Impacts are considered to be cumulatively considerable by the SCAQMD if they exceed the project-specific significance thresholds (see Response 3-9). As stated in the ND, the proposed Cogen Project would not exceed the project-specific significance thresholds, and would therefore also not result in significant adverse cumulative impacts.

As discussed in Response 3-12, TAC emissions for the proposed Project are not considered to be cumulatively considerable as defined in CEQA Guidelines §15064(h)(1). Consequently, cumulative air quality impacts from the proposed Project associated with TAC emissions are not considered to be significant.

**Response 3-14**

The SCAQMD disagrees with the commentator's unsubstantiated opinion that "the failure to consider the Project's impacts together with those of past, present, and reasonably probable future projects is an egregious error given the severely degraded environmental conditions in the Wilmington District." The Project impacts are not significant and the CEQA Guidelines §15064(h)(4) notes the "mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project's incremental effects are cumulatively considerable." Comment 3-14 is reporting information regarding the existing environment and not information related to Ultramar or the proposed Project. Comment 3-14 references the California Communities Environmental Health Screening Tool, referred to as CalEnviroScreen, which is a statewide environmental health screening tool. The tool was developed to identify disadvantaged communities for a state law that requires 25 percent of the proceeds from cap-and-trade auctions be invested in projects that benefit these communities. While the tool considers certain environmental issues (e.g., air quality, traffic, hazardous wastes), it also considers socioeconomic factors such as low birth weight, education, age, linguistic isolation, poverty, and race/ethnicity, which are generally not environmental factors. However, the screening tool has limitations. As reported by the Office of Environmental Health Hazard Assessment (OEHHA) with respect to CalEnviroScreen, "the CalEnviroScreen scoring results are not directly applicable to the cumulative impacts analysis required under the California Environmental Quality Act (CEQA). The statutory definition of "cumulative impacts" contained in CEQA is substantially different than the working definition of "cumulative impacts" used to

guide the development of this tool. Therefore, the information provided by this tool cannot be used as a substitute for an analysis of the cumulative impacts of any specific project for which an environmental review is required by CEQA.” (CalEPA, 2013). Therefore, CalEnvironScreen is not directly applicable to the cumulative analysis required by CEQA, according to OEHHA. Further, CalEnviroScreen can only be used to describe a portion of the existing environmental setting or existing environmental baseline and cannot be used to determine whether an EIR is required as it does not consider the impacts of individual projects. The screening tool is not a substitute for a formal risk assessment (CalEPA, 2013).

As suggested by OEHHA in the Air Toxics Hot Spots Program Risk Assessment` Guidelines (OEHHA, 2003), a HRA is the appropriate analysis to be conducted and an HRA was prepared for the proposed Project and included in the ND (see pages 2-22 through 2-27, and Appendix C) and summarized in Response 3-12. The maximum cancer risk for the maximum exposed individual resident was determined to be 0.57 per million and the maximum exposed individual worker was determined to be 0.33 per million, both of which are well below the significance threshold of 10 per million. The maximum chronic hazard index was determined to be 0.024 and the maximum acute hazard index was determined to be 0.019, both of which are well below the significance threshold of 1.0. Therefore, project-specific cancer and non-cancer health risks from the proposed Project are concluded to be less than significant (see ND pages 2-22 through 2-27, and Appendix C). Further, TAC emissions are not considered to be cumulatively considerable as defined in CEQA Guidelines §15064(h)(1). Consequently, cumulative air quality impacts from the proposed Project associated with TAC emissions are also not considered to be significant. Therefore, the analysis in the ND is adequate and does not need to be revised or recirculated.

### **Response 3-15**

As explained in this response, no significant impacts were identified for the proposed Cogen Project so an ND is the appropriate CEQA document. The commentator seems to imply the only way to satisfy CEQA’s purposes and goals is to prepare an EIR. However, that opinion is not correct as the CEQA statutes and Guidelines clearly allow the analysis of a project and the disclosure of impacts to be provided in various forms, such as an exemption, a ND, an EIR, etc. depending on whether there is substantial evidence to support a fair argument of a significant impact. Projects whose analysis determined potential impacts to be less than significant, such as the Ultramar Cogen Project in question, qualify for an ND (CEQA Guidelines §15070). Further, the Ultramar ND does provide a robust analysis to adequately inform both decision makers and the public as to potential impacts and environmental consequences from the proposed Project before a permit decision is made. Similar to an EIR, the Ultramar ND does alert the public and responsible officials of potential environmental changes before the Project is implemented and potential changes occur.

Thus, the ND was prepared in accordance with CEQA Guidelines §15070 and Public Resources Code (PRC) §21080. PRC §21080 (c) states the following:

“If a lead agency determines that a proposed project, not otherwise exempt from this division, would not have a significant effect on the environment, the lead agency shall

## RESPONSE TO COMMENTS

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adopt a ND to that effect. The ND shall be prepared for the proposed project in either of the following circumstances:

- (1) There is no substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment.
- (2) An initial study identifies potentially significant effects on the environment, but (A) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed ND and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (B) there is no substantial evidence, in light of the whole record before the lead agency, that the project, as revised, may have a significant effect on the environment.”

The Initial Study, within the ND (see Chapter 2), analyzed the environmental impacts associated with the proposed Project and concluded, based on substantial evidence that the environmental impacts (including air quality, hazards, as well as cumulative impacts) are not significant, pursuant to the SCAQMD significance thresholds. An EIR is required only if there is substantial evidence in the record that the project may have a potentially significant environmental impact (CEQA Guidelines §15070 and PRC §21080). Substantial evidence, defined in CEQA Guidelines §15384, means “facts, reasonable assumptions predicated on facts, and expert opinion support by facts.” It does not include “argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly erroneous or inaccurate” (CEQA Guidelines §15384 (a)). A lead agency has some discretion to determine whether particular evidence is substantial and to assess the credibility of evidence. The comment does not point to or provide such substantial evidence. In fact, the comment makes no claims of individual impacts of this Project. A project that does not have potentially significant impacts may be approved based on a ND. No “substantial evidence” was provided to demonstrate that environmental impacts of the proposed Project are significant or qualify as a significant adverse impact, such that it would warrant preparation of an EIR.

### **Response 3-16**

Similar to the EIR requirements noted by the commentator, the Ultramar ND does provide information about the effect the proposed Project is likely to have on the environment. The analysis in the Ultramar ND concluded that the Project would not have a significant effect on the environment. Because the proposed Project did not trigger a significance determination, a range of reasonable alternatives to the project were not required to be developed and included in the Draft ND (CEQA Guidelines §15126.6(f)). In addition, no feasible mitigation measures were required to be identified (CEQA Guidelines §15126.4(a)(3)). As such, alternatives and mitigation measures are not required because no significant environmental impacts were identified per CEQA Guidelines §15070(a) and the ND was prepared pursuant to CEQA Guidelines §15071.

Please see Response 3-15 for CEQA guidelines on the appropriate use of a ND, and reasons the Project analysis does not warrant the preparation of an EIR. An EIR is required only if there is

substantial evidence in the record that the project may have a potentially significant environmental impact (CEQA Guidelines §15070 and PRC §21080). As discussed in more detail in the various responses, the “data” provided by the commentator to support the opinion that an EIR is required are based on inaccurate or erroneous assumptions. 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; as such an EIR is not required.

### **Response 3-17**

Please see Response 3-15 regarding meeting the goals and purposes of CEQA through a variety of legal means and not solely on the preparation of an EIR. As noted by the commentator, the “fair argument” standard relies on substantial evidence contradicting the determination of non-significance warranting the preparation of an ND. However, as discussed in more detail in the various responses, the information provided by the commentator to support the opinion that an EIR is required are based on inaccurate or erroneous assumptions. Furthermore, CEQA Guidelines §15064(f)(5) state that, “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, and as such, an EIR is not required. Further, there is no fair argument that is supported by substantial evidence that a significant impact will occur. CEQA Guidelines §15064(f)(3) states if the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment then the lead agency shall prepare a negative declaration. With regard to worker exposure and cumulative impacts, see responses 3-18 thru 3-25, and 3-36, respectively.

### **Response 3-18**

See Response 3-8 with regard to the historical features of the Refinery, soil and groundwater conditions, as well as monitoring and cleanup. Comment 3-18 does not provide any comments on the draft ND so no response is required. Ultramar was issued a Cleanup and Abatement Order in December 1985 from the Regional Water Quality Control Board, Los Angeles Region, relating to existing groundwater contamination at and around the Refinery, which is appropriately considered part of the existing setting. However, the proposed Project will not change or affect the Refinery’s ability to comply with the existing Abatement Order and Ultramar will continue to be subject to all the requirements of that Order whether or not the proposed Project is approved, because the Order requires specific remediation and monitoring requirements that apply to the existing Refinery. There is no substantial evidence that the proposed Project to install a Cogen Unit will cause groundwater contamination because no increase in the storage of petroleum products or other hazardous materials would occur. The Cogen Unit would result in new equipment burning natural gas and refinery fuel gas and not liquid fuels; therefore, a new release to the soil which could migrate into groundwater would not be expected.

**Response 3-19**

See Response 3-8 regarding historical soil and groundwater contamination and the potential for worker exposure in response to Mr. Hagemann's conclusions. It is explained in detail in Response 3-8 that the data used by Mr. Hagemann does not accurately represent the quality of the groundwater and soil at the location of the proposed Cogen Unit and, therefore, does not accurately represent the potential for worker exposure during construction activities.

More specifically, the document from the Regional Water Quality Control Board (RWQCB) used by Mr. Hagemann and referenced in this comment is appropriately part of the existing setting. The document is a Quarterly Ground Water Monitoring Report prepared to provide the results of routine groundwater monitoring at the site, in compliance with a Cleanup and Abatement Order issued by the RWQCB, and described on pages 2-54, 2-55, and 2-58 of the ND.

**Response 3-20**

See Response 3-8 regarding historical soil and groundwater contamination in response to Mr. Hagemann's conclusions. The commentator expressed concern regarding potential exposure of construction workers to "vapors" and references the Hagemann letter that references benzene vapors. As stated in the ND on page 2-59, excavation and trenching activities are expected to be less than four feet deep, which is less than the depth to groundwater. The depth to groundwater varies across the Refinery and has historically been reported as deep as 12 feet in some locations beneath the Refinery. While the groundwater levels in well RMW-01, as noted by the commentator, was last reported at 3.4 feet, it is located over 525 feet (inaccurately stated as 400 feet by the commentator, see Response 3-8, Figure 1) northeast of the proposed Cogen Unit location and other data shows that the depth of groundwater is even deeper (over five feet) (EEC 2005 through 2013). Specifically, the closest well to the proposed Cogen location is RMW-27 (see Response 3-8, Figure 4 for a visual location of the two wells) approximately 75 feet southeast, which historically has reported depth to groundwater (5.01 feet to 6.45 feet) which is two to three feet deeper than RMW-01 (see Response 3-8, Table 1 for dates when depth to groundwater was measured concurrently in both wells). More recent measurements (December 10-11, 2013) measured RMW-27 at 5.29 feet, thus, it is reasonable that the groundwater depth nearest to the proposed Project would be five to six feet deep. Furthermore, soil samples taken at the proposed Project site on March 31, 2014 indicated that no groundwater was present at five feet. See the discussion in Response 3-8 with regard to the role of pilings that reduce the need for deep excavation activities. Because excavation is less than four feet, the proposed Project will not affect the groundwater table. See Response 3-8 for a further discussion on geology at the Refinery.

### Response 3-21

See Response 3-8 regarding historical soil and groundwater contamination that appropriately constitutes the existing setting. The reports from the RWQCB referenced in this comment are Groundwater Monitoring Reports prepared to present the result of routine groundwater monitoring at the site, in compliance with a Cleanup and Abatement Order issued by the RWQCB.

As discussed in Response 3-8, exposure to benzene vapors in the soil is not expected to occur because prior subsurface investigations did not identify any detectable concentrations of benzene in the soil at the site. Therefore, no significant exposure to workers is expected during construction of the proposed Project. The previous soil sampling conducted within and adjacent to the proposed Project construction site at a depth of 3.5 feet on the northern end of the excavation did not contain detectable levels of benzene (see Response 3-8, Table 2). The additional soil sampling on March 31, 2014, within the proposed Cogen Unit location did not contain detectable levels of benzene (see Response 3-8, Table 2). As described in Response 3-8, the depth of the proposed Project excavation is shallower than the groundwater table, so the potential for dermal contact with contaminated soil or groundwater, and inhalation of vapor from contaminated soil is not significant. The recorded groundwater depths noted by the commentator are further away from the proposed Project excavation site. The closest well to the construction site (see Response 3-8) reported a groundwater depth of five to six and a half feet, which is one to two and a half feet deeper than the proposed Project excavation depth. Further, soil samples taken in the vicinity and at of the Cogen Unit have shown no detectable concentrations of benzene (see Response 3-8, Table 2). Therefore, construction workers are not expected to be exposed to a water table, or potential contamination, as a result of the proposed Project.

The commentator argues that the conclusion in the ND that potential soil contamination would be less than significant because of compliance with Rule 1166 and Title 22 lacks basis (although the commentator seems to imply groundwater contamination). The SCAQMD disagrees. The purpose of the fully enforceable Rule 1166 is to control VOC emissions, thus potential toxic air contaminants, from excavating, grading, handling, and treating VOC contaminated soil.

To dismiss the effects from required compliance with Rule 1166 implies the Rule is not effective or there is a failure of enforcement. The commentator provides no evidence for such a conclusion. Similarly, Title 22 of the California Code of Regulations is an enforceable requirement that imposes environmental health standards on the generation, storage, transportation, and disposal of regulated wastes, with the purpose of ensuring minimal or no adverse impacts to the environment. See Response 3-8 for a more detailed discussion of the other existing health protective laws and regulations in place that require health and safety plans, worker training, monitoring of worker exposures, and various other activities which serve to protect workers from exposure to contamination, including 28 CFR 1910.120, Hazardous Waste Operations and Emergency Response (Fed-OSHA, HAZWOPER); and 8 California Code of Regulations (CCR) 5192, Hazardous Waste Operations and Emergency Response (Cal-OSHA, HAZWOPER).

**Response 3-22**

See Responses 3-8 and 3-21 regarding historical soil and groundwater contamination and potential worker exposure. The proposed Project will have limited excavation of between 300 and 500 cubic yards (see page 2-59 of the ND). As discussed in Response 3-8, the soil in the proposed Project site location has been evaluated for potential contamination in the past. There is no substantial evidence that indicates that contamination exists in the soil at the proposed Project location. In addition, the requirements of SCAQMD Rule 1166, as well as other existing rules and regulations, protect against exposure should contaminated soil be encountered. The commentator is incorrect that a mitigation plan pursuant to Rule 1166 has not been prepared. The Refinery has an approved Rule 1166 Plan by the SCAQMD (“Various Locations Rule 1166 VOC Contaminated Soil Mitigation Plan,” Mitigation Plan/Application No. 549217, Permit approved on June 26, 2013). Therefore, to require the Plan as a condition of project approval would be redundant. The plan allows for up to 2,000 cubic yards of contaminated soil to be excavated within the Refinery in a year. As the proposed Project is not anticipated to encounter contaminated soil, and the volume of total soil to be excavated (i.e., 300 to 500 cubic yards) is less than the quantity of contaminated soil in the approved 1166 Plan, the implementation of the approved SCAQMD Rule 1166 Plan is protective of the workplace and the environment should soil contamination be encountered. As such, under the approved SCAQMD Rule 1166 Plan, the Refinery is required to notify the SCAQMD at least 24 hours prior to the start of excavation, monitor (at least once every 15 minutes, within three inches of the excavated soil surface), as well as implement the mitigation plan if VOC-contaminated soil is detected. Thus, contrary to commentator’s opinion, Rule 1166 would protect workers that may encounter contamination at the Project site. SCAQMD Rule 1166 defines VOC contaminated soil as soil which registers 50 ppm or greater using an organic vapor analyzer meter. The approved mitigation plan includes covering the contaminated soil piles with heavy plastic sheeting and watering activities to assure the soil remains moist to reduce VOC emissions. In addition, VOC-contaminated soils shall be removed within 30 days from the time of excavation. Soil remediation activities are also under the jurisdiction of the RWQCB, and it may be necessary for the RWQCB and SCAQMD to coordinate in order to assure air quality impacts, as well as water quality impacts, are adequately mitigated. VOC emission estimates would be speculative at this time because the levels of contamination, if any, are currently unknown because there is currently no substantial evidence of contamination at the Project site. The hazardous waste regulations in Title 22 of the CCR establish requirements for hazardous waste handling, transport, and disposal.

Based on the above and Response 3-8, existing rules and regulations that apply to the Refinery require monitoring and remediation. Therefore, as concluded in the ND on page 2-59, no significant impacts are expected from the construction-related potential for encountering contaminated soils during excavation.

**Response 3-23**

There are a number of environmental sections in the ND discussing and analyzing potential impacts from contaminated soils including air quality, hazards, hydrology, and solid waste. Thus, different regulations assist in ensuring no significant adverse impacts occur to the different environmental topic areas. For example, SCAQMD Rule 1166 controls VOC emissions, thus

benefiting air quality. Other regulations such as Cal-OSHA Order 5155 protect workers from exposure to hazardous materials during construction by establishing concentration limits for airborne contaminants to which workers may be exposed daily during a 40-hour workweek for a working lifetime without adverse effects. Order 5155 also requires appropriate protective clothing for specified contaminants to prevent skin absorption and specifies required monitoring for workplace exposures. See Responses 3-8 regarding historical soil and groundwater contamination and potential worker exposure.

Contrary to the opinion of the commentator, hazardous waste management in accordance with regulations such as Title 22, reduce worker exposure during excavation of possible contaminated soils. Existing laws and regulations address the discovery and remediation of contaminated sites, including the discovery of such sites during construction activities. Existing laws require health and safety plans, worker training, and various other activities which serve to protect workers from exposure to contamination, including 28 CFR 1910.120, Hazardous Waste Operations and Emergency Response (Fed-OSHA, HAZWOPER); 8 CCR 5192, Hazardous Waste Operations and Emergency Response (Cal-OSHA, HAZWOPER); and SCAQMD Rule 1166, VOC Emissions from Decontamination of Soil. The exposure of employees, including construction workers, is regulated by Cal-OSHA in Title 8 of the CCR. Specifically 8 CCR 5155 establishes permissible exposure levels and short-term exposure levels for various chemicals including benzene. These requirements apply to all contamination and exposure, whether it is discovered as part of construction or some other activities. The permissible exposure levels establish levels below which no adverse health effects are expected. Compliance with the permissible exposure levels protect the health and safety of the workers by minimizing exposure, as well as the nearby population that could be exposed to emissions, including sensitive receptors.

### **Response 3-24**

The SCAQMD respectfully disagrees with the commentator's opinion that there is a fair argument supported by substantial evidence regarding significant worker exposure as discussed in Responses 3-8, and 3-18 through 3-23. As stated in Public Resources Code (PRC §21082.2(c)) and 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 impacts to workers. Because the ND analysis definitively concludes the potential worker exposure is not significant, the preparation of an EIR is not required, warranted, or necessary. Based on the available information regarding soil and groundwater contamination in the vicinity of the proposed Project and the regulations and requirements currently in place that protect against worker exposure, as explained in detail on both the ND and response to comments, no significant adverse impacts to worker exposure, will occur from proposed Project.

As explained in Response 3-8, the comments provided do not present a fair argument of a significant impact. The commentators attempt to utilize data from the Refinery to demonstrate the possibility of significant impacts from contaminated soil and groundwater on the workers at the Refinery, either during construction or operation. The commentators opine that this possible impact to workers amounts to a substantial impact to the environment as a result of the Project.

However, the data utilized by the commentators is incorrect, misinterpreted, or misapplied. Therefore the comments provided amount to unsubstantiated opinion, and therefore do not constitute substantial evidence of an adverse impact either to workers or to the environment in general.

In a recent California Court of Appeals opinion, *Parker Shattuck Neighbors v. Berkeley City Council (CityCentric Investments, LLC)*, 22 Cal. App. 4<sup>th</sup> 768 (2013), the court found that the same argument under very similar circumstances as this Project, failed to present substantial evidence of a significant impact pursuant to CEQA. The court held that “the health risks to workers and residents identified by petitioners do not constitute ‘substantial adverse effects on human beings’ or otherwise create a fair argument that the disturbance of contaminated soil may have a significant effect on the environment.” (*Parker Shattuck, supra* at 782.) The expert for appellants (Mathew Hagemann) provided data on the levels of contamination present in the soil to support his conclusion that soil disturbance would cause a significant environmental effect due to the health risk the sites contamination would provide to the future residents and workers and requested that a vapor intrusion study be performed. The court found that this expert opinion was “insufficient to create a fair argument of a significant effect on the environment because a suggestion to investigate further is not evidence, much less substantial evidence, of an adverse impact.” (*Parker Shattuck, supra* at 786.)

Likewise, in this current Project, the commentators failed to provide accurate, relevant data to support the expert’s opinion that any possible pre-existing contamination would cause an adverse health impact to construction workers by contact with contaminated soil and to Refinery personnel through vapor intrusion. Just as in *Parker Shattuck*, the commentators merely request additional analysis to determine whether impacts would be significant without providing any substantial evidence, thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion requesting additional analysis is “insufficient to create a fair argument of a significant effect on the environment.”

### **Response 3-25**

See Response 3-8 regarding the potential for worker exposure as a result of vapor intrusion. There are a number of reasons supporting the conclusion that the proposed control room will not be exposed to contamination and there is no significant potential impact, including the following.

- There is no evidence of benzene in soil at the Cogen site as discussed in Response 3-8. Therefore, the risk for vapor intrusion and exposure of workers within the proposed control room is low.
- The groundwater contamination in RMW-27, located 75 feet southeast of the Cogen Unit, is localized to the vicinity of the well based on the Conceptual Site Model (EEC, 2011) and is below the level of proposed ground disturbance.
- The preliminary control room design includes a monolithic foundation free of drains or other protrusions through the foundation, thereby eliminating pathways for vapors to enter the control room.

- The control room included in the Project description on page 1-7 of the ND is not a manned location and no workers would work in the control room on a continuous basis. The operation of the proposed Cogen Unit would be controlled from the main Refinery control room. The control room to be installed with the proposed Cogen Unit is an auxiliary control room for use during maintenance activities and if communications with the main control room are unavailable.
- The control room will be designed to include an industrial ventilation system to provide the necessary temperature control for the electronics installed in the control room and adequate air flow. Ventilation of the control room reduces accumulation of vapors, should there be any.

Because the proposed control room is expected to normally be unmanned and the control room will have air handling equipment operating for temperature control, accumulation of vapors in the control room and worker exposure to vapors is not expected. Additionally, vapor intrusion has not been a problem at any other buildings at the Refinery, including buildings in the vicinity of well RMW-27. Therefore, a vapor intrusion system is not anticipated to be necessary.

The SCAQMD disagrees that there is substantial evidence regarding significant worker exposure during operation of an unmanned control room. Please see Response 3-8 for CEQA guidelines regarding “fair argument” and substantial evidence. An EIR is required only if there is substantial evidence in the record that the project may have a potentially significant environmental impact (CEQA Guidelines §15070 and PRC §21080). 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 impacts to workers through exposure to onsite contamination during Project operation, so that an EIR is not required. In *Parker Shattuck* the court found that the same argument under very similar circumstances as this Project, failed to present substantial evidence of a significant impact pursuant to CEQA. The court held that “the health risks to workers and residents identified by petitioners do not constitute ‘substantial adverse effects on human beings’ or otherwise create a fair argument that the disturbance of contaminated soil may have a significant effect on the environment.” (*Parker Shattuck, supra* at 782.) The court found that this expert opinion was “insufficient to create a fair argument of a significant effect on the environment because a suggestion to investigate further is not evidence, much less substantial evidence, of an adverse impact.” (*Parker Shattuck, supra* at 786.)

For the proposed Project, the commentators failed to provide accurate, relevant data to support the expert’s opinion that any possible pre-existing contamination would cause an adverse health impact to construction workers by contact with contaminated soil and to Refinery personnel through vapor intrusion. Just as in *Parker Shattuck*, the commentators request additional analysis to determine whether impacts would be significant, thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion merely requesting additional analysis without providing any substantial evidence is “insufficient to create a fair argument of a significant effect on the environment.”

**Response 3-26**

The methodology used by Valorie Thompson to calculate the Localized Significance Threshold (LST) analysis is incorrect as explained in detail in Responses 3-33 through 3-35 and as summarized below. When the appropriate methodology is used to calculate the LST analysis, the construction emissions are less than significant, as reported on pages 2-15 and 2-16 of the ND.

Localized significance thresholds represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable air quality standard at the nearest residence or sensitive receptor (See SCAQMD LST Fact Sheet available at [http://www.aqmd.gov/localgovt/images/lst\\_fact\\_sheet.pdf](http://www.aqmd.gov/localgovt/images/lst_fact_sheet.pdf)). The closest off-site workers are associated with the Air Products Hydrogen Plant located about 200 meters from the proposed Project site. The correct LST analysis for the closest occupational receptor is shown in Response 3-33, Table 5. LST for PM10 and PM2.5 does not apply to industrial and commercial receptors because the ambient air quality standards for PM10 and PM2.5 are based on a minimum exposure period of 24 hours per day and workers are not exposed at the Refinery for 24 hours per day (SCAQMD, 2008). Therefore, the correct LST analysis for PM10 and PM2.5 is at the residential receptor 500 meters away where the LST screening value is 158 lbs/day. The estimated construction PM10 emissions associated with the proposed Project is 43.2 lbs/day; therefore, the proposed Project impacts for PM10 emissions during the construction period are less than significant. The correct LST for PM2.5 for a receptor 500 meters away is 93 lbs/day. The estimated construction PM2.5 emissions associated with the proposed Project is 23.8 lbs/day; therefore, the proposed Project impacts for PM2.5 emissions during the construction period are also less than significant.

Because the commentators based their opinion on an incorrect calculations and assumptions, there is no substantial evidence that there are significant particulate matter emissions, therefore, an EIR is not required (CEQA Guidelines §15070 and PRC §21080). 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 LST impacts, such that an EIR is not required. Based on the correct LST analysis (see Response 3-33), no significant adverse LST impacts are expected.

**Response 3-27**

See Responses 3-26, 3-33, and 3-35 regarding the LST analysis. The closest off-site workers are associated with the Air Products Hydrogen Plant located about 200 meters from the proposed Project site. The bridge over the Terminal Island Freeway is a private walkway owned by Ultramar and solely for Ultramar employees to travel between the north and south portions of the Refinery and is not open to the public nor do workers stay on the bridge for any length of time. Further, the pedestrian bridge is located about 450 meters from the proposed Project site, so it is farther away from the proposed Project site than the Hydrogen Plant. Receptors on the rail lines

in the vicinity of the Refinery are transitory and temporary because the rail line is an active, operational rail line, and any people walking on the rail line are vulnerable to being hit by a train. Therefore, people are not located on the rail lines for any period of time. Contrary to the commentator's analysis, the correct LST analysis for the closest occupational receptor is shown in Response 3-33, Table 5. LST for PM10 and PM2.5 does not apply to industrial and commercial receptors because the ambient air quality standards for PM10 and PM2.5 are based on a minimum exposure period of 24 hours per day and workers are not exposed at the Refinery for 24 hours per day. When the correct data and assumptions are used to calculate the LST analysis, the peak construction emissions are less than significant, as reported on pages 2-15 and 2-16 of the ND.

### **Response 3-28**

The SCAQMD respectfully disagrees with the commentator's opinion that there is substantial evidence regarding significant worker exposure as discussed in Responses 3-25, 3-26, 3-27, and 3-33. Because the ND analysis definitively concludes the LST analysis results in exposure levels that are not significant, the preparation of an EIR is not required, warranted, or necessary. Based on the correct emission estimates and the existing SCAQMD guidance, no significant adverse impacts to air quality LST impacts is expected. Furthermore, CEQA Guidelines §15064(f)(5) state that, "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 particulate emissions during construction, as such, an EIR is not required. Further, there is no fair argument that is supported by substantial evidence that a significant impact will occur.

### **Response 3-29**

An HRA was prepared for the proposed Project and included in the ND (see pages 2-22 through 2-27, and Appendix C) and the results of the HRA are summarized below.

The combined maximum cancer and non-cancer health risks from the Cogen Unit and boilers 86-B-9000, 86-B-9001, and 86-B-9002 are shown in Table 3 (Table 2-7, page 2-25 of the ND). The most impacted sensitive receptor is located 1.5 miles east of the Refinery boundary. As indicated in Table 3, none of the cancer and non-cancer health risk categories analyzed for the proposed Project would exceed the applicable significance threshold. Therefore, cancer and non-cancer health risks from the proposed Project are concluded to be less than significant and an EIR is not required.

In accordance with SCAQMD Risk Assessment Procedures (July, 2005), the cancer burden only needs to be calculated if the incremental risk to a maximum individual exposed resident (MEIR) is greater than one in a million. As shown in Table 2-7 of the ND (duplicated here as Table 3), the residential risk is less than one per million from the total of all sources associated with the proposed Project.

**TABLE 3**

**Proposed Project Health Risks**

Equipment	MEIR	MEIW	MCHI	MAHI
Cogen Unit	$0.386 \times 10^{-6}$	$0.111 \times 10^{-6}$	0.0029	0.0157
Boiler 86-B-9000	$0.019 \times 10^{-6}$	$0.033 \times 10^{-6}$	0.0027	$1.76 \times 10^{-4}$
Boiler 86-B-9001	$0.054 \times 10^{-6}$	$0.016 \times 10^{-6}$	0.0016	$1.67 \times 10^{-3}$
Boiler 86-B-9002	$0.110 \times 10^{-6}$	$0.165 \times 10^{-6}$	0.0167	$1.48 \times 10^{-3}$
Total	$0.57 \times 10^{-6}$	$0.33 \times 10^{-6}$	0.024	0.019
Significance Threshold	$10 \times 10^{-6}$	$10 \times 10^{-6}$	1.0	1.0
Significant?	No	No	No	No

The combined health risk values assume that the boilers and the Cogen Unit would be operating at full capacity concurrently, which will not be the mode of operation. During operation of the proposed Project, the boilers would operate at reduced capacities that would vary depending on the operating scenario, with the Cogen Unit typically operating at full capacity. The health risks expected from the various operating scenarios would be less than the combined maximum health risks shown in Table 3. Therefore, the combined HRA results in Table 3 represent a conservative analysis of the proposed Project’s cancer and non-cancer health risks, and are still less than significant. Emissions will be limited by SCAQMD permit conditions in the permit to operate (see Attachment F-1).

The long-term air quality impacts from exposure to toxics were appropriately evaluated through the preparation of an HRA. The HRA evaluated the emissions associated with the operation of the proposed Project to derive cancer and non-cancer health risk values, which were then compared to carcinogenic and non-carcinogenic significance thresholds. As demonstrated in the HRA, the carcinogenic and non-carcinogenic impacts for all receptors are expected to be less than the applicable significance thresholds. Therefore, no significant adverse carcinogenic or non-carcinogenic health risk impacts associated with the operation of the proposed Project are expected.

Contrary to the opinion of the commentator, a valid cumulative impact analysis was conducted in the ND (see pages 2-21 through 2-22). It was concluded that cumulative impacts are not significant. With regard to health risk, the proposed Project would contribute to potentially significant adverse cumulative impacts if project-specific TAC emissions are considered to be cumulatively considerable as defined by CEQA Guidelines §15064(h)(1). Other past, present, and reasonably foreseeable future projects may contribute to significant adverse cumulative air quality impacts if their combined operational emissions would exceed the SCAQMD’s project-specific thresholds for operations. As shown in Table 2-7 of the ND, duplicated here as Table 3, the proposed Project would result in less than significant TAC emissions during peak operations because of permit conditions on the proposed new Cogen Unit combined with the new permit conditions for existing boilers. Therefore, project-specific TAC impacts associated with the operation of the proposed Project are not considered to be cumulatively considerable and, therefore, do not contribute to significant adverse cumulative air quality impacts. To conclude the proposed Project will cause a significant cumulative impact within Wilmington is not

consistent with CEQA Guidelines §15064(h)(4), which states, “The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project’s incremental effects are cumulatively considerable.” Thus, there is no substantial evidence to support fair argument that TACs from the proposed Project are significant and thus an EIR is not warranted or required.

**Response 3-30**

See Response 3-36 regarding GHG emissions as to why the methodology used by Valorie Thompson to calculate GHG emissions is incorrect. When the correct data and assumptions are used to calculate GHG emissions, the GHG emissions from the proposed Project are accurately determined to be less than significant, as reported in the ND on pages 2-27 through 2-32 and Appendices A and B.

The correct GHG emissions are included in Table 2-10, page 2-31, of the ND which demonstrates that the overall GHG associated with the Cogen Unit will be zero. This is because the Ultramar Refinery is subject to the requirements of the AB 32 Cap and Trade Program, 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 mitigating any potential GHG emissions to zero.

Since GHG emissions have global consequences in concert with other activities causing GHG emissions, the impacts from GHGs are considered to be cumulative impacts. Those impacts are cumulatively considerable if they exceed the GHG significance threshold of 10,000 metric tons per year. Since the GHG emissions (with AB 32 required offsets) for the proposed Project will not increase and, thus, will not exceed the SCAQMD GHG threshold, they are not considered to be cumulatively considerable and, therefore, are not considered to contribute to cumulative GHG impacts. With regard to effects of other projects, the conclusion is consistent with CEQA Guidelines §15064(h)(4), which states, “The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.”

For the reasons identified above, the proposed Cogeneration Project’s GHG emissions are not considered to be cumulatively considerable and, therefore, are not considered to contribute to cumulative GHG impacts. 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 3-31**

The SCAQMD Staff disagrees with the comment that the ND is inadequate. As discussed in the above responses, the SCAQMD staff disagrees with the commentator’s opinion that the proposed Project may have any significant adverse impacts that would require preparation of an EIR. As discussed in Responses 3-5 and 3-6, the Project Description was adequate and has been misrepresented by the commentator. Comments raised regarding the worker safety associated with soil and groundwater have been exaggerated and are incorrect (see Responses 3-8). In *Parker Shattuck* the court found that the same argument under very similar circumstances as this

Project, failed to present substantial evidence of a significant impact pursuant to CEQA. The court held that “the health risks to workers and residents identified by petitioners do not constitute ‘substantial adverse effects on human beings’ or otherwise create a fair argument that the disturbance of contaminated soil may have a significant effect on the environment.” (*Parker Shattuck*, *supra* at 782.) Just as in *Parker Shattuck*, the commentators merely request additional analysis to determine whether impacts would be significant without providing any substantial evidence, thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion requesting additional analysis is “insufficient to create a fair argument of a significant effect on the environment.” The ND provided a detailed analysis regarding both project impacts and cumulative impacts. Cumulative impacts on ambient air quality are addressed in Responses 3-9 and cumulative impacts on public health are address in Response 3-29. As explained in Response 3-9, the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in a CEQA document. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant. This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. Cumulative impacts related to GHGs are addressed in Response 3-30.

As discussed in the responses to comments, when the appropriate information and assumptions regarding the proposed Project are used, the proposed Project would not result in significant air quality, worker safety impacts, or any other environmental impacts. The conclusions made by the commentator are not supported by substantial evidence and are merely speculative. As noted 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 correct and appropriate data and assumptions are used, the proposed Project is not expected to result in significant adverse environmental impacts, therefore an EIR is not warranted or required. Further, the commentator does not present any fair argument supported by substantial evidence that a significant impact will occur.

### **Response 3-32**

The first paragraph of the letter provides an introduction and the qualifications of the commentator. No comments were provided on the ND in the introduction or qualifications so no response to the introduction and qualifications is required.

The SCAQMD disagrees that the Project description in the ND does not provide complete information. The Project description for the Cogen Unit describes the proposed Cogeneration Facilities (see page 1-6), the modifications to the existing boilers (page 1-7), modifications to the existing ammonia delivery system (page 1-7), and modifications to other Refinery support systems (see page 1-9). Other information regarding the proposed Project is provided including the location of the proposed Project; maps of the site location; a map of equipment locations; and associated modifications (see pages 1-3 and 1-8); the construction schedule (see page 1-9); the required permits and approvals (see pages 1-9 through 1-14), as well as an overview of current Refinery operations (see page 1-6). Therefore, the Project description in the ND not only

complies with CEQA Guidelines §15071 (a) and (b) requirements to provide sufficient information to inform the public and decision makers regarding the scope of the proposed Project, but the description is robust and detailed. Please see Responses to Comments 3-5 and 3-6 regarding information as to how the boilers would be limited.

As explained in the ND (see page 1-1), the purpose of the proposed Project is to provide the Refinery with a more reliable electricity supply through on-site power generation in an effort to reduce process upsets due to interruptions of power supplied by any third-party provider. This has the additional benefit of producing less air emissions per megawatt generated and consumed by utilizing cleaner technology than is currently used to produce LADWP-purchased power.

Recent power outages have resulted in potentially hazardous conditions at local refineries. For example, a power outage resulted in heavy flaring at the Torrance ExxonMobil Refinery on May 30, 2013 (LA Times, 2013). No injuries were reported, but workers at the facility were evacuated as a precaution. A power outage at the Phillips 66 Refinery in Wilmington on September 15, 2012 resulted in a flaring event that lasted about six hours generating black smoke and numerous complaints (MercuryNews, 2012). Minimizing power outages minimizes these hazardous refinery conditions, avoiding the need to flare, and avoiding emissions associated with flaring during power outages. Therefore, the proposed Cogen Unit provides Ultramar with redundancy in their steam and electrical production facilities so that power outages, and the associated excess emissions, can be prevented in the future.

As explained in the ND (first full paragraph on page 1-7), Boiler 86-B-9000 would be shut down during normal operating conditions of the Cogen Unit. Boilers 86-B-9001 and 86-B-9002 would continue to operate in a lower “hot standby mode” on a normal basis so they would be immediately available to produce steam in the event the Cogen Unit is unexpectedly shut down (see ND, page 2-16 under Operational Emission Impacts). This would help avoid situations where power outages result in shutdown of refinery units and related flaring events. As further explained in the ND, the design of the proposed Project includes a permit condition to ensure the Refinery does not operate in a manner that produces excess steam and thus limits emissions. “SCAQMD permits for the boilers would limit emission rates when the Cogen Unit is operating such that the Cogen Unit would be installed with no net increase in emissions of NO<sub>x</sub>, sulfur oxides (SO<sub>x</sub>), and less than significant increases in volatile organic compounds (VOC), carbon monoxide (CO), particulate matter less than ten microns in diameter (PM<sub>10</sub>), or particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>)” (see ND page 1-7). Therefore, as designed, the proposed Project will limit the operation of the Cogen Unit and boilers, so that under any combination of operation, all four units would not significantly exceed the emissions levels established by the current operation of the three existing boilers.

To further assist the commentator in correctly understanding the proposed Project, the copies of the enforceable permits along with permit conditions that limit the equipment use have been attached. Thus, no fair argument can be made supporting the commentator’s opinion that the proposed Project’s operational impacts will be significant.

The comment that “no information is provided that would clarify how the boilers will operate” is also incorrect. A number of different boiler operating scenarios were evaluated in the ND (see

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ND, page 2-16 under Operational Emission Impacts and Table 2-4) as well as Appendix A, in order to determine the worst-case operating scenario (operating scenario that generates the highest emissions). The description of the scenarios evaluated is provided on page 2-17 (last paragraph) and 2-18 of the ND, which states the following:

As indicated in Table 2-4, scenario 1 assumes that the Cogen Unit operates at full capacity and boiler 86-B-9002 is operating up to a minimal level (31 percent load) and boiler 86-B-9001 is operating up to a level (38 percent load), where both boilers would generate supplemental steam as needed. Scenario 2 assumes that the Cogen Unit operates at full capacity, boiler 86-B-9002 is off and boiler 86-B-9001 would be ready to generate supplemental steam as needed (75 percent load). Scenario 3 assumes that the Cogen Unit operates at full capacity and boiler 86-B-9001 is operating up to a minimal level (30 percent load) and boiler 86-B-9002 is operating up to a level (36 percent load) where both boilers would generate supplemental steam as needed. Scenario 4 assumes that the Cogen Unit operates at full capacity, boiler 86-B-9001 is off and 86-B-9002 (54 percent load) would generate supplemental steam as needed. As a permit condition, when the boilers are used to supply steam instead of supplement steam to the Refinery the Cogen Unit will not operate. When the boilers are supplying steam to the Refinery, the worst-case emissions from the project would be the same as the existing setting (since the Cogen Unit would not be operating). The operating conditions of the boilers and Cogen Unit combined would be restricted through permit conditions to limit emissions in any combination of equipment such that the NOx emissions from the proposed Project would not exceed the current permitted NOx emission limits on the existing boilers. (Emphasis added)

The table presented in Comment 3-32 assumes all boilers and the Cogen Unit would be operating at the same time. The table provided in Comment 3-32 depicting estimated emissions calculations is incorrect and does not reflect Project impacts, since, as designed the Project will limit the operation of Boilers 86-B-9000, 86-B-9001 and 86-B-9002, as well as the proposed Cogen Unit, through the incorporation of a permit condition (see Comment 3-6) preventing all three of the boilers and the Cogen Unit from operating at the same time. Opinion based on evidence that is clearly incorrect, is not substantial evidence of a significant impact in accordance with PRC §21080. The correct proposed Project emissions are shown in Table 4 and were accurately presented in the ND (Table 2-5, page 2-19).

Therefore, as shown in Table 4 (which is a copy of Table 2-5 in the ND), emissions of VOCs, CO, NOx, SOx, PM10, and PM2.5 for the proposed Project will be less than the SCAQMD significance thresholds and less than significant. No mitigation measures are required since no significant impacts have been identified (CEQA Guidelines §15126.4(a)(3)).

**TABLE 4**  
**Ultramar Wilmington Refinery**  
**Comparison of Proposed Project Operational Emissions<sup>(a)</sup> to Baseline Emissions**  
**(lbs/day)**

Sources	VOC	CO	NOx	SOx	PM10	PM2.5 <sup>(b)</sup>
Baseline Boiler Emissions <sup>(c)</sup>	38.0	118.0	106.5	72.1	62.2	62.2
Proposed Peak Scenario Emissions (Scenario 2 from Table 2-4) <sup>(d)</sup>	63.6	319.8	205.3	91.6	158.0	82.8
Emissions Change <sup>(e)</sup>	25.6	201.8	98.8	19.5	95.8	20.6
Fugitive VOC Emissions	7.8	0.0	0.0	0.0	0.0	0.0
<b>Subtotal Project Emissions</b>	<b>33.4</b>	<b>201.8</b>	<b>98.8</b>	<b>19.5</b>	<b>95.8</b>	<b>20.6</b>
<b>RECLAIM Credits<sup>(f)</sup></b>	<b>--</b>	<b>--</b>	<b>-98.8</b>	<b>-19.5</b>	<b>--</b>	<b>--</b>
<b>Total Project Emissions</b>	<b>33.4</b>	<b>201.8</b>	<b>0</b>	<b>0</b>	<b>95.8</b>	<b>20.6</b>
<b>Significance Thresholds</b>	<b>55</b>	<b>550</b>	<b>55</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Significant?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

- (a) Maximum emissions based on various boiler operating scenarios while the Cogen Unit is operating.
- (b) For existing boilers PM2.5 is assumed to be PM10. For the Cogen Unit, PM2.5 is a fraction of PM10 due to ammonium nitrate formation, which is considered as PM10.
- (c) Maximum existing boiler emissions are the average of the actual emissions for each boiler for the operating days, which were above the 98<sup>th</sup> percentile of the combined boiler emissions during 2011.
- (d) Emission estimates for each of the four operating scenarios in Table 2-4 are included in Appendix B. Based on these estimates, Scenario 2 is expected to generate the greatest emissions.
- (e) Negative numbers denote emission reductions.
- (f) RECLAIM credits are required to be surrendered annually based on actual emissions to comply with SCAQMD Regulation XX.

### Response 3-33

Localized significance thresholds represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable air quality standard at the nearest residence or sensitive receptor (See SCAQMD LST Fact Sheet available at [http://www.aqmd.gov/localgovt/images/lst\\_fact\\_sheet.pdf](http://www.aqmd.gov/localgovt/images/lst_fact_sheet.pdf)). Therefore, the commentator is not correct in the assumption to apply the LST methodology to all land uses. SCAQMD Staff developed the LST methodology and mass rate look up tables to assist in determining whether or not a project may generate significant adverse localized air quality impacts.

The LST analysis was correctly completed for the construction impacts associated with the proposed Cogen Unit, as described in pages 2-15 and 2-16 of the ND, and considers potential adverse impacts to ambient air quality. The methodology in the ND followed SCAQMD guidance for the LST Methodology (SCAQMD, 2008) which indicates the following for sensitive receptors:

“For purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as residence, hospital, convalescent facility where it is possible that an

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individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees do not typically remain onsite for a full 24 hours, but are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM10 is appropriate not only because the averaging period for the state standard is 24 hours, but because, according to the SCAQMD's definition, the sensitive receptor would be present at the location of the full 24 hours.

Since a sensitive receptor is considered to be present onsite for 24 hours, LSTs based on shorter averaging times, such as the one-hour NO<sub>2</sub> or the one-hour and eight hour CO ambient air quality standards, would also apply. However, LSTs based on shorter averaging periods, such as the NO<sub>2</sub> and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours.”

The LST source table significance thresholds include background concentrations for NO<sub>x</sub> and CO, and PM10 significance thresholds are based on Rule 403. Therefore, ambient air quality analysis is included in the LST analysis.

These mass rate look-up tables were used appropriately in the LST analysis and listed in the ND (Table 2-3, page 2-16). Based on the above, the LST analysis for construction emission impacts in the ND (see pages 2-15 and 2-16) is consistent with the SCAQMD LST methodology. To address the commentator's concern for non-residential sources in the context of LST impacts, staff conducted an alternative LST analysis to include the analysis for NO<sub>x</sub> and CO for industrial or commercial facilities adjusting exposure times since workers would be at the site for eight hour timeframes, as discussed in the SCAQMD LST Significance Threshold Methodology cited above. The LST analysis for industrial/commercial receptors would not include PM10 or PM2.5 because of the longer averaging periods for ambient air quality standards, (i.e., 24-hour and annual averages), and industrial/commercial receptors are present for about 8-hours per day versus 24-hours per day for residential exposures. The closest industrial receptor to the proposed Ultramar Cogeneration Unit is the Air Products Hydrogen Plant located approximately 200 meters west of the site. The LST analysis that includes industrial/commercial receptors is shown in Table 5 below.

As shown in Table 5, the LST analysis for industrial receptors would remain less than significant as does the LST analysis for sensitive receptors. Therefore, no significant air quality impacts are expected during the construction phase of the proposed Project for industrial/commercial or sensitive receptors.

**TABLE 5**  
**Ultramar Cogeneration Project**  
**LST Analysis for Construction Emissions for Industrial/Commercial Receptors**

Criteria Pollutant	On-Site Source Emissions (lbs/day)			
	CO	NO <sub>x</sub>	PM10	PM2.5
Peak Construction Emissions <sup>(1)</sup>	37.6	46.7	43.2	23.8
Sensitive Receptor Screening Value <sup>(2)(3)</sup>	7,558	142	158	93
Worker Receptor Screening Value <sup>(2)(4)</sup>	2,296	90	N/A	N/A
Significant?	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

(1) See ND, Table 2-2.

(2) Screening values for LST analysis from SCAQMD, 2009.

(3) 1 acre site located in SRA No. 4 at 500 meters.

(4) 1 acre site located in SRA No. 4 at 200 meters.

### Response 3-34

Please see Response 3-33 regarding the appropriate LST analysis conducted for construction emissions. The analysis for construction emissions in the ND properly applied the LST thresholds and properly concluded non-significance.

Evaluation of localized impacts from operational emissions were appropriately analyzed in the ND (page 2-20 thru 2-21 and Appendix B), which included industrial receptors. CO, NO<sub>x</sub>, PM10, and PM2.5 emissions were modeled using the SCAQMD and EPA-approved AERMOD air dispersion model. Ground level concentrations of the criteria pollutants required to be modeled were determined to be below the most stringent ambient air quality standard (or significant change in air quality thresholds) (see ND, Table 2-6 and Appendix B). The operational impacts on ambient air quality were determined to be less than significant based on the results of ambient air quality. Therefore, no mitigation measures are required (CEQA Guidelines §15126.4(a)(3)).

### Response 3-35

Please see Response 3-33 regarding the appropriate LST analysis conducted for construction emissions. As explained previously in Response 3-33, LST impacts are determined at the nearest residence or sensitive receptor. The U.S EPA and the California Air Resources Board define “ambient air quality” as air quality offsite from a specific source. The SCAQMD developed the LST methodology using the state and federal definition of ambient air quality. Therefore, the LST analysis is based on off-site receptors (SCAQMD, 2008). There are no off-site receptors located within 25 meters of the proposed Cogen Unit, thus, there is no need to analyze receptors within 25 meters of the Cogen Unit.

The closest off-site workers are associated with the Air Products Hydrogen Plant located about 200 meters from the proposed Project site. The bridge over the Terminal Island Freeway is a private walkway solely for Ultramar employees to travel between the north and south portions of the Refinery and is not open to the public nor do workers stay on the bridge for any length of

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time. Further, the pedestrian bridge is located about 450 meters from the proposed Project site, so it is farther away from the proposed Project site than the Hydrogen Plant.

As explained in the SCAQMD LST Fact Sheet ([http://www.aqmd.gov/localgovt/images/lst\\_fact\\_sheet.pdf](http://www.aqmd.gov/localgovt/images/lst_fact_sheet.pdf)), “LSTs only apply to emissions at a fixed location, not applicable to mobile sources traveling over roadways.” Receptors on the rail lines in the vicinity of the Refinery are transitory and temporary because the rail line is an active, operational rail line, and it would be hazardous for anyone to remain on the tracks for any period of time. Thus, the sources were not included in the LST analysis that was appropriately conducted in the ND.

The correct LST analysis for the closest occupational receptor is shown in Response 3-33, Table 5 (above). The LST for PM10 and PM2.5 does not apply to industrial and commercial receptors because workers are not exposed onsite for 24 hours per day. Therefore, the correct LST analysis for PM10 and PM2.5 is at the residential receptor 500 meters away (SCAQMD, 2008) where the LST screening value is 158 lbs/day. The estimated construction PM10 emissions associated with the proposed Project is 43.2 lbs/day; therefore, the proposed Project impacts on PM10 emissions during the construction period are less than significant. The correct LST for PM2.5 for a receptor 500 meters away is 93 lbs/day. The estimated construction PM2.5 emissions associated with the proposed Project is 23.8 lbs/day; therefore, the proposed Project impacts on PM2.5 during the construction period are also less than significant.

The LST analysis for receptors within 25 meters of the proposed construction activities would also be less than significant as shown in Table 6. Therefore, no further analysis or mitigation measures are required.

**TABLE 6**  
**Ultramar Cogeneration Project**  
**LST Analysis for Receptors within 25 Meters**

Criteria Pollutant	On-Site Source Emissions (lbs/day)			
	CO	NO <sub>x</sub>	PM10	PM2.5
Peak Construction Emissions <sup>(1)</sup>	37.6	46.7	43.2	23.8
LST Screening Value <sup>(2)(3)</sup>	585	57	N/A <sup>(4)</sup>	N/A
Significant?	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

(1) See ND, Table 2-2.

(2) Screening values for LST analysis from SCAQMD, 2009.

(3) 1 acre site located in SRA No. 4 at 25 meters.

(4) N/A = not applicable

### Response 3-36

The SCAQMD staff disagrees that the proposed Project will result in cumulatively significant air quality impacts. The proposed Project was adequately and appropriately analyzed to conclude potential impacts to be not significant. As such, the proposed Project is not cumulatively considerable and thus cumulative impacts were not significant. The possible existence of

cumulative effects from other projects is not a cumulative impact of this project unless this project contributes to that cumulative effect and the contribution is cumulatively considerable. The Ultramar ND determined that this is not the case. See Response 3-9 and 3-10 for a further discussion regarding cumulative impacts.

The Project emissions estimated by the commentator in the first table in Comment 3-36 are incorrect. They were based on the same incorrect assumptions, as were used in Comment 3-32, which assumed all boilers would operate because there were no enforceable mitigation measures. This assumption is incorrect because there will be enforceable permit emission limits on the SCAQMD permits to operate for the existing boilers (also see Responses 3-6 and 3-32). Thus the opinion of the commentator does not amount to substantial evidence of a significant impact in accordance with PRC §21080. The correct Project emissions are as shown in Table 7.

**TABLE 7**  
**Ultramar Wilmington Refinery**  
**Comparison of Proposed Project Operational Emissions**

Sources	VOC	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5
Total Project Emissions (lbs/day)	33.4	201.8	0	0	95.8	20.6
Significance Thresholds (lbs/day)	55	550	55	150	150	55
Significant?	No	No	No	No	No	No
Total Project Emissions (tons/year) <sup>(1)</sup>	6.1	36.8	0	0	17.4	3.8

(1) Emissions were calculated as follows: Emissions (lb/day) x 365 days/year tons per year were calculated

The information provided by the commentator is not accurately represented so does not establish substantial evidence to support a fair argument that the cumulative impacts are significant. The first table in Comment 3-36 lists the 2012 annual criteria emissions prepared for other facilities (e.g., BP Carson Refinery, Tesoro Refining and Marketing, Air Products and Chemicals, etc.) and compares the commentator’s improperly calculated Project incremental emissions to the 2012 annual emissions for the selected facilities. This is a faulty analysis as the 2012 annual emissions represent the environmental baseline or existing emissions and are not representative of projects as defined under CEQA. The same is true for the facilities listed in commentator’s Attachment A as the facilities are all existing facilities and are included as part of the baseline.

The SCAQMD staff disagrees that the cumulative impacts analysis in the ND is inadequate. As discussed in Response 3-9, the possible existence of cumulative effects from other projects is not a cumulative impact of this Project unless this Project contributes to that cumulative effect and the contribution is cumulatively considerable. The ND determined that this is not the case. Air quality impacts from the proposed Project would contribute to potentially significant cumulative air quality impacts if project-specific emissions are considered to be cumulatively considerable as defined by CEQA Guidelines §15064(h)(1). Impacts are considered to be cumulatively considerable if they exceed the project-specific air quality significance thresholds, see CEQA Guideline §15064.7. Table 2-5 of the ND (see page 2-19) indicated that the proposed Project operational emissions for all criteria pollutants are less than significant, based on established SCAQMD significance thresholds. Since VOC, CO, NO<sub>x</sub>, SO<sub>x</sub>, PM10, and PM2.5 emissions do

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not exceed their respective established significance thresholds, they are not considered to be cumulatively considerable and, therefore, are not considered to contribute to cumulative air quality impacts. This conclusion is consistent with CEQA Guidelines §15064(h)(4). Thus, no cumulative air quality impacts are expected from the Project.

This approach was upheld by the Court, in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria..." "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast Air Quality Management District significance thresholds. Thus, it may be concluded that the project will not cause a significant unavoidable cumulative contribution to an air quality impact.

The SCAQMD monitors the potential impact of existing emissions through air quality monitoring throughout the Basin. Ambient air quality monitoring measures the concentration of criteria air pollutants and provides the most accurate determination of the overall impact of air emissions on ambient air quality. The closest air quality monitoring station near the proposed Project site is the South Coastal Los Angeles County (Source/Receptor Area (SRA) No. 4) located in Long Beach. 2011 is the most recent air quality monitoring data for the region (2012 air quality data is not yet available). The 2011 ambient monitoring data indicate that SRA No. 4 is in compliance with all ambient air quality standards with the exception of the PM<sub>2.5</sub> 24-hour federal standard. Therefore, the air quality regulatory programs have provided an overall beneficial impact on air quality in SRA No. 4, including an overall reduction in air emissions from various sources.

The SCAQMD has developed the 2012 AQMP to establish a plan for assuring attainment of all ambient air quality standards. As discussed on page 2-11 of the ND, the 2012 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the City of Los Angeles General Plan is considered to be consistent with the AQMP. Since the proposed Project would be consistent with the City of Los Angeles General Plan, it would be consistent with the AQMP.

The second table provided in Comment 3-36 provides inaccurate GHG emissions data for the proposed Project, because the commentator fails to consider adopted regulations that require

offsets for GHG emissions. The correct GHG emissions are included in Table 2-10, page 2-31, of the ND which indicates that the overall GHG associated with the Cogeneration Unit will be zero. This is because the Ultramar Refinery is subject to the requirements of the AB 32 cap-and-trade program, which requires the facilities subject to the program to offset any GHG emissions in excess of the total allocation. Since the Cogen Unit is a new unit and will be in excess of cap-and-trade allocations, the AB 32 regulations will require all Project related GHG emissions to be offset as part of the operation of the unit.

GHG cumulative impacts are considered to be cumulatively considerable if they exceed the project-specific GHG significance threshold of 10,000 metric tons per year. Since the GHG emissions for the proposed Project will not increase and, thus, would not exceed the SCAQMD's GHG significance threshold, they will not contribute to cumulative GHG impacts and are not cumulatively considerable. As previously stated, this conclusion is consistent with CEQA Guidelines §15064(h)(4).

Further, all GHG emissions included in the second table of comment 3-36 lists the 2011 GHG emissions prepared for other facilities (e.g., BP Carson Refinery, Tesoro Refining and Marketing, Air Products and Chemicals, etc.) and incorrectly compares the calculated Project incremental emissions to the 2011 annual GHG emissions for the selected facilities. This is a faulty analysis as the 2011 annual emissions represent the environmental baseline or existing emissions.

For the reasons identified above, the proposed Cogen Unit's criteria and GHG emissions are not cumulatively considerable and, do not contribute to cumulative air quality and GHG impacts.

### **Response 3-37**

Detailed responses to comments from Mathew Hagemann are provided in Response 3-8. As stated in Response 3-8, the commentator inappropriately used data in the Ground Water Monitoring Report by reporting data from a monitoring well that was further from the proposed Project site than other wells to establish existing conditions at the site affecting the proposed Project. Thus, as outlined in detail in Response 3-8, the report quoted by the commentator and monitoring well chosen by the commentator do not reflect the conditions at the proposed Project location, so the conclusions of significant impact are unsupported.

Due to the geology in and around the Refinery, foundations are typically supported on pilings, which reduce the depth of excavation needed to install foundations adequate to support Refinery equipment. Additionally, projects in the Refinery historically have not encountered groundwater during construction. The proposed Project is designed to include pilings to support the foundation for the proposed Cogen Unit, which will limit the depth of the excavation to no more than four feet. Therefore, as stated in the Draft ND, the proposed Project is not expected to encounter groundwater during construction.

**Response 3-38**

Because the groundwater table in the area of the proposed Project has been established to be deeper than the necessary depth of excavation to be conducted (please see Response 3-8), the concerns raised by the commentator have no basis with relation to the proposed Project. In addition, the Refinery has performed various investigations of the subsurface soil and groundwater since 1985 when a groundwater monitoring order was implemented by the RWQCB, as indicated on page 2-58 of the ND. Soil and groundwater samples taken in the vicinity of the proposed Project indicate that the soil and groundwater are not expected to be contaminated (see Response 3-8, Table 2, Figure 2, and Figure 5). Free product is present at several locations throughout the Refinery, but investigation of this product indicate that it is predominately related to historic oil field operations, is extremely viscous, and is not migrating. Free product on the groundwater at the Refinery is limited to two active wells (RMW-15 and RMW-27) (EEC, 2011). Soil vapor has not been identified as a concern, due to the lack of significant concentrations of volatile compounds in groundwater, and lack of significant soil contamination beneath the Refinery. Finally, analysis of exposure pathways shows no likely exposure routes caused by subsurface contamination at the Refinery (EEC, 2011). See Response 3-8 for more detailed comments.

**Response 3-39**

Because the groundwater table in the area of the proposed Project has been established to be deeper than the necessary depth of excavation to be conducted, (see response to comment 3-8), the concerns raised by the commentator have no basis with relation to the proposed Project. The commentator expressed concern regarding potential exposure of construction workers to benzene vapors. As reported in the Conceptual Site Model, soil boring and excavation activities in the vicinity of the proposed Cogen Unit location do not support this conclusion (see Response 3-8). Soil and groundwater samples in the vicinity of the proposed Project did not contain detectable levels of benzene (see Response 3-8, Table 2 and Figure 5). Therefore, it is unlikely that construction workers will be exposed to benzene through dermal contact or inhalation. Moreover, existing laws and regulations address the discovery and remediation of contaminated sites, including the discovery of such sites during construction activities. Existing laws require health and safety plans, worker training, and various other activities which serve to protect workers from exposure to contamination, including 28 CFR 1910.120, Hazardous Waste Operations and Emergency Response (Fed-OSHA, HAZWOPER); 8 CCR 5192, Hazardous Waste Operations and Emergency Response (Cal-OSHA, HAZWOPER); and, SCAQMD Rule 1166, VOC Emissions from Decontamination of Soil. See Response 3-8 for a more detailed discussion of worker exposure and regulations that protect workers from exposure. Therefore, as concluded in the ND on page 2-59, no significant impacts are expected from the construction-related potential for encountering contaminated soils during excavation.

**Response 3-40**

See Response 3-38 for the facts supporting the conclusion that the proposed control room will not be exposed to contamination and there is no potential significant impact including: (1) There is no evidence of benzene in soil as discussed in Response 3-8; (2) groundwater in vicinity of the

proposed Project does not contain detectable concentrations of benzene (see Response 3-8, Figure 5); (3) the preliminary control room design includes a monolithic foundation free of drains or other protrusions through the foundation, thereby eliminating pathways for vapors to enter the control room; (4) the control room included in the Project description on page 1-7 of the ND is not a manned location and no workers will work in the control room on a continuous basis; and (5) the control room will be designed to include a ventilation system to provide the necessary temperature control for the electronics installed in the control room, which will minimize the potential for vapor accumulation. Therefore, the risk for vapor intrusion and exposure of workers within the proposed control room is low.

The environmental screening levels (ESLs) developed by the San Francisco Bay Regional Water Quality Control Board are “a tool to facilitate rapid evaluation of a contaminated site located in the San Francisco Bay area (Region 2). They provide an initial estimate of the likelihood that a contaminant at its present concentration will have a negative effect on the environment, human or ecological receptors, or present or future drinking water resources. In addition, ESLs provide a starting point for a site-specific risk assessment (“Tier 2” or “Tier 3”).” (SFRWQCB, 2013) The benzene concentration mentioned by the commentator from the temporary well was taken in 1993 prior to remediation activities. The temporary well was removed during the soil remediation activities at that time and the soil remediation activities determined that the soil contamination was localized, the source of the contamination was removed, and RMW-27 was installed. As shown in Response 3-8, benzene concentrations in the soil in the vicinity of the proposed Cogen location are below the detection limit (less than 0.005 ppm). Therefore, there is no need to use soil gas screening criteria to determine potential impacts as actual data exist, which show no detectable benzene concentrations in the soil.

### **Response 3-41**

See Response 3-8 regarding vapor intrusion and worker exposure to contaminants. As discussed earlier, the presence of limited soil and groundwater contamination were identified in the early 1980s. The Refinery has been under a Cleanup and Abatement Order from the RWQCB and has performed various investigation and remediation of subsurface soil and groundwater since 1985. The requirements of the Cleanup and Abatement Order will continue regardless of whether the proposed Project occurs. The RWQCB continues to provide oversight of the remediation activities at the Refinery as quarterly monitoring reports are required to be submitted by Ultramar and the Project plans will not affect any clean-up activities so there is no requirement or need for additional oversight by the RWQCB. As discussed in Response 3-8, groundwater is not expected to be encountered during construction of the proposed Project, soil borings do not indicate that contaminated soil would be encountered during construction and no employees will work inside the control room. Since the proposed Project is in a designated methane hazard zone, the proposed Project must comply with the citywide methane mitigation requirements established in the City of Los Angeles Ordinance 175790 in order to be issued building permits. Therefore, adherence to the requirements of the City of Los Angeles would protect against methane intrusion or other vapors into occupied buildings, so no significant impacts associated with vapor intrusion would be expected. Therefore, no significant health risks to workers or other receptors would be expected.

## RESPONSE TO COMMENTS

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Further, as noted in the beginning of Response 3-8 regarding the *Parker Shattuck* case, the commentators failed to provide accurate, relevant data to support the expert's opinion that any possible pre-existing contamination would cause an adverse health impact to construction workers by contact with contaminated soil and to Refinery personnel through vapor intrusion. Just as in *Parker Shattuck*, the commentators merely request additional analysis to determine whether impacts associated with the proposed Cogen Unit would be significant without presenting any substantial evidence, thus failing to demonstrate an impact on the health of workers. And as in *Parker Shattuck*, this expert opinion merely requesting additional analysis is "insufficient to create a fair argument of a significant effect on the environment." Therefore, no significant impacts have been identified related to exposure to groundwater or benzene in soil and no mitigation measures are required. Therefore, an EIR is not warranted or required.

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**ATTACHMENT F-1**

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**Draft SCAQMD Permit for Ultramar Cogen Project**



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

May 22, 2013  
*via electronic submittal*

Mr. Gerardo Rios  
USEPA Region IX, Mail Stop AIR-3  
75 Hawthorne Street  
San Francisco, CA 94105

SUBJECT: Significant Permit Revision to Title V Facility Permit  
Ultramar, Inc.  
2402 E. Anaheim Street  
Wilmington, CA 90744

REFERENCE: SCAQMD Facility ID: 800026  
SCAQMD Application # 527884-527886, 527888-527889

Dear Mr. Rios:

The South Coast Air Quality Management District (SCAQMD) has received and reviewed a Title V Significant Permit Revision application to the Ultramar, Inc. Facility Permit. Ultramar is proposing to construct a new Cogeneration Unit. The proposed permit change qualifies as a Significant Permit Revision. This permit revision is subject to a 45-day EPA review (SCAQMD Rule 3003) and a 30-day public comment period (SCAQMD Rule 3006) since the new equipment proposed is subject to federal NSPS and federal NESHAP. The Cogeneration Unit and other changes to existing equipment located at the facility are listed in the table below:

	A/N	Equipment	Device ID	Permit Action	Section	Process	System
1	527889	Cogeneration Unit	Various	Permit to Construct for new gas turbine and heat recovery steam generator with duct burner	H	16	1
2	527888	CO Oxidation Catalyst and Selective Catalytic Reduction (SCR)	Various	Permit to Construct for new CO oxidation catalyst and SCR serving the new cogeneration unit	H	16	2
3	527884	Boiler 86-B-9002	Various	Change of condition to restrict operation of boiler to allow cogeneration unit to be installed with no net emission increase	H	15	4
4	527885	Boiler 86-B-9001	D378		D	15	2
5	527886	Boiler 86-B-9000	D377		D	15	1

The SCAQMD is required under Rule 3003(j) to provide a copy of the proposed permit to the EPA administrator for a 45-day review. A copy of the proposed revisions to the existing Title V permit is attached along with our analysis and the public notice for your review. As agreed with your staff, we are submitting the required documents to the email address [R9AirPermits\\_SC@epa.gov](mailto:R9AirPermits_SC@epa.gov). Please let us know if you have problems with downloading the above referenced documents, or if you would like hard copies of any of the documents.

If you have any questions or wish to provide comments regarding this proposed permit, please contact Ms. Connie Yee (909) 396-2619 ([cvee@aqmd.gov](mailto:cvee@aqmd.gov)) or Mr. Paul Park at (909) 396-2568 ([ppark@aqmd.gov](mailto:ppark@aqmd.gov)).

Sincerely yours,



Mohsen Nazemi, P.E.  
Deputy Executive Officer  
Engineering and Compliance

Enclosures: Proposed Title V Permit, Sections D and H  
Evaluation for A/Ns 527884-527886, 527888-527889  
Public Notice

cc: with cover letter only  
Jason Lee, Ultramar, Inc.



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

## NOTICE OF INTENT TO ISSUE TITLE V PERMIT "PERMITS-TO-CONSTRUCT" AND "PERMITS-TO-OPERATE" ACCORDING TO SCAQMD RULE 3006

This notice is to inform you that the South Coast Air Quality Management District (SCAQMD) has received applications for Permits to Construct and Operate from Ultramar Inc. (Valero Wilmington Refinery) to modify its petroleum refining facility by adding a Cogeneration Unit to simultaneously generate electricity and steam for use at the refinery and by modifying existing boilers to reduce allowable emissions from the boilers in the City of Wilmington. The SCAQMD is the air pollution control agency for the four county-region including all of Orange County and non-desert portions of Los Angeles, Riverside and San Bernardino counties. Anyone wishing to install or modify equipment that could release or control air pollution within this region must first obtain a permit from the SCAQMD. Since the facility currently has a Title V permit, SCAQMD Rule 3006 requires publication of a public notice prior to the issuance of a significant revision to their Title V permit.

The AQMD has evaluated the permit applications for the following equipment and has determined that the equipment will meet the requirements of all applicable air quality rules and regulations.

- APPLICANT:** Ultramar Inc. (Valero Wilmington Refinery)  
Facility ID #800026
- PROJECT LOCATION:** 2402 E. Anaheim Street  
Wilmington, CA 90744
- PROJECT DESCRIPTION:** Construction of one new cogeneration system and associated air pollution control equipment

Application No.	Equipment	Application Description
527889	Cogeneration Unit	New construction of gas turbine and heat recovery steam generator with duct burner
527888	Selective Catalytic Reduction and Carbon Monoxide (CO) Catalyst Unit	New construction of Selective Catalytic Reduction and CO Catalyst Unit serving the new cogeneration system
527884	Boiler 86-B-9002	Change of conditions to restrict the operation of the boilers to allow the Cogeneration Unit to be installed with no net increase in allowable emissions
527885	Boiler 86-B-9001	
527886	Boiler 86-B-9000	

Ultramar Inc. operates a petroleum refinery at the above location to produce gasoline, diesel, and other petroleum related products. The refinery proposed installation of the Cogeneration Unit to improve the reliability of refinery operation and to comply with regulatory requirements. The applications listed above are for the installation of one new 34 megawatt (MW) cogeneration system and associated air

pollution control equipment along with restricting the operation of three existing boilers to allow the cogeneration system to be installed with no net increase in emissions.

The refinery will use the Best Available Control Technology (BACT) for controlling air emissions from the cogeneration unit. SCAQMD's calculations show that the new cogeneration unit will emit a daily maximum potential of 131 lbs of Nitrogen Oxides (NO<sub>x</sub>), 122 lbs of CO, 55 lbs of Volatile Organic Compounds (VOC), 110 lbs of Fine Particulate Matter (PM<sub>10</sub>), 44 lbs of Sulfur Oxides (SO<sub>x</sub>), and 83 lbs Ammonia (NH<sub>3</sub>). However, the refinery will restrict the operation of three existing boilers that produce steam for the facility. Therefore, with the exception of 83 lbs/day emissions of NH<sub>3</sub> which is used for the control of NO<sub>x</sub> emissions, there is an overall potential maximum daily emission decrease for the proposed projects after restricting the operation of the boilers as follows:

Pollutant	Emission Decrease, lbs/day
NO <sub>x</sub>	-46
CO	-24
VOC	-20
PM <sub>10</sub>	-31
SO <sub>x</sub>	-70

The new cogeneration unit will emit small quantities of some toxic compounds. The SCAQMD has evaluated the short term (acute) and long term (chronic) health impacts associated with the maximum potential emissions of toxic compounds from the equipment. Using worst case conditions, our evaluation shows that the chronic and acute health risks are both well below SCAQMD's toxic rule thresholds (below a hazard index of 1). According to the state health experts, a hazard index of one or less means that the surrounding community including the most sensitive individuals such as very young children and the elderly will not experience any adverse health impacts due to these emissions. In addition, the long term cancer risk due to emissions from this equipment complies with the SCAQMD risk thresholds.

The SCAQMD intends to revise the existing Facility Permit (Title V permit) for Ultramar (Valero Wilmington Refinery) which includes the permits to construct and operate for the above listed equipment. As required by Title V of the Federal Clean Air Act, the revised Title V permit includes all of the emission limits, applicable requirements and operating conditions imposed on the equipment. The facility is required to certify compliance with the Title V permit in addition to recordkeeping and mandatory reporting of any deviations from the permit conditions.

The air quality analysis and the proposed permit are available for public review during normal business hours at the SCAQMD's headquarters, 21865 Copley Drive, in Diamond Bar, and at the Los Angeles Public Library, 1300 N. Avalon Blvd., Wilmington, CA 90744. A copy of the draft permit can be viewed at [www.aqmd.gov/webappl/PublicNotices/Search.aspx](http://www.aqmd.gov/webappl/PublicNotices/Search.aspx) by entering the facility's ID number. Information regarding the facility owner's compliance history submitted to the SCAQMD pursuant to Health and Safety Code Section 42336, or otherwise known to the SCAQMD, based on credible information, is also available for public review at SCAQMD headquarters.

**Anyone wishing to comment on the proposed issuance of the revised permits should submit their comments in writing postmarked no later than June 30, 2013. Written comments must be submitted to:**

South Coast Air Quality Management District  
Engineering and Compliance  
21865 Copley Drive  
Diamond Bar, CA 91765-4178  
Attention: Mr. Danny Luong, Senior Manager

If you are primarily concerned with zoning decisions and the process by which this facility has been sited at this location, please contact your local city or county planning department. For additional information, or to review the supporting air quality related documents, please contact Ms. Connie Yee at (909) 396-2619 or [cyee@aqmd.gov](mailto:cyee@aqmd.gov).

The public may request the SCAQMD to conduct a public hearing on the proposed Title V permit by submitting a Hearing Request Form (Form 500-G) to Mr. Danny Luong at the above SCAQMD address. The public hearing request must contain all the information requested on the form in order for the SCAQMD to determine whether or not the request is valid or a public hearing will be held. The public hearing forms may be obtained from the SCAQMD by calling the Title V hotline at (909) 396-3013, or downloading from the Internet at <http://www.aqmd.gov/titlev>. Any request for a public hearing must be submitted to the SCAQMD in writing postmarked no later than June 15, 2013. A copy of the public hearing request must also be sent by first class mail to the facility contact person, Mr. Jason Lee, Health, Safety, and Environmental Director, Ultramar Inc., 2402 E. Anaheim Street, Wilmington, CA 90744 at the same time.

For your general information, anyone experiencing air quality problems such as dust or odors can telephone in a complaint to the SCAQMD by calling 1-800-CUT-SMOG (1-800-288-7664) or file a complaint online at [http://www.aqmd.gov/complain/reporting\\_aq\\_problems.html](http://www.aqmd.gov/complain/reporting_aq_problems.html).



**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765**

**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>PROCESS 15: STEAM GENERATION</b>					
<b>SYSTEM 1: BOILER</b>					
BOILER, 86-B-9000, REFINERY GAS, WITH LOW NOX BURNER, 39 MMBTU/HR WITH  A/N: 527886  BURNER, REFINERY GAS, ZURN, MODEL MJ-21, ONE BURNER, LOW NOX BURNER, 39MMBTU/HR	D377		NOX: LARGE SOURCE;  SOX: MAJOR SOURCE	CO: 400 PPMV (5) [RULE 1146, 11-17-2000; RULE 1146, 9-5-2008];  CO: 2000 PPMV (5) [RULE 407, 4-2-1982]  NOX: 125 PPMV (3) [RULE 2012, 5-6-2005]  PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A63.x, B61.2, D28.11, D29.x1, D90.3, H23.5
<b>SYSTEM 2: BOILER</b>					
BOILER, 86-B-9001, REFINERY GAS, 127.8 MMBTU/HR  A/N: 527885	D378	C379	NOX: MAJOR SOURCE;  SOX: MAJOR SOURCE	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]  NOX: 0.01 LBS/MMBTU (8) [CONSENT DECREE VALERO, 6-16-2005]  PM: 0.01 GRAINS/SCF (5B) [RULE 476, 10-8-1976];  PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981];  PM: 11 LBS/HR (5A) [RULE 476, 10-8-1976]	A63.x, A195.15, A327.1, B61.2, D29.x1, D90.3, D328.1, H23.5

* (1)(1A)(1B) Denotes RECLAIM emission factor	(2)(2A)(2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit	(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit	(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit	(8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits	(10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

**FACILITY CONDITIONS**

F8.1 The operator shall comply with all applicable mitigation measures stipulated in the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" document which is part of the AQMD Certified Subsequent Environmental Impact Report dated 08/30/2002 for this facility.

[CA PRC CEQA, 11-23-1970]

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F10.1 Material(s) that contain the following compound(s) shall not be used in this facility;

Total Reduced Sulfur

H<sub>2</sub>S

Hydrogen Fluoride

This condition shall not apply if the operator demonstrates to the satisfaction of the Executive Officer that the facility is in compliance with the operational air quality mitigation measures stipulated in the Reformulated Fuels Project EIR as follows:

a. Implementation of an inspection and maintenance program for all odor sources.

b. Installation and inspection of a deluge system in the alkylation unit. The deluge system shall be inspected quarterly and flow tested semi-annually.



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The operator shall comply with the terms and conditions set forth below:

- c. Installation and inspection of elevated monitors with water spray system covering all area of the alkylation unit. The system shall be inspected weekly and flow tested monthly.
- d. Conduct safety review for the GOH unit, revision and implementation of the Risk Management and Prevention Plan (RMPP) for hydrogen sulfide.
- e. Conduct safety review for the Sulfur Recovery Unit, revision and implementation for the RMPP for hydrogen sulfide.

[CA PRC CEQA, 11-23-1970]

- F14.1 The operator shall not purchase diesel fuel, for stationary source application as defined in Rule 431.2, containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

- F24.1 Accidental release prevention requirements of Section 112(r)(7):

- a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).
- b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 – Accidental Release Prevention, 5-24-1996]

- F25.1 The permit holder of this facility shall not install, alter, or operate a refinery process unit or other non-Rule 219 exempt equipment without a valid RECLAIM/TitleV permit issued by the AQMD pursuant to Rule 201 – Permit to Construct, Rule 203 - Permit to Operate, Rule 2004 - Requirements, and Rule 3002 - Requirements, as applicable.

Notwithstanding the above, the provisions of Rules 201, 203, 2004, and 3002 shall not apply to installations or alterations that involve only the equipment listed in Table 1 below, nor shall they apply to the operation of equipment listed in Table 1, when directly associated with permitted process units or other permitted equipment.

Notwithstanding the above, all new equipment listed in Table 1, including associated fugitive components installed with such equipment, shall have Best Available Control Technology installed in conformance with the Best Available Control



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### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Technology Guidelines in effect at the time of the installation.

TABLE 1

- (a) Heat Exchanger (including air-cooler, reboiler, cooler, condenser ,and shell and tube exchanger)
- (b) In-line Mixer
- (c) Pump
- (d) Knockout Pot - Compressor inlet (immediate inlet) and interstage
- (e) Knockout Pot - Fuel Gas System (downstream of fuel gas mix drums)

This condition applies only to the facility that processes petroleum as defined in the Standard Industrial Classification Manual as Industry No. 2911 - Petroleum Refining, as well as its directly associated sulfur recovery plant which may be located outside of the facility.

[RULE 2004, 5-11-2001; RULE 2004, 4-6-2007]

F34.2 The operator shall not sell refinery gas containing sulfur compounds in excess of 40 ppmv, calculated as hydrogen sulfide, averaged over 4-hour period.

[RULE 431.1, 6-12-1998]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

California Code of Regulations, Title 13, Division 3, Chapter 5

40 CFR 79

40 CFR 80

[40CFR 79, 7-1-1999; 40CFR 80, 7-1-1999; CCR Title 13, 9-24-1999]

F52.2 This facility is subject to the applicable requirements of the following rules or regulation(s):

40 CFR 60 Subpart A



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**FACILITY PERMIT TO OPERATE  
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**SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

**The operator shall comply with the terms and conditions set forth below:**

- 40 CFR 61 Subpart A
- 40 CFR 63 Subpart A
- 40 CFR 63 Subpart GGGGG

[40CFR 60 Subpart A, 5-16-2007; 40CFR 61 Subpart A, 5-16-2007; 40CFR 63 Subpart A, 5-16-2007; 40CFR 63 Subpart GGGGG, 11-29-2006]

F52.3 This facility is subject to the applicable requirements of the following rules or regulation(s):

CONSENT DECREE CIVIL NO. SA-05-CA-0569. The facility shall send the District a copy of the semiannual update report sent to the EPA of the specific requirement of emission standards and limitations from the Consent Decree. This report shall also identify any anticipated future requirements known as of the date of the report and dates of compliance for the requirements.

[CONSENT DECREE VALERO, 6-16-2005]

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere from the originating equipment.

**DEVICE CONDITIONS**

**A. Emission Limits**

A63.x 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.

The operator shall initially calculate the monthly emissions for VOC and PM10 using the equation below.

Monthly Emissions, lb/ month = (Monthly fuel usage in mmscf/day) \* (Emission factors indicated below)



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

The emission factors for the gas turbine and duct burner during the commissioning period shall be as follows: VOC, 6.20 lb/mm scf; PM10, 14.01 lb/mm scf.

After commissioning, the emission factors of the gas turbine and duct burner shall be as follows: VOC, 4.14 lb/mm scf; PM: 9.78 lb/mm scf.

The emission factors for the boilers 86-B-9000, 86-B-9001, 86-B-9002 shall be as follows: VOC, 5.5 lb/mm scf; PM10, 7.6 lb/mm scf.

The VOC and PM10 emission factors for boilers 86-B-9000, 86-B-9001, 86-B-9002 shall be revised annually based on results of individual VOC and PM10 source tests performed as specified in permit condition D29.x1. The VOC and PM10 emission factor shall be calculated as the average emission rate in lb/mm scf from all valid source test runs during the annual source test.

The VOC and PM10 emission factors for the gas turbine and duct burner shall be revised initially and annually, thereafter, based on the results of individual VOC and PM10 source tests performed as specified in permit conditions D29.x2 and D29.x3. The VOC and PM10 emission factor shall be calculated as the average emission rate in lb/mm scf from all valid source test runs during the annual source test.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available to District personnel upon request.

**[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1313, 12-7-1995]**

[Devices subject to this condition: D377, D378, D1550, DX1, DX2]

A195.15 The 0.01 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

**[Consent Decree Valero, 6-16-2005]**

[Devices subject to this condition: D378]

A327.1 For the purpose of determining compliance with District Rule 476, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.



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**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[RULE 476, 10-8-1976]

[Devices subject to this condition: D378, D1550, DX1, DX2]

**B. Material/Fuel Type Limits**

B61.2 The operator shall not use fuel gas containing the following specified compounds:

Compound	ppm by volume
H2S	greater than 160

The H2S concentration limit of 160 ppm shall be based on a rolling 3-hour averaging period at the standard condition of 60 °F and 14.7 psia, as defined in Rule 102. This H2S concentration limit of 160 ppm is equivalent to 162 ppm at the standard conditions of 68 °F and 29.92 inches Hg, as defined as 40CFR 60 Subpart A.

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

**D. Monitoring and Testing Requirements**

D28.11 The operator shall conduct source test(s) in accordance with the following specifications:

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted when this equipment is operating at 80 percent or greater of its maximum design heat rating, or within a capacity approved by the District.

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted at least annually. If equipment has not been in operation during the calendar year, the source test does not have to be conducted. The source test shall be conducted in the calendar year the equipment resumes operation. The Facility Permit holder shall keep records to demonstrate that the equipment had not been operated. Upon resumption of operation, the Facility Permit holder shall keep records of each day operated.

[Devices subject to this condition: D377]



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## FACILITY PERMIT TO OPERATE ULTRAMAR INC (NSR USE ONLY)

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982**]

[Devices subject to this condition: D9, D59, D 60, D73, D377]

D29.x1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
PM10 emissions	Approved District Method	1 hour (15 percent oxygen)	Stack Outlet
VOC emissions	Approved District Method	1 hour (15 percent oxygen)	Stack Outlet

The test shall be conducted when this equipment is operating at 80 percent or greater of the maximum design capacity at which ammonia injection occurs during the PM10 test.

The test(s) shall be conducted at least annually. If equipment has not been in operation during the calendar year, the source test does not have to be conducted. The source test shall be conducted in the calendar year the equipment resumes operation. The Facility Permit holder shall keep records to demonstrate that the equipment had not been operated. Upon resumption of operation, the Facility Permit holder shall keep records of each day operated.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

Source test results shall include the following parameters: fuel gas usage of the boiler, amount of ammonia injected, if applicable, for NOx control, the flue gas flow rate, and Higher Heating Value (HHV) of fuel gas other than natural gas.

The test shall be conducted to demonstrate compliance with Rules 1303(b)(1)-BACT, 1303(b)(2)-Offsets, 409, and 476.

[**RULE 1303(b)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 409, 8-7-1981; RULE 476, 10-8-1976**]

[Devices subject to this condition: D377, D378 , D1550]

D90.3 The operator shall continuously monitor the H2S concentration in the fuel gas before being burned in this device according to the following specifications:



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**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The operator shall use an NSPS Subpart J approved instrument meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

The operator may monitor the H2S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H2S in the fuel gas being burned in this device.

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with the CO emission limit(s). The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition: D3, D6, D8, D12, D22, D52, D53, D98, D378, D429, D768]

**H. Applicable Rules**

H23.5 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
H2S	40CFR60, SUBPART	J

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, C400, C402, C403, D429, D430, D768, D1550]



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## FACILITY PERMIT TO OPERATE ULTRAMAR INC (NSR USE ONLY)

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>PROCESS 15: STEAM GENERATION</b>					
<b>SYSTEM 4: BOILER</b>					
BOILER, 86-B-9002, REFINERY GAS, RENTECH BOILER SYSTEMS, MODEL BAF-200/250, 245 MMBTU/HR WITH A/N: 527884 Permit to Construct Issued: TBD  BURNER, REFINERY GAS, COEN, DAF-42, WITH LOW NOX BURNER, 245 MMBTU/HR	D1550	C1551	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	CO: 2000 PPMV (5)[RULE 407, 4-2-1982];  CO: 50 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]  NOX: 0.015 LBS/MMBTU (8) [CONSENT DECREE VALERO, 6-16-2005];  NOX: 9 PPMV (4) [RULE 2005, 6-3-2011];  NOX: 7 PPMV (Monthly) (4) [RULE 2005, 6-3-2011];  PM: 11 LBS/HR (5A) [RULE 476, 10-8-1976];  PM: 0.01 GRAINS/SCF (5B) [RULE 476, 10-8-1976]  PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A1.2, A63.x, A99.6, A195.1, A195.16, A327.1, B61.1, B61.2, D29.10, D29.x1, D82.5, D90.3, H23.5, H23.28, K67.10
VESSEL, DEAERATOR, 86-V-1, HEIGHT: 10 FT ; DIAMETER: 7 FT A/N: 527884 Permit to Construct Issued: TBD	D1552				

* (1)(1A)(1B) Denotes RECLAIM emission factor (3) Denotes RECLAIM concentration limit (5)(5A)(5B) Denotes command and control emission limit (7) Denotes NSR applicability limit (9) See App B for Emission Limits	(2)(2A)(2B) Denotes RECLAIM emission rate (4) Denotes BACT emission limit (6) Denotes air toxic control rule limit (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.) (10) See Section J for NESHAP/MACT requirements
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\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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**FACILITY PERMIT TO OPERATE  
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**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
DRUM, BOILER BLOWDOWN, 86-V-2, LENGTH: 6 FT ; DIAMETER: 4 FT  A/N: 527884 Permit to Construct Issued: TBD	D1553				
TANK, OXYGEN SCAVENGER, 86-TK-2, PORTABLE A/N: 527884 Permit to Construct Issued: TBD	D1554				
TANK, DISPERSENT/POLYMER, 86-TK-3, PORTABLE A/N: 527884 Permit to Construct Issued: TBD	D1555				
TANK, AMINE, 86-TK-4, PORTABLE A/N: 527884 Permit to Construct Issued: TBD	D1556				

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>PROCESS 16: POWER GENERATION</b>					
<b>SYSTEM 1: COGENERATION</b>					S31.x

\* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
GAS TURBINE, 79-GT-1, NATURAL GAS, GENERAL ELECTRIC MODEL NO. LM2500+G4, 341.6 MMBTU/HR (HHV)  A/N: 527889  Permit to Construct Issued: TBD	DX1	CX1, CX2	NOX: MAJOR SOURCE; SOX: MAJOR SOURCE	CO: 2,000 PPMV (5) [RULE 407, 4-2-1982]; CO: 4 PPMV (4) [RULE 1703(a)(2) – PSD – BACT, 10-7- 1988]; NOx: 2.5 PPMV (4) [RULE 2005; 6-3-2011]; NOx: 52.3 LBS/MMCF (1) [RULE 2012; 5-6-2005]; NOx: 10.1 LBS/MMCF (1A) [RULE 2012; 5-6-2005]; NOx: 25 PPMV (8) [40CFR 60 SUBPART KKKK, 7-06-2006]; PM: 0.1 GR/SCF (5) -[RULE 409, 8-7-1981]; PM: 0.01 GR/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7- 1978]; PM: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: 0.06 LBS/MMBTU (8A) [40CFR 60 SUBPART KKKK, 7- 06-2006]; SOx: 4.1 LBS/MMCF (1) 2011; 5- 6-2005]; SOx: 3.9 LBS/MMCF (1) [RULE 2011; 5-6-2005]; VOC: 3 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A1.x, A63.x, A99.x1, A99.x2, A99.x3, A99.x5, A99.x6, A99.x7, A99.x8, A327.1, A327.x, D12.x1, D29.x2, D29.x3, D82.x1, D82.x2, 90.x1, H23.x2, H23.x3, I297.x1, I297.x2, K40.x1, K67.x1
DRY LOW-NOX COMBUSTORS	BX1				
GENERATOR, 79-G-1, 34 MW	BX2				

\* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
BURNER, DUCT BURNER, , REFINERY GAS, NATURAL GAS, DELTAK OR EQUIVALENT, LOW NOX TYPE, 164.5 MMBTU/HR (HHV)  A/N: 527889  Permit to Construct Issued: TBD	DX2	CX1, CX2	NOx: MAJOR SOURCE; SOx: MAJOR SOURCE	CO: 2,000 PPMV (5) [RULE 407, 4-2-1982];  NOx: 25 PPMV (8) [40CFR 60 SUBPART KKKK, 7-06-2006];  PM: 0.1 GR/SCF (5) [RULE 409, 8-7-1981];  PM: 0.01 GR/SCF (5A) [RULE 476, 10-8-1976];  PM: 11 LBS/HR (5B) [RULE 476, 10-8-1976],  SO2: 0.06 LBS/MMBTU (8) [40CFR 60 SUBPART KKKK, 7-06-2006];	A1.x, A63.x, A99.x1, A99.x2, A99.x3, A99.x5, A99.x6, A99.x7, A99.x8, A327.x1 B61.x1, B61.x2, D12.x1, D29.x2, D29.x3, D82.x1, D82.x2, D90.x1, D90.x2, H23.x1, H23.x2, H23.x4, I297.x1, I297.x2, K40.x1, K67.x1
KNOCKOUT DRUM, 79-V-2, FUEL GAS  A/N: 527889  Permit to Construct Issued: TBD	DX3				
SCRUBBER, 79-V-1, NATURAL GAS SUCTION  A/N: 527889  Permit to Construct Issued: TBD	DX4				
BOILER, WASTE HEAT RECOVERY STEAM GENERATOR, UNFIRED,  A/N: 527889  Permit to Construct Issued: TBD	DX5				

\* (1)(1A)(1B)Denotes RECLAIM emission factor  
(2)(2A)(2B)Denotes RECLAIM emission rate  
(3) Denotes RECLAIM concentration limit  
(4) Denotes BACT emission limit  
(5)(5A)(5B)Denotes command and control emission limit  
(6) Denotes air toxic control rule limit  
(7) Denotes NSR applicability limit  
(8)(8A)(8B)Denotes 40 CFR limits(e.g. NSPS, NESHAPS, etc.)  
(9) See App B for Emission Limits  
(10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
DRUM, 79-V-3, BLOWDOWN A/N: 527889 Permit to Construct Issued: TBD	DX6				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 527889 Permit to Construct Issued: TBD	DX7				H23.17
<b>SYSTEM 2: AIR POLLUTION CONTROL FOR COGENERATION</b>					
CO OXIDATION CATALYST, BASF OR APPROVED EQUIVALENT SYSTEM, 150 CU FT; DEPTH: 2.6 IN; WIDTH: 11 FT; HEIGHT: 56 FT A/ N: 527888 Permit to Construct Issued: TBD	CX1	DX1 DX2 CX2			
SELECTIVE CATALYTIC REDUCTION, HALDOR TOPSOE OR APPROVED EQUIVALENT SYSTEM, 425 CU. FT. DEPTH: 13.4 IN; WIDTH: 11 FT; HEIGHT: 56 FT; WITH AMMONIA INJECTION GRID A/ N: 527888 Permit to Construct Issued: TBD	CX2  BX3	CX1 SX		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	D12.x2, D12.x5

\* (1)(1A)(1B) Denotes RECLAIM emission factor  
 (2)(2A)(2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit  
 (4) Denotes BACT emission limit  
 (5)(5A)(5B) Denotes command and control emission limit  
 (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit  
 (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits  
 (10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
VESSEL, 79-ME-1, AQUEOUS AMMONIA VAPORIZER  A/ N: 527888 Permit to Construct Issued: TBD	DX8				A99.x4, A195.x4, D12.x3, D12.x4, D29.x4, E73.x1
STACK, DIAMETER: 9 FT; HEIGHT: 95 FT A/N: 527888 Permit to Construct Issued: TBD	SX	CX2			

**FACILITY CONDITIONS**

F8.1 The operator shall comply with all applicable mitigation measures stipulated in the “Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan” document which is part of the AQMD Certified Subsequent Environmental Impact Report dated 08/30/2002 for this facility.

[CA PRC CEQA, 11-23-1970]

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

* (1)(1A)(1B)Denotes RECLAIM emission factor	(2)(2A)(2B)Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit	(4) Denotes BACT emission limit
(5)(5A)(5B)Denotes command and control emission limit	(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit	(8)(8A)(8B)Denotes 40 CFR limits(e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits	(10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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The operator shall comply with the terms and conditions set forth below:

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F10.1 Material(s) that contain the following compound(s) shall not be used in this facility;

Total Reduced Sulfur

H<sub>2</sub>S

Hydrogen Fluoride

This condition shall not apply if the operator demonstrates to the satisfaction of the Executive Officer that the facility is in compliance with the operational air quality mitigation measures stipulated in the Reformulated Fuels Project EIR as follows:

- a. Implementation of an inspection and maintenance program for all odor sources.
- b. Installation and inspection of a deluge system in the alkylation unit. The deluge system shall be inspected quarterly and flow tested semi-annually.
- c. Installation and inspection of elevated monitors with water spray system covering all area of the alkylation unit. The system shall be inspected weekly and flow tested monthly.
- d. Conduct safety review for the GOH unit, revision and implementation of the Risk Management and Prevention Plan (RMPP) for hydrogen sulfide.
- e. Conduct safety review for the Sulfur Recovery Unit, revision and implementation for the RMPP for hydrogen sulfide.

[CA PRC CEQA, 11-23-1970]

F14.1 The operator shall not purchase diesel fuel, for stationary source application as defined in Rule 431.2, containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]



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The operator shall comply with the terms and conditions set forth below:

F24.1 Accidental release prevention requirements of Section 112(r)(7):

- a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).
- b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 – Accidental Release Prevention, 5-24-1996]

F25.1 The permit holder of this facility shall not install, alter, or operate a refinery process unit or other non-Rule 219 exempt equipment without a valid RECLAIM/TitleV permit issued by the AQMD pursuant to Rule 201 – Permit to Construct, Rule 203 - Permit to Operate, Rule 2004 - Requirements, and Rule 3002 - Requirements, as applicable.

Notwithstanding the above, the provisions of Rules 201, 203, 2004, and 3002 shall not apply to installations or alterations that involve only the equipment listed in Table 1 below, nor shall they apply to the operation of equipment listed in Table 1, when directly associated with permitted process units or other permitted equipment.

Notwithstanding the above, all new equipment listed in Table 1, including associated fugitive components installed with such equipment, shall have Best Available Control Technology installed in conformance with the Best Available Control Technology Guidelines in effect at the time of the installation.

TABLE 1

- (a) Heat Exchanger (including air-cooler, reboiler, cooler, condenser ,and shell and tube exchanger)
- (b) In-line Mixer
- (c) Pump
- (d) Knockout Pot - Compressor inlet (immediate inlet) and interstage
- (e) Knockout Pot - Fuel Gas System (downstream of fuel gas mix drums)

This condition applies only to the facility that processes petroleum as defined in the Standard Industrial Classification Manual as Industry No. 2911 - Petroleum Refining, as well as its directly associated sulfur recovery plant which may be located outside of the facility.



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**The operator shall comply with the terms and conditions set forth below:**

[RULE 2004, 5-11-2001; RULE 2004, 4-6-2007]

F34.2 The operator shall not sell refinery gas containing sulfur compounds in excess of 40 ppmv, calculated as hydrogen sulfide, averaged over 4-hour period.

[RULE 431.1, 6-12-1998]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

California Code of Regulations, Title 13, Division 3, Chapter 5

40 CFR 79

40 CFR 80

[40CFR 79, 7-1-1999; 40CFR 80, 7-1-1999; CCR Title 13, 9-24-1999]

F52.2 This facility is subject to the applicable requirements of the following rules or regulation(s):

40 CFR 60 Subpart A

40 CFR 61 Subpart A

40 CFR 63 Subpart A

40 CFR 63 Subpart GGGGG

[40CFR 60 Subpart A, 5-16-2007; 40CFR 61 Subpart A, 5-16-2007; 40CFR 63 Subpart A, 5-16-2007; 40CFR 63 Subpart GGGGG, 11-29-2006]

F52.3 This facility is subject to the applicable requirements of the following rules or regulation(s):

CONSENT DECREE CIVIL NO. SA-05-CA-0569. The facility shall send the District a copy of the semiannual update report sent to the EPA of the specific requirement of emission standards and limitations from the Consent Decree. This report shall also identify any anticipated future requirements known as of the date of the report and dates of compliance



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**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

**The operator shall comply with the terms and conditions set forth below:**

for the requirements.

[CONSENT DECREE VALERO, 6-16-2005]

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere from the originating equipment.

**SYSTEM CONDITIONS**

S31.x The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 527889:

All sampling connections shall be closed-purge, closed loop, or closed-vent systems.

All new valves in VOC service shall be leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard (e.g., drain valves with valve stems in horizontal position), retrofits/special applications with space limitations, and valves not commercially available.

For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellows or equivalent approved in writing by the District prior to installation.

All new components in VOC service as defined by Rule 1173, except valves and flanges shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21. Components shall be defined as any valve, flange, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.

The following leaks shall be repaired within 7 calendar days -- all light liquid/gas/vapor components leaking at a rate of 500 to 10,000 ppm, heavy liquid components leaking at a rate of 100 to 500 ppm and greater than 3 drops/minute, unless otherwise extended as allowed under Rule 1173.

The following leaks shall be repaired within 2 calendar days -- any leak between 10,000 to 25,000 ppm, any atmospheric PRD leaking at a rate of 200 to 25,000 ppm, unless otherwise extended as allowed under Rule 1173.

The following leaks shall be repaired within 1 calendar day -- any leak greater than 25,000 ppm, heavy liquid leak greater than 500 ppm, or light liquid leak greater than 3 drops per minute.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for two consecutive months, then the operator may revert to a



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**The operator shall comply with the terms and conditions set forth below:**

quarterly inspection program with the approval of the Executive Officer. This condition shall not apply to leakless valves.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new valves and the new flange population inspected are found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv. This condition shall not apply to leakless valves.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District.

The operator shall provide to the District, prior to initial startup, a list of all non-leakless type valves that were installed. The list shall include the tag numbers for the valves and reasons why leakless valves were not used. The operator shall not startup the equipment prior to the Districts approval for the use of all non-leakless valves

The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on actual components installed and removed from service. The operator shall also submit a complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets or field inspection surveys for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; **RULE 1303(a)(1)-BACT, 12-6-2002**; **RULE 1303(b)(2)-Offset, 5-10-1996**; **RULE 1303(b)(2)-Offset, 12-6-2002**]

[Systems subject to this condition: Process 16, System 1]

**DEVICE CONDITIONS**

**A. Emission Limits**

A1.2 Compliance with the emission limit(s) specified in the emissions and requirements column for this device shall be determined as follows:

Emittant	Emission Limit Type	Averaging time	Compliance Verification Method
CO	(5) - Command and Control	15 minute (3 percent oxygen)	Source test
CO	(4)- BACT	1 hour (3 percent oxygen)	Certified CEMS
NOx	(4)- BACT	1 hour (3 percent oxygen)	Source test, Certified CEMS
PM	(5) - Command and	1 hour (3 percent oxygen)	Source test



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## FACILITY PERMIT TO OPERATE ULTRAMAR INC (NSR USE ONLY)

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Control |

The NOx BACT identified above applies only to the 9 PPM limit.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 6-3-2011; RULE 407, 4-2-1982; RULE 409, 8-7-1981; RULE 476, 10-8-1976]

[Devices subject to this condition: D1550]

A1.x Compliance with the emission limit(s) specified in the emissions and requirements column for this device shall be determined as follows:

Emittant	Emission Limit Type	Averaging time	Compliance Verification Method
CO	(5) - Command and Control	15 minute (15 percent oxygen)	Source test
CO	(4)- BACT	1 hour (15 percent oxygen)	Certified CEMS
NOx	(4)- BACT	1 hour (15 percent oxygen)	Source test, Certified CEMS
PM	(5) - Command and Control	1 hour (15 percent oxygen)	Source test
SOx	(4)- BACT	1 hour (15 percent oxygen)	Source test, Certified CEMS
VOC	(4)- BACT	1 hour (15 percent oxygen)	Source test

The above limits are all determined at standard conditions of 68°F and 1 atm.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 6-3-2011; RULE 407, 4-2-1982; RULE 409, 8-7-1981; RULE 476, 10-8-1976]

[Devices subject to this condition: DX1, DX2]

A63.x 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



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**The operator shall comply with the terms and conditions set forth below:**

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 operator shall initially calculate the monthly emissions for VOC and PM10 using the equation below.

Monthly Emissions, lb/ month = (Monthly fuel usage in mmscf/day) \* (Emission factors indicated below)

The emission factors for the gas turbine and duct burner during the commissioning period shall be as follows: VOC, 6.20 lb/mmscf; PM10, 14.01 lb/mmscf.

After commissioning, the emission factors of the gas turbine and duct burner shall be as follows: VOC, 4.14 lb/mmscf; PM: 9.78 lb/mmscf.

The emission factors for the boilers 86-B-9000, 86-B-9001, 86-B-9002 shall be as follows: VOC, 5.5 lb/mmscf; PM10, 7.6 lb/mmscf.

The VOC and PM10 emission factors for boilers 86-B-9000, 86-B-9001, 86-B-9002 shall be revised annually based on results of individual VOC and PM10 source tests performed as specified in permit condition D29.x1. The VOC and PM10 emission factor shall be calculated as the average emission rate in lb/mmscf from all valid source test runs during the annual source test.

The VOC and PM10 emission factors for the gas turbine and duct burner shall be revised initially and annually, thereafter, based on the results of individual VOC and PM10 source tests performed as specified in permit conditions D29.x2 and D29.x3. The VOC and PM10 emission factor shall be calculated as the average emission rate in lb/mmscf from all valid source test runs during the annual source test.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available to District personnel upon request.

[**RULE 1303(b)(2)–Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1313, 12-7-1995**]

[Devices subject to this condition: D377, D378, D1550, DX1, DX2]

A99.6 The 9 ppm NOx emission limit(s) shall not apply during any startup.

For the purposes of this condition, startup shall be defined as the period when the exhaust temperature of this equipment is below 475 degrees F, which is the minimum ammonia injection temperature.

[**RULE 2005, 6-3-2011**]

[Devices subject to this condition: D1550]



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The operator shall comply with the terms and conditions set forth below:

- A99.x1 The 2.5 PPM NO<sub>x</sub> emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The turbine commissioning shall not exceed 376 total hours. The turbine shall be limited to a maximum of 20 hours of start-ups and shutdown per year.

For the purposes of this condition, the start-up and shutdown period shall be defined as the initial 30 minute time period when the equipment is shutting down or the initial 60 minute time period when the equipment is starting up and the temperature of the exhaust gas at the inlet of the SCR is below 535 °F.

NO<sub>x</sub> emissions shall not exceed 28.4 lbs/startup and 11 lbs/shutdown.

[RULE 1703(a)(2) – PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011]

[Devices subject to this condition: DX1, DX2]

- A99.x2 The 4.0 PPM CO emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The turbine commissioning shall not exceed 376 total hours. The turbine shall be limited to a maximum of 20 hours of start-ups and shutdown per year.

For the purposes of this condition, the start-up and shutdown period shall be defined as the initial 30 minute time period when the equipment is shutting down or the initial 60 minute time period when the equipment is starting up and the temperature of the exhaust gas at the inlet of the SCR is below 535 °F.

[RULE 1703(a)(2) – PSD-BACT, 10-7-1988]

[Devices subject to this condition: DX1, DX2]

- A99.x3 The 3 PPM VOC emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The turbine commissioning shall not exceed 376 total hours. The turbine shall be limited to a maximum of 20 hours of start-ups and shutdown per year.

For the purposes of this condition, the start-up and shutdown period shall be defined as the initial 30 minute time period when the equipment is shutting down or the initial 60 minute time period when the equipment is starting up and the temperature of the exhaust gas at the inlet of the SCR is below 535 °F.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: DX1, DX2]



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**The operator shall comply with the terms and conditions set forth below:**

- A99.x4 The 5 PPM NH<sub>3</sub> emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The turbine commissioning shall not exceed 376 total hours. The turbine shall be limited to a maximum of 20 hours of start-ups and shutdown per year.

For the purposes of this condition, the start-up and shutdown period shall be defined as the initial 30 minute time period when the equipment is shutting down or the initial 60 minute time period when the equipment is starting up and the temperature of the exhaust gas at the inlet of the SCR is below 535 °F.

With the exception of the commissioning period, the ammonia injection system shall be in full operation at all times that the exhaust gas temperature at the inlet to the SCR is greater than 535 °F.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: Cx2]

- A99.x5 The 52.3 LBS/MMCF NO<sub>x</sub> emission limit(s) shall only apply during turbine commissioning during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from the initial start up of the turbine.

[RULE 2012, 5-6-2005]

[Devices subject to this condition: DX1, DX2]

- A99.x6 The 10.1 LBS/MMCF NO<sub>x</sub> emission limit(s) shall only apply after turbine commissioning during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from the initial start up of the turbine.

[RULE 2012, 5-6-2005]

[Devices subject to this condition: DX1, DX2]

- A99.x7 The 4.10 LBS/MMCF SO<sub>x</sub> emission limit(s) shall only apply during turbine commissioning during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from the initial start up of the turbine.

[RULE 2011, 5-6-2005]

[Devices subject to this condition: DX1, DX2]



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**The operator shall comply with the terms and conditions set forth below:**

A99.x8 The 3.9 LBS/MMCF SO<sub>x</sub> emission limit(s) shall only apply after turbine commissioning during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from the initial start up of the turbine.

[RULE 2011, 5-6-2005]

[Devices subject to this condition: DX1, DX2]

A195.1 The 7 ppmv (monthly) NO<sub>x</sub> emission limit(s) is averaged over a calendar month and is at dry condition, corrected to 3 percent oxygen.

This NO<sub>x</sub> calendar monthly emission limit shall be calculated based on the measured NO<sub>x</sub> emissions using a certified RECLAIM CEMS and the heat input during all boiler operating hours for the calendar month except during:

Any District required source test performed without ammonia;  
Periods of the exhaust temperature entering the SCR catalyst is less than 475 degrees F, which is the minimum ammonia injection temperature);  
RATA testing;  
RECLAIM Missing Data period;  
Calibration and maintenance periods;  
Equipment breakdown periods as defined in Rule 2004; and  
Periods of zero fuel flow.

The heat input weighted average NO<sub>x</sub> concentration shall be calculated using this equation, or other equivalent equation: PPMV at 3 percent oxygen = (Et/Qt) x K, where:

PPMV at 3 percent oxygen = Concentration of NO<sub>x</sub> in PPMV at 3 percent oxygen  
Et = Total measured NO<sub>x</sub> emissions during the averaging period (excluding exempt periods as noted above)  
Qt = Total heat input during the averaging period (excluding exempt periods as noted above)  
K = A conversion factor from lbs/MMBtu to PPM, which can be determined using EPA 40 CFR60 Method 19

A data acquisition system (DAS) shall be installed and maintained to record the parameters necessary to determine the calendar monthly NO<sub>x</sub> concentration. In addition, the DAS shall calculate and display on demand the average monthly NO<sub>x</sub> PPM.

Any corrections to the DAS data and calculation shall be completed within 72 hours after the end of the calendar month. The recorded parameters and the calculated average monthly NO<sub>x</sub> PPM shall be kept for a period as stated in the Section E of this facility permit and shall be readily available to the District personnel upon request.

A violation of the 7 PPM NO<sub>x</sub> limit shall be a violation of the emission limit for the entire averaging period.

[RULE 2005, 6-3-2011]



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[Devices subject to this condition: D1550]

A195.16 The 0.015 lb/mmBTU NOx emission limit(s) is averaged over 365 rolling days and based on the HHV.

This Consent Decree interim NOx emission limit is calculated by CEMS data measured and recorded in accordance with Rule 2012.

This emission limit shall only apply during the interim emission reduction period from January 1, 2010 to December 31, 2011.

[Consent Decree Valero, 6-16-2005]

[Devices subject to this condition: D1550]

A327.1 For the purpose of determining compliance with District Rule 476, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[RULE 476, 10-8-1976]

[Devices subject to this condition: D378, D1550, DX1, DX2]

A327.x For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[RULE 475, 10-8-1976; RULE 475, 8-7-1978]

[Devices subject to this condition: DX1, DX2]

**B. Material/Fuel Type Limits**

B61.1 The operator shall only use fuel gas containing the following specified compounds:

Compound	ppm by volume
Sulfur	less than 100

The operator shall maintain a continuous total sulfur analyzer to monitor the sulfur content of the fuel gas.



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[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: D3, D6, D8, D9, D12, D22, D59, D60, D73, D74, D98, D429, D430, D768, D1550]

B61.2 The operator shall not use fuel gas containing the following specified compounds:

Compound	ppm by volume
H2S	greater than 160

The H2S concentration limit of 160 ppm shall be based on a rolling 3-hour averaging period at the standard condition of 60 °F and 14.7 psia, as defined in Rule 102. This H2S concentration limit of 160 ppm is equivalent to 162 ppm at the standard conditions of 68 °F and 29.92 inches Hg, as defined as 40CFR 60 Subpart A.

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

B61.x1 The operator shall not use fuel gas containing the following specified compounds:

Compound	ppm by volume
H2S	greater than 60
H2S	greater than 162

The 60 ppmv limit is based on a rolling 365 consecutive calendar day rolling average.  
The 162 ppmv limit is based on a rolling 3-hour averaging period.

[40CFR 60 Subpart Ja, 6-24-2008]

[Devices subject to this condition: DX2]

B61.x2 The operator shall not use fuel gas containing the following compounds:

Compound	ppm by volume
Total Sulfur (calculated as H2S) greater than	40

The 40 ppm limit shall be based on a 1-hour averaging time.



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For the purposes of this condition, fuel gas is defined as natural gas obtained from a utility regulated by the Public Utilities Commission (PUC) or a mixture of refinery fuel gas, produced within the refinery, and natural gas.

[RULE 2005, 5-6-2005]

[Devices subject to this condition: DX2]

#### D. Monitoring and Testing Requirements

D12.x1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine and duct burner.

The operator shall also install and maintain a device to continuously record the parameter being measured in accordance with Rule 2012.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; [RULE 2012, 5-6-2005]

[Devices subject to this condition: DX1, DX2]

D12.x2 The operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature at the inlet to the CO catalyst bed.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within +/- 5 percent. It shall be calibrated once every 12 months.

For the purpose of this condition, continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: CX1]

D12.x3 The operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature at the inlet to the SCR catalyst bed.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within +/- 5 percent. It shall be calibrated once every 12 months.

For the purpose of this condition, continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]



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The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition: CX2]

D12.x4 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured every 15 minutes.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The calibration records shall be kept on site and made available to District personnel upon request.

The ammonia injection system shall be placed in full operation as soon as the minimum temperature at the inlet to the SCR reactor is reached. The minimum temperature is 535 deg F.

[RULE 1303(a)(1) – BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: CX2]

D12.x5 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the CO catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured. For the purpose of this condition, continuously record shall be defined as recording at least once a week and shall be calculated based upon the average of the continuous monitoring for that week.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The pressure drop across the catalyst shall not exceed 6 inches water column.

[RULE 1303(a)(1) – BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011]

[Devices subject to this condition: CX1]

D29.10 The operator shall conduct source test(s) for the pollutant(s) identified below.



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The operator shall comply with the terms and conditions set forth below:

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	Approved District Method	District-approved averaging time	Outlet of the SCR

The test(s) shall be conducted at least once every three years.

The test shall be conducted to demonstrate compliance with Rules 407.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982**]

[Devices subject to this condition: D1550]

D29.x1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
PM10 emissions	Approved District Method	1 hour (15 percent oxygen)	Stack Outlet
VOC emissions	Approved District Method	1 hour (15 percent oxygen)	Stack Outlet

The test shall be conducted when this equipment is operating at 80 percent or greater of the maximum design capacity at which ammonia injection occurs during the PM10 test.

The test(s) shall be conducted at least annually. If equipment has not been in operation during the calendar year, the source test does not have to be conducted. The source test shall be conducted in the calendar year the equipment resumes operation. The Facility Permit holder shall keep records to demonstrate that the equipment had not been operated. Upon resumption of operation, the Facility Permit holder shall keep records of each day operated.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

Source test results shall include the following parameters: fuel gas usage of the boiler, amount of ammonia injected, if applicable, for NOx control, the flue gas flow rate, and Higher Heating Value (HHV) of fuel gas other than natural gas.

The test shall be conducted to demonstrate compliance with Rules 1303(b)(1)-BACT, 1303(b)(2)-Offsets, 409, and 476.



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[RULE 1303(b)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 409, 8-7-1981; RULE 476, 10-8-1976]

[Devices subject to this condition: D377, D378 , D1550]

D29.x2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District –approved Method	1 hour (15 percent oxygen)	Outlet of the SCR serving this equipment
CO emissions	District –approved Method	15 mins (15 percent oxygen)	Outlet of the SCR serving this equipment
SOX emissions	District-approved method	1 hour (15 percent oxygen)	Stack Outlet
VOC emissions	District –approved Method	1 hour (15 percent oxygen)	Outlet of the SCR serving this equipment
PM10 emissions	District-approved method	1 hour (15 percent oxygen)	Outlet of the SCR serving this equipment
NH3 emissions	District –approved Method	1 hour (15 percent oxygen)	Outlet of the SCR serving this equipment

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, amount of ammonia injected, if applicable, for NOx control, the flue gas flow rate, and Higher Heating Value (HHV) of fuel gas other than natural gas, and the turbine generating output in MW.

The test shall be conducted with duct firing when this equipment is operating at maximum, average, and minimum loads at which ammonia injection occurs during the NOx and PM test. The fuel combusted in the duct burner during the source test shall be at least 40% refinery gas or a fuel mixture of natural gas and refinery gas approved by the District.

For the purpose of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of AQMD, EPA and CARB.



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[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011**]

[Devices subject to this condition: DX1, DX2]

D29.x3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
VOC emissions	District-approved Method	1 hour (15 percent oxygen)	Outlet of the SCR
PM10 emissions	District-approved Method	1 hour (15 percent oxygen)	Outlet of the SCR

The test shall be conducted annually. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at a load of 80 percent or greater of the maximum design capacity at which ammonia injection occurs during the PM test. The fuel combusted in the duct burner during the source test shall be at least 40% refinery gas or a fuel mixture of natural gas and refinery gas approved by the District.

For the purposes of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of AQMD, EPA, and CARB.

The test shall be conducted for compliance verification of the BACT VOC 3 ppmv limit.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2)-PSD-BACT, 10-7-1988**]

[Devices subject to this condition: DX1, DX2]



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The operator shall comply with the terms and conditions set forth below:

D29.x4 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District-approved Method	1 hour (15 percent oxygen)	Outlet of the SCR

The test(s) shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted no later than 180 days after initial startup.

The test results submitted to the District within 60 days after the test date.

The test shall be conducted when the gas turbine and duct burner are operating at a load of 80 percent or greater of the maximum design capacity.

The test shall be conducted to demonstrate compliance with the Rule 1303 BACT concentration limit.

If the equipment is not operated in any given quarter, the operator may elect to defer the required testing to a quarter in which the equipment is operated.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: CX2]

D82.5 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

Concentrations shall be corrected to 3 percent oxygen on a dry basis.

The CEMS shall be installed and operated in accordance with an approved AQMD Rule 218 CEMS plan application.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]



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**The operator shall comply with the terms and conditions set forth below:**

[Devices subject to this condition: D1550]

D82.x1 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine, in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD. Within two weeks of the turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operated to measure CO concentrations over a 15 minute averaging time period.

**[RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 218, 8-7-1981; RULE 218, 5-14-1999]**

[Devices subject to this condition: DX1, DX2]

D82.x2 The operator shall install and maintain a CEMS to measure the following parameters:

NOx concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). Within two weeks of the turbine start-up date, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start-up of the turbine.

**[RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; [RULE 2012, 5-6-2005]**

[Devices subject to this condition: DX1, DX2]

D90.3 The operator shall continuously monitor the H2S concentration in the fuel gas before being burned in this device according to the following specifications:



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765

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Facility I.D.:	800026
Revision #:	DRAFT
Date:	DRAFT

**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

The operator shall use an NSPS Subpart J approved instrument meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored.

The operator may monitor the H<sub>2</sub>S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned in this device.

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, D429, D430, D768, D1550]

D90.x1 The operator shall continuously monitor the H<sub>2</sub>S concentration in the fuel gas before being burned in this device according to the following specifications:

The operator shall use an NSPS Subpart Ja approved instrument meeting the requirements of 40CFR60 Subpart J to monitor the parameter.

The operator shall also install and maintain a device to continuously record the parameter being monitored in accordance with NSPS Subpart Ja.

The operator may monitor the H<sub>2</sub>S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned in this device.

[40CFR 60 Subpart Ja, 6-24-2008]

Devices subject to this condition: DX1, DX2]

D90.x2 The operator shall continuously monitor the total sulfur compounds calculated as H<sub>2</sub>S concentration in the refinery fuel gas before being burned in this device according to the following specifications:

The CEMS shall be approved by the District before the initial startup.

The operator shall also install and maintain a device to continuously record the parameter being monitored every 15 minutes.

The operator may monitor the total sulfur compounds H<sub>2</sub>S concentration at a single location for fuel combustion devices, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned in this device.

[RULE 2005, 6-3-2011]



**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

**The operator shall comply with the terms and conditions set forth below:**

Devices subject to this condition: DX2]

**E. Equipment Operation/Construction Requirements**

E73.x1 Notwithstanding the requirements of Section E conditions, the operator may, at his discretion, choose not to use ammonia injection if:

The inlet temperature of the SCR reactor is below 535 °F.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: CX2]

**H. Applicable Rules**

H23.5 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
H2S	40CFR60, SUBPART	J

[40CFR 60 Subpart J, 6-24-2008]

Devices subject to this condition: D3, D6, D8, D9, D12, D22, D38, D52, D53, D59, D60, D73, D74, D98, D377, D378, C400, C402, C403, D429, D430, D768, D1550]

H23.17 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173

[RULE 1173, 5-13-1994; RULE 1173, 6-1-2007]

Devices subject to this condition: D872, D1321, D1323, D1353, D1626, DX4]

H23.28 This equipment is subject to the applicable requirements of the following rules or regulations:



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765

**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

Rule	Rule/Subpart
40CFR60, SUBPART	Db

[40 CFR60, Subpart Db, 11-16-2006]

[Devices subject to this condition: D1550]

H23.x1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
H2S	40CFR60, SUBPART	Ja

[40 CFR 60 Subpart Ja, 6-24-2008]

[Devices subject to this condition: DX2]

H23.x2 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
NOx	40CFR60, SUBPART	KKKK
SOX	40CFR60, SUBPART	KKKK

[40 CFR 60 Subpart KKKK, 7-6-2006]

[Devices subject to this condition: DX1, DX2]

H23.x3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
HAPs	40CFR63, SUBPART	YYYY

[40 CFR 63 Subpart YYYY, 4-20-2006]

[Devices subject to this condition: DX1]

H23.x4 This equipment is subject to the applicable requirements of the following rules or regulations:



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**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

Contaminant	Rule	Rule/Subpart
HAPs	40CFR63, SUBPART	DDDDD

[40 CFR 63 Subpart DDDDD, 5-20-2011]

[Devices subject to this condition: DX2]

**I. Administrative**

1297.x1 This equipment shall not be operated unless the facility holds 44,137 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

For the purposes of this condition, the above amount of RTCS held shall apply to the combined emissions of the Gas Turbine 79-GT-1 and Duct Burner.

[RULE 2005, 6-3-2011]

[Devices subject to this condition: DX1, DX2]

1297.x2 This equipment shall not be operated unless the facility holds 15,318 pounds of SOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

For the purposes of this condition, the above amount of RTCS held shall apply to the combined emissions of the Gas Turbine 79-GT-1 and Duct Burner.

[RULE 2005, 6-3-2011]

[Devices subject to this condition: DX1, DX2]

**K. Recordkeeping/Reporting**

K40.x2 The operator shall provide to the District a source test report in accordance with the following specifications:



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765

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**FACILITY PERMIT TO OPERATE  
ULTRAMAR INC (NSR USE ONLY)**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

**The operator shall comply with the terms and conditions set forth below:**

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lb/hr), and lb/MMCF. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains/DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the heating content of the fuel, the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011**]

[Devices subject to this condition: DX1, DX2]

K67.10 The operator shall keep records, in a manner approved by the district, for the following parameter(s) or item(s):

fuel gas usage

fuel gas heating value

[**RULE 2011, 5-6-2005, RULE 2012, 5-6-2005**]

[Devices subject to this condition: D1550]

K67.x1 The operator shall keep records in a manner approved by the District, for the following parameter(s) or item(s):

Refinery fuel gas and natural gas fuel use during the commissioning period.

Refinery fuel gas and natural gas fuel use after the commissioning period and prior to CEMS certification.

Refinery fuel gas and natural gas fuel use after CEMS certification.

[**RULE 2005, 6-3-2011**]

[Devices subject to this condition: DX1, DX2]

**ATTACHMENT F-2**

---

**EEC Report on Soil Investigation, April 3, 2014**



**ENVIRONMENTAL  
ENGINEERING & CONTRACTING, INC.**

501 Parkcenter Drive, Santa Ana, CA 92705  
Phone (714) 667-2300 • Fax (714) 667-2310  
www.eecworld.com

## SOIL INVESTIGATION

Proposed Cogen Project Site  
2402 East Anaheim Street  
Wilmington, California 90744

April 3, 2014

Prepared for:

**Valero Wilmington Refinery**  
2402 East Anaheim Street  
Wilmington, California 90744

Prepared by:

Environmental Engineering and Contracting, Inc.  
501 Parkcenter Drive  
Santa Ana, California 92705

Nate Busch  
Senior Staff Geologist



Andrew Drummond, P.G.  
Project Geologist

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### FIGURES

Figure 1 - Site Location Map  
Figure 2 - Sample Location Map

### ATTACHMENTS

Attachment A – Soil Boring Permit  
Attachment B – Soil Boring Log  
Attachment C – Laboratory Report and Chain of Custody

## 1.0 INTRODUCTION

On behalf of Valero, Environmental Engineering and Contracting, Inc. (EEC) has prepared this soil investigation report documenting soil sampling activities associated with the Proposed Cogen Project Site in the Valero Wilmington Refinery (Refinery) located at 2402 East Anaheim Street, Wilmington, California (site). The site location is shown on Figure 1, *Site Location Map*. The investigation was conducted to provide Valero with a baseline assessment of soil conditions at the site.

## 2.0 SITE BACKGROUND AND PRE-REMEDIATION ACTIVITIES

The site is located in the Refinery in the Heavy Oils Unit. There are various process units including crude and vacuum distillation, delayed coking, catalytic reforming, hydrotreating, logistical equipment, aboveground storage tanks (ASTs), and various transfer vessels in the area.

## 3.0 SOIL EXCAVATION AND SAMPLING

The following section of this report describes soil sampling procedures conducted during the soil investigation.

### 3.1 Permitting

Prior to commencing investigative field activities, EEC obtained the required soil boring permit from the Los Angeles County Department of Health Services, Environmental Health Division. The soil boring permit is included as Attachment A.

### 3.2 Soil Sampling

On March 31, 2014, EEC advanced one soil boring located within the Proposed Cogen Project Site (*Figure 2, Soil Boring Location*). The boring was advanced using a hand auger and initially advanced to depth of approximately 3.5 feet and 5 feet below ground surface (bgs). At these depths, soil samples were collected by using a slide hammer to drive a sampling tool containing a 6 inch stainless steel sleeve approximately 6 inches into the ground. Sample sleeves were capped with Teflon tape, plastic end caps, and labeled with a sample identification number. The soil samples were placed in water-tight storage bags and placed on ice in a sample cooler. The soil samples were transported under chain of custody protocols to Calscience, a California State-certified analytical laboratory for analyses. All soil samples were analyzed for benzene in accordance with United States Environmental Protection Agency Method 8260B.

The soil samples from the boring were visually examined and observations were recorded on a field boring log in accordance with Unified Soil Classification System standards (American Society for Testing and Materials D-2488-00). Following sample retrieval, a portion of the soil from the sampler was analyzed for volatile organic compound (VOC) concentrations in the field by a hand-held photoionization detector (PID). See Attachment B, *Soil Boring Log* for complete details of the lithology.

Upon completion of the soil sampling, the boring was backfilled with bentonite chips to surface grade and hydrated with clean water to ensure proper sealing of the borehole.

### 3.3 Waste Disposal

All soil excavated was disposed onsite by Valero.

### 4.0 FINDINGS

The soil encountered during the investigation was fill material composed of gravelly sand and silt. Groundwater was not encountered in the soil boring. VOC concentrations measured with a PID were 1.2 parts per million (ppm) in the 3.5 ft bgs sample and 33.3 ppm in the 5 ft bgs sample.

All samples were nondetect for benzene. Analytical results are shown below in Table 1, *Summary of Soil Analytical Data*. The full laboratory report can be found as Attachment C, *Laboratory Report and Chain of Custody*.

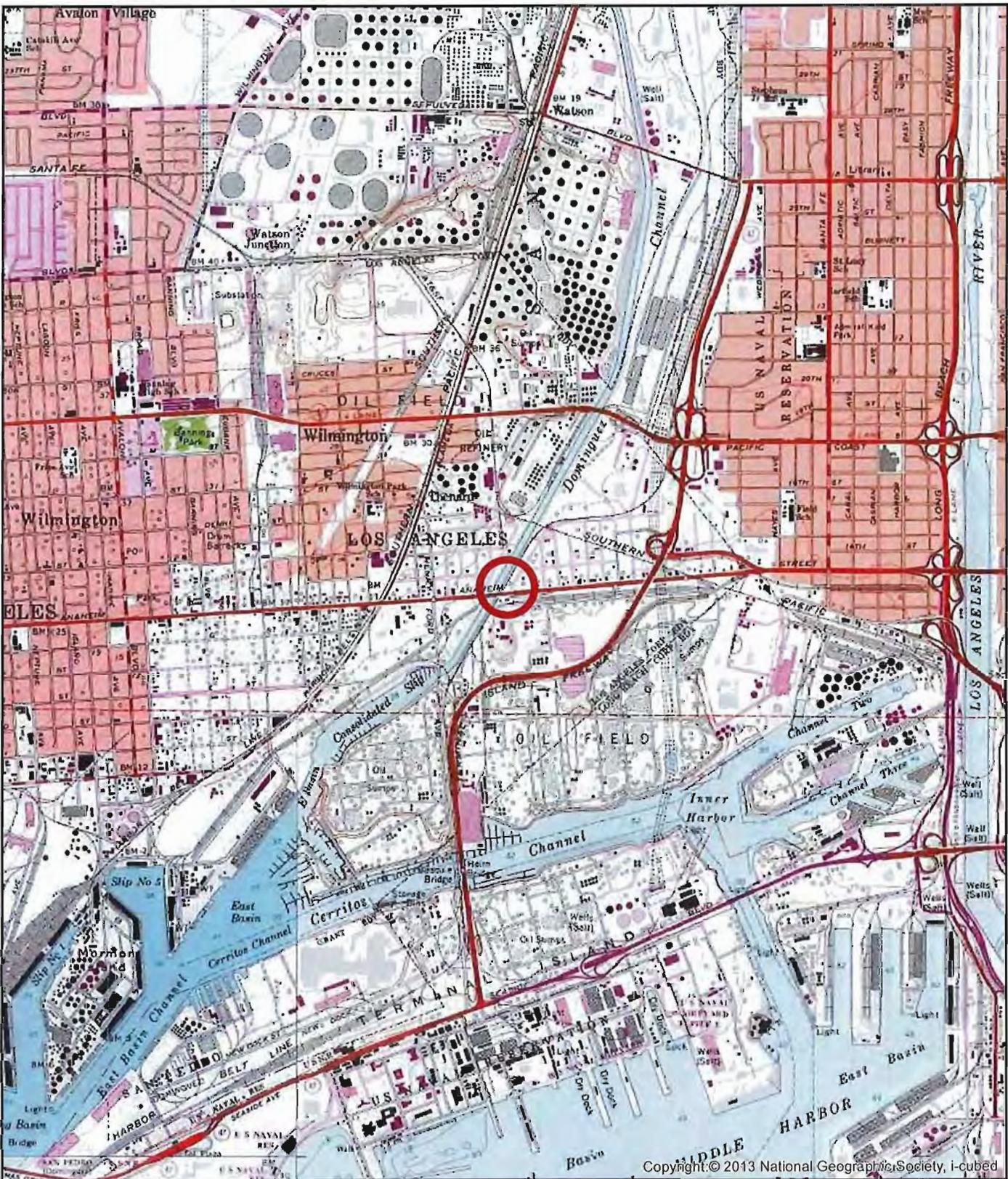
**Table 1, Summary of Soil Analytical Data**

Sample ID	Depth (ft bgs)	Benzene ( $\mu\text{g}/\text{kg}$ )
COGEN-1-3.5	3.5	ND (<5.0)
COGEN-1-5	5.0	ND (<5.0)

**Key:**

ft bgs = feet below ground surface  
 $\mu\text{g}/\text{kg}$  = micrograms per cubic meter  
ND (<5.0) = nondetect

## **FIGURES**



Copyright © 2013 National Geographic Society, i-cubed

		<b>LEGEND</b> Site Location 		<b>SITE LOCATION MAP</b> Valero Wilmington Refinery 2402 E. Anaheim Street Wilmington, California	
Date April 3, 2014	Drafter AW	<b>SOURCE</b> U.S. Geological Survey, 7.5-minute, Topographic Quadrangle Map, Long Beach, California, 1964.		PE/RG MZ	Project Number S-1917
				PH DB	File Number S1917-1Q14-GWM-01
					<b>1</b>



**ATTACHMENT A  
SOIL BORING PERMIT**



# ENVIRONMENTAL HEALTH

## Drinking Water Program



COUNTY OF LOS ANGELES  
**Public Health**

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: [waterquality@ph.lacounty.gov](mailto:waterquality@ph.lacounty.gov)

[http://publichealth.lacounty.gov/eh/ep/dw/dw\\_main.htm](http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm)

### Well Permit Approval

#### TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2402 East Anaheim St.	Wilmington	90749	abusib@renewal.com

#### NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

*Juan Rodriguez 626-430-5386 or jurodriguez@ph.lacounty.gov*

#### TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input checked="" type="checkbox"/> WORK PLAN APPROVED	DATE: 3/27/14
	Los Angeles County Drinking Water stamp	ADDITIONAL APPROVAL CONDITIONS:
	 6330	Permit # 8932.39 issued to advance a soil boring location.
	<i>Juan Rodriguez</i>	

<input type="checkbox"/> ANNULAR SEAL FINAL INSPECTION REQUIRED	<input type="checkbox"/> WELL COMPLETION LOG REQUIRED
DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
<input type="checkbox"/> WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED	<input type="checkbox"/> WATER QUALITY—CHEMICAL STANDARDS REQUIRED
DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
<input type="checkbox"/> WATER SUPPLY YIELD REQUIRED	<input type="checkbox"/> OTHER REQUIREMENT
DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature

Revised: October 2012

**ATTACHMENT B  
SOIL BORING LOG**



**ENVIRONMENTAL**  
ENGINEERING & CONTRACTING, INC.

**WELL ID: COGEN-1**

Logged By: Eric Clark  
 Reviewed By: Mark Zeko  
 Drilling Subcontractor: EEC  
 Boring Type: Soil Boring  
 Boring Diameter: 3"  
 Filter Pack:

Project #: S1917  
 Project Name: Valero - Cogen Soil Sampling  
 Location: 2402 East Anaheim Street  
 City/State: Wilmington, CA  
 Annular Seal: Hydrated Bentonite

Sheet: 1 of 1  
 Date: 3/31/14  
 Drilling Method: Hand Auger  
 Depth of Boring: 5.5 ft bgs  
 Depth to Groundwater: Not Encountered

Depth (ft)	Symbol	USCS	Geologic Description	Sample Interval	PID	Well Completion
0.0		GP	FILL: GRAVEL: Gray, dry, coarse.			
		SM	FILL: SAND with Silt: yellowish brown with olive mottling, damp, fine to medium; trace asphalt clasts.	3.5 - 4.0	1.2	
5.0				5.0 - 5.5	33.3	

**ATTACHMENT C**  
**LABORATORY REPORT AND CHAIN OF CUSTODY**



# CALSCIENCE

## WORK ORDER NUMBER: 14-03-2151

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Environmental Engineering & Contracting, Inc.

**Client Project Name:** Valero Cogen Soil Sampling / S1917.32

**Attention:** Nate Busch  
501 Park Center Drive  
Santa Ana, CA 92705-3515

Approved for release on 04/01/2014 by:  
Stephen Nowak  
Project Manager

ResultLink ▶

Email your PM ▶



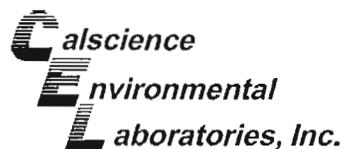
Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



## Contents

Client Project Name: Valero Cogen Soil Sampling / S1917.32  
Work Order Number: 14-03-2151

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## Work Order Narrative

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Work Order: 14-03-2151

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### **Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 03/31/14. They were assigned to Work Order 14-03-2151.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

### **Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

### **Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here:

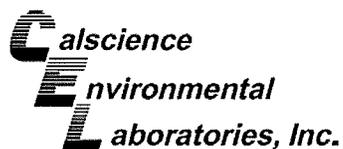
[http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

### **Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.





### Sample Summary

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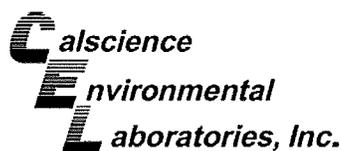
Client: Environmental Engineering & Contracting, Inc.	Work Order:	14-03-2151
501 Park Center Drive	Project Name:	Valero Cogen Soil Sampling / S1917.32
Santa Ana, CA 92705-3515	PO Number:	
	Date/Time Received:	03/31/14 13:58
	Number of Containers:	2

Attn: Nate Busch

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
COGEN-1-3.5	14-03-2151-1	03/31/14 12:00	1	Solid
COGEN-1-5	14-03-2151-2	03/31/14 12:45	1	Solid





## Analytical Report

Environmental Engineering & Contracting, Inc.  
501 Park Center Drive  
Santa Ana, CA 92705-3515

Date Received: 03/31/14  
Work Order: 14-03-2151  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: Valero Cogen Soil Sampling / S1917.32

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>COGEN-1-3.5</b>	<b>14-03-2151-1-A</b>	<b>03/31/14 12:00</b>	<b>Solid</b>	<b>GC/MS BB</b>	<b>03/31/14</b>	<b>03/31/14 17:18</b>	<b>140331L007</b>

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	5.0	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	60-132	
Dibromofluoromethane	118	63-141	
1,2-Dichloroethane-d4	127	62-146	
Toluene-d8	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>COGEN-1-5</b>	<b>14-03-2151-2-A</b>	<b>03/31/14 12:45</b>	<b>Solid</b>	<b>GC/MS BB</b>	<b>03/31/14</b>	<b>03/31/14 17:45</b>	<b>140331L007</b>

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	5.0	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	60-132	
Dibromofluoromethane	120	63-141	
1,2-Dichloroethane-d4	126	62-146	
Toluene-d8	103	80-120	

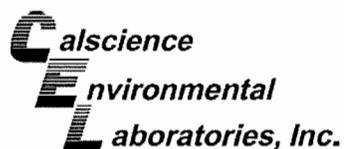
Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-796-8337</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS BB</b>	<b>03/31/14</b>	<b>03/31/14 13:04</b>	<b>140331L007</b>

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	5.0	0.13	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	60-132	
Dibromofluoromethane	119	63-141	
1,2-Dichloroethane-d4	127	62-146	
Toluene-d8	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

Environmental Engineering & Contracting, Inc.  
501 Park Center Drive  
Santa Ana, CA 92705-3515

Date Received: 03/31/14  
Work Order: 14-03-2151  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: Valero Cogen Soil Sampling / S1917.32

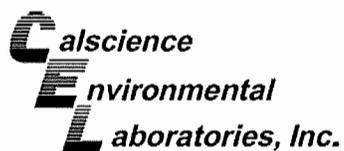
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-03-2107-4	Sample	Solid	GC/MS BB	03/29/14	03/31/14 14:08	140331S005
14-03-2107-4	Matrix Spike	Solid	GC/MS BB	03/29/14	03/31/14 14:35	140331S005
14-03-2107-4	Matrix Spike Duplicate	Solid	GC/MS BB	03/29/14	03/31/14 15:02	140331S005

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	43.64	87	43.99	88	61-127	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

Environmental Engineering & Contracting, Inc.  
501 Park Center Drive  
Santa Ana, CA 92705-3515

Date Received: 03/31/14  
Work Order: 14-03-2151  
Preparation: EPA 5030C  
Method: EPA 8260B

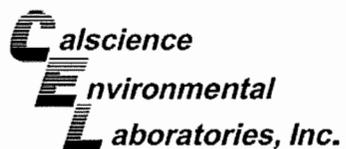
Project: Valero Cogen Soil Sampling / S1917.32

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-8337	LCS	Solid	GC/MS BB	03/31/14	03/31/14 11:43	140331L007
Parameter		Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Benzene		50.00	45.73	91	78-120	



RPD: Relative Percent Difference. CL: Control Limits



## Sample Analysis Summary Report

Work Order: 14-03-2151

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	715	GC/MS BB	2

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Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

## Glossary of Terms and Qualifiers

Work Order: 14-03-2151

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

CHAIN OF CUSTODY RECORD

Calscience Environmental Laboratories, Inc.

Date 3/31/14  
 Page 1 of 1

SoCal Laboratory  
 7440 Lincoln Way  
 Garden Grove, CA 92841-1427  
 (714) 895-5494

WO # / LAB USE ONLY  
**14-03-2151**

CLIENT PROJECT NAME / NUMBER:  
COGEN SOIL SAMPLING P.O. NO.: S1917.32

PROJECT CONTACT:  
Nate Busch SAMPLER(S): (PRINT)  
Eric P. Clark

LABORATORY CLIENT:  
ENVIRONMENTAL ENGINEERING & CONTRACTING, INC.

ADDRESS:  
501 Parkcenter Drive

CITY: Santa Ana STATE: CA ZIP: 92705

TEL: (714) 667-2300 E-MAIL: nbusch@eecworld.com  
ec@eecworld.com

TURNAROUND TIME:  
 SAME DAY  24 HR  48 HR  72 HR  STANDARD

COELT EDF GLOBAL ID

**REQUESTED ANALYSES**

TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X)	Cr(VI) [7196 or 7199 or 218.6]	BENZENE (8260B)

**SPECIAL INSTRUCTIONS:**  
 \* Report J-Flags

LAB USE ONLY	SAMPLE ID	SAMPLING		NO. OF CONT.	MATRIX	LOG CODE
		DATE	TIME			
	1 COGEN-1-3.5	3/31/14	1200	1	S	Unpreserved
	2 COGEN-1-5	3/31/14	1245	1	S	Unpreserved

*Eric P. Clark*  
 3/31/14

Relinquished by: (Signature) Eric P. Clark EEC 1338 Date: 3/31/14 Time: 13:58

Relinquished by: (Signature) Eric P. Clark EEC 1338 Date: 3/31/14 Time: 13:58

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

DISTRIBUTION: White with final report, Green and Yellow to Client.  
 Please note that pages 1 and 2 of our TCOs are printed on the reverse side of the Green and Yellow copies respectively.

WORK ORDER #: **14-03-2151**

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: EEC

DATE: 03/31/14

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 18.4 °C - 0.3 °C (CF) = 18.1 °C     Blank     Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:     Air     Filter    Checked by: 681

**CUSTODY SEALS INTACT:**

Cooler     \_\_\_\_\_     No (Not Intact)     Not Present     N/A    Checked by: 681

Sample     \_\_\_\_\_     No (Not Intact)     Not Present    Checked by: 603

<b>SAMPLE CONDITION:</b>	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:     4ozCGJ     8ozCGJ     16ozCGJ     Sleeve (S)     EnCores®     TerraCores®     \_\_\_\_\_

Aqueous:     VOA     VOA<sub>h</sub>     VOA<sub>na2</sub>     125AGB     125AGB<sub>h</sub>     125AGB<sub>p</sub>     1AGB     1AGB<sub>na2</sub>     1AGB<sub>s</sub>

500AGB     500AGJ     500AGJ<sub>s</sub>     250AGB     250CGB     250CGB<sub>s</sub>     1PB     1PB<sub>na</sub>     500PB

250PB     250PB<sub>n</sub>     125PB     125PB<sub>z<sub>na</sub></sub>     100PJ     100PJ<sub>na2</sub>     \_\_\_\_\_     \_\_\_\_\_     \_\_\_\_\_

Air:     Tedlar®     Canister    Other:     \_\_\_\_\_    Trip Blank Lot#: \_\_\_\_\_    Labeled/Checked by: 603

Container:    C: Clear    A: Amber    P: Plastic    G: Glass    J: Jar    B: Bottle    Z: Ziploc/Resealable Bag    E: Envelope    Reviewed by: 681

Preservative:    h: HCL    n: HNO<sub>3</sub>    na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>    na: NaOH    p: H<sub>3</sub>PO<sub>4</sub>    s: H<sub>2</sub>SO<sub>4</sub>    u: Ultra-pure    z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH    f: Filtered    Scanned by: 603

**ATTACHMENT F-3**

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**SCAQMD White Paper On Potential Control Strategies to Address  
Cumulative Impacts from Air Pollution, Appendix D, Cumulative Impact  
Requirements Pursuant to the California Environmental Quality Act**

**APPENDIX D**

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**CUMULATIVE IMPACT ANALYSIS REQUIREMENTS  
PURSUANT TO CEQA**

**CUMULATIVE IMPACT REQUIREMENTS  
PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

The following summarizes the requirement to analyze cumulative impacts pursuant to the California Environmental Quality Act (CEQA), and the procedures by which the AQMD complies with the requirement.

**CUMULATIVE IMPACTS DEFINED**

"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

**REQUIREMENT TO ANALYZE CUMULATIVE IMPACTS**

An Environmental Impact Report (EIR) shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable.

An adequate discussion of significant cumulative impacts requires:

(1) Either:

- (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency. Factors to consider include the nature of each environmental resource being examined, the location of the project and its type. Or
- (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

(3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

### **REQUIREMENTS WHEN CUMULATIVE IMPACTS ARE LESS THAN SIGNIFICANT**

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

An EIR may determine that a project's contribution to a significant cumulative impact is de minimus and thus is not significant. A de minimus contribution means that the environmental conditions would essentially be the same whether or not the proposed project is implemented. Note that this provision (CEQA Guidelines Section 15130(a)[4]) was challenged by Communities for a Better Environment and has not been resolved. Therefore, the SCAQMD does not rely on this provision to conclude that a project does not have cumulatively significant impacts.

### **CONSIDERATIONS WHEN CONDUCTING CUMULATIVE IMPACT ANALYSES**

"Probable future projects" may be limited to those projects requiring an agency approval for an application which has been received at the time the notice of preparation is released; projects included in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; projects included in a summary of projections of projects (or development areas designated) in a general plan or a similar plan; projects anticipated as later phase of a previously approved project (e.g. a subdivision); or those public agency projects for which money has been budgeted.

If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact.

When analyzing the cumulative impacts of a project, the Lead Agency is required to discuss not only approved projects under construction and approved related projects not yet under construction, but also unapproved projects currently under environmental review with related impacts or which result in significant cumulative impacts. The analysis should include a discussion of projects under review by the Lead Agency and projects under review by other relevant public agencies, using reasonable efforts to discover, disclose, and discuss the other related projects.

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute. An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

### **AQMD COMPLIANCE WITH CEQA CUMULATIVE IMPACT ANALYSIS REQUIREMENT**

The AQMD has two primary roles under CEQA. As a Lead Agency, the AQMD is responsible for preparing environmental analyses in the form of EIRs, Negative Declarations, or Environmental Assessments. As a Commenting Agency, the AQMD is responsible for review and comment on air quality analyses prepared by other public agencies.

The AQMD, as Lead Agency, complies with all cumulative impact analysis requirements when preparing CEQA documents. As a Commenting Agency, the AQMD recommends that other public agencies perform cumulative impact analyses relative to air quality in the same manner as does AQMD. The following discussion focuses on how AQMD complies with the cumulative impact analysis as a Lead Agency.

The SCAQMD's regulatory program (i.e., development of rules and regulations) has been certified by the Secretary of the Resources Agency per Public Resources Code Section 21080.5. This means the SCAQMD prepares environmental analyses, including cumulative analyses, in documents other than EIRs and Negative Declarations. AQMD documents are always called Environmental Assessments.

As Lead Agency preparing Environmental Assessments for rule projects, AQMD evaluates requirements of the proposed rule as well as other AQMD rules with future compliance dates and AQMP control measures to determine if the proposed project may significantly contribute to cumulative impacts.

When AQMD is Lead Agency for a non-SCAQMD project (i.e., permit projects), standard CEQA requirements apply and Negative Declarations and EIRs are prepared. By definition, projects that qualify for a Negative Declaration do not have cumulative impact.

For permit projects, AQMD evaluates cumulative impacts relative to other projects within a geographical sphere of influence as well as other related projects. While cumulative impact analyses include projects undergoing a CEQA review, AQMD also typically requires the consultant to contact the city/county in which the project is located to identify projects where applications have been submitted, but the project has not yet undergone an environmental analysis. For these projects, general plan growth projections are applied to estimate impacts as applicable.

As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is  $HI \geq 1.0$  while the cumulative (facility-wide) is  $HI \geq 3.0$ . It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

### References

*Title 14, California Code of Regulations.* Chapter 3 - Guidelines for Implementation of the California Environmental Quality Act. Article 9 - Contents of EIRs, Section 15130 - Discussion of Cumulative Impacts and Article 20 – Definitions, Section 15355 - Cumulative Impacts.

Governor's Office of Planning and Research. Discussion relative to CEQA Guidelines Section 15130 ([http://ceres.ca.gov/topic/env\\_law/ceqa/guidelines/art9.html](http://ceres.ca.gov/topic/env_law/ceqa/guidelines/art9.html)).

## Appendix D

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**Note:** Authority cited for CEQA Guidelines Section 15130: Sections 21083 and 21087, Public Resources Code. Reference: Sections 21083(b), 21093, 21094, and 21100, Public Resources Code; Whitman v. Board of Supervisors (1979) 88 Cal.App.3d 397; San Franciscans for Reasonable Growth v. City and County of San Francisco (1984) 151 Cal.App.3d 61; Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692; Laurel Heights Homeowners Association v. Regents of the University of California (1988) 47 Cal.3d 376; Sierra Club v. Gilroy (1990) 220 Cal.App.3d 30; Citizens to Preserve the Ojai v. County of Ventura (1985) 176 Cal.App.3d 421; Concerned Citizens of South Cent. Los Angeles v. Los Angeles Unified Sch. Dist. (1994) 24 Cal.App.4th 826; Las Virgenes Homeowners Fed'n v. County of Los Angeles (1986) 177 Cal.App.3d 300; San Joaquin Raptor/Wildlife Rescue Ctr v. County of Stanislaus (1994) 27 Cal. App.4th 713; and Fort Mojave Indian Tribe v. Cal. Dept. Of Health Services (1995) 38 Cal.App.4th 1574.