INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Proposed Boiler 10 SCR Project
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
Contact Person:	Michael Krause
Contact Phone Number:	(909) 396-2706
Project Sponsor's Name: Project Sponsor's Address:	ConocoPhillips 1520 East Sepulveda Boulevard Carson, CA 90745
General Plan Designation:	Heavy Industrial
Zoning:	M-3 Heavy Industrial
Description of Project:	The proposed project includes the installation of an aqueous ammonia storage tank and selective catalytic reduction (SCR) unit to control nitrogen oxide emissions from an existing boiler at the ConocoPhillips Carson Plant.
Surrounding Land Uses and Setting:	The Carson Plant is bounded by Sepulveda Boulevard to the north, Wilmington Avenue to the west, Alameda Boulevard to the east, and by a branch of the Atchison, Topeka and Santa Fe Railroads to the south. The Carson Plant is designated as heavy industrial land use and all the surrounding land uses are heavy industrial, including other refinery facilities, tank farms, and transportation corridors.
Other Public Agencies Whose Approval is Required:	City of Carson

POTENTIALLY SIGNIFICANT IMPACT AREAS

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Hazards & Hazardous Materials	☐ Hydrology/ Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Solid/Hazardous Waste	☐ Transportation/ Traffic	☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

- ☑ I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be prepared.

- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

- ☐ I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

- ☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: January 14, 2004 Signature: Steve Smith

Steve Smith, Ph.D.
Program Supervisor

ENVIRONMENTAL CHECKLIST AND DISCUSSION

		Potentially Significant Impact	Less Than Significant Impact	No Impact
1.	**AESTHETICS.** Would the project:			
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☑
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☑
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☑	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑

1.1 Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

The project will block views from a scenic highway or corridor.

The project will adversely affect the visual continuity of the surrounding area.

The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

1.2 Environmental Setting and Impacts

1. a), b) and c). Project construction consists of adding a new SCR unit, installation of a storage tank, and the installation of new piping. Therefore, the proposed project will introduce minor visual changes to the Carson Plant. The new SCR Unit will be about 20 feet high, which is lower than many surrounding structures. The existing boiler is 30 feet high and there are vessels and stacks at the Carson Plant that are over 100 feet high. Therefore, no visual impacts are expected from this equipment. The storage tank will be smaller than most of the surrounding structures. The views of the Plant from adjacent properties are not expected to change

substantially because of the proposed project. The new SCR unit will have similar structures as the existing equipment so that a significant change in the visual characteristics of the Carson Plant is not expected. No significant adverse impacts to aesthetics are expected.

No scenic highways or corridors are located in the vicinity of the Carson Plant. No significant adverse aesthetic impacts are expected.

1. d). Construction activities are not anticipated to require additional lighting because they are scheduled to take place during daylight hours. However, if the construction schedule requires nighttime activities, temporary lighting may be required. Since the project location is completely located within the boundaries of the existing Carson Plant, additional temporary lighting is not expected to be discernible from the existing permanent lighting.

The proposed project components will be located within existing industrial facilities, which are already lighted at night for nighttime operations, so no overall increase in lighting associated with the proposed project at the Carson Plant is expected. Therefore, no significant impacts to light and glare are anticipated from the proposed project.

1.3 Mitigation Measures

No significant adverse impacts to aesthetics are expected to occur as a result of the proposed project. Therefore, no mitigation is necessary or proposed.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
2.	**AGRICULTURE RESOURCES.** Would the project:			
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☑
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☑
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☑

2.1 Significance Criteria

Project-related impacts on agricultural resources will be considered significant if any of the following conditions are met:

The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.

The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.

The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

2.2 Environmental Setting and Impacts

2. a), b), and c). There are no agricultural resources, (i.e., food crops grown for commercial purposes), located in or near the vicinity of the Carson Plant. The proposed project will not involve construction outside of the existing boundaries of the Carson Plant and no agricultural resources are located within the Carson Plant. The zoning of the Carson Plant will remain heavy industrial, and refinery uses are allowed within this zone. No existing agricultural land will be converted to non-agricultural land uses. Further, the project will not conflict with a Williamson Act contract. Therefore, the proposed project will have no significant adverse impacts on agricultural resources.

2.3 Mitigation Measures

The impacts of the proposed project on agricultural resources are less than significant so no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
3.	**AIR QUALITY.** Would the project:			
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑
b)	Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☑
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable	☐	☑	☐

	federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☑	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☑	☐
f)	Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	☐	☐	☑

3.1 Significance Criteria

Impacts will be evaluated and compared to the significance criteria in Table 1. If impacts equal or exceed any of the following criteria, they will be considered significant.

3.2 Environmental Setting and Impacts

3. a) An inventory of existing emissions from the industrial facilities is included in the baseline inventory in the SCAQMD's Air Quality Management Plan (AQMP). The AQMP identifies emission reductions from existing sources and air pollution control measures that are necessary in order to comply with the state and federal ambient air quality standards (SCAQMD, 2003). The control strategies in the AQMP are based on projections from the local general plans provided by the cities in the district. Projects that are consistent with the local General Plans are consistent with the air quality related regional plans. The proposed project is considered to be consistent with the air quality related regional plans since it is consistent with the City of Carson's General Plan.

The 2003 AQMP demonstrates that applicable ambient air quality standards can be achieved within the timeframes required under federal law. This proposed project must comply with applicable SCAQMD rules and regulations for new or modified sources. For example, new emission sources associated with the proposed project are required to comply with the SCAQMD's Regulation XIII - New Source Review requirements that include the use of BACT. The project proponent must also comply with prohibitory rules, such as Rule 403, for the control of fugitive dust. By meeting these requirements, the project will be consistent with the goals and objectives of the AQMP to improve air quality in the basin. In addition, the project will result in a reduction in NO_x emissions associated with the operation of Boiler 10.

New emission sources associated with the proposed project (e.g., ammonia storage tank) are required to comply with the SCAQMD's Regulation XIII – New Source Review requirements that include the use of BACT.

TABLE 1

AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TAC, AHM, and Odor Thresholds		
Toxic Air Contaminants (TACs)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Hazard Index $\geq$ 1.0 (project increment) Hazard Index $\geq$ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
NO_2 1-hour average annual average	 20 ug/m^3 (= 1.0 pphm) 1 ug/m^3 (= 0.05 pphm)	
PM10 24-hour annual geometric mean	 2.5 ug/m^3 1.0 ug/m^3	
Sulfate 24-hour average	 1 ug/m^3	
CO (Carbon Monoxide) 1-hour average 8-hour average	 1.1 mg/m^3 (= 1.0 ppm) 0.50 mg/m^3 (= 0.45 ppm)	

PM10 = particulate matter less than 10 microns in size, ug/m3 = microgram per cubic meter; pphm = parts per hundred million; mg/m3 = milligram per cubic meter; ppm = parts per million; TAC = toxic air contaminant; AHM = Acutely Hazardous Material

3. b), c), and f) Emissions Estimates

Construction Emissions: Construction activities associated with the proposed project would result in emissions of carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), NOx and sulfur dioxide (SO_x)**.** Construction activities include construction of new foundations, and installation of NO_x control equipment and new ammonia tank. The site is already graded, so no major grading activities are expected.

Construction activities can generate emissions from heavy construction equipment, construction worker vehicles, truck deliveries, and fugitive dust. Daily construction emissions were calculated for the peak construction day activities based on activities at the Refinery. Peak day emissions are the sum of the highest daily emissions from employee vehicles, fugitive dust sources, construction equipment, and transport activities at the Carson Plant for the entire construction period. The peak day is based on the day in which the highest emissions occur for

each pollutant. The criteria pollutant emissions for that peak day were then compared to their respective significance thresholds. Peak construction emissions for the proposed project are summarized in Table 2. Detailed construction emissions calculations for the proposed project are provided in Appendix A.

The proposed project emissions during the construction phase are compared to the SCAQMD CEQA thresholds in Table 2. The peak construction emissions are expected to be less than the SCAQMD CEQA thresholds so that no significant impacts on air quality are expected during the construction phase.

TABLE 2

PEAK CONSTRUCTION EMISSIONS

Activity/Source	Peak Daily Emissions (lbs/day)				
	CO	VOC	NO_X	SO_X	PM10
Construction Equipment	15.8	1.7	9.0	0.8	0.5
Vehicle Emissions	15.0	1.7	4.6	< 0.1	0.1
Fugitive Construction	0.0	0.0	0.0	0.0	71.5
Fugitive Road Dust	0.0	0.0	0.0	0.0	4.3
Total Emissions	**30.8**	**3.4**	**13.6**	**0.8**	**76.4**
SCAQMD Threshold	*550*	*75*	*100*	*150*	*150*
Significant	NO	NO	NO	NO	NO

Notes: "On-Site Other Fugitive PM10" includes fugitive PM10 from storage pile wind erosion.
SCAQMD Threshold = threshold criteria for determining environmental significance of construction activities, as provided in the South Coast Air Quality Management District's 1993 Handbook for Air Quality Analysis.

Operational Emissions

The proposed project involves the installation of air pollution control equipment (i.e., SCR) and will result in a decrease in NO_x emissions from Boiler 10. Based on the most recent emissions, Boiler 10 emits about 101,000 lbs/yr (about 277 lbs/day) of NOx. The NOx emissions from Boiler 10 following installation of the SCR are expected to be about 35,000 lbs/year (96 lbs per day), resulting in a NOx emission reduction of about 181 lbs/day. The ammonia storage tank will be a pressurized tank, so no emissions are expected from the storage tank. The project will involve the transport of aqueous ammonia to the site. A maximum of one truck per day will be required to transport the aqueous ammonia to the site. The estimated emissions from the truck are as follows: (1) 2.6 lbs/day of CO; (2) 0.3 lb/day of VOC; (3) 3.1 lbs/day of NO_x; (4) <0.1 lb/day of SO_x; and (5) 2.1 lbs/day of PM10 (see Appendix A for detailed calculations). Catalyst in the SCR Unit will require replacement once every five to ten years. Only one truck per day would be expected during the infrequent removal and replacement of SCR Unit catalyst. Therefore, a maximum of one truck per day is expected associated with the proposed project (i.e., either ammonia or catalyst).

The estimated increase in emissions are below the SCAQMD thresholds, therefore no significant impacts on air quality are expected during operations. The project emission increases are limited to emissions from a maximum of one truck per day. Further, the proposed project is expected to result in a substantial NOx emission decrease of about 181 lbs/day providing an air quality benefit; therefore, no cumulative air quality impacts are expected. The proposed project is required to comply with ConocoPhillip's Rule 2009.1 Compliance Plan and, therefore, assists the Refinery is complying with applicable air quality rules and regulations. Thus, the proposed project will not diminish an existing air quality rule or future compliance requirement.

Toxic Air Contaminants Impacts

3. d) The proposed project will increase the use of ammonia at the Carson Plant and potentially generate ammonia emissions through ammonia slip in Boiler 10. Ammonia is regulated as a toxic air contaminant under SCAQMD Rule 1401, New Source Review for Toxic Air Contaminants. A Tier 1 screening health risk assessment was prepared for the proposed emissions increase using the SCAQMD Rule 1401 Risk Assessment Procedures (Version 6.0). The ammonia emission estimates were calculated using the SCAQMD default emission factor for ammonia slip [9.1 pounds per million standard cubic feet (lb/mmscf)] times the maximum rated heat capacity of Boiler 10 (352 mmBtu/hr) (see Appendix A). The annual estimated emissions of 23,900 lbs/year were compared to the chronic screening level (51,700 lbs/year). The chronic screening level of 51,700 lbs/year is the highest level of ammonia emissions that can be emitted before triggering a chronic hazard index of 1.0. The estimated ammonia emissions are below the yearly screening level for ammonia; therefore, the chronic hazard index for the proposed project is less than 1.0. Therefore, no significant adverse chronic health impacts are expected due to exposure to ammonia.

A screening health risk assessment was also prepared to evaluate the potential for acute health impacts. The one-hour ammonia emission estimates (2.72 lbs/hour) were compared to the acute screening level for ammonia (8.57 lbs/hour). The acute screening level of 8.57 lbs/hour is the highest level of ammonia emissions that can be emitted before triggering an acute hazard index of 1.0. The estimated hourly ammonia emission rate is below the hourly screening threshold for ammonia; therefore, the acute hazard index for the proposed project is less than 1.0. Therefore, no significant adverse acute health impacts are expected due to exposure to ammonia.

Odors

3. e) The proposed project is not expected to result in an increase in odors. Ammonia can have a strong odor; however, the proposed project is not expected to generate substantial ammonia emissions, since the project will use aqueous ammonia, and the ammonia will be stored in an enclosed pressurized tank. The Refinery maintains a 24-hour environmental surveillance effort, which helps to minimize the frequency and magnitude of odor events. No odors are expected from the new equipment. The use of BACT also reduces the emissions of compounds that could produce odor impacts. Potential odor impacts from the proposed project are not expected to be significant.

3.3 Mitigation Measures

No mitigation measures are required for the proposed project since no significant adverse impacts to air quality are expected.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
4.	**BIOLOGICAL RESOURCES.** Would the project:			
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☑
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☑
c)	Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☑
f)	Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.?	☐	☐	☑

4.1 Significance Criteria

The impacts on biological resources will be considered significant if any of the following criteria apply:

The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.

The project interferes substantially with the movement of any resident or migratory wildlife species.

The project adversely affects aquatic communities through construction or operation of the project.

4.2 Environmental Setting and Impacts

4. a), b), c), d), e), and f). The proposed project would be located entirely within the existing boundaries of the Carson Plant, which has already been developed, therefore, no conflict with local, regional or state Conservation Plans are expected. The area contains industrial activities and does not support riparian habitat, federally protected wetlands, or migratory corridors. Based on a review of California Natural Diversity Database maps for the project area, there are no sensitive, threatened, or endangered plant or animal species in the immediate vicinity of the Carson Plant. (SCAQMD, 2001).

4.3 Mitigation Measures

No mitigation measures are required since no significant adverse impacts to biological resources are expected.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
5.	**CULTURAL RESOURCES.** Would the project:			
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☑

c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☑
d)	Disturb any human remains, including those interred outside a formal cemeteries?	☐	☐	☑

5.1 Significance Criteria

Impacts to cultural resources will be considered significant if:

The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.

Unique paleontological resources are present that could be disturbed by construction of the proposed project.

The project would disturb human remains.

5.2 Environmental Setting and Impacts

5. a), b), c), and d) The proposed project will result in minor ground-disturbing activities, but no significant adverse impacts to equipment and structures over 50 years of age, which may be culturally significant, are anticipated to occur. No existing structures at the Carson Plant are considered architecturally or historically significant, as defined under CEQA Guidelines §15064.5, i.e., no structures are eligible for listing in the California Register of Historical Resources or included in a local register of historic resources. The entire Carson Plant site has been previously graded and developed. The larger Carson Plant structures and equipment are supported on existing concrete foundations. The SCR Unit and storage tank will be constructed in the center of the plant and surrounded by operating units (see Figure 3). No adverse impacts to cultural resources are expected since no known cultural resources are located within the Plant where the proposed new units will be constructed.

5.3 Mitigation Measures

The impacts of the proposed project on cultural resources are less than significant so that no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
6.	**ENERGY.** Would the project:			
a)	Conflict with adopted energy conservation plans?	☐	☐	☑
b)	Result in the need for new or substantially altered power or natural gas utility systems?	☐	☐	☑
c)	Create any significant effects on local or regional energy supplies and on requirements for additional energy?	☐	☑	☐
d)	Create any significant effects on peak and base period demands for electricity and other forms of energy?	☐	☑	☐
e)	Comply with existing energy standards?	☐	☐	☑

6.1 Significance Criteria

The impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

The project conflicts with adopted energy conservation plans or standards.

The project results in substantial depletion of existing energy resource supplies.

An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.

The project uses non-renewable resources in a wasteful and/or inefficient manner.

6.2 Environmental Setting and Impacts

6. a) The proposed project is not expected to conflict with an adopted energy conservation plan because there is no known energy conservation plan that would apply to this proposed project. Further, although there is a slight energy penalty for installing SCR equipment, the proposed project is not expected to substantially increase the Refinery's energy demand.

6. b), c), d), and e). The Carson plant is currently served by Southern California Edison (SCE) for electricity supply. No significant increase in electricity is expected during the two-month construction period because most of the equipment is powered by diesel fuel. The diesel fuel use will be minor during the short construction period. Therefore, no significant impacts on energy are expected during the construction period.

The SCR unit requires a minimal amount of energy to operate. The only equipment requiring additional energy will be a pump to supply liquid ammonia to the SCR, and a vaporization unit to supply ammonia vapor to the SCR unit. These have relatively small motors, and no additional electrical use over existing electrical use at the plant is expected. The electrical requirement can be met with existing electrical supply facilities. SCE supplies the electricity to the facility. SCE supplies more than 101,000 gigawatt hours of electricity a year to their service area. SCE will be able to annually increase its output, and projects over 121,000 megawatts will be available in 2012 (CEC, 2002). Sufficient electrical supplies are available from SCE to handle the electricity use from the proposed project.

The proposed installation of an SCR and ammonia tank is not expected to increase the demand for natural gas or refinery fuel gas at the Carson Plant.

6.3 Mitigation Measures

The impacts of the proposed project on energy resources are less than significant so that no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
7. GEOLOGY AND SOILS. Would the project:			
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☑
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☑
• Strong seismic ground shaking?	☐	☑	☐
• Seismic–related ground failure, including liquefaction?	☐	☑	☐
• Landslides?	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☑	☐
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑

d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☑

7.1 Significance Criteria

The impacts on the geological environment will be considered significant if any of the following criteria apply:

Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.

Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.

Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.

Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

7.2 Environmental Setting and Impacts

7.a). The City of Carson is located within a seismically active region. The most significant potential geologic hazard at the Carson Plant is estimated to be seismic shaking from future earthquakes generated by active or potentially active faults in the region. Table 3 identifies those faults considered important to the project site in terms of potential for future activity. Seismic records have been available for the last 200 years, with improved instrumental seismic records available for the past 50 years. Based on a review of earthquake data, most of the earthquake epicenters occur along the Whittier-Elsinore, San Andreas, Newport-Inglewood, Malibu-Santa Monica-Raymond Hills, Palos Verdes, Sierra Madre, San Fernando, Elysian Park-Montebello, and Torrance- faults (Jones and Hauksson, 1986). All these faults are elements of the San Andreas Fault system. Past experience indicates that there has not been any substantial damage, structural or otherwise to the Refinery as a result of earthquakes. Table 4 identifies the historic earthquakes over magnitude 4.5 in southern California, between 1915 and the present, along various faults in the region.

TABLE 3

MAJOR ACTIVE OR POTENTIALLY ACTIVE FAULTS IN SOUTHERN CALIFORNIA

FAULT ZONE	FAULT LENGTH (Miles)	MAXIMUM CREDIBLE EARTHQUAKE	MAXIMUM ACCELERATION (G)
Malibu-Santa Monica-Raymond Hill	65	7.5	0.49
Newport-Inglewood	25	7.0	0.42
Northridge	12	6.7	0.16
Palos Verdes	20	7.0	0.24
San Andreas	200+	8.25	0.21
San Jacinto	112	7.5	0.11
San Fernando	8	6.8	0.17
Sierra Madre	55	7.3	0.23
Whittier-Elsinore	140	7.1	0.46
Elysian Park – Montebello	15	7.1	0.27

Notes: G = acceleration of gravity.

TABLE 4

SIGNIFICANT HISTORICAL EARTHQUAKES IN SOUTHERN CALIFORNIA

DATE	LOCATION (epicenter)	MAGNITUDE
1915	Imperial Valley	6.3
1925	Santa Barbara	6.3
1920	Inglewood	4.9
1933	Long Beach	6.3
1940	El Centro	6.7
1940	Santa Monica	4.7
1941	Gardena	4.9
1941	Torrance	5.4
1947	Mojave Desert	6.2
1951	Imperial Valley	5.6
1968	Borrego Mountain	6.5
1971	Sylmar	6.4
1975	Mojave Desert	5.2
1979	Imperial Valley	6.6
1987	Whittier	5.9
1992	Joshua Tree	6.3
1992	Landers	7.4
1992	Big Bear	6.5
1994	Northridge	6.7
1999	Hector Mine	7.1

Sources: Bolt (1988), Jennings (1985), Gere and Shah (1984), Source Fault Hazard Zones in California (1988), Yanev (1974), and personnel communication with the California Division of Mines and Geology.

Whittier-Elsinore Fault Zone: The Whittier-Elsinore Fault is located about 7.5 miles northeast of the site. The Whittier fault is one of the more prominent structural features in the Los Angeles Basin. It extends from Turnbull Canyon near Whittier, southeast to the Santa Ana River, where it merges with the Elsinore fault. Yerkes (1972) indicated that vertical separation on the fault in the upper Miocene strata increases from approximately 2,000 feet at the Santa Ana River northwestward to approximately 14,000 feet in the Brea-Olinda oil field. Farther to the northwest, the vertical separation decreases to approximately 3,000 feet in the Whittier Narrows of the San Gabriel River.

The fault also has a major right-lateral strike slip component. Yerkes (1972) indicates streams along the fault have been deflected in a right-lateral sense from 4,000 to 5,000 feet. The fault is capable of producing a maximum credible earthquake event of about magnitude 7.0 every 500 to 700 years.

San Andreas Fault Zone: The San Andreas fault is located on the north side of the San Gabriel Mountains trending east-southeast as it passes the Los Angeles Basin. This fault is recognized as the longest and most active fault in California. It is generally characterized as a right-lateral strike-slip fault which is comprised of numerous sub-parallel faults in a zone over two miles wide. There is a high probability that southern California will experience a magnitude 7.0 or greater earthquake along the San Andreas or San Jacinto fault zones, which could generate strong ground motion in the project area. There is a five to twelve percent probability of such an event occurring in southern California during any one of the next five years and a cumulative 47 percent chance of such an event occurring over a five year period (Reich, 1992).

The Newport-Inglewood Fault Zone: The Newport-Inglewood fault is a major tectonic structure within the Los Angeles Basin. This fault is best described as a structural zone comprising a series of echelon and sub-parallel fault segments and folds. The faults of the Newport-Inglewood uplift in some cases exert considerable barrier influence upon the movement of subsurface water (DWR, 1961). Offsetting of sediments along this fault usually is greater in deeper, older formations. Sediment displacement is less in younger formations. The Alquist-Priolo Act has designated this fault as an earthquake fault zone. The purpose of designating this area as an earthquake fault zone is to mitigate the hazards of fault rupture by prohibiting building structures across the trace of the fault. This fault poses a seismic hazard to the Los Angeles area (Toppozada, et al., 1988, 1989), although no surface faulting has been associated with earthquakes along this structural zone during the past 200 years. Since this fault is located within the Los Angeles Metropolitan area, a major earthquake along this fault would produce more destruction than a magnitude 8.0 on the San Andreas fault. The largest instrumentally recorded event was the 1933 Long Beach earthquake, which occurred on the offshore portion of the Newport-Inglewood structural zone with a magnitude of 6.3. A maximum credible earthquake of magnitude 7.0 has been assigned to this fault zone (Yerkes, 1985).

Malibu-Santa Monica-Raymond Hills Fault Zone: The Raymond Hills fault is part of the fault system that extends from the base of the San Gabriel Mountains westward to beyond the Malibu coast line. The fault has been relatively quiet, with no recorded seismic events in historic time; however, recent studies have found evidence of ground rupture within the last 11,000 years (Triad, 1995).

The Palos Verdes Fault Zone: The Palos Verdes fault extends for about 50 miles from the Redondo submarine canyon in Santa Monica Bay to south of Lausen Knoll and is responsible for the uplift of the Palos Verdes Peninsula. This fault is both a right-lateral strike-slip and reverse separation fault. The Gaffey anticline and syncline are reported to extend along the northwestern portion of the Palos Verdes hills. These folds plunge southeast and extend beneath recent alluvium east of the hills and into the San Pedro Harbor, where they may affect movement of ground water (DWR, 1961). The probability of a moderate or major earthquake along the Palos Verdes fault is low compared to movements on either the Newport-Inglewood or San Andreas faults (Los Angeles Harbor Department, 1980). However, this fault is capable of producing strong to intense ground motion and ground surface rupture. This fault zone has not been placed by the California State Mining and Geology Board into an Alquist-Priolo special studies zone.

Sierra Madre Fault System: The Sierra Madre fault system extends for approximately 60 miles along the northern edge of the densely populated San Fernando and San Gabriel valleys (Dolan, et al., 1995) and includes all faults that have participated in the Quaternary uplift of the San Gabriel Mountains. The fault system is complex and appears to be broken into five or six segments each 10 to 15 miles in length (Ehlig, 1975). The fault system is divided into three major faults by Dolan, et al. (1995), including the Sierra Madre, the Cucamonga and the Clamshell-Sawpit faults. The Sierra Madre fault is further divided into three minor fault segments the Azusa, the Altadena and the San Fernando fault segments. The Sierra Madre fault is capable of producing a 7.3 magnitude fault every 805 years (Dolan, et al., 1995).

San Fernando Fault: The westernmost segment of the Sierra Madre fault system is the San Fernando segment. This segment extends for approximately 12 miles beginning at Big Tujunga Canyon on the east to the joint between the San Gabriel Mountains and the Santa Susana Mountains on the west (Ehlig, 1975). The 1971 Sylmar earthquake occurred along this segment of the Sierra Madre fault system, resulting in a 6.4 magnitude fault. Dolan, et al. (1995) indicates the San Fernando fault segment is capable of producing a 6.8 magnitude fault every 455 years.

Elysian Park-Montebello System: The Elysian Park fault is a blind thrust fault system, i.e., not exposed at the surface, whose existence has been inferred from seismic and geological studies. The system as defined by Dolan, et al. (1995) comprises two distinct thrust fault systems; 1) an east-west-trending thrust ramp located beneath the Santa Monica Mountains; and 2) a west-northwest-trending system that extends from Elysian Park Hills through downtown Los Angeles and southeastward beneath the Puente Hills. The Elysian Park thrust is capable of producing a magnitude 7.1 earthquake every 1,475 years.

Torrance-Fault Zone: The Torrance- fault has been reported to be a potentially destructive, deeply buried fault, which underlies the Los Angeles Basin. Kerr (1988) has reported this fault as a low-angle reverse or thrust fault. This proposed fault could be interacting with the Palos Verdes hills at depth. Little is known about this fault, and its existence is inferred from the study of deep earthquakes. Although information is still too preliminary to be able to quantify the specific characteristics of this fault system, this fault appears to be responsible for many of the small to moderate earthquakes within Santa Monica Bay and easterly into the Los Angeles area.

This fault itself should not cause surface rupture, only ground shaking in the event of an earthquake.

In addition to the known surface faults, shallow-dipping concealed "blind" thrust faults have been postulated to underlie portions of the Los Angeles Basin. Because there exist few data to define the potential extent of rupture planes associated with these concealed thrust faults, the maximum earthquake that they might generate is largely unknown.

No faults or fault-related features are known to exist at the project site. The site is not located in any Alquist-Priolo Earthquake fault zone and is not expected to be subject to significant surface fault displacement. Therefore, no significant impacts to the proposed project facilities are expected from seismically-induced ground rupture.

Based on the historical record, it is highly probable that earthquakes will affect the Los Angeles region in the future. Research shows that damaging earthquakes will occur on or near recognized faults which show evidence of recent geologic activity. The proximity of major faults to the Carson Plant increases the probability that an earthquake may impact the Carson Plant. There is the potential for damage in the event of an earthquake. Impacts of an earthquake could include structural failure, spill, etc. The hazards of a release during an earthquake are addressed in the "8. Hazards and Hazardous Materials" section below.

New structures must be designed to comply with the Uniform Building Code Zone 4 requirements since the proposed project is located in a seismically active area. The City of Carson is responsible for assuring that the proposed project complies with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The Uniform Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

The Carson Plant will be required to obtain building permits, as applicable, for all new structures at the site. The Carson Plant shall submit building plans to the City of Carson for review. The Carson Plant must receive approval of all building plans and building permits to assure compliance with the latest Building Code adopted by the City prior to commencing construction activities. The issuance of building permits from the local agency will assure compliance with the Uniform Building Code requirements which include requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since the project will be required to comply with the Uniform Building Codes.

7. b) Topography and Soils

The proposed project is located within the confines of the existing Carson Plant. Concrete pavement presently supports several of the refinery structures and equipment. Most of the Carson Plant roads, including all high traffic roads have been paved. Some portions of the site have also been landscaped. The site is relatively flat. No unstable earth conditions, changes in topography or changes in geologic substructures are anticipated to occur with the project because of the limited grading and excavation involved. No significant impacts on topography and soils are expected.

The proposed project involves the addition of new air pollution control equipment to existing facilities, so no major grading/trenching is expected to be required, and should be limited to minor foundation work, and minor trenching for piping. Since the proposed project will occur within already developed facilities, no significant impacts related to soil erosion are expected. No significant change in topography is expected because little grading/trenching is required that could substantially increase wind erosion or runoff from affected sites.

The proposed project will be required to comply with SCAQMD Rule 403 – Fugitive Dust, which imposes requirements to minimize dust emissions associated with wind erosion. Relative to operation, no change in surface runoff is expected because surface conditions will remain relatively unchanged. Further, surface runoff is minimized because surface runoff at all facilities is typically captured, treated, and released to the public sewerage system or storm drain system.

7. c) and d) Liquefaction.

Liquefaction would most likely occur in unconsolidated granular sediments that are water saturated less than 30 feet below ground surface (Tinsley et al., 1985). Based on the latest seismic hazards maps developed under the Seismic Hazards Mapping Act, small portions of the Carson Plant are located in an area of historic, or have the potential for, liquefaction (California Division of Mines and Geology, Map of Seismic Hazard Zones, Long Beach Quadrangle). A small section of the southwest portion of the Carson Plant has conditions conducive to liquifaction. The new SCR unit will not be located in the area identified for potential liquifaction. There is no evidence of expansive soils at the site. The issuance of building permits from the local agency will assure compliance with the Uniform Building Code requirements, which include requirements for building within potential liquefaction zones. No significant impacts from liquefaction are expected since the project will be required to comply with the Uniform Building Codes.

7. e) Waste Discharge The proposed project is expected to generate a minimal amount of additional wastewater discharged by the Carson Plant. The Carson Plant discharges wastewater to the local sewer system under an Industrial Wastewater Discharge Permit. The Carson Plant, or the proposed project, will not use septic tanks or alternative wastewater disposal systems, therefore, no significant impacts on soils from alternative wastewater disposal systems are expected

Mitigation Measures

No mitigation measures are required for the construction/operation of the project since no significant adverse impacts to geology or soils are expected.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
8.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:			
a)	Create a significant hazard to the public or the environment through the routine transport, use, disposal of hazardous materials?	☐	☑	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☑	☐
c)	Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☑
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑

g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☑
i)	Significantly increased fire hazard in areas with flammable materials?	☐	☐	☑

8.1 Significance Criteria

The impacts associated with hazards will be considered significant if any of the following occur:

Non-compliance with any applicable design code or regulation.

Non-conformance to National Fire Protection Association standards.

Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.

Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

8. a), and b) Potential Hazards

The ConocoPhillips Carson Plant uses a number of hazardous materials at the site to manufacture petroleum products. The major types of public safety risks consist of impacts from toxic substance releases, fires, and explosions. Toxic substances handled by the Carson Plant include hydrogen sulfide, ammonia, regulated flammables like propane and butane, and petroleum products like gasoline, fuel oils, and diesel. Shipping, handling, storing, and disposing of hazardous materials inherently poses a certain risk of a release to the environment.

Exposure to a toxic gas cloud is the potential hazard associated with the proposed project. Toxic gas clouds are releases of volatile chemicals (e.g., ammonia, chlorine, and hydrogen sulfide) that could form a cloud and migrate off-site, thus exposing individuals. "Worst-case" conditions tend to arise when very low wind speeds coincide with accidental release, which can allow the chemicals to accumulate rather than disperse.

The proposed SCR system requires ammonia to react with NOx emissions in the exhaust gases to reduce the NOx emissions. Therefore, the proposed project will result in the transport, storage

and handling of aqueous ammonia (19 percent ammonia). Along with the use and handling of aqueous ammonia come the hazards associated with its use. The hazards associated with the use of aqueous ammonia are reduced through design, operations, maintenance, regulatory, and administrative controls. Design standards are developed through industry groups, various independent institutes, and government agencies. Operational controls include automatic devices to control and monitor process variables and documented procedures for manual operations. Routine preventative maintenance and inspections of critical equipment help to prevent unscheduled process shutdowns and potential equipment failures. Administrative controls include operator training, documentation of equipment inspection and maintenance history, and procurement prequalification controls over contractors and vendors.

ConocoPhillips adheres to and will continue to adhere to the following safety design and process standards in the operations of the equipment for the existing facility:

- The California Code of Regulations, Title 8 – contains minimum requirements for equipment design.

- Industry Standards and Practices – codes for design of various equipment, including the American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), and National Fire Protection Association (NFPA).

The standards noted above and other applicable design standards will govern the design of mechanical equipment such as pressure vessels, tanks, pumps, piping, and compressors. No further analysis of these standards is needed in this project hazard analysis. Adherence to codes will be verified by the City's building inspector before the proposed project's new or modified facilities and equipment become operational.

The proposed project includes the addition of one 10,000-gallon pressurized storage tank to service the new SCR unit. The aqueous ammonia at a concentration of 19 percent would be delivered to the facility and stored on-site. Nineteen percent ammonia is being used to reduce the inherent risk of handling ammonia. Use and transport of anhydrous ammonia involves greater risk than aqueous ammonia because it is stored and transported under pressure. In the event of a leak or rupture of a tank, anhydrous ammonia is released and vaporizes into the gaseous form, which is its normal state at atmospheric pressure and produces a toxic cloud. Aqueous ammonia is a liquid at ambient temperatures and gas is only produced when a liquid pool from a spill evaporates.

Aqueous ammonia at concentrations less than 20 percent is not considered a toxic substance under federal RMP requirements. However, under current California Office of Emergency Services regulations implementing the CalARP requirements, there is no threshold concentration of aqueous ammonia for exclusion from the program (California Health and Safety Code Section 2770.1)

Hazard Analysis

The onsite storage and handling of the ammonia creates the possibility of an accidental spill and release of aqueous ammonia, which would evaporate and present a potential offsite public exposure. To further evaluate the potential for significant adverse environmental impacts due to an accidental release of aqueous ammonia, various scenarios were evaluated that could occur during the onsite storage, transportation, and transfer of ammonia. These scenarios and their consequences are discussed in detail below.

Transportation Release Scenario

ConocoPhillips will receive ammonia from a local ammonia supplier located in the greater Los Angeles area. Deliveries of aqueous ammonia would be made to the facility by tanker truck via public roads. The maximum capacity of a tanker truck is 6,000 gallons. Based on the onsite storage capacity and consumption of ammonia, delivery frequency from the supplier to the facility would be six trucks per month (about 72 trucks per year). Regulations for the transport of hazardous materials by public highway are described in 49 Code of Federal Regulations 173 and 177.

Although trucking of aqueous ammonia and other hazardous materials is regulated for safety by the U.S. Department of Transportation, there is a possibility that a tanker truck could be involved in an accident spilling its contents. The factors that enter into accident statistics include distance traveled and type of vehicle or transportation system. Factors affecting automobiles and truck transportation accidents include the type of roadway, presence of road hazards, vehicle type, maintenance and physical condition, and driver training. A common reference frequently used in measuring risk of an accident is the number of accidents per million miles traveled. Complicating the assessment of risk is the fact that some accidents can cause significant damage without injury or fatality.

Every time hazardous materials are moved from the site of generation, opportunities are provided for accidental (unintentional) release. A study conducted by the U.S. EPA indicates that the expected number of hazardous materials spills per mile shipped ranges from one in 100 million to one in one million, depending on the type of road and transport vehicle used. The U.S. EPA analyzed accident and traffic volume data from New Jersey, California, and Texas, using the Resource Conservation and Recovery Act Risk/Cost Analysis Model and calculated the accident involvement rates presented in Table 5. This information was summarized from the Los Angeles County Hazardous Waste Management Plan (Los Angeles County, 1988).

In the study completed by the U.S. EPA, cylinders, cans, glass, plastic, fiber boxes, tanks, metal drum/parts, and open metal containers were identified as usual container types. For each container type, the expected fractional release en route was calculated. The study concluded that the release rate for tank trucks is much lower than for any other container type (Los Angeles County, 1988).

TABLE 5

TRUCK ACCIDENT RATES FOR CARGO ON HIGHWAYS

Highway Type	Accidents Per 1,000,000 miles
Interstate	0.13
U.S. and State Highways	0.45
Urban Roadways	0.73
Composite*	0.28

Source: U.S. Environmental Protection Agency, 1984.

* Average number for transport on interstates, highways, and urban roadways.

The accident rates developed based on transportation in California were used to predict the accident rate associated with trucks transporting aqueous ammonia to the facility. Assuming an average truck accident rate of 0.28 accidents per million miles traveled (Los Angeles County, 1988), the estimated accident rate associated with transporting aqueous ammonia for this project is 0.00101, or about one accident every 992 years.

The actual occurrence of an accidental release of a hazardous material cannot be predicted. The location of an accident or whether sensitive populations would be present in the immediate vicinity also cannot be identified. In general, the shortest and most direct route that takes the least amount of time would have the least risk of an accident. Hazardous material transporters do not routinely avoid populated areas along their routes, although they generally use approved truck routes that take population densities and sensitive populations into account.

The hazards associated with the transport of regulated (CCR Title 19, Division 2, Chapter 4.5 or the CalARP requirements) hazardous materials, including aqueous ammonia, would include the potential exposure of numerous individuals in the event of an accident that would lead to a spill. The major route for aqueous ammonia to reach the facility is from the 405 freeway to Alameda Boulevard to Sepulveda Boulevard which would generally avoid sensitive receptors. Factors such as amount transported, wind speed, ambient temperatures, route traveled, distance to sensitive receptors are considered when determining the consequence of a hazardous material spill.

In the unlikely event that the tanker truck would rupture and release the entire 6,000 gallons of aqueous ammonia, the ammonia solution would have to pool and spread out over a flat surface in order to create sufficient evaporation to produce a significant vapor cloud. For a road accident, the roads are usually graded and channeled to prevent water accumulation and a spill would be channeled to a low spot or drainage system, which would limit the surface area of the spill and the subsequent toxic emissions. Additionally, the roadside surfaces may not be paved and may absorb some of the spill. Without this pooling effect on an impervious surface, the spilled ammonia would not evaporate into a toxic cloud and impact residences or other sensitive receptors in the area of the spill.

Based on the improbability of an ammonia tanker truck accident with a major release, its potential severity if it did occur, the conclusion of this analysis is that potential impacts due to accidental release of ammonia during transportation are less than significant.

Ammonia Tank Rupture Scenario

Under this ammonia storage tank release scenario, impacts were calculated for an accidental release of 19 percent aqueous ammonia into a containment dike (see Appendix B for hazard analysis). A series of release and dispersion calculations were completed to quantify the dispersion of ammonia gas evolving from a pool of aqueous ammonia following a release from a storage tank on the premises of the ConocoPhillips Carson Plant. The dispersion calculations were performed until specific ammonia concentrations were reached in the downwind direction. Two ammonia concentrations were chosen for evaluation:

ERPG-2 (200 ppm): The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their ability to take protective action.

ERPG –3 (1,000 ppm): The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.

The hazard zones resulting from liquid releases into the storage containment area were evaluated to determine the extent and location of the gas cloud containing ammonia. Note that the storage containment area is also referred to in Appendix B as the bund. Details on the accidental release modeling assumptions are included in Appendix B. The dispersion analysis was completed for a range of impoundment sizes ranging from 100 to 1,000 feet. The following conclusions were drawn from this analysis:

1. Under worst-case atmospheric conditions (e.g., low winds and stable air), the lowest ammonia concentration of interest (ERPG-2 level of 200 ppm), does not reach the closest property line. The liquid impounding area would have to be much larger than 1,000 square feet (ft^2) to exceed the ERPG-2 level.

2. Under all other atmospheric conditions (e.g., high winds, less stable atmospheres), the distances to the 200 ppm ammonia concentration level would be shorter.

3. Under no condition does the 1,000 ppm ammonia concentration level extend further than 45 feet from the tank. This distance is always well within the Carson Plant property boundaries.

Based on the above, as long as the containment area is no larger than 1,000 ft^2 a release of ammonia from the tank would remain within about 45 feet from the tank, which is well within the boundaries of the Carson Plant (see Figure 2). ConocoPhillips is proposing a concrete spill containment of 18 feet by 18 feet, for a total of 324 square feet. Therefore, the containment area

is less than 1,000 ft^2 and a release from the ammonia tank is not expected to result in a significant adverse hazard impact.

The modeling analysis completed above for the ammonia tank release would also apply to a release of ammonia when the tank truck is unloaded and transferred to the storage tank. Containment facilities are provided at the truck loading rack to contain ammonia in the event of a spill during transfer activities. The ammonia concentration will be less than the ERPG 2 level of 200 ppm at the facility boundaries, as long as the containment area is limited to 1,000 ft^2.

8. c) No existing or proposed schools are located within one-quarter mile of the existing Refinery, so that no significant adverse impacts are expected to a school.

Other Hazard Issues

8. d) The proposed project is not located on a site which is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, no significant hazards related to hazardous materials at the site on the environment or to the public are expected.

8. e) and f) The proposed project site is not within an airport land use plan or within about five miles of a public or private airport. Therefore, no safety hazards are expected from the proposed project on any airports in the region.

8. g) The proposed project is not expected to interfere with an emergency response plan or emergency evacuation plan. The proposed project will result in modifications to the existing Carson Plant. All construction activities will occur within the confines of the existing Carson Plant so that no emergency response plans should be impacted. ConocoPhillips has implemented emergency response plans at its facility, but no modifications to the plans are expected as a result of the proposed project. The proposed project is not expected to alter the route that employees would take to evacuate the site, as the evacuation routes generally directs employees outside of the main operating portions of the Carson Plant. The proposed project is not expected to impact any emergency response plans.

8. h) and i) The proposed project will not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees. The Refinery will continue to use and produce flammable materials. The proposed project will not increase the use of flammable materials at the site No substantial or native vegetation exists within the operational portions of the Refinery. Therefore, no significant increase in fire hazards is expected at the Refinery associated with the proposed project.

8.3 Mitigation Measures

No mitigation is required since no significant adverse hazard impacts have been identified.

A variety of safety laws and regulations have been in existence for many years to reduce the risk of accidental releases of chemicals at industrial facilities. The Occupational Safety and Health Administration (OSHA) passed the Process Safety Management of Highly Hazardous Chemicals

rule in 1992 (29 CFR 910.119). This rule was designed to address the prevention of catastrophic accidents at facilities handling hazardous substances, in excess of specific threshold amounts, through implementation of Process Safety Management (PSM) systems for protection of workers. A major PSM requirement is the performance of process hazard analyses to identify potential process deviations and implement of improve safeguards to prevent accidents.

A federal EPA Risk Management Program (RMP) and a more stringent state RMP, the California Accidental Release Program (CalARP), were developed for the Carson Plant and submitted to appropriate agencies in 1999. The RMP's contain hazard assessments of both worst-case and more credible accidental release scenarios, an accident prevention program, and an emergency response program. The Los Angeles County Fire Department administers the RMP for the Carson Plant. In addition, operators of the Carson Plant have prepared an emergency response manual, which describes the emergency response procedures that would be followed in the event of any of several release scenarios along with the responsibilities of key personnel.

The Carson Plant adheres to the following safety design and process standards:

- The California Health and Safety Code Fire Protection specifications.
- The design standards for petroleum refinery equipment established by American Petroleum Institute, American Society of Mechanical Engineers, the American Institute of Chemical Engineers, the American National Standards Institute, and the American Society of Testing and Materials.
- The applicable Cal-OSHA requirements.
- The Carson Plant maintains its own emergency response capabilities, including onsite equipment and trained emergency response personnel who are available to respond to emergencies anywhere within the Carson Plant.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
9.	**HYDROLOGY AND WATER QUALITY.** Would the project:			
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☑

b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☑
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☑	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☑	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☑
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☑
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☑
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☑
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☑

k)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☑
l)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
m)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑
n)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑
o)	Require in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑

9.1 Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Quality:

The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.

The project will cause the degradation of surface water substantially affecting current or future uses.

The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.

The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.

The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.

The project results in alterations to the course or flow of floodwaters.

Water Demand:

The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.

The project increases demand for water by more than five million gallons per day.

9.2 Environmental Setting and Impacts

9. a), f), k), l) and o) Wastewater Generation.

The Carson Plant currently generates process wastewater, high salts water, treated sour water, and storm water. Wastewater is treated in the wastewater treatment system, which includes American Petroleum Institute (API) separators to remove oil and dissolved air floatation units for additional removal of oil and particulates. The treated process wastewater, high salts water and treated sour water are discharged to the Los Angeles County Sanitation Districts (LACSD) in accordance with the LACSD industrial wastewater permit discharge limits. The treated storm water and treated high salts water are discharged to the Dominguez Channel in accordance with a National Pollutant Discharge Elimination System (NPDES) permit discharge limits.

The SCR unit does not use water as part of the NO_x control process. Except for water used periodically to clean equipment, the proposed project will not result in an increase in wastewater generated or discharged from the Carson Plant. As a result, no significant adverse impacts associated with wastewater discharges are expected.

9. b) and n) Water Demand

Water is primarily provided by an onsite water well. Supplemental water is supplied to the Carson Plant by the Dominguez Water Corporation, who primarily receives water from the Metropolitan Water District and its own wells. As already noted, the SCR unit does not use water as part of the NO_x control process. Therefore, no increase in water use is associated with the proposed project so that no significant adverse impacts on water demand are expected.

A portion of the water used at the ConocoPhillips Carson Plant is supplied by onsite water wells; however, no increase in water demand is expected. Therefore, the proposed project is not expected to result in additional demand for ground water supplies. Consequently, no significant adverse impacts from the proposed project are anticipated for ground water supplies.

9. c), d), e) and m) Surface Water.

Most of the storm water runoff from the Carson Plant is collected in a drainage system, treated, as necessary, and discharged to the Dominguez Channel under the conditions of the existing NPDES permit.

The proposed project is not expected to increase the stormwater runoff from the Carson Plant. The Carson Plant modifications will occur within the existing refinery units and a negligible increase in paved areas is expected. The Stormwater Pollution Prevention Plan will be updated, as necessary, to reflect operational modifications and include additional Best Management Practices, if required. No new storm drainage facilities or expansion of existing storm facilities are expected to be required. Since stormwater discharge or runoff is not expected to change in either volume or water quality, no significant stormwater quality impacts are expected to result from the operation of the proposed project.

9. g), h), i) and j) Flood Hazards

Based on the topography and/or site elevations in relation to the ocean, the proposed project is not expected to result in an increased risk of flood, seiche, tsunami or mud flow hazards. The proposed project would not locate housing within a 100-year flood hazard area. The Carson Plant is not located within a 100-year flood hazard zone so no new equipment would be located within a 100-year flood hazard zone. Therefore, no significant impacts associated with flooding are expected.

9.3 Mitigation Measures

No significant adverse impacts to water quality and supply are expected as a result of the activities associated with the proposed project. Therefore, no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
10.	**LAND USE AND PLANNING.** Would the project:			
a)	Physically divide an established community?	☐	☐	☑
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑

c)	Conflict with any applicable habitat conservation or natural community conservation plan?	☐	☐	☑

10.1 Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by the City of Carson.

10.2 Environmental Setting and Impacts

10. a), b), and c) The proposed modifications to the Carson Plant will be developed entirely within the existing Carson Plant property boundaries. Land use on the Carson Plant property is designated as M3, which is heavy industrial zoning. The proposed project is consistent with the land use designation of heavy industry and manufacturing.

No new property will be acquired for the Carson Plant and there will be no impacts to established communities. Additionally, the proposed project is not expected to conflict with local habitat conservation plans, or natural community conservation plans, as the proposed project site is a previously developed industrial facility. The proposed project will not trigger changes in the current zoning designations at the project site. Based on these considerations, no significant adverse impacts to established residential or natural communities are expected.

The proposed project includes construction at an existing industrial facility. The activities and products produced at the facility for the proposed project are the same as existing activities and products produced. No new land would be required for the project, and no zoning and/or land use changes are required as part of the project.

Land use at the Carson Plant, and in the surrounding vicinity is consistent with the City of Carson General Plan land use designations. Therefore, no significant adverse impacts on land use are expected.

10.3 Mitigation Measures

No significant adverse impacts to land use are expected to occur as a result of construction or operation of the proposed project. Therefore, no mitigation is necessary or proposed.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
11.	**MINERAL RESOURCES.** Would the project:			
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☑
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☑

11.1 Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

> The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
>
> The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

11.2 Environmental Setting and Impacts

11. a) As the proposed project will be limited to modifications within the confines of the existing Carson Plant boundaries, no loss of availability of known mineral resource that would be of value to the region or the residents of the state is expected. No mineral extraction is anticipated to occur during the construction phase of the project.

11. b) The proposed project is not expected to result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

11.3 Mitigation Measures

No significant adverse impacts to mineral resources are expected to occur as a result of the proposed project so no mitigation measures are required.

	Significant Impact	Significant Impact	
12. NOISE. Would the project result in:			
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☑	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☑	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☑	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑
f) For a project within the vicinity of a private airship, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑

12.1 Significance Criteria

Impacts on noise will be considered significant if:

> Construction noise levels exceed the City of Carson's noise ordinance or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.

The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

12.2 Environmental Setting and Impacts

12. a), b) c) and d) The Carson Plant is surrounded by other industrial land uses. Property to the north of the Carson Plant is occupied by the British Petroleum (former ARCO) Los Angeles Refinery. The western boundary of the plant borders vacant property, the northerly portion of which was a former tank farm; farther south is Wilmington Boulevard property. Property across Wilmington Boulevard includes a residential neighborhood to the northwest and commercial uses to the southwest. Land uses to the south of the Carson Plant are heavy industrial. Land south of Lomita Avenue is dominated by port-related activities. Land east of Alameda Street is occupied by a storage tank farm and the Shell (formerly Equilon/Texaco) Refinery.

Construction activity for the proposed project will produce noise as a result of operation of construction equipment. The equipment necessary for construction will comply with ConocoPhillips SP-100-1 Noise Limits for Equipment and Piping which generally limits continuous noise levels to 85 dBA (decibels). Typical sound levels for typical construction equipment are presented in Table 6. The construction equipment associated with the proposed project will be minimal. The construction equipment at the Carson Plant will include an air compressor, backhoe, plate compactor, dump truck and forklifts. The estimated noise level during equipment installation is expected to be an average of about 80 dBA at 50 feet from the center of construction activity. The SCR unit is located near the center portion of the Plant, about 1,000 feet from the property boundaries. The aqueous ammonia tank is located about 1,300 feet from the property boundaries. Using an estimated six dBA reduction for every doubling distance, the noise levels at the property boundaries is estimated to be 55 dBA. Most of the construction noise sources will be located near ground level, so the noise levels are expected to attenuate further than analyzed herein. Noise attenuation due to existing structures and equipment has not been included in the analysis. The closest resident is about 1,800 feet west of the Carson Plant. Noise levels at the residential area are expected to be about 49 dBA, which is below ambient noise levels.

The construction activities that generate noise will be carried out during daytime from Monday to Friday, or as permitted by the local cities or county. Because of the nature of the construction activities, the types, number, operation time and loudness of construction equipment will vary throughout the construction period. As a result, the sound level associated with construction will change as construction progresses. Construction noise sources will be temporary and will cease following construction activities. Noise levels at the closest residential area are not expected to increase during construction activities, i.e., background noise levels in residential areas generally are in the range of 55-65 dBA. The noise levels from the construction equipment are expected to be within the allowable noise levels established by the local noise ordinance for industrial areas which are about 70 dBA. Noise impacts associated with the proposed project construction activities are expected to be less than significant.

TABLE 6

CONSTRUCTION NOISE SOURCES

EQUIPMENT	TYPICAL RANGE (decibels)(1)	ANALYSIS VALUE (decibels)(2)
Truck	82-92	82
Air compressor	85-91	85
Flatbed Truck	84-87	85
Pickup	70-85	70
Tractor Trailer	75-92	85
Cranes	85-90	85
Pumps	68-72	70
Welding Machines	72-77	72

1. Data are modified from U.S. Environmental Protection Agency NTID 300.1, 1972, and City of Long Beach, 1975. Levels are in dBA at 50-foot reference distance. These values are based on a range of equipment and operating conditions.
2. Analysis values are intended to reflect noise levels from equipment in good conditions, with appropriate mufflers, air intake silencers, etc. In addition, these values assume averaging of sound level over all directions from the listed piece of equipment.

Workers exposed to noise sources in excess of 85 dBA are required to participate in a hearing conservation program. Workers exposed to noise sources in excess of 90 dBA for an eight-hour period will be required to wear hearing protection devices that conform to Occupational Safety and Health Administration/National Institute for Occupational Safety and Health (NIOSH) standards. Since the maximum noise levels during construction activities are expected to be 85 decibels or less, no significant impacts to workers during construction activities are expected.

The new equipment being installed as part of the proposed project does not generate noise beyond what currently exists at the facility. Only small pumps are included as part of the proposed project. The project will include installing an SCR Unit and storage tank. No increase in noise is expected from these sources. The new equipment will be located within existing industrial areas where noise is generated by adjacent operational equipment. Therefore, significant noise impacts from the proposed project are not expected.

12. e) and f) The proposed project site is not located within an airport land use plan or within the vicinity of a private airstrip. Further, the Carson Plant is not located within the normal flight pattern of an airport. Thus, the proposed project would not increase the noise levels to people residing or working in the area.

12.3 Mitigation Measures

No significant adverse noise impacts are expected to occur as a result of construction or operation of the proposed project. Therefore, no mitigation is necessary or proposed.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
13.	**POPULATION AND HOUSING.** Would the project:			
a)	Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☑
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☑
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☑

13.1 Significance Criteria

The impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

The demand for temporary or permanent housing exceeds the existing supply.

The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

13.2 Environmental Setting and Impacts

13. a), b) and c) The proposed project would require modifications to the existing Carson Plant and will not involve an increase, decrease or relocation of population. Labor (an estimated 20 employees) for construction is expected to come from the existing labor pool in southern California. Operation of the proposed project is not expected to require any new permanent employees at the Carson Plant. Therefore, construction and operation of the proposed project are not expected to have significant adverse impacts on population or housing, induce substantial population growth, or exceed the growth projections contained in any adopted plans.

13.3 Mitigation Measures

No mitigation measures are required for the construction/operation of the project since no significant adverse impacts to population and housing are expected.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			
a) Fire protection?	☐	☐	☑
b) Police protection?	☐	☐	☑
c) Schools?	☐	☐	☑
d) Parks?	☐	☐	☑
e) Other public facilities?	☐	☐	☑

14.1 Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

14.2 Environmental Setting and Impacts

14. a) ConocoPhillips maintains its own onsite emergency response department at the Carson Plant. Compliance with state and local fire codes is expected to minimize the need for additional fire protection services. The Carson Plant has its own emergency response team, which is supplemented by the County of Los Angeles, to respond to emergency requirements. The Carson Plant maintains a fully trained 24-hour emergency response team; fire-fighting equipment including fire engines and foam pumper trucks or trailers; and maintains manual and automatic fire suppression systems for flammable and combustible materials. Carson Plant staff is trained in accordance with industry standards, and on-site fire training exercises with the County Fire Department staff are conducted.

The proposed project will not increase the requirements for additional or altered fire protection. Fire-fighting and emergency response personnel and equipment will continue to be maintained and operated at the Carson Plant. Close coordination with local fire departments and emergency services also will be continued.

14. b) The City of Carson Police Department is the responding agency for law enforcement needs at the Carson Plant. The Carson Plant is fenced and entry is restricted to authorized individuals. Entry and exit are currently monitored and no additional or altered police protection is expected. The operation of the proposed project will not require additional workers. The Carson Plant is an existing facility with a 24-hour security force for people and property currently in place. All modifications will occur within the confines of the existing Carson Plant. Therefore, no impacts to the local police department are expected related to the proposed project.

14. c), d) and e) The local workforce is expected to fill the short-term construction positions required for this project. No increase in the number of permanent workers is expected at the Carson Plant, therefore, there will be no increase in the local population and thus no impacts are expected to schools, parks, or other public facilities.

14.3 Mitigation Measures

Because no significant adverse impacts to public services are expected as a result of the proposed project, no mitigation is necessary or proposed.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
15.	**RECREATION.**			
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☑
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☑

15.1 Significance Criteria

The impacts to recreation will be considered significant if:

The project results in an increased demand for neighborhood or regional parks or other recreational facilities.

The project adversely effects existing recreational opportunities.

15.2 Environmental Setting and Impacts

15. a) and b) During the construction phase of the proposed project, there would be no significant changes in population densities resulting from the project since construction workers are expected to draw from the existing labor pool in southern California. Additionally, the operation of the new SCR Unit will not require additional workers. Thus, there will be no increase in the use of existing neighborhood and regional parks or other recreational facilities.

The project does not include recreational facilities or require the construction or expansion of existing recreational facilities. No significant adverse impacts to recreational facilities are expected.

15.3 Mitigation Measures

No significant adverse impacts to recreational resources are expected to occur as a result of construction or operation of the proposed project. Therefore, no mitigation is necessary or proposed.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
16.	**SOLID/HAZARDOUS WASTE.** Would the project:			
a)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑
b)	Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☐	☑

16.1 Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occur:

> The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

16.2 Environmental Setting and Impacts

16. a) Non-Hazardous Waste

Construction activities could uncover hydrocarbon-contaminated soils, given the fact that refining, storage and distribution of petroleum products have been conducted at the site over a number of years. Where appropriate, the soil will be recycled if it is considered or classified as a non-hazardous waste. Otherwise the material will need to be disposed of at a hazardous waste facility (see below discussion under hazardous waste).

During operation, the proposed project is not expected to generate significant quantities of solid waste, which are primarily generated from administrative or office activities. The proposed project would not result in an increase in permanent employees at the Carson Plant, so no significant increase in solid waste is expected.

16. b) Hazardous Waste

There are no hazardous waste disposal sites within the southern California area. Hazardous waste generated at the Carson Plant which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Contaminated soil that was determined to be hazardous waste would need to be disposed of at a hazardous waste disposal facility (either in-state or out-of-state). Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern County). Kettleman Hills has an estimated 6.5 million cubic yard capacity and expects to continue receiving wastes for approximately 18 years under its current permit, or for approximately another 24 years with an approved permit modification (Personal Communication, Terry Yarbough, Chemical Waste Management Inc., June 2000). Buttonwillow receives approximately 960 tons of hazardous waste per day and has a remaining capacity of approximately 10.3 million tons. The expected life of the Buttonwillow Landfill is approximately 35 years (Personal Communication, Marianna Buoni, Safety-Kleen (Buttonwillow), Inc., July 2000).

Hazardous waste also can be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada; USPCI, Inc., in Murray, Utah; and Envirosafe Services of Idaho, Inc., in Mountain Home, Idaho. Incineration is provided at the following out-of-state facilities: Aptus, located in Aragonite, Utah and Coffeyville, Kansas; Rollins Environmental Services, Inc., located in Deer Park, Texas and Baton Rouge, Louisiana; Chemical Waste Management, Inc., in Port Arthur, Texas; and Waste Research & Reclamation Co., Eau Claire, Wisconsin.

The proposed project will generate hazardous waste from spent catalyst in the SCR unit. The catalysts have a life expectancy ranging from about five to ten years, depending on the type of catalyst and reaction rate. Spent catalysts (about 13,000 pounds every five to ten years) are expected to be removed or recycled offsite for their heavy metal content. Therefore, no significant impacts to hazardous waste disposal facilities are expected due to the operation of the

proposed project. The facility is expected to continue to comply with federal, state, and local statutes and regulations related to solid and hazardous wastes.

16.3 Mitigation Measures

No significant adverse impacts from waste generated or disposed of are expected and thus no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
17.	**TRANSPORTATION/TRAFFIC.** Would the project:			
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☑	☐
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☑	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☑
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☑
e)	Result in inadequate emergency access or access to nearby uses?	☐	☐	☑
f)	Result in inadequate parking capacity?	☐	☐	☑
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☑

17.1 Significance Criteria

The impacts on transportation/traffic will be considered significant if any of the following criteria apply:

Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D or F for more than one month.

An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.

A major roadway is closed to all through traffic, and no alternate route is available.

There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.

The demand for parking facilities is substantially increased.

Water borne, rail car or air traffic is substantially altered.

Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

17.2 Environmental Setting and Impacts

The Carson Plant site is located on Sepulveda Boulevard between Wilmington Avenue and Alameda Street, south of the San Diego (I-405) freeway. Sepulveda Boulevard was reconstructed recently to provide a fly-over bypass of Alameda Street so that truck and rail traffic can move between the Ports of Long Beach and Los Angeles and the central railyards in downtown Los Angeles.

17 a) and b) Traffic and Circulation

About 20 construction workers will be commuting to the Carson Plant, during peak construction activities. All construction workers will park at the Carson Plant since sufficient parking is available onsite. Construction workers are expected to arrive at the work sites between 6:30 – 7:00 a.m. and depart about 5:30 – 6:00 p.m., which would generally avoid peak hour traffic conditions. The construction activities are expected to avoid peak hour traffic during morning hours, between 7-9 a.m but could impact the evening peak hour (between 4-6 p.m.). Construction activities also are expected to be limited to about a two to three month period. Therefore, the increase in traffic in the area is temporary and will cease following the completion of construction activities. The baseline traffic estimates near the Carson Plant indicate that the local streets carry between 17,500 and 27,000 vehicles per day (SCAQMD, 1993). The projected increase in traffic during the construction phase of the proposed project is well below a one percent increase in traffic on the local streets and at the local intersections. Therefore, the

proposed project's impact on traffic during the construction phase is expected to be less than significant.

Construction will require contractor parking areas, equipment laydown and materials stockpiling areas. Parking for project construction will be in areas within the Carson Plant currently used for contractor parking and sufficient parking is expected to be available so no significant adverse impacts on parking are expected.

The operation of the proposed project will not result in an increase in permanent workers. Truck traffic will increase by six trucks per month (maximum of one truck per day) to deliver aqueous ammonia to the Plant. Based on the above analysis, the additional truck trips would not result in significant adverse traffic impacts. The proposed project impacts on traffic during the operational phase would be considered less than significant.

17 c) The proposed project includes modifications to existing facilities. The project will not involve the delivery of materials via air so no increase in air traffic is expected.

17. d) and e) The proposed project is not expected to increase traffic hazards or create incompatible uses at or adjacent to the site. The proposed project will result in an increase in traffic of about one truck trip per day. The truck will access the Carson Plant using existing streets and access points. No new streets or entrances/exits to the Carson Plant are required. Emergency access at the Carson Plant will not be adversely affected by the proposed project and ConocoPhillips will continue to maintain the existing emergency access gates to the Carson Plant.

17. f) Parking for the construction workers will be provided within the confines of the existing site. No increase in permanent workers is expected. Therefore, the proposed project will not result in significant impacts on parking.

17. g) The proposed project will be constructed within the confines of an existing refinery and is not expected to conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks).

17.3 Mitigation Measures

No significant impacts to transportation/traffic are expected and thus mitigation measures are not required.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
18.	**MANDATORY FINDINGS OF SIGNIFICANCE.**			
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☑
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☑	☐
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐

18. MANDATORY FINDINGS OF SIGNIFICANCE

18. a) The proposed project does not have the potential to adversely affect the environment, reduce or eliminate any plant or animal species or destroy prehistoric records of the past. The proposed project is located at a site that is part of an existing industrial facility, which has been previously disturbed, graded and developed, and this project will not extend into environmentally sensitive areas but will remain within the confines of an existing, operating refinery. For additional information, see Section 4.0 – Biological Resources (page 2-15) and Section 5.0 – Cultural Resources (page 2-18).

18. b) and c) The proposed project is not expected to result in cumulative adverse environmental impacts. The proposed project will result in a decrease in NOx emissions due to the installation of an SCR unit on an existing boiler, providing a local and regional environmental benefit to air quality. The proposed project increases the potential hazards at the Carson Plant by increasing the amount of aqueous ammonia transported to and stored at the Plant. Based on modeling results, an onsite release of ammonia from the proposed storage tank would remain within about 45 feet from the tank, which is well within the boundaries of the

Carson Plant. ConocoPhillips is proposing a concrete spill containment of 18 feet by 18 feet, for a total area of 324 square feet. Therefore, the containment area is less than 1,000 ft^2 and a release from the ammonia tank is not expected to result in a significant adverse hazard impact. Therefore, no significant adverse air quality impacts are expected, either individually or cumulatively. Therefore, the proposed project is not expected to result in significant adverse cumulative impacts pursuant to CEQA Guidelines Section 15130(a)(2).

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ACRONYMS

ABBREVIATION	DESCRIPTION
AB1807	California Toxic Air Contaminants Program (Tanner Bill)
AB2728	Revised Tanner Bill
AB2588	Air Toxic "Hot Spots" Information and Assessment Act
AB2595	California Clean Air Act
ACE2588	Assessment of Chemical Exposure for AB2588
API	American Petroleum Institute
ADT	Average Daily Traffic
AEL	Acute Exposure Limit
AHI	Acute Hazard Index
AHM	Acutely Hazardous Material
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ATIR	Air Toxics Inventory Report
AVR	Average Vehicle Ridership
BACT	Best Available Control Technology
Basin	South Coast Air Basin
BLEVE	Boiling Liquid Expanding Vapor Explosion
BTU	British Thermal Units
BTU/hr	British Thermal Units per hour
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
Caltrans	California Department of Transportation
CalOSHA	California Occupational Safety and Health Administration
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEMS	Continuous Emissions Monitoring System
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHI	Chronic Hazard Index
CMP	Congestion Management Plan
CNEL	Community noise equivalent level
CNS	Central nervous system
CO	Carbon monoxide
CO_2	Carbon dioxide
CPUC	California Public Utilities Commission
CUP	Conditional Use Permit
C4	Butane

DAF	Dissolved Air Flotation
dBA	A-weighted noise level measurement in decibels
DOT	Department of Transportation
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
DWR	California Department of Water Resources
EHS	Extremely Hazardous Substance
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPCRA	USEPA's Emergency Planning and Community Right-to-Know
ERPG	Emergency Response Planning Guideline
^{o}F	Degrees Fahrenheit
FCCU	Fluid Catalytic Cracking Unit
FEMA	Federal Emergency Management Agency
FT-BGS	feet below ground surface
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
G	acceleration of gravity
GWh	Gigawatts per hour
H_2	Hydrogen
HAZOP	Hazardous operation process analysis
HI	Hazard Index
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
IAF	Induced Air Flotation
ICU	Intersection Capacity Utilization
ID #	Identification number
ISCST3	Industrial Source Complex Model Short Term Version 3
^{o}K	degrees Kelvin
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LADPW	Los Angeles Department of Public Works
LAER	lowest achievable emission reduction
LARWQCB	Los Angeles Regional Water Quality Control Board
LEL	Lower explosive limit
lbs	pounds
lbs/hr	pounds per hour
L_{dn}	day-night average sound level
L_{eq}	energy equivalent sound level
LFL	Lower Flammable Limit
Lmax	Maximum sound level
Lmin	Minimum sound level
LOS	Level of Service
LPG	liquefied petroleum gas
Lpk	Peak sound level
MACT	Maximum Achieved Control Technologies

m/s	meters per second
MATES	Multiple Air Toxic Exposure Study
MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
MTBE	methyl tertiary butyl ether
mw	megawatts
MMscf	Million Standard Cubic Feet
MICR	Maximum Incremental Cancer Risk
MWD	Metropolitan Water District of Southern California
N_2	nitrogen
NH_3	Ammonia
NAAQS	National Ambient Air Quality Standards
nanograms/m^3	nanograms per cubic meter
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Agency
NIOSH	National Institute of Occupational Safety and Health
NOP	Notice of Preparation
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSR	New Source Review
OSHA	Occupational Safety and Health Administration
PAH's	Polynuclear Aromatic Hydrocarbons
PCE	passenger car equivalents
pH	potential hydrogen ion concentration
PM10	particulate matter less than 10 microns in diameter
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
PRD	pressure relief devices
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
PSI	Pollutant Screening Index
psi	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch (gauge)
PSM	Process Safety Management Program
RCRA	Resource Conservation and Recovery Act
RECLAIM	Regional Clean Air Incentives Market
REL	Reference exposure level
RFG	reformulated fuels gasoline
RMP	Risk Management Program
RMPP	Risk Management and Prevention Program
RVP	Reid Vapor Pressure
RWQCB	Regional Water Quality Control Board, Los Angeles Region
S	Significant impacts even after mitigation

SB	South Bound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SCR	Selective Catalytic Reduction
SCS	Soil Conservation Service
SO_2	sulfur dioxide
SOx	sulfur oxide
SPCC	Spill Prevention, Control and Countermeasure
SRU	Sulfur Recovery Unit
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T-BACT	Toxics Best Available Control Technology
TACs	toxic air contaminants
TDM	transportation demand management
TDS	total dissolved solids
TPH	total petroleum hydrocarbons
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
USDA	United States Department of Agriculture
USGS	United States Geological Society
ug/l	micrograms per liter
ug/m^3	micrograms per cubic meter
UVCE	Unconfined Vapor Cloud Explosion
V/C	volume to capacity ratio
VOC	volatile organic compounds

GLOSSARY

TERM	DEFINITION
Alkylation	The reaction of low-molecular-weight olefins with an isoparafin to produce a saturated compound of high octane number.
Alkylate	The product of an alkylation process.
Ambient Noise	The background sound of an environment in relation to which all additional sounds are heard
Anhydrous	Free from water.
Aqueous	Formed from water, having a water base.
Aromatics	Hydrocarbons which contain one or more benzene rings.
Barrel	42 gallons.
Blending	One of the final operations in refining, in which two or more different components are mixed together to obtain the desired range of properties in the finished product.
Catalyst	A substance that promotes a chemical reaction to take place but which is not itself chemically changed.
Condensate	Steam that has been condensed back into water by either raising its pressure or lowering its temperature
Cogeneration	A cogeneration unit is a unit that produces electricity.
Cracking	The process of breaking down higher molecular weight hydrocarbons to components with smaller molecular weights by the application of heat; cracking in the presence of a suitable catalyst produces an improvement in product yield and quality over simple thermal cracking.
Crude Oil	Crude oil is "unprocessed" oil, which has been extracted from the subsurface. It is also known as petroleum and varies in color, from clear to tar-black, and in viscosity, from water to almost solid.
dBA	The decibel (dDB) is one tenth of a *bel* where one bel represents a difference in noise level between two intensities I_1, I_0 where

	one is ten times greater than the other. (A) indicates the measurement is weighted to the human ear.
Distillation	The process of heating a liquid to its boiling point and condensing and collecting the vapor.
Feedstock	Material used as a stream in the refining process.
Flares	Emergency equipment used to incinerate refinery gases during upset, startup, or shutdown conditions
Flue Gas	Gases produced by burning fuels in a furnace, heater or boiler.
Heat exchanger	Process equipment used to transfer heat from one medium to another.
Heater	Process equipment used to raise the temperature of refinery streams processing.
Hydrocarbon	Organic compound containing hydrogen and carbon, commonly occurring in petroleum, natural gas, and coal.
Hydrotreater	A machine that treats hydrocarbons.
Hydrotreating	A process to catalytically stabilize petroleum products of feedstocks by reacting them with hydrogen.
Isomerization	The rearrangement of straight-chain hydrocarbon molecules to form branch chain products; normal butane may be isomerized to provide a portion of the isobutane feed needed for the alkylation process.
L_{50}	Sound level exceeded 50 percent of the time (average or mean level)
Liquefied Petroleum Gas (LPG)	Liquefied light end gases often used for home heating and cooking; this gas is usually 95 percent propane, the remainder being split between ethane and butane.
Naphtha	A crude distillation unit cut in the range of C_7-420^o; naphthas
	are subdivided – according to the actual crude distillation cuts - into light, intermediate, heavy, and very heavy virgin naphthas; a typical crude distillation operation would be:
	C_7-160^o - light naphtha

	160-280^{o}	-	intermediate naphtha
	280-330^{o}	-	heavy naphtha
	330-420^{o}	-	very heavy naphtha

Natural Gas	A mixture of hydrocarbon gases that occurs with petroleum deposits, principally methane together with varying quantities of ethane, propane, butane, and other gases.
Octane	Measurement of the burning quality of the gasoline; reflects the suitability of gasoline to perform in internal combustion engines smoothly without letting the engine knock or ping.
Olefins	Hydrocarbons that contain at least two carbons joined by double bonds; olefins do not naturally occur in crude oils but are formed during the processing.
Paleontological	Prehistoric life.
Peak Hour	This typically refers to the hour during the morning (typically 7 AM to 9 AM) or the evening (typically 4 PM to 6 PM) in which the greatest number of vehicles trips are generated by a given land use or are traveling on a given roadway.
Pentane	Colorless, flammable isomeric hydrocarbon, derived from petroleum and used as a solvent.
Reactor	Vessels in which desired reactions take place.
Refinery gas	Gas produced from refinery operations used primarily for fuel gas combustion in refinery heaters and boilers.
Reformate	One of the products from a reformer; a reformed naptha; the naptha is then upgraded in octane by means of catalytic or thermal reforming process.
Reformulated Gasoline	New gasoline required under the federal Clean Air Act and California Air Resources Board to reduce emissions.
Reid Vapor Pressure	The vapor pressure of a product determined in a volume of air four times greater than the liquid volume at 100^{o}F; Reid vapor pressure (RVP) is an indication of the vapor-lock tendency of a motor gasoline, as well as explosion and evaporation hazards.

Seiches	A vibration of the surface of a lake or landlocked sea that varies in period from a few minutes to several hours and which many change in intensity.
Selective Catalyst Reduction	An air pollution control technology that uses a catalyst to remove nitrogen oxides from the flue gas.
Stripper or Splitter	Refinery equipment used to separate two components in a feed stream; examples include sour water strippers and naphtha splitters.

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APPENDIX A

EMISSION CALCULATIONS

Construction Equipment Emissions for the SCR Unit Project

Construction Equipment

Equipment Type	Hp[1]	Load[2]	Emission Factors lb/hp-hr[3]					Emission Factors lb/hr				
			CO	VOC	NOx	SOx	PM10	CO	VOC	NOx	SOx	PM10
Air Compressor 185 CFM	37	0.48	0.011	0.002	0.018	0.002	0.001	0.195	0.036	0.320	0.036	0.018
Backhoe[5]	119	0.465	0.015	0.003	0.022	0.002	0.001	0.830	0.166	1.217	0.111	0.055
Plate Compactor (Gasoline)	8	0.43	0.830	0.043	0.004	0.001	0.000	2.855	0.148	0.014	0.002	0.001
Dump Trucks	23	0.38	0.006	0.002	0.021	0.002	0.002	0.052	0.017	0.184	0.017	0.013
Forklift 4000 lb.[4]	--	--	0.520	0.170	1.540	0.143	0.093	0.520	0.170	1.540	0.143	0.093

(1) Default Horsepower from SCAQMD CEQA Air Quality Handbook, Table 9-8-C.

(2) Default load factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-D.

(3) Emission factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-B, unless otherwise noted.

(4) Emissions factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-A. Units are in lbs/hr.

(5) HP data provided by ConocoPhillips

Construction Equipment Emissions for the SCR Unit Project

Construction Equipment

Equipment Type	Number	Hours Per Day	Emission Factors lb/hr					Daily Emissions (lbs/day)				
			CO	VOC	NOx	SOx	PM10	CO	VOC	NOx	SOx	PM10
Air Compressor 185 CFM	1	1	0.195	0.036	0.320	0.036	0.018	0.20	0.04	0.32	0.04	0.02
Backhoe	1	3	0.830	0.166	1.217	0.111	0.055	2.49	0.50	3.65	0.33	0.17
Plate Compactor (Gasoline)	1	4	2.855	0.148	0.014	0.002	0.001	11.42	0.59	0.06	0.01	0.00
Dump Trucks	1	2	0.052	0.017	0.184	0.017	0.013	0.10	0.03	0.37	0.03	0.03
Forklift 4000 lb.	1	3	0.520	0.170	1.540	0.143	0.093	1.56	0.51	4.62	0.43	0.28
Total Emission Totals								15.77	1.67	9.01	0.84	0.49

* Emissions factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-A.
* Emissions factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-C. Table 9-8-C, *Pounds/hour calculated from load factor and hp rating.*
* Trucks Emissions factors from SCAQMD CEQA Air Quality Handbook Table 9-8-A, *Trucks:off highway diesel used for truck:pickup/stake bed.*
* Emissions factors from SCAQMD CEQA Air Quality Handbook, Table 9-8-A, *Emissions for equipment not specifically listed can be found under miscellaneous.*

Construction Vehicle Emissions

On Road Mobile Emission Factors from California ARB EMFAC2002 Scenario Year 2003 (Model Years 1965 to 2003)

Vehicle Type	CO Emissions Factor (lb/mile)	VOC Emission Factor (lb/mile)	NOx Emissions Factor (lb/mile)	SOx Emissions Factor (lb/mile)	PM10 Emissions Factor (lb/mile)
Construction Workers Commuting	0.01815	0.001935	0.002014	0.00001	0.000078
Light Duty Trucks	0.01815	0.001935	0.002014	0.00001	0.000078
Bus	0.025508	0.003362	0.031208	0.000241	0.00054
Heavy Diesel Trucks	0.025508	0.003362	0.031208	0.000241	0.00054

	Parameters			Peak Day Emissions, lbs/day				
Source	Number of Vehicles	Total Number of Trips	Distance Traveled	CO Emissions	VOC Emissions	NOx Emissions	SOx Emissions	PM10 Emissions
Construction Workers Commuting	20	40	16.2	11.76	1.25	1.31	0.01	0.05
On-site Cars	0	0	10	0.00	0.00	0.00	0.00	0.00
Light Duty Trucks	1	2	16.2	0.59	0.06	0.07	0.00	0.00
Buses	0	0	1.5	0.00	0.00	0.00	0.00	0.00
Daily Delivery Trucks	1	2	50	2.55	0.34	3.12	0.02	0.05
Heavy Diesel Trucks	1	1	4	0.10	0.01	0.12	0.00	0.00

Source	Parameters		CO	VOC	NOx	SOx	PM10
Total Emissions for Construction Workers	20	40	11.76	1.25	1.31	0.01	0.05
Total Emissions for Buses	0	0	0.00	0.00	0.00	0.00	0.00
Total Emissions for Light Duty Trucks	1	2	0.59	0.06	0.07	0.00	0.00
Total Emissions for Heavy Diesel Trucks	1	1	2.65	0.35	3.25	0.00	0.06
			15.00	1.67	4.62	0.01	0.11

Fugitive Construction
Emission Estimates

REFINERY CONSTRUCTION

Grading Operations	Average Pieces of Equipment Operating	Peak Pieces of Equipment Operating	Hours of Operation	PM10 Emission Factor (lb/hour)	Water Control Factor	Controlled Emissions: Average PM10 Emissions (lbs/day)	Controlled Emissions: Peak PM10 Emissions (lbs/day)	Uncontrolled Emissions: Average PM10 Emissions (lbs/day)	Uncontrolled Emissions: Peak PM10 Emissions (lbs/day)	SCAQMD Emission Factor Source
Construction Activities[1]	1	2	8	7.7	0.5	30.80	61.60	61.6	123.2	Table A9-9-F

TRENCHING OPERATIONS (Backhoe) TEMPORARY STOCKPILES	Average Tons of Materials Handled Per Day	Peak Tons of Materials Handled Per Day	PM10 Emission Factor (lb/ton)	Water Control Factor	Controlled Emissions: Average PM10 Emissions Pounds/day	Controlled Emissions: Peak PM10 Emissions Pounds/day	Uncontrolled Emissions: Average PM10 Emissions Pounds/day	Uncontrolled Emissions: Peak PM10 Emissions Pounds/day	SCAQMD Emission Factor Source
Construction Activities[2]	1	10	0.0035	0.5	0.00175	0.0119	0.0035	0.035	Table A9-9-G
Assumptions: 1cubic yard trench spoils = 1 ton									

WIND EROSION Disturbed Area and Temporary Stockpiles	Days of Construction	Average Acreage Disturbed Per Day	Peak Acreage Disturbed Per Day	PM10 Emission Factor (lb/day/acre)	Average PM10 Emissions Pounds/day	Peak PM10 Emissions Pounds/day	Average PM10 Emissions Tons/Year	Peak PM10 Emissions Tons/Year	SCAQMD Emission Factor Source
Construction Activities	60	0.25	0.5	19.800	4.950	9.900	0.149	0.297	Table A9-9-E

TRUCK FILLING/DUMPING	Estimated Materials Handled Per Day (tons)	Peak Tons of Materials Handled Per Day	PM10 Emission Factor (lb/ton)	Water Control Factor	Controlled Emissions: Average PM10 Emissions Pounds/day	Controlled Emissions: Peak PM10 Emissions Pounds/day	Uncontrolled Emissions: Average PM10 Emissions Pounds/day	Uncontrolled Emissions: Peak PM10 Emissions Pounds/day	SCAQMD Emission Factor Source
Truck Filling[4]	1	1	0.02205	0.5	0.011025	0.011025	0.02205	0.02205	Table A9-9
Truck Dumping	1	1	0.009075	0.5	0.0045375	0.0045375	0.009075	0.009075	Table A9-9

TOTAL PM10 Pounds/day		Average	Peak
(Controlled Emissions)	Construction	35.7673	71.52746
(Uncontrolled Emissions)		66.585	133.166
Mitigated Emissions (assumes water 3 times/day)		22.639	45.276

(1) Emissions (lbs/hr) = [0.45 x $(G^{1.5})/(H^{1.4})$ x 2.2046 x J; where G = silt content (7.5%), H = moisture content (2.0%) and J = hrs of operation.
(2) Emissions (lbs/ton) = 0.00112 x $[(G/5)^{1.3}/(H/2)^{1.4}]$ x I/J; where G=mean wind speed (12 mph), H=moisture content of surface material (2%); I= lbs of dirt handled per day (100,000 lbs); and J=2,000 lbs/ton
(3) Emissions (lbs/day/acre) = 1.7 x [(G/1.5)/(365-H/235)] x I/15 x J; where G = silt content (7.5%); H = days with >0.01 inch of rain (34); I = percentage of time wind speed exceeds 12 mph (50%) and J= fraction of TSP (0.5)
(4) Used SCAQMD Table 9-9 Default emission factors.

Fugitive Dust Construction Emission Estimates
From Trucks and Employee Vehicles

Source Type	Number	Fuel	Peak Daily Trips	One-way Distance	Emission Factor (lb/vmt)	Peak PM-10 (lbs/day)
Passenger Vehicle/ On Paved Roadways	20	Gasoline	2	16.2	0.000856	0.55
Pickup Trucks on Paved Roadways	1	Gasoline	2	16.2	0.0026	0.08
Trucks on Paved Roadways	1	Diesel	2	50	0.0206	2.06
Trucks on Unpaved Roads	1	Diesel	1	1	1.6	1.60
Total	23					4.30

* Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1

$E = k(sL/2)^{0.65} \times (W/3)^{1.5} - C$

Where: k = 0.016 lb/VMT for PM10, sL = road silt loading (gms/m2) from CARB Methodology 7.9 for paved roads (0.240 for local roads and 0.037 for major/collector roads), W = weight of vehicles (2.4 tons for cars; 5 for pickup trucks, and 20 for heavy trucks), and C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear. C is assumed to be zero in order to provide a conservative emissions estimate.

**Emission Calculations for travel on unpaved roads from EPA AP-42 Section 13.2.2

$E = 2.6(s/12)^{0.8} \times (W/3)^{0.4}/(M/0.2)^{0.3}$

Where: s = surface silt content (assumed to be 11%, AP-42 Table 13.2.2-1), W = vehicle weight (tons) same assumptions as above, and M = material moisture content (assumed to be 10 percent since these emissions would only come from a water truck watering the site).

CONSTRUCTION SUMMARY

Construction Period		Estimated Emissions				
		CO	VOC	NOx	SOx	PM10
Construction Equipment		15.77	1.67	9.01	0.84	0.49
Vehicle Emissions		15.00	1.67	4.62	0.01	0.11
Fugitive Construction		0	0	0	0	71.53
Fugitive Road Dust		0	0	0	0	4.30
TOTAL EMISSIONS		30.8	3.3	13.6	0.8	76.4
SCAQMD Thresholds		550	75	100	150	150
Significant		No	No	No	No	No

1/14/2004

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Vehicle Emissions

On Road Mobile Emission Factors from California ARB EMFAC2002 Scenario Year 2003 (Model Years 1965 to 2003)

Vehicle Type	CO Emissions Factor (lb/mile)	VOC Emission Factor (lb/mile)	NOx Emissions Factor (lb/mile)	SOx Emissions Factor (lb/mile)	PM10 Emissions Factor (lb/mile)
Workers Commuting	0.01815	0.001935	0.002014	0.00001	0.000078
Light Duty Trucks	0.01815	0.001935	0.002014	0.00001	0.000078
Bus	0.025508	0.003362	0.031208	0.000241	0.00054
Heavy Diesel Trucks	0.025508	0.003362	0.031208	0.000241	0.00054

Source	Parameters			Peak Day Emissions, lbs/day				
	Number of Vehicles	Total Number of Trips	Distance Traveled	CO Emissions	VOC Emissions	NOx Emissions	SOx Emissions	PM10 Emissions
Workers Commuting	0	0	16.2	0.00	0.00	0.00	0.00	0.00
On-site Cars	0	0	10	0.00	0.00	0.00	0.00	0.00
Light Duty Trucks	0	0	16.2	0.00	0.00	0.00	0.00	0.00
Buses	0	0	1.5	0.00	0.00	0.00	0.00	0.00
Daily Delivery Trucks	1	2	50	2.55	0.34	3.12	0.02	0.05
Heavy Diesel Trucks	0	0	4	0.00	0.00	0.00	0.00	0.00

Source	Parameters		CO	VOC	NOx	SOx	PM10
Total Emissions for Workers	0	0	0.00	0.00	0.00	0.00	0.00
Total Emissions for Buses	0	0	0.00	0.00	0.00	0.00	0.00
Total Emissions for Light Duty Trucks	0	0	0.00	0.00	0.00	0.00	0.00
Total Emissions for Heavy Diesel Trucks	1	1	2.55	0.34	3.12	0.00	0.05
			2.55	0.34	3.12	0.00	0.05

Fugitive Dust Emission Estimates
From Trucks

Source Type	Number	Fuel	Peak Daily Trips	One-way Distance	Emission Factor (lb/vmt)	Peak PM-10 (lbs/day)
Passenger Vehicle/ On Paved Roadways	0	Gasoline	2	16.2	0.000856	0.00
Pickup Trucks on Paved Roadways	0	Gasoline	2	16.2	0.0026	0.00
Trucks on Paved Roadways	1	Diesel	2	50	0.0206	2.06
Trucks on Unpaved Roads	0	Diesel	1	1	1.6	0.00
Total	1					2.06

* Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1

$E = k(sL/2)^{0.65} \times (W/3)^{1.5} - C$

Where: k = 0.016 lb/VMT for PM10, sL = road silt loading (gms/m2) from CARB Methodology 7.9 for paved roads (0.240 for local roads and 0.037 for major/collector roads), W = weight of vehicles (2.4 tons for cars; 5 for pickup trucks, and 20 for heavy trucks), and C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear. C is assumed to be zero in order to provide a conservative emissions estimate.

**Emission Calculations for travel on unpaved roads from EPA AP-42 Section 13.2.2

$E = 2.6(s/12)^{0.8} \times (W/3)^{0.4}/(M/0.2)^{0.3}$

Where: s = surface silt content (assumed to be 11%, AP-42 Table 13.2.2-1), W = vehicle weight (tons) same assumptions as above, and M = material moisture content (assumed to be 10 percent since these emissions would only come from a water truck watering the site).

SCREENING HEALTH RISK ASSESSMENT

9.1	lbs/mmscf	(SCAQMD default emission factor for ammonia slip)
7.74E-03	lb/mmBtu	(SCAQMD default emission factor for ammonia slip)
352	mmBtu/hr	Maximum fired duty

SCREENING HRA FOR CARCINOGENS/CHRONIC HEALTH HAZARDS

CHEMICAL	Estimated Emissions (lbs/hr)	Estimated Emissions (lbs/day)	Estimated Emissions (lbs/year)	Screening level (lb/year)	EXCEEDS?
Ammonia	2.72E+00	6.54E+01	2.39E+04	5.17E+04	NO

SCREENING HRA FOR ACUTE HEALTH HAZARDS

CHEMICAL	Estimated Emissions (lbs/hr)	Screening level (lb/hr)	EXCEEDS?
Ammonia	2.72E+00	8.57E+00	NO

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APPENDIX B

HAZARD ANALYSIS

Ammonia Dispersion Calculations

Introduction

A series of release and dispersion calculations have been performed in an effort to quantify the dispersion of ammonia gas evolving from a pool of aqueous ammonia following a release from a storage tank. The releases were designed to simulate what would happen if a release from the storage tank were to occur and the aqueous ammonia solution spilled into the bunded area surrounding the tank.

Site-Specific Information

Several of the parameters defined in the analysis are:

Liquid composition	Material	Weight Percent
	Ammonia (NH_3)	19
	Water	81

Tank capacity (nominal) = 10,000 gallons
Tank diameter = 12 feet
Distance from tank to nearest property line = 500 feet

Atmospheric Conditions

Wind speed = 1.5 m/s and 5 m/s
Relative humidity = 70%
Air temperature = 77 ^{o}F
Atmospheric stability = Pasquill-Gifford F (extremely stable) and Pasquill-Gifford D (neutral)
[Atmospheric stability is classified by the letters A through F. In general, the most unstable atmosphere is characterized by stability class A. Stability A would correspond to an atmospheric condition where there is strong solar radiation and moderate winds. This combination of radiation and winds allows for rapid fluctuations in the air and thus greater mixing of the released gas with time. Stability D is characterized by fully overcast or partial cloud cover during both daytime and nighttime. The atmospheric turbulence is not as great during D conditions as during A conditions; thus, the gas will not mix as quickly with the surrounding atmosphere. Stability F corresponds to the most "stable" atmospheric conditions. Stability F generally occurs during the early morning hours before sunrise (thus, no solar radiation) and under low winds. The combination of low winds and lack of solar heating allows for an atmosphere which appears calm or still and thus restricts the ability to actively mix with the released gas.]

Ammonia Gas Concentrations of Interest

Release/dispersion calculations were made in order to examine the effect of atmospheric conditions and pool size on the downwind travel of the ammonia gas evolving from the liquid pool. The dispersion calculations

were performed until specific ammonia concentrations were reached in the downwind direction. Two ammonia gas concentrations were chosen for evaluation. The definitions of the two levels evaluated are:

ERPG-2 for Ammonia = 200 ppm

Emergency Response Planning Guideline (ERPG) Level 2. The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their ability to take protective action.

ERPG-3 for Ammonia = 1,000 ppm

Emergency Response Planning Guideline (ERPG) Level 3. The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.

Consequence Analysis

Vaporization from a Liquid Pool

The hazard zones resulting from the liquid releases into the bund were evaluated to determine the extent and location of the gas cloud containing NH_3. The Mackay and Matsugu model[1] is the basis of many of the current pool vaporization models published today. This model has been partially validated using the authors' experimental data.

The equation normally used to compute evaporation rates is shown in Equation 1.

$$N = k_m A (P - P_\infty)/ R T \quad (1)$$

where:
- N = evaporation rate, g-moles/hr
- k_m = mass transfer coefficient, m/hr
- A = area of pool, m^2
- P = partial pressure or vapor pressure of liquid, atm
- P_∞ = background pressure of evaporating liquid, atm
- R = gas constant, atm-m^3 /g-mole-K, 82.06 x 10^{-6}
- T = temperature, K

The equation given by Mackay and Matsugu[1] to compute the mass transfer coefficient is:

$$k_m = 0.0292 S_c^{2/3} U^{0.78} \rho^{-0.11} \quad (2)$$

where:
- U = wind speed at a height of 10 m, m/hr
- S_c = Schmidt Number, $\mu/\rho D$
- μ = air viscosity, kg/m·hr

[1] "Evaporation Rates of Liquid Hydrocarbon Spills on Land and Water," Donald Mackay and Ronald S. Matsugu. *The Canadian Journal of Chemical Engineering,* Vol. 51, August, 1973: pp. 434-439.

ρ = air density, kg/m^3
D = evaporating liquid diffusivity, m^2/hr

As can be seen from Equation 1, as the liquid pool diameter increases, the total evaporation rate also increases. A range of liquid pool sizes was evaluated. The vaporization results are presented in Table 1.

Dispersion of Ammonia Gas

The pool vaporization model provides one of the inputs to a dispersion model. The ammonia released from the pool can be treated as a neutrally buoyant gas. The ammonia/air mixture over the liquid pool surface is slowly swept from the pool surface by the ambient wind field. Since the ammonia/air mixture would not exhibit any dense gas effects (the molecular weight of the mixture is less than air), a form of a Gaussian dispersion model would be appropriate. For rectangular impoundment areas, the area source was approximated as a series of line sources. The line source model is taken from Dobbins[2]. For this analysis, urban dispersion coefficients[3] were used.

For these calculations the following parameters were used.

Liquid pool temperature	= 77 ^{o}F
Partial pressure of ammonia above liquid pool (at 77 ^{o}F)	= 5.1 psia
Surface roughness (representative of urban conditions)	= 0.04 m
Dispersion coefficient averaging time	= 60 minutes

The results of the dispersion analysis for a range of impoundment sizes are presented in Table 1 and Figure1. For the aqueous ammonia release scenarios, the distances listed would not change size as long as the liquid pool remained. In essence, the plumes reach steady state within minutes of a release, and will maintain their shape until the weather conditions change or the liquid pool is eliminated.

Conclusions

The conclusions drawn from this analysis are:

1. Under worst-case atmospheric conditions (e.g., low winds and stable air), the lowest ammonia concentration of interest, 200 ppm, does not reach the closest property line even if the liquid impounding area is larger than 1,000 ft^2 .
2. Under all other atmospheric conditions (e.g., higher winds, less stable atmospheres), the distances to the 200 ppm ammonia concentration level would be shorter.
3. Under no condition does the 1,000 ppm ammonia concentration level extend further than 45 feet from the tank. This distance is always well within the facility fence line.

[2] *Atmospheric Motion and Air Pollutio*n, Richard A. Dobbins. John Wiley & Sons, Inc., 1979.
[3] *Diffusion Estimation for Small Emission*s, G. A. Briggs. ATDL Report No. 79, ATDL, Post Office Box E, Oak Ridge, Tennessee 37830, 1973.

Table 1

Ammonia Vaporization and Dispersion Results

Pool Size (ft 2)	Atmospheric Conditions		Total Ammonia Vaporization Rate from Pool (kg/ sec) [lb/ sec]	Downwind Distance (ft) to NH 3 Concentration	
	Wind Speed (m/ s) [mph]	Stability		1,000 ppm	200 ppm
100	1.5 [3.35]	F	0.00344 [0.00758]	12	46
	5.0 [11.2]	D	0.0140 [0.0308]	9	34
300	1.5 [3.35]	F	0.0103 [0.0227]	25	92
	5.0 [11.2]	D	0.0420 [0.0925]	17	63
600	1.5 [3.35]	F	0.0206 [0.0454]	40	131
	5.0 [11.2]	D	0.0839 [0.1848]	30	91
1,000	1.5 [3.35]	F	0.0344 [0.0758]	59	170
	5.0 [11.2]	D	0.1400 [0.3083]	42	0118

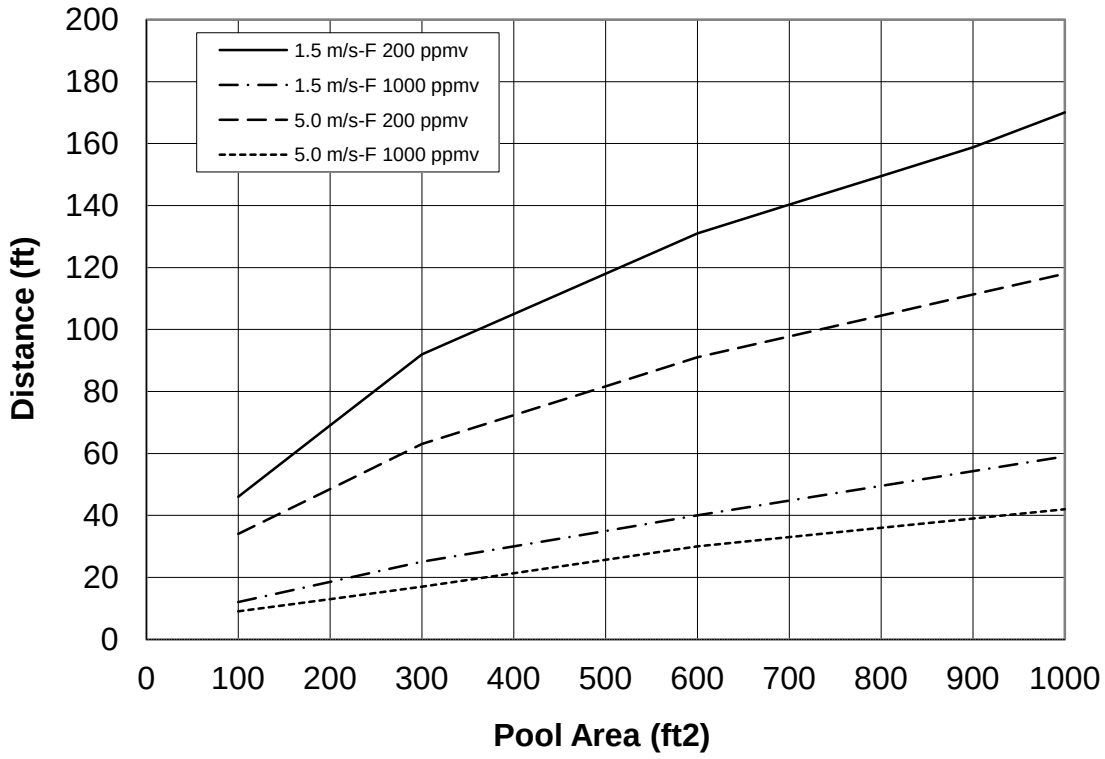


Figure 1

Note: This document was modified from the document originally prepared by Quest to remove site-specific information.

APPENDIX C

FINAL NEGATIVE DECLARATION

CONOCOPHILLIPS LOS ANGELES REFINERY
CARSON PLANT
SCR PROJECT

RESPONSE TO COMMENTS

INTRODUCTION

This Appendix, together with the Draft Negative Declaration constitutes the Final Negative Declaration for the ConocoPhillips Los Angeles Refinery – Carson Plant Selective Catalytic Reduction Unit Project.

The Negative Declaration was circulated for a 30-day public review and comment period on January 15, 2004. The comment period was extended an additional 10 days at the request of the public. The Negative Declaration is otherwise available at the South Coast Air Quality Management District (SCAQMD), 21865 Copley Drive, Diamond Bar, California 91765-4182 or by phone at (909) 396-2039. The Negative Declaration can also be downloaded by accessing the SCAQMD's CEQA web pages at http://www.aqmd.gov/ceqa/nonaqmd.html.

The Draft Negative Declaration included a detailed project description, the environmental setting for each environmental resource, and an analysis of the each environmental resource pursuant to the California Environmental Quality Act (CEQA) checklist including all potentially significant environmental impacts. Based on the analysis in the Draft Negative Declaration, no significant adverse environmental impacts were identified associated with the proposed SCR project.

The SCAQMD received two comment letters on the Draft Negative Declaration during the public comment period. Responses to each comment letter are presented in this Appendix. The comments are bracketed and numbered. The related responses are identified with the corresponding number and are included in the following pages.

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
651 GATEWAY BOULEVARD, SUITE 900
SOUTH SAN FRANCISCO, CA 94080
TEL: (650) 589-1660
FAX: (650) 589-5062
rdrury@adamsbroadwell.com

DANIEL L. CARDOZO
RICHARD T. DRURY
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
MARC D. JOSEPH
SUMA PEESAPATI

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL

SACRAMENTO OFFICE
1225 8th Street, Suite 550
SACRAMENTO, CA 95814
TEL: (916) 444-6201
FAX: (916) 444-6209

February 25, 2004

VIA FACSIMILE, ELECTRONIC MAIL & U.S. MAIL

Mr. Michael Krause, Air Quality Specialist
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
mkrause@aqmd.gov
FAX: (909) 396-3324

Re: Comments on Negative Declaration for ConocoPhillips Los Angeles Refinery Selective Catalytic Reduction Unit (SCR) Project

Dear Mr. Krause:

1-1 We are writing on behalf of the Southern California Pipe Trades District Council 16 and Steamfitters & Pipefitters Local 250 ("Commenters") to comment on the Negative Declaration that has been prepared for the ConocoPhillips Los Angeles Refinery Selective Catalytic Reduction Unit (SCR) Project ("Project"). The Project will allow ConocoPhillips to install and operate an aqueous ammonia tank and an SCR unit to control nitrogen oxide emissions from an existing boiler at the ConocoPhillips Carson Plant. We believe that there is a fair argument that the Project may have adverse environmental impacts and that an environmental impact report is therefore required.

1-2 The members of the Commenters construct and maintain commercial, residential and industrial projects, primarily in the vicinity of Los Angeles County and often in and around the ConocoPhillips Carson and Wilmington Refineries ("CP Refineries") themselves. The Commenters' members live in and use areas that suffer the impacts of the CP Refineries and other environmentally detrimental projects. Union members breathe the same polluted air that others breathe and suffer the same adverse health and safety impacts. Because they are often in close proximity to the CP Refineries and other polluting sources, their exposure is often at significantly higher levels than that of the general population.

Union members are also concerned with environmentally sound land use in Los Angeles County. Poorly planned and environmentally detrimental projects may jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live here. Continued degradation can cause construction moratoriums and other restrictions on growth in the region that, in turn, reduce future employment opportunities. Finally, union members are concerned about projects that carry serious environmental risks without providing countervailing employment and economic benefits to local workers and communities. Therefore, the Unions and their members have a strong interest in enforcing environmental laws such as CEQA.

1-2 cont.

I. LEGAL STANDARD.

"The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal.App.4th 98, 109.)

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") except in certain limited circumstances. (See, e.g., Pub. Res. Code § 21100.) .) The EIR is the very *heart* of CEQA. (*Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.) A negative declaration may be prepared instead of an EIR when, after preparing an initial study, a lead agency determines that a project "would not have a significant effect on the environment." (Id., § 21080(c).) However, such a determination may be made only if "[t]here is no substantial evidence in light of the whole record before the lead agency" that such an impact may occur. (Id., § 21080(c)(1) (emphasis added).)

1-3

A negative declaration is improper, and an EIR is required, whenever substantial evidence in the record supports a "fair argument" that significant impacts may occur. Even if other substantial evidence supports the opposite conclusion, the agency nevertheless must prepare an EIR. (*Stanislaus Audubon v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597.) The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. (*Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754.)

As a matter of law, "substantial evidence includes ... expert opinion." (Pub. Res. Code § 21080(e)(1); CEQA Guidelines § 15064(f)(5).)

1-3 cont.

As discussed below, the negative declaration is legally and factually untenable. The courts have required EIR's even for residential developments of 21 homes, see, *Arviv Enterprises v. South Valley Area Pln. Comm.*, 101 Cal.App.4th 1333 (2002), and for 40-home residential developments whose only impact was blocking the view from a park. *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597. In light of these cases, it is clear that an EIR is required for a major industrial Project involving major construction and the use of hazardous and highly toxic chemicals.

II. The Project Will Have Significant Cumulative Air Pollution Impacts.

1-4

It is clear that the Project will have significant cumulative air quality impacts when viewed together with the large number of other projects currently underway or in the approval process in the immediate vicinity of the Project. The Negative Declaration fails to even mention these other past, present and reasonably foreseeable future projects, let alone analyze the impacts of the Project together with the other projects. In fact, the Negative Declaration fails to even mention ConocoPhillips' own Ultra Low Sulfur Diesel Project ("ULSD Project") that is being subjected to a parallel but separate Negative Declaration simultaneously with the Negative Declaration for the SCR Project, or the ConocoPhillips Phase 3 Fuel Project or the ConocoPhillips Ethanol Project. As such, the Negative Declaration is patently inadequate.

1-5

CEQA section 21083 requires a finding that a project may have a significant effect on the environment if "the possible effects of a project are individually limited but cumulatively considerable. . . . 'Cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." CEQA Guidelines section 15355(a). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects." CEQA Guidelines section 15355(a).

The importance of an adequate cumulative impacts analysis was recently reaffirmed in *Communities for a Better Environment v. Calif. Resources Agency* (2002) *("CBE v. CRA")* 103 Cal.App.4th at 116, where the court stated:

1-6

> Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.

The SCAQMD is clearly aware of other past, present and reasonably foreseeable future projects in the area. The SCAQMD is currently conducting CEQA review for the Paramount Refinery Clean Fuels Project (SCH No. 2003031044), pp. 5-1 through 5-15 (attached as Exhibit A) ("Paramount DEIR"). The Draft EIR for the Paramount Project includes a list of at least 17 projects in the area with significant air quality impacts, including:

1-7

1. ConocoPhillips RFG Phase 3 Project (Carson and Wilmington) (SCH NO. 2000091056).
2. ConocoPhillips Ethanol Import and Distribution Project (Carson and Wilmington).
3. ExxonMobil RFG Phase 3 Project (Torrance).
4. Shell RFG Phase 3 Project (Wilmington).
5. ChevronTexaco RFG Phase 3 Project.
6. British Petroleum RFG Phase 3 Project (Carson).
7. Ultramar/Valero Refinery RFG Phase 3 Project (Wilmington).
8. Kinder Morgan Orange Terminal.
9. Kinder Morgan Colton Terminal.
10. City of Long Beach Street Construction.
11. North Long Beach Redevelopment Project.
12. City of Paramount Warehousing Project.
13. City of Paramount Recreation Facility.
14. City of Downey Landing.
15. Banco Popular Project.
16. 12651-65 Paramount Boulevard.
17. 12645 Lakewood Blvd.,
18. City of Bellflower 91 Freeway Ramp.

19. City of Bellflower Town Center Plaza Project.
20. Paramount Refinery Clean Fuels Project (SCH No. 2003031044) (Paramount).

According to the Paramount DEIR, the cumulative emissions from all of the above projects are as follows:

1-7 cont.

CUMULATIVE EMISSIONS (pounds per day)

	CO	VOC	NOx	Sox	PM10
Construction	322	236	81	6	118
Operation	3744	1441	8094	5662	1486
Thresholds	550	55	55	150	150

The Negative Declaration fails even to mention these cumulative projects – ignoring even the four projects underway at the ConocoPhillips refinery itself.[1] The construction and operational emissions from the ConocoPhillips SCR and ULSD Projects are in addition to the emissions set forth above. Clearly, the cumulative impact of these emission far exceed the SCAQMD's significance thresholds. As such, the SCAQMD has a mandatory duty to find that the Project has a significant cumulative impact, and an EIR is required.

1-8

In addition, the Project's toxic air contaminant emissions will be in addition to those created by the above projects. The Project will also have hazardous chemical impacts from the transport and storage of ammonia, which will be combined with the cumulative hazards posed by the above projects. The Negative Declaration fails entirely to disclose, analyze or mitigate these significant cumulative impacts. Therefore, an EIR is required.

III. The SCAQMD Has Improperly Piecemealed the ConocoPhillips Projects.

1-9

As mentioned above, there are currently 4 "projects" underway or proposed for the ConocoPhillips refinery: (1) RFG Phase 3; (2) Ethanol Transport and Distribution; (3) SCR; (4) Ultra Low Sulfur Diesel ("ULSD"). The CEQA review for the SCR and ULSD projects is being conducted simultaneously pursuant to two

[1] We incorporate the environmental documents for all of the above-listed projects (EIRs, Draft EIRs, final EIRs, negative declarations, permit applications and supporting documents) herein by reference. All of these documents are in the possession of the SCAQMD.

separate negative declarations. The 4 projects are all part of a refinery modernization project that is required to comply with cleaner fuel requirements. Nevertheless, the SCAQMD is analyzing each project separately and has issued separate negative declarations for 3 of the 4 projects. CEQA prohibits such "piecemealing" since by dividing a project up into several separate projects, it makes each phase appear less significant. This is precisely the error that the SCAQMD has committed in this case.

1-9 cont.

CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones -- each with a minimal potential impact on the environment -- which cumulatively may have disastrous consequences." (*Bozung v. LAFCO* (1975) 13 Cal.3d 263, 283-84; *City of Santee v. County of San Diego*, (1989) 214 Cal.App.3d 1438, 1452). Before undertaking a project, the lead agency must assess the environmental impacts of all reasonably foreseeable phases of a project. (*Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal.3d 376, 396-97 (EIR held inadequate for failure to assess impacts of second phase of pharmacy school's occupancy of a new medical research facility).) A public agency may not segment a large project into two or more smaller projects in order to mask serious environmental consequences. As the Second District very recently stated:

1-10

> The CEQA process is intended to be a careful examination, fully open to the public, of the environmental consequences of a given project, covering the entire project, from start to finish. . . the purpose of CEQA is not to generate paper, but to compel government at all levels to make decision with environmental consequences in mind.

(*Natural Resources Defense Council v. City of Los Angeles ("NRDC v. LA")* (2002) 103 Cal.App.4th 268.)

The SCAMQD has noted that ConocoPhillips operates its Wilmington and Carson locations as a single, integrated refinery. "The two integrated sites transfer raw, intermediate, and finished materials primarily by pipelines." (Paramount DEIR p. 5-1) Therefore, it is improper to allege that the ULSD, SCR and other projects are separate based on the fact that they are being undertaken at different locations. Also, the Negative Declarations for the ULSC and SCR projects admit that at least some of each project will be built at each of the 2 ConocoPhillips locations.

1-11

By analyzing the 4 phases separately, the SCAQMD has masked the combined environmental impacts of the phases of the refinery modernization project. Considered together, there is no question that emissions from the 4 phases far exceed relevant significance thresholds – thereby requiring an EIR. By piecemealing the projects into 4 separate analyses, the Air District has been able to avoid CEQA review for the projects currently under review.

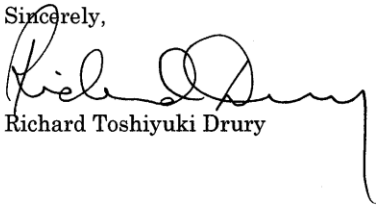
1-11 cont.

CEQA prohibits such a "piecemeal" approach. (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720.) In fact, it was precisely such piecemealing that was rejected by the Second District in the *NRDC v. LA* case. In that case, the Port of Los Angeles analyzed Phase 2 of a three phase project in a negative declaration. The court held that an EIR was required to analyze the entire three-phase project as a whole. (*NRDC v. LA, supra,* p. 284.) Similarly here, the Air District must prepare an EIR to analyze the impacts of the entire refinery modernization project as a whole, rather than analyzing each individual phase in a series of separate negative declarations. By chopping up the refinery modernization project into four phases, each of which is alleged to have little or no adverse impacts, the Air District is conducting precisely the type of piecemeal analysis prohibited by CEQA.

IV. CONCLUSION.

For all of the above reasons, we urge the SCAQMD to prepare an environmental impact report for the Project, and to analyze the Project's impacts together with other past, present and future projects that will have a cumulative impact. We reserve the right to supplement these comments at a later date.

Sincerely,



Richard Toshiyuki Drury

RTD:bh
Attachment
Cc: Sid Stolper
George Vasquez

1550a-006

ATTACHMENT A

December 2003 SCH No. 2003031044

PARAMOUNT REFINERY

CLEAN FUELS PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

Volume I: Draft Environmental Impact Report

Executive Officer
Barry Wallerstein, D. Env.

Deputy Executive Officer
Planning, Rules, and Area Sources
Elaine Chang, DrPH

Assistant Deputy Executive Officer
Planning, Rule Development and Area Sources
Laki Tisopulos, Ph.D., P.E.

Planning and Rules Manager
CEQA and Socioeconomic Analyses
Susan Nakamura

Submitted to:
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Prepared by:
ENVIRONMENTAL AUDIT, INC.

Reviewed by: James Koizumi - Air Quality Specialist
Steve Smith, Ph.D. - Program Supervisor

CHAPTER 5.0

CUMULATIVE IMPACTS

A. INTRODUCTION

CEQA Guidelines §15130(a) requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is cumulative considerable, as defined in §15065(c). There are a number of projects proposed for development in the Paramount area that may contribute cumulative regional impacts to those generated by the Paramount Refinery's proposed project. These include reformulated fuels modifications planned by other petroleum refineries in Basin as well as other local projects. Figure 5-1 shows the locations of the six major southern California refineries. The reformulated fuels modifications are to be completed in order to supply reformulated gasoline as required by Executive Order D-5-99 and the resulting CARB RFG Phase 3 requirements. The discussion below lists projects which are reasonably expected to proceed in the foreseeable future, i.e., project information has been submitted to a public agency. Cumulative construction impacts were evaluated herein if the major portion of construction is expected to occur during the same construction period as Paramount's Clean Fuels project.

Public agencies were contacted to obtain information on projects in the Paramount area. Figure 5-2 identifies by number the location of each of the projects discussed below. The number is used to identify the related projects throughout the discussion of cumulative impacts. Localized impacts were assumed to include projects which would occur within the same timeframe as the Paramount's Clean Fuels project and which are in the Paramount area. These projects generally include the RFG Phase 3 project at the British Petroleum (formerly ARCO) refinery; the RFG Phase 3 project at the Conoco-Phillips (formerly Tosco) refinery; the RFG Phase 3 project at the Shell (formerly Equilon) refinery. Regional impacts were assumed to include projects throughout the Basin, e.g., all refineries.

Some of the impacts of the proposed Paramount project would primarily occur during the construction phase, e.g., traffic. Other impacts would primarily occur during the operational phase, e.g., hazards. Other impacts would occur during both phases, e.g., air quality.

B. LOCAL REFINERIES

1) Conoco-Phillips

The Conoco-Phillips Refinery (formerly Tosco and Unocal) is approximately 18 miles southwest of the Paramount Refinery. It consists of facilities at two locations (Wilmington and Carson) approximately three miles apart. The two integrated sites transfer raw, intermediate, and finished materials primarily by pipelines. Finished

products are transferred from the Wilmington location via the Torrance Tank Farm pipeline to distribution terminals in the southern California area or to interstate pipelines. The RFG Phase 3 project will involve physical changes only to the Conoco-Phillips Wilmington Plant, located at 1660 W. Anaheim Street, Wilmington, California, 90745.

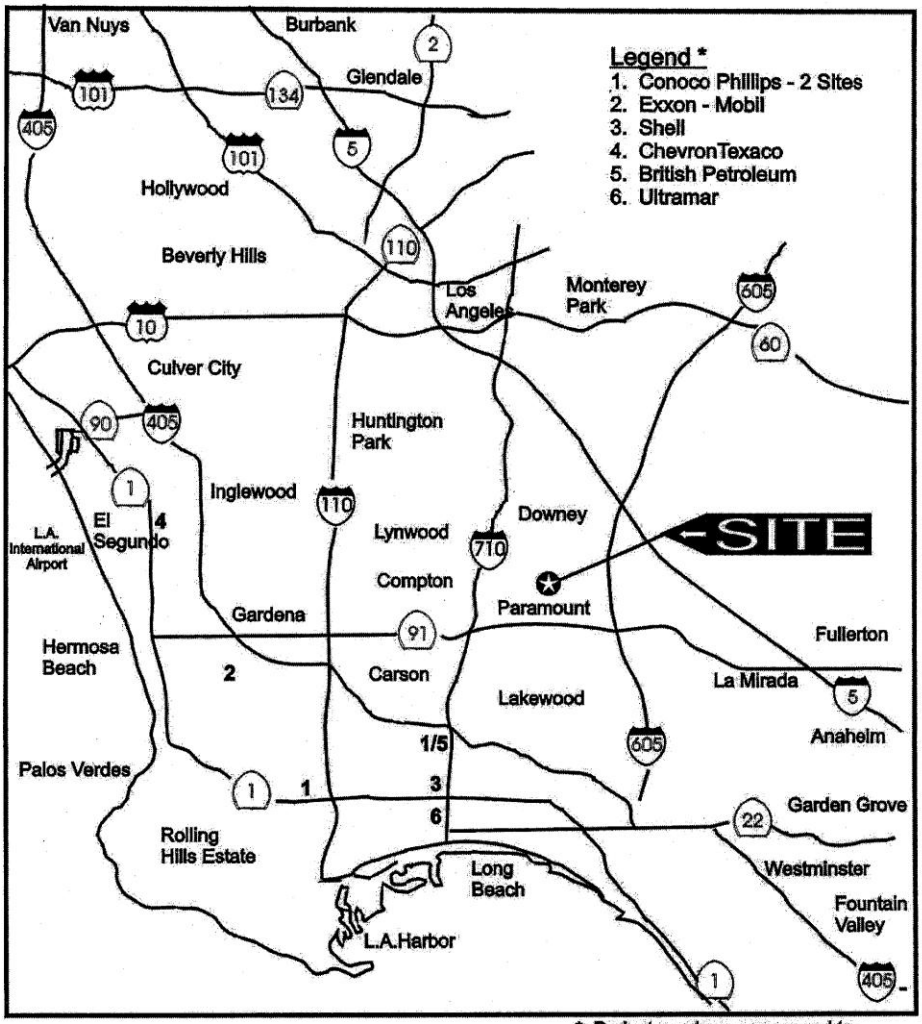
Conoco-Phillips proposed to modify existing process units at the Wilmington Plant in order to produce gasoline in compliance with CARB's Phase 3 requirements (SCAQMD, 2001). No new process units were proposed at the Refinery.

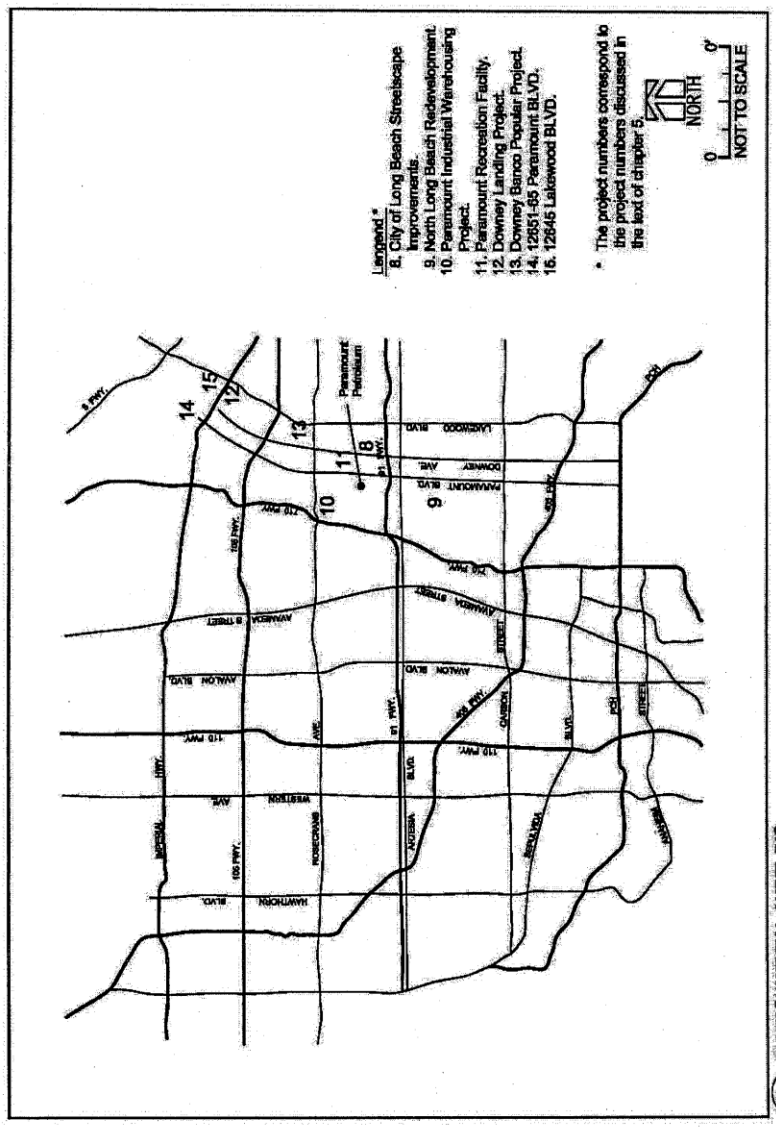
Modifications to the following units are proposed:

- Alkylation Unit (fractionation equipment, refrigeration compressor system, pumps, heaters and exchangers)
- Acid Plant (vapor recovery system)
- Butamer Unit (pumps)
- Catalytic Light Ends Fractionation Unit (fractionation equipment, pumps and piping)
- Rail Car Offloading Facilities
- Butane Storage Tank System
- Storage Tank System
- Utilities (the nitrogen, steam, water, condensate, electrical, hydrocarbon relief, and fresh/spent acid systems).

Associated modifications and additions to storage facilities, pipelines and support facilities are also expected (SCAQMD, 2001). The original CARB Phase 3 project was evaluated in the Final EIR (SCAQMD, SCH No. 2000091056, certified April 5, 2001). An Addendum to the April 5, 2001 Final EIR was prepared to include modifications to the Los Angeles Terminal including expansion of rail service at the terminal to include the unloading of ethanol (SCAQMD 2003b).

In addition to the CARB Phase 3 project, Conoco-Phillips has been issued permits for an Ethanol Import and Distribution Project. In order to produce gasoline without MTBE as required by the Governor's Executive Order and to remain compliant with state and federal reformulated fuel standards, Conoco-Phillips will replace MTBE with ethanol. This project is comprised of modifying existing facilities to permit ethanol to be received into the Marine Terminal for transshipment through the Wilmington Plant for ultimate blending into gasoline at existing, offsite marketing terminals. A Negative Declaration has been completed (SCAQMD, 2000b) and approved for this project. Because this project was found not to have any significant effect on the environment, no cumulative impacts are expected. The ConocoPhillips Refinery is located approximately fifteen miles from the Paramount Refinery so cumulative localized impacts are not expected to occur.


Van Nuys
Burbank
Glendale
Hollywood
Beverly Hills
Los Angeles
Monterey Park
Culver City
Huntington Park
Inglewood
El Segundo
L.A. International Airport
Lynwood
Compton
Downey
SITE
Paramount
Gardena
Hermosa Beach
Carson
Lakewood
Fullerton
La Mirada
Anaheim
Palos Verdes
Rolling Hills Estate
Long Beach
L.A.Harbor
Garden Grove
Westminster
Fountain Valley
Legend *
1. Conoco Phillips - 2 Sites
2. Exxon - Mobil
3. Shell
4. ChevronTexaco
5. British Petroleum
6. Ultramar
* Project numbers correspond to the project numbers discussed in the text of Chapter 5.
N
Environmental Audit, Inc.
REGIONAL MAP SHOWING REFINERIES
Project No. 2150
N:\2150\Regional
Figure 5-1


Legend *
8. City of Long Beach Streetscape Improvements.
9. North Long Beach Redevelopment.
10. Paramount Industrial Warehousing Project.
11. Paramount Recreation Facility.
12. Downey Landing Project.
13. Downey Banoo Popular Project.
14. 12651-65 Paramount BLVD.
16. 12845 Lakewood BLVD.
* The project numbers correspond to the project numbers discussed in the text of chapter 5.
NORTH
0
NOT TO SCALE
Paramount Petroleum
ENVIRONMENTAL AUDIT, INC.®
RELATED PROJECTS
Project No. 2160
Figure 5-2

2) Exxon-Mobil

The Exxon-Mobil refinery is located at 3700 W. 190th Street in Torrance, about fourteen miles southwest of the Paramount Refinery. The RFG Phase 3 project includes modifications and/or additions to the following equipment:

- Light FCCU – Unsaturated Gas Plant Debutanizer
- Light HDC – Stabilizer, Gasoline Component Isolation Piping
- Deisobutanizer Tower – Butane Handling, KOH Tower
- Alky Feed – Hydrotreating
- Liquefied Petroleum Rail Facilities – Vessels, Loading and Additional Track
- Fuel Ethanol Storage – Tanks, Rail and Off-loading Facilities
- Gasoline Storage – Tanks
- FCC – Hydrotreater Reactors and Heater Modifications
- Alkylate – Additive Water Wash System and Merox System
- Sulfur Contamination Elimination – Overhead Compressor Modifications
- Light FCC Gasoline – Splitter Modifications
- Torrance Loading Rack (add fuel ethanol off-loading rack; modify vapor recovery unit, piping, and manifolds)
- Vernon Terminal (add rail car off-loading system, two truck off-loading areas, gasoline tank, lighting area and drainage system; modify rail spur, loading rack, vapor recovery unit, vapor destruction unit, and two storage tanks)
- Anaheim (Atwood) Terminal (add two truck off-loading areas, storage tank, lighting area and drainage system; modify truck rack)
- One new pentane sphere

Associated modifications and additions to storage facilities, pipelines and support facilities are also expected (SCAQMD, 2001a and SCAQMD 2003c). The Torrance refinery and loading rack, and the Vernon and Anaheim distribution terminals are located at least 10-15 miles from the Paramount Refinery so cumulative localized impacts are not expected to occur.

3) Shell

The Shell refinery (formerly Equilon and Texaco) is located at 2101 East Pacific Coast Highway, Wilmington and is sixteen miles south of the Paramount refinery. Shell's Wilmington Terminal is located adjacent to the southwestern portion of its Refinery at 1926 East Pacific Coast Highway, and the marine terminal is located on Mormon Island at Berths 167-169 within the Port of Los Angeles. The proposed project will also require changes to Shell's other southern California area distribution terminals located in Signal Hill, Carson, Van Nuys, and Colton/Rialto. The RFG Phase 3 project includes the following proposed modifications:

- Alkylation Unit (Contactor and Settler, refrigeration unit, exchangers/pumps, and effluent treating vessels)

- C4 Isomerization Unit (vessels, exchangers, pumps, piping, stabilizer, gas scrubber, and drier)
- Hydrotreater Unit No. 2 (Olefins Saturation Reactor, pretreatment reactor, charge pumps, heat exchangers, trays, stripper reboiler, and control valves)
- Hydrotreater Unit No. 4 (diesel side stripper, feed steam preheater, and heat exchangers)
- Hydrotreater Unit No. 1
- Catalytic Reforming Unit No. 2 (sulfur guard reactor)
- Fractionator Changes (HCU Main Fractionator, FCCU Debutanizer, Feed Prep Tower, Depentanizer, Alky Deisobutanizer, Alky Debutanizer and C4 Isomerization Deisobutanizer, and HCU Depropanizer)
- Refinery Storage Tank modifications
- Storage Tanks (at Wilmington, Carson, Signal Hill, Van Nuys, and Colton/Rialto Terminals)
- Pentane Sphere
- No. 2 (debutanizer tower)
- Flare
- Vapor Recovery Systems
- Carson Terminal (includes storage tanks modifications and a new truck loading rack)
- Lomita Terminal (includes an ethanol railcar unloading facility)
- Signal Hill Terminal (includes storage tank and truck loading rack modifications)
- Colton/Rialto Terminal (includes storage tank and truck loading rack modifications)
- Van Nuys Terminal (includes storage tank and truck loading rack modifications)
- Marine Terminal (includes storage tank modifications)
- Wilmington Terminal (includes storage tank and truck loading rack modifications)

Associated modifications and additions to storage facilities, pipelines and support facilities also are expected (SCAQMD, 2001b and SCAQMD 2002). The Shell refinery is located 16 miles south of the Paramount refinery. The Shell terminal in Signal Hill, is located at least eight miles from the Paramount Refinery and the Van Nuys and Colton/Rialto Terminals are located over 30 miles from the Paramount refinery. Localized cumulative impacts are not anticipated for any of these facilities because of the distance from the Paramount refinery.

4) ChevronTexaco

The ChevronTexaco refinery (formerly Chevron) is located at 324 West El Segundo Boulevard in El Segundo, California, about 18 miles west of the Paramount refinery, which is a sufficient distance away to avoid cumulative localized impacts with the Paramount refinery. The ChevronTexaco refinery has proposed to make changes to the reconfiguration of the Refinery by modifying existing process operating units, constructing and installing new equipment, and providing additional ancillary facilities in order to produce the RFG Phase 3 reformulated gasolines (SCAQMD, 2001c). The proposed new refinery units include:

- Isomax Complex (distillation column, steam reboilers and overhead condensers)
- TAME Plant (steam reboilers and overhead condensers)

- Pentane Storage Sphere
- Pentane Sales (rail loading facilities and railcar storage area)
- TAME Unit (distillation column, reflux pumps, steam reboilers and overhead condensers)
- No. 1 Naphtha hydrotreater (under Option A: one furnace, compressors, exchangers, and pumps. Under Option B: compressors, exchangers, and pumps).
- FCCU Depropanizer
- FCCU Debutanizer
- FCCU Deethanizer (vessels, pumps and exchangers)
- FCCU Propylene Caustic Treating Facilities
- FCCU Butene Caustic Treating Facilities
- FCCU Amine Absorber
- FCCU Relief System (headers)
- FCCU Wet Gas Compressor Insterstage System Upgrades (two exchangers and one vessel)
- Alkylation Plant (two contactors and an acid settler)
- Cooling Tower
- Trim coolers for existing Distillation Columns
- Iso-octene Plant (pressure vessels, exchangers and pumps)
- Two floating roof gasoline component storage tanks

Modifications to existing refinery units are proposed for the following:

- TAME Unit (Depentanizer column)
- No. 1 Naphtha hydrotreater (under Option A: modify one furnace; under Option B: modify two furnaces)
- Deethanizer (column)
- Relief Systems (vapor recovery facilities and flare)
- Main air blower rotor replacement
- Wet Gas Compressor
- Rotor and Gearbox Upgrade
- Recommission Existing Out-of-Service Deisobutanizer
- Retraying Distillation Columns
- MTBE storage tank

The proposed project also includes modifications to the ChevronTexaco Montebello Terminal (storage tank and loading rack modifications and a new ethanol railcar unloading facility), the Van Nuys Terminal (storage tank and loading rack modifications), and the Huntington Beach Terminal (storage tank and loading rack modifications).

Due to the distance separating the ChevronTexaco refinery and terminals from the Paramount refinery, no cumulative impacts are expected during the construction or operation of the proposed project.

5) British Petroleum

The British Petroleum (BP) Refinery (formerly ARCO), located at 1801 E. Sepulveda Boulevard in Carson, is approximately eleven miles south of the Paramount refinery. The BP Carson terminal is located at 2149 E. Sepulveda Boulevard; the Marine Terminal 2 is located at 1300 Pier B Street within the Port of Long Beach. The proposed RFG Phase 3 project will also require changes to BP's other southern California area distribution terminals located in South Gate, Rialto, Long Beach and Signal Hill. The BP refinery has proposed to make changes to the Refinery by modifying existing process operating units, constructing and installing new equipment, and providing additional ancillary facilities in order to produce the RFG Phase 3 reformulated gasolines (SCAQMD, 2001d). The proposed new refinery units include:

- FCCU Gasoline Fractionation (Option #1) – rerun bottoms splitter (splitter tower, heat exchangers, etc.)

Modifications to existing refinery units are proposed for the following:

- Light Hydro Unit (modify heat exchangers; new exchangers, piping pumps and control systems)
- Isomerization Sieve (convert unit to hydrotreater; modifications to heat exchangers, piping and control systems; new reactor, exchangers, pumps and control systems)
- No. 3 Reformer Fractionator and Overhead Condenser (piping and control systems; new pumps)
- Gasoline Fractionation Area (retraying, piping and control systems)
- FCCU Gasoline Fractionation (Option #2) – convert gasoline fractionation area depentanizer to a FCCU bottoms splitter (retraying; new exchangers, flash drum, and product cooling)
- North hydrogen plant (new feed drum, pump and vaporizer)
- MTBE Unit (Option #1) – convert into ISO Octene Unit (modify heat exchangers, piping and control systems; new reactive, steam heater and heat exchangers)
- MTBE Unit (Option #2) – convert into Selective Hydrogenation Unit (modify stripper, reboiler, piping and control systems; new heat exchangers)
- Cat Poly Unit – modify to a Dimerization Unit Hydrotreater reactor system (modify piping and control systems; new pumps, heat exchangers, vessels, piping and control systems)
- Mid-Barrel Unit – modify to a Gasoline Hydrotreater (modify feed and product piping, hydrogen supply system and heat exchanger, controls systems)
- Tank Farm – piping modifications
- Pentane railcar loading facility – modify for pentane off-loading (new repressurizing vaporizer system and two railcar spots)
- Propylene railcar loading facility – modify for butane off- loading.

Associated modifications and additions to distribution storage facilities, pipelines and support facilities also are expected (SCAQMD, 2001d). The BP Arco Refinery is located

about 11 miles from the Paramount Refinery, so cumulative localized impacts are not expected.

6) Ultramar Inc, Valero Refinery

The Ultramar refinery is located at 2042 East Anaheim Street in the Wilmington district of the City of Los Angeles. The Ultramar refinery is about 15 miles south of the Paramount Refinery. In order to produce the RFG Phase 3 project gasoline Ultramar has proposed both new and modified refinery units (SCAQMD, 2000c). The Ultramar's RFG Phase 3 project would include the following new refinery equipment:

- Merox Treater
- Sour Water Stripper – (storage tank, stripper and vapor recovery system)
- Storage Tanks
- Boiler
- Flare
- Cooling Tower

Modifications to the following refinery units were proposed:

- Fluid Catalytic Cracking Unit (FCCU) – (new Gas Concentration Unit Debutanizer, new primary absorber and stripper, new accumulators, pumps, reboiler, distillation columns, vessels and heat exchangers)
- Fluid Catalytic Cracking Unit Liquefied Gas Merox Unit – (new liquefied petroleum gas (LPG) dryer and Selective Hydrogenation Unit, convert existing dryer column to depropanizer)
- Light Ends Recovery Unit – (new debutanizer and depentanizer, convert existing depropanizer to recover butane in Butamer Unit; new vessels, pumps and fin-fans)
- Naphtha Hydrotreater Unit – (modify compressor, new heat exchangers and pumps)
- Olefin Treater – (convert to hydrotreater; new reactor, new stripper, new compressor, changes to piping and new catalyst)
- Gas Oil Hydrotreater – (new pumps, new compressors and modify heater)
- Platformer – (new compressor and depropanizer)
- Butamer Unit – (new column, new heat exchangers, vessels and pumps)
- Storage Tanks
- Flare System

Associated modifications and additions to storage facilities, pipelines and support facilities are also expected (SCAQMD, 2000c). The project also includes modification to existing storage tanks and new storage tanks at the Ultramar Marine Tank Farm, Olympic Tank Farm, and Marine Terminal. The Ultramar Refinery is located about 15 miles from the Paramount Refinery, so no localized cumulative impacts are expected.

7) Third Party Terminals

A number of petroleum companies use third party terminals to distribute their fuel to gasoline stations. The terminals include the Kinder Morgan Orange Terminal, and the Kinder Morgan Colton Terminal. The modifications to the Kinder Morgan Orange and Colton Terminals included the conversion of an existing fixed roof tank to an internal floating roof tank and a change in service of the tank from diesel to ethanol. In addition, new truck unloading racks were added to both the Orange and Colton Terminals.

C. OTHER NEARBY PROJECTS

Other proposed projects within the general vicinity of the Paramount Refinery are described below.

City of Long Beach

8) Street Construction

As part of the ongoing effort by the City of Long Beach to revitalize certain areas, a number of streetscape improvements have been proposed over the next three years. Streetscaping involves landscaping, widening of streets, sidewalk construction and repair, installation of lighting and signage, and construction of medians on streets. Several of these streetscaping activities are currently ongoing or will be conducted in the future within the vicinity of the Paramount Refinery, including the following:

- Atlantic Avenue to Artesia Blvd.
- Artesia Blvd. – Downey Ave. to Obispo Ave.
- Paramount Boulevard – 70th Street and Artesia Blvd.
- Downey Avenue – 70th Street and Artesia Blvd.

(Personal communication, Lee Mayfield, May 2003).

9) North Long Beach Redevelopment Project Area

North Long Beach covers an area of 7,540 acres of land. The majority of the land is within the Redevelopment project area and is located north of I-405 freeway. The area is bordered by the cities of Compton, Paramount and Lakewood. Many of the existing commercial properties in the area are in varying stages of physical deterioration and were built with substandard design and lack adequate parking.

The redevelopment of North Long Beach is already underway and is scheduled to be completed in approximately 2026. Part of the revitalization plan for the area includes converting declining commercial land uses to residential housing or other alternatives, and initiating streetscape improvements (Long Beach, City of, 2002).

City of Paramount

10) Industrial Warehousing Project

An industrial warehousing project located at the intersection of Garfield Avenue and Rosecrans Boulevard is projected to begin construction in approximately August 2004. This project will add 78,605 square feet of warehouse space and is scheduled to be completed within approximately six to eight weeks from commencement (Personal Communication, John Caver, May 2003 and November 2003).

11) Recreation Facility

The City of Paramount plans to build a new recreation center at Progress Park. Progress Park is located at 15500 Downey Ave. The 4,000-square-foot recreation center will replace a 1,400-square-foot preschool that was originally a house built in the 1940s. The new facility will be home to the City's preschool, the Park Pals after-school program, youth and adult recreation classes, the local girls softball league, as well as meetings and counseling sessions for GRIP (Gang Resistance in Paramount) and Neighborhood Watch. In addition, a plaza will be created and there will be extensive landscape and hardscape improvements to the park in the center's vicinity. Construction is scheduled to begin approximately, in April 2004. (Paramount, City of, Press Release, October 2002, Linda Benedetti-Leal and David Johnson, Paramount, City of, Recreation Department, November 2003).

City of Downey

12) Downey Landing

A mixed-use commercial and industrial complex is being proposed in the City of Downey which is located five miles north of the Paramount refinery. The site is bounded by Stewart and Gray roads on the north, Lakewood Boulevard and Clark Avenue on the west, Imperial Highway on the south, and Bellflower Boulevard on the east. The Downey Landing's proposal included multiple uses for 117 acres of the 160 acre site, including a 28-acre retail center that will occupy the northern portion, a movie/TV production studio complex for the central portion, and a business/technology park on the eastern portion. Kaiser Permanente plans a new hospital/medical office complex for 30 acres on the southern portion of the property. The proposed Kaiser Permanente project will include a six-story hospital and a four-story medical office building. The remaining 13 acres of the 160 acres will be reserved for a school/park/learning center.

The final Environmental Impact Report (EIR) (City of Downey, 2002) discusses the impact of the Specific Plan, and contains recommended mitigation measures designed to lessen the extent of identified impacts (City of Downery, 2002).

13) Banco Popular Project

The Banco Project is proposed for the northwest corner of the Rosecrans Avenue/Lakewood Boulevard intersection (13451 Lakewood Boulevard). The project site contains 15,577 square feet and; development will consist of one building containing a 1,200 square foot restaurant and a 2,013 square foot bank. A grading permit has been issued by the City of Downey for the project (Personal Communication Mark Selheim, May 2003).

14) 12651-65 Paramount Boulevard

A residential tract consisting of eight single-family residences is under construction at 12651-65 Paramount Boulevard (Personal Communication Mark Selheim, May 2003).

15) 12645 Lakewood Boulevard

A residential tract consisting of eight single-family residences is proposed for 12645 Lakewood Boulevard (Personal Communication Mark Selheim, May 2003).

City of Bellflower

16) 91 Freeway Ramp Beautification

Landscaping and decorative painting is being performed on the 91 Freeway on/off ramps at Bellflower Boulevard. (City of Bellflower, 2003).

17) Town Center Plaza Project

The Town Center Plaza project is part of the redevelopment plan to revitalize the downtown area of Bellflower. This project will span five acres and feature an outdoor stage, businesses and a train station that would connect to the Metrolink transit system. Environmental clearance is being sought for a two and one half mile bicycle path and walkway on what is currently a railroad track that is scheduled to be removed in the near future. This project is scheduled to begin construction approximately at the end of 2003. (City of Bellflower, 2003).

D. AIR QUALITY

CONSTRUCTION IMPACTS

Construction activities associated with CARB RFG Phase 3 projects at other refineries have or will be essentially completed prior to the commencement of construction activities at the Paramount Refinery. December 31, 2003 is the date when MTBE must be phased out of gasoline sold in California so most of the construction activities at other refineries and terminals have been or will be completed prior to construction of the

Paramount Clean Fuels project. No cumulative construction impacts are expected from other refinery projects.

Air quality impacts due to construction at the Paramount Refinery are considered to be less than significant. It is expected that construction activities associated with several other local projects will occur during the same timeframe as the proposed project including the Industrial Warehousing Project (No. 10), the Recreational Facility (No. 11), the Banco Popular Project (No. 13), and two residential developments (No. 14 and 15). Potential construction emissions have been estimated using the URBEMIS2002 Model. The default assumptions in the URBEMIS2002 Model (Yolo-Solano AQMD, 2003) were used since little information is available regarding these projects (see Appendix B for additional information).

TABLE 5-1

CUMULATIVE PROJECT
PEAK DAY CONSTRUCTION EMISSIONS[1]
(lbs/day)

ACTIVITY	CO	VOC	NOx	SOx	PM10
Paramount Clean Fuels Project	308	32	76	6	118
Industrial Warehouse Project (No. 10)	11	133	1	<1	<1
Recreational Center Project (No. 11)	1	<1	<1	<1	<1
Banco Popular Project (No. 13)	<1	5	<1	<1	<1
Residential Development (No. 14 and 15)	2	66	4	0	<1
Cumulative Emissions	322	236	81	6	118
SCAQMD Thresholds	550	75	100	150	150
Cumulatively Significant (?)	NO	YES	NO	NO	NO

Table 5-1 summarizes the construction emissions of the related projects (projects within approximately one mile of the Refinery) with construction schedules that might coincide with construction of the Paramount Clean Fuels Project. On a cumulative basis, construction emissions would exceed the CEQA thresholds established by the SCAQMD for VOC, assuming the construction projects occur at the same time. Therefore, the cumulative air quality construction impacts are considered significant for VOC emissions. The cumulative air quality construction impacts are less than significant for CO, NOx, SOx and PM10.

OPERATIONAL IMPACTS - CRITERIA POLLUTANTS

The RFG Phase 3 projects at all of the local refineries will increase the criteria pollutants emitted from the refineries. Direct stationary emission sources are generally subject to regulation. The emissions associated with the cumulative CARB Phase 3 projects are shown in Table 5-2. The operation of the CARB Phase 3 projects are expected to exceed

SCAQMD thresholds for CO, VOC, NOx, SOx and PM10, so air quality impacts are significant. No localized increases in air emissions are expected because the refineries and terminals are located a sufficient distances from the Paramount Refinery (see Figure 5-1).

Cumulative impacts associated with other local projects could also occur during the operational phase. Operational emissions from projects other than Paramount are expected to be largely due to mobile source emissions. The operational emissions have been estimated in Table 5-2.

TABLE 5-2

CUMULATIVE PROJECT
PEAK DAY OPERATIONAL EMISSIONS(1)
(Pounds per day)

SOURCE	CO	VOC	NOx	SOx	PM10
Ultramar CARB Phase 3 Project	514	156	2,164	2,678	287
ConocoPhillips Ethanol Import & Dist. Project	9	-54(1)	10	--	1
ConocoPhillips CARB RFG Phase 3	136	22	514	402	43
BP ARCO CARB Phase 3 Project	42	86	49	0	57
Shell CARB Phase 3 Project	2,213	482	2030	71	57
ExxonMobil CARB Phase 3 Project	29	288	138	12	103
ChevronTexaco CARB Phase 3 Project	393	347	3,103	2,498	843
Third Party Terminals	-	4	-	-	-
Paramount Clean Fuels Project	104	66	52	1	69
Industrial Warehouse Project (No. 10)(2)	76	7	10	<1	5
Recreational Center Project (No. 11)(2)	39	3	5	<1	3
Banco Popular Project (No. 13)(2)	109	9	14	<1	8
Residential Development (No. 14 and 15)(2)	80	25	5	<1	10
Cumulative Emissions	**3,744**	**1,441**	**8,094**	**5,662**	**1,486**
SCAQMD Thresholds	550	55	55	150	150
Significant (?)	YES	YES	YES	YES	YES

(1) Negative numbers represent emission reductions.
(2) Based on URBEMIS2002 Model, using default assumptions.

On a regional basis, RFG Phase 3 fuels produced by the refineries are expected to result in a reduction in emissions from mobile sources that utilize the reformulated fuels. Table 5-3 summarizes the expected statewide emission decreases from the mobile sources, which use the reformulated fuels. As a conservative approach, the statewide mobile source emissions reductions are not credited toward mitigation of cumulative impacts.

TABLE 5-3

CARB PHASE 3 EXPECTED STATEWIDE EMISSION CHANGES
(Pounds per Day)

POLLUTANT	1998 Average In-Use Fuel		Future Representative In-Use Fuel Based on Flat Limits		Difference
	2005	2010	2005	2010	2005
NOx	4,200	3,400	-33,200	-27,200	-37,400
Exhaust Hydrocarbons	-16.0 -32,000	-9.3 -18,600	-16.5 -33,000	-9.6 -19,200	-0.5 -1,000
Evaporative Hydrocarbons	-28,800	-22,600	-28,800	-22,600	0
Total Hydrocarbons	-60,800	-41,200	-61,800	-41,800	-1,000

Negative numbers indicate emission reductions. Source: CARB, 1999

Air quality impacts associated with operation of the six RFG Phase 3 projects are considered significant since SCAQMD mass emissions thresholds are expected to be exceeded. Although operations will exceed the significance thresholds, there will be large regional benefits from the use of the reformulated fuels by mobile sources. Emissions of mobile sources will be reduced for NOx and VOCs counteracting the emissions being produced by the refineries and providing an environmental benefit. The emission reductions are expected to be far greater than the direct cumulative emissions from the refineries. In addition, the RFG Phase 3 compliant fuels are expected to result in a 7.2 percent reduction in potency-weighted emissions of toxic air contaminants from mobile sources using the fuel providing additional emissions benefits. Further, the diesel sulfur limit of 15 ppmw will help generate significant air quality benefits by enabling the effective performance of advanced diesel exhaust emissions control technologies that reduce emissions of ozone precursors (NOx and VOCs) and diesel particulate matter.

The cumulative operational emissions associated with projects in the Paramount area are expected to exceed SCAQMD thresholds for CO, VOC, NOx, SOx and PM10. Therefore, cumulative air quality impacts are significant.

OPERATIONAL IMPACTS - TOXIC AIR CONTAMINANTS

In order to determine the cumulative impacts of toxic air contaminants, the emissions from the implementation of the proposed project were analyzed. This is referred to as the post-project scenario and includes all the existing emission sources at the Paramount Refinery, plus the proposed modified emission sources associated with the revised reformulated fuels program. In addition, the potential cumulative impacts associated with the overlap of emissions from other refineries were addressed in the analysis provided below. The other cumulative projects (Projects 8-17) are not expected to emit toxic air contaminants during operations and, therefore, were not included in this analysis.

COMMENT LETTER NO. 1

ADAMS BROADWELL JOSEPH AND CARDOZO

RICHARD TOSHIYUKI DRURY

February 25, 2004

Response 1-1		

The SCAQMD understands that Adams, Broadwell, Joseph and Cardozo is representing the Southern California Pipe Trades District Council 16 and Steamfitters & Pipefitters Local 250.

The SCAQMD required the preparation of an Initial Study to evaluate the potentially significant impacts of the proposed project, particularly related to the use of ammonia (see Draft Negative Declaration, Appendix B). Based on the analysis completed in the Initial Study, it was determined that the impacts related to ammonia use would be less than significant. This analysis, along with the analysis of other environmental resources concluded that the proposed project would not result in any adverse significant environmental effects. Therefore, it was determined that a Negative Declaration was the appropriate CEQA document for the proposed project. As discussed in the following responses, the SCAQMD disagrees with the commentator's opinion that there is a fair argument that the Project may have any significant adverse impacts that would require the preparation of an environmental impact report (EIR). Further, no technical data have been provided to support the opinion that an EIR is required.

Response 1-2					

The commentator is confusing this project with other types of industrial projects. The comment that "members live and use areas that suffer the impacts of the CP Refineries and other environmentally detrimental projects" misses the objectives of the proposed project. The proposed project is to construct a Selective Catalytic Reduction (SCR) Unit, which is an air pollution control device (Draft Negative Declaration page 1-4 through 1-6). The proposed project is expected to result in an emission reduction of about 66,000 pounds per year of nitrogen oxides (NOx) (see Draft Negative Declaration page 2-9) from an existing boiler. The large decrease in NOx emissions can be compared to the expected very small increase in emissions from the proposed project from one additional truck trip per day. Therefore, the overall air quality impact of the proposed project is beneficial (see Draft Negative Declaration page 2-10). While it is appropriate for members of the public to be concerned about air quality degradation, this project reduces emissions, reduces exposure to air pollutants, and improves, rather than degrades air quality. Further, the proposed project helps the Basin to achieve and maintain ambient air quality standards and avoid construction moratoriums associated with missing Clean Air Act compliance dates. As discussed in the Negative Declaration (see Chapter 2) and in responses to comments below, the environmental impacts from implementing the proposed SCR project are less than significant.

Regarding land use decisions, the SCAQMD has no authority over land use decisions. Further, the proposed project will occur entirely within the boundaries of an existing industrial facility, so no land use decisions, change of zoning, General Plan amendments, etc., are necessary.

Response 1-3					

The Negative Declaration was prepared in accordance with CEQA Guidelines §15070 and PRC §210080. The Public Resources Code (PRC) §21080 (c) indicates 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 adopt a negative declaration to that effect. The negative declaration 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."

The Initial Study, within the Negative Declaration, analyzed the environmental impacts associated with the proposed project and concluded, based on substantial evidence (e.g., the SCAQMD air quality significance thresholds), that the air quality impacts are not significant. In addition, see also Gentry v. City of Murrieta (4th Dist. 1995) 36 Cal. App. 4th 1359, 1399-1400 [Cal. Rpt. 2d 170], which invokes the fair argument standard but emphasizes that a lead agency "has some discretion to determine whether particular evidence is substantial" and assess the credibility of evidence. In those cases, as in this case, 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 §210080).

The comment does not point to or provide such substantial evidence. In fact, the comment makes no claims of individual impacts of this project, and claims only cumulative impacts and "piecemealing" of other projects. An industrial project that does not have potentially significant impacts, even if it involves construction or use of hazardous chemicals, may be approved based on a negative declaration.

In this comment the only information provided by the commentator is that "an EIR is required for a major industrial Project involving major construction and the use of hazardous and highly toxic chemicals." No "substantial evidence" was provided to demonstrate that the air quality impacts from the "major construction" and "use of chemicals" exceed the SCAQMD significance thresholds or qualify as a significant adverse impact. If substantial evidence supports a significant impact, an EIR would have been prepared, but unlike the cases stated in this comment (e.g., Arviv Enterprises and Quail Botanical Gardens), none was identified for this project.

In fact, CEQA Guidelines §15064(f)(4) indicates that "the existence of public controversy over the environment effects of a project will not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment." CEQA Guidelines §15064(f)(5) further states 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. Substantial evidence shall include facts, reasonable assumptions predicated upon facts and expert opinion support by fact." This comment provides no substantial evidence that the proposed project will result in significant environmental impacts.

First, the proposed project does not involve major construction. The SCR unit will be made at the manufacturer's facility and sent to the Refinery for installation. Little construction work is required, other than installation of the unit and connecting it to the appropriate equipment, e.g., Boiler 10. The estimated construction emissions are at least 50 percent below the SCAQMD significance thresholds indicating that the construction emissions are well below the significance thresholds for all pollutants and, therefore, less than significant (see Draft Negative Declaration page 2-9). The construction equipment expected as part of the proposed project includes one of each of the following: an air compressor, backhoe, plate compactor, dump truck and fork lift. The use of five pieces of construction equipment clearly does not represent major construction efforts. Further, an estimated 20 workers will be required to install the SCR unit, which does not represent major construction.

Second, the proposed project will require the use of additional ammonia at the Refinery. The Refinery currently uses ammonia for a number of purposes so that no new chemicals will be introduced at the Refinery. The potential hazards associated with the use of ammonia have been evaluated in the Negative

Declaration (see Negative Declaration, Appendix B) and were determined to be less than significant. Please note that the proposed project will use aqueous ammonia and not anhydrous ammonia. Aqueous ammonia at concentrations less than 20 percent is not considered a regulated substance under federal Risk Management Plan requirements, due to the high concentration of water. The potential impacts associated with anhydrous ammonia tend to be significant, as the ammonia is present in a concentrated form.

Responses to other comments are provided below.

Response 1-4					

The SCAQMD disagrees with the commentator's opinion that the Negative Declaration is inadequate. The comment does not point to any evidence of a potential contribution to cumulative impacts associated with this project. Instead, the comment claims only that certain other projects should have been considered for cumulative impacts purposes. However 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 Negative Declaration determined that this is not the case. A Negative Declaration has also been prepared for the Ultra Low Sulfur Diesel (ULSD) Project at the Wilmington Plant. The ULSD Project is a separate project that will be located at the Wilmington Plant, about three miles southwest, of the Carson Plant. The ULSD Project will allow ConocoPhillips to produce diesel fuel in compliance with state and federal regulations and has nothing to do with the proposed SCR Unit to control NOx emissions at the Carson Plant. The SCR project and ULSD project do not rely on each other in any way and one project can be constructed without the other. No cumulative impacts are expected between the two projects and facilities for the following reasons:

1. The only emission increases associated with the ULSD project are an estimated 1.1 pounds per day of volatile organic compound (VOC) emissions. The ULSD project does not use ammonia and will not generate NOx emissions. Therefore, there are no cumulative emission impacts between the SCR Project and ULSD Project.

2. The distance between the two facilities is sufficient to preclude most cumulative impacts.

3. The peak construction period associated with the SCR Unit is expected to occur in September 2004. The peak construction period associated with the ULSD project is expected to occur during mid- 2005. Therefore, peak construction impacts of the two projects do not overlap.

4. The SCR Project will reduce NOx emissions from Boiler 10 by about 66,000 pound per year (181 pound per day), providing an environmental benefit. The construction of the SCR project is expected to be completed prior to the operation of the ULSD project so that the region will experience the emission reduction benefits of the SCR Project prior to the installation of the ULSD Project.

Regarding the other projects referenced in this comment, the ConocoPhillips Phase 3 Project and the Ethanol Project, are separate projects that were both the subjects of separate CEQA documents. The construction related to both projects has been completed, as these projects were required to comply with state and federal gasoline specifications that, in part, required the elimination of MTBE in gasoline and the replacement of MTBE with ethanol. These regulations became effective December 31, 2003 and gasoline produced after that date is subject to the CARB Phase 3 requirements. Therefore, the construction related to the CARB Phase 3 and ethanol projects has been completed and, thus, would not overlap with the construction impacts from this proposed project that has yet to begin. Further, the refinery modifications associated with these projects occurred and the new/modified units are currently operating. Finally, to the extent that truck trips associated with this project generate small amounts of ozone precursors, that contribution is more than offset by the project's NOx reductions.

Response 1-5

See Response 1-4 regarding why cumulative impacts for the proposed project are not significant. The proposed project is expected to result in an emission reduction of about 66,000 pounds per year of nitrogen oxides (NOx) (see Draft Negative Declaration page 2-9). The large decrease in NOx emissions can be compared to the expected very small increase in emissions from the proposed project of one additional truck per day. Therefore, the proposed SCR project will provide an overall air quality and, thus, public health benefit (see Draft Negative Declaration page 2-10). The proposed project is not expected to result in any significant impacts so that no cumulative impacts are expected (see page 2-48 of the Negative Declaration).

Response 1-6

The SCAQMD is aware that a cumulative impacts analysis is an important part of a CEQA document, when there is the potential for cumulative impacts. The potential for cumulative impacts does not exist for the currently proposed ConocoPhillips SCR project.

The CEQA guidelines provide guidance for the cumulative impact analysis. CEQA Guidelines §15064(h)(3) states the following:

> "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency."

As indicated on page 2-7, the proposed project will comply with the Air Quality Management Plan (AQMP). The AQMP identifies control measures necessary to lessen the cumulative air quality problem in the South Coast Air Basin and assist the Basin in achieving compliance with the state and federal ambient air quality standards. The 2003 AQMP has been adopted by the SCAQMD and the California Air Resources Board. The operators of ConocoPhillips are proposing to install an SCR Unit at the ConocoPhillips Carson Plant to reduce NOx emissions from Boiler 10. The proposed project is expected to result in an emission reduction of about 66,000 pounds per year of nitrogen oxides (NOx) (see Draft Negative Declaration page 2-9). The large decrease in NOx emissions can be compared to the expected very small increase in emissions from the proposed project of one additional truck per day. Therefore, the proposed project will provide an overall air quality and, thus, public health benefit (see Draft Negative Declaration page 2-10). The proposed project will result in a cumulative emission benefit, improve air quality, thus, helping the Basin to achieve and maintain ambient air quality standards.

Response 1-7

The use of the cumulative impact analysis prepared for the Paramount Refinery Clean Fuels Draft EIR as part of the analysis for the ConocoPhillips SCR project is inappropriate for the reasons outlined below.

First, the Paramount Refinery is located about 10 miles northeast of the ConocoPhillips Carson Plant, which is a sufficient distance to preclude cumulative impacts between the refineries. Further, the projects identified in the Paramount area (#10 –19) are also located within a sufficient distance to avoid cumulative impacts. In fact, it was determined that only four of these projects would result in cumulative impacts with the Paramount Refinery project.

Second, as discussed in Response 1-4 above, all of the refineries were required to produce gasoline in compliance with CARB Phase 3 requirements as of December 31, 2003. Therefore, the construction of all of the CARB Phase 3 projects (#1-9) is essentially complete and, therefore, has no bearing on the impacts from the proposed project. Further, the projects listed by the commentator (#1-9) have been operational for at least six months, while many have been operational for over a year, so that any environmental impacts associated with these projects would properly be considered as part of the existing environmental setting.

See Response 1-4 regarding the other ConocoPhillips projects, which were also determined not to have cumulative impacts with the SCR Project. Based on the above discussion, none of the identified projects in this comment would have cumulative impacts associated with the ConocoPhillips SCR Unit project.

Response 1-8					

The comment is incorrect. The only toxic air contaminant emitted by the proposed project is ammonia. Ammonia emissions (also referred to as ammonia slip) will be control by permit conditions to five parts per million or less and, therefore, would not be considered a cumulatively considerable impact. For the same reasons identified in Response 1-7, cumulative emissions from toxic air contaminants are not expected. Either the projects are located a sufficient distance from the ConocoPhillips Carson Plant or the construction of the projects are complete and currently operating at new conditions. Further, the ULSD project would not result in any emission increases in ammonia so that no cumulative ammonia emissions would be expected.

CEQA Guidelines §15064(f)(5) further states 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. Substantial evidence shall include facts, reasonable assumptions predicated upon facts and expert opinion support by fact." The comment provides information that is erroneous to the ConocoPhillips SCR project and, therefore, no substantial evidence of significant environmental impacts from the proposed project has been provided to justify the need for an EIR.

Response 1-9					

As discussed in Response 1-4, there are not four projects currently underway or proposed for the ConocoPhillips Refinery. In addition, with regards to impacts and operational process, the ULSD and SCR projects are not related to each other or the two previous CARB Phase 3 projects. The ULSD project will not occur at the same time or result in cumulative impacts with the SCR Unit. The ConocoPhillips Phase 3 Project and the Ethanol Project were separate projects and were both the subject of separate CEQA documents. However, the cumulative impacts were not ignored because the CARB Phase 3 EIR included evaluation of the cumulative impacts of the Ethanol Project since both of these projects involved compliance with CARB Phase 3 requirements and, therefore, are related projects. The construction related to the CARB Phase 3 Project and the Ethanol Project has been completed and the operation of these projects is part of the current environmental setting. Therefore, piecemealing has not occurred for any of the projects referenced in this comment, especially since two of the projects, the Ethanol Project and the SCR project, provide net environmental benefits.

Response 1-10					

Comment noted. The comment discusses the legal standard for analyzing "piecemealing" of a single project under CEQA. As noted above in Responses 1-4 and 1-9, no piecemealing has occurred in this case.

Response 1-11					

While the ConocoPhillips Refinery itself is an integrated refinery that operates at two sites, the SCR project is not part of any larger project and is specifically intended to comply with the RECLAIM program. (See Negative Declaration, p 1-4.) The comment that "the Negative Declarations for the ULSC (sic) and SCR

projects admit that at least some of each project will be built at each of the 2 ConocoPhillips locations" is incorrect (see Draft Negative Declaration page 1-1).

The SCR Project involves the installation of an SCR Unit to reduce NOx emissions from Boiler 10 at the Carson Plant. The project includes an SCR Unit and ammonia tank at the Carson Plant. No portion of this project will occur at or involve any physical modifications at the Wilmington Plant. The ULSD Project is a separate project that will be located at the Wilmington Plant, about three miles southwest, of the Carson Plant. The ULSD Project will allow ConocoPhillips to produce diesel fuel in compliance with state and federal regulations and has nothing to do with the proposed SCR Unit to control NOx emissions from Boiler 10 at the Carson Plant. The SCR project and ULSD project do not rely on each other and one project can be constructed without the other.

The two projects have different construction schedules. The peak construction period associated with the SCR Unit is expected to occur in September 2004. The peak construction period associated with the ULSD project is expected to occur during mid-2005. Therefore, peak construction is not expected to overlap.

See Response 1-9 regarding the comment that there are four phases of the same project ("the refinery modernization project"). This comment is incorrect as the goals and objectives of the projects are very different. There is no "refinery modernization project" at the ConocoPhillips Refinery as referred to in this comment. Three of the four projects at the ConocoPhillips Refinery are being undertaken to comply with state and federal reformulated gasoline and ultra low sulfur diesel specifications. The fourth project, the SCR project, is being undertaken to comply with ConocoPhillip's SCAQMD Rule 2009.1 Compliance Plan. The only portion of this comment that is correct is that the Ethanol Import and Distribution Project and the CARB Phase 3 Project were evaluated for cumulative impacts in the CARB Phase 3 EIR. As explained in Response 1-9, the CARB Phase 3 Project, the SCR Project and the ULSD Project are all separate projects. In addition, CEQA review has not been avoided as the impacts from the Ethanol Import and Distribution Project were included in the cumulative analysis of the other CARB Phase 3 EIR.

The comment referring to the NRDC v. LA is noted. That case concerned a single multi-phase project. This case, however, has no bearing on the proposed ConocoPhillips SCR Unit project because, as discussed previously, this project is not part of any larger "refinery modernization project," or a subsequent phase of a single project.

Response 1-12					

No evidence has been provided to support the commentator's opinion that an EIR is required for the proposed project. Further, as discussed in the above responses, there is no evidence of any significant adverse project-specific or cumulative impacts associated with the proposed project. Therefore, a negative declaration was the appropriate CEQA document to be prepared and distributed to the public for review.

RESPONSE 1-13

Attachment A consists of a portion of Chapter 5, "Cumulative Impacts," of the Paramount Refinery Clean Fuels Project Draft Environmental Impact Report, mentioned in Comment 1-7 to support the commentator's opinion regarding potential cumulative impacts from other projects in the region. As explained in Response 1-7, the projects identified in this attachment have no potential to contribute to cumulative impacts to the ConocoPhillips SCR Project. Therefore, no additional responses are necessary to address Attachment A.

COMMUNITIES FOR A BETTER ENVIRONMENT

February 25, 2004

Via Email, U.S. Mail and Fax

South Coast Air Quality Management District
Attn: Michael Krause
21865 Copley Drive
Diamond Bar, CA 91765-4182
Facsimile: (909) 396-3324

RE: Comments in Opposition to Approval of Negative Declaration for the ConocoPhillips Los Angeles Refinery Carson Plant SCR Project

Dear Mr. Krause and South Coast Air Quality Management District:

2-1 CBE opposes the South Coast Air Quality Management District's Proposed Negative Declaration for the ConocoPhillips Los Angeles Refinery Carson Plant SCR Project ("Project"). Approval of the Negative Declaration would violate the requirements of the California Environmental Quality Act ("CEQA"). California Public Resources Code section 21000, et seq. As discussed below, CEQA requires the preparation of an environmental impact report ("EIR") for the Project in order to allow the public an opportunity to fully and meaningfully participate in the CEQA process and to assure the public that the South Coast Air Quality Management District ("SCAQMD") is adequately protecting the environment and public health.

I. CEQA Requires the Fullest Possible Protection of the Environment

2-2 CEQA must be interpreted to "afford the fullest possible protection to the environment within the reasonable scope of the statutory language." Friends of Mammoth v. Bd. of Supervisors, 8 Cal.3d 247, 259 (1972). CEQA provides that the SCAQMD may issue a Negative Declaration only if "[t]here is no substantial evidence before the agency that the project may have a significant effect on the environment." Public Res. Code section 21080(c)(1). An EIR is required whenever substantial evidence in the record supports a "fair argument that significant impacts may occur." Public Res. Code §21080; Laurel Heights Improvement Assoc. v. Regents of the Univ. of Calif., 6 Cal.4th 1112, 1123 (1993). The "fair argument" standard creates a "low threshold" for requiring preparation of an EIR. Citizens Action to Serve All Students v. Thornley, 222 Cal.App.3d 748 (1990). Because issuing a negative declaration has a terminal effect on the environmental review process, an EIR is necessary to resolve "uncertainty created by conflicting assertions" and to "substitute some degree of factual certainty for tentative opinion and speculation." No Oil, Inc. v. City of Los Angeles, 13 Cal.3d 68, 75 (1975). Therefore, CEQA mandates that the SCAQMD, as lead agency, must require the preparation of an environmental impact report ("EIR") to fully analyze the nature of those impacts as well as measures to reduce or eliminate those impacts. Quail Botanical Gardens v. City of Encinitas, 29 Cal.App.4th 1597 (1994). An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary. Sierra Club v. County of Sonoma, 6 Cal.App.4th, 1307, 1318 (1992)

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In Northern California: 1611 Telegraph Avenue, Suite 450 • Oakland, CA 94612 • (510) 302-0430

II. An EIR is Required Because Substantial Evidence Supports a Fair Argument that the Project Will Have a Significant Effect on the Environment

A. The Use of Ammonia May Have a Significant Effect on the Environment

2-3 The proposed installation of a 10,000 gallon pressurized ammonia storage tank to store aqueous ammonia poses significant threats to health and the environment. Ammonia is a toxic air contaminant and the project will increase ammonia emissions. Even if the emissions produced do not exceed SCAQMD's threshold of significance, the pollution may nevertheless be significant and require the preparation of an EIR. Ammonia can also have a strong odor that may significantly impact the environment. Further, if released, ammonia is a dangerous chemical and the presence of such a large quantity at the site magnifies the threat from any accident or explosion. Installation of a 10,000 gallon pressurized ammonia storage tank presents a target for terrorist attack, thereby creating another danger to the community.

B. The Project Will Create Air Pollution That May Have a Significant Effect on the Environment

The Negative Declaration fails to appreciate the significant impact that Project created air pollution will have on the air quality in the region. Even if the pollution produced does not exceed SCAQMD's threshold of significance, the pollution may nevertheless be significant and
2-4 require the preparation of an EIR. SCAQMD MATES II data indicates that the excess cancer risk in Wilmington is 1537 in one million persons. Given the existing cancer risks for the nearby community, any increase in toxic pollution must be considered significant and must be mitigated fully. Kings County Farm Bureau v. City of Hanford, 221 Cal.App.3d 692, 717-18 (1990). Possible mitigation measures include, but are not limited to, hermetically sealed control valves, retrofitting the refinery with best available control technology including bellows valves and hermetically sealed control valves to offset new pollution, monthly health and safety inspections, and other pollution reduction measures.

C. Construction of the Project Will Cause Significant Environmental Impacts

Construction will cause significant amounts of diesel exhaust, dust, truck traffic, and
2-5 noise impacts that must be analyzed and mitigated in an EIR. In order to mitigate these construction impacts, ConocoPhillips should use Ultra Low Sulfur Diesel (ULSD) in heavy construction vehicles, base its construction schedule around a 4 day -10 hours per day construction week to lessen the traffic impact on the community, paint only with rollers, not spray unless enclosed, use reclaimed water, and reduce diesel emissions from construction equipment through the use of particulate traps and oxidation catalysts.

III. SCAQMD is Illegally Piecemealing the Project in Violation of CEQA

2-6 CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." Bozung, 13 Cal.3d 263,

283-4 (1975); City of Santee v. County of San Diego, 214 Cal.App.3d 1438, 1452 (1989). Before undertaking a project, the lead agency must assess the environmental impacts of all reasonably foreseeable phases of a project. Laurel Heights Improvement Assoc. v. Regents of the Univ. of Calif., 47 Cal.3d 376, 396-97, 253 Cal.Rptr. 426 (1988). A public agency may not segment a large project into two or more smaller projects in order to mask serious environmental consequences. Id. CEQA prohibits such a "piecemeal" approach. Kings County Farm Bureau v. City of Hanford, 221 Cal.App.3d 692, 720, 270 Cal.Rptr. 650 (1990).

2-6 cont.

Both the ConocoPhillips Carson and Wilmington Plants are part of the same refinery, the ConocoPhillips Refinery, and both produce the same product, low sulfur diesel. The two Los Angeles Refinery sites would undergo modifications at the same time and the work done concurrently at each would be part of the same project. The Notice of Intent to Adopt a Negative Declaration for the Wilmington Plant admits that both plants are part of the same project stating, "The proposed project includes physical modifications primarily to process facilities at the Wilmington Plant and only minor control system improvements at the Carson Plant." For the SCAQMD to separate the Los Angeles Refinery's modifications into two distinct projects is piecemealing the two projects. This does not adequately determine the full impacts of the proposed project and instead makes it easier to skirt the preparation of an EIR which would allow the public an opportunity to fully and meaningfully participate in the CEQA process.

IV. The Proposed Negative Declaration Fails to Consider the Impact of the Project on the Communities in Los Angeles which are Already Overburdened with Environmental Hazards

2-7

The proposed project is located in the city of Carson, a community that already bears a disproportionate share of environmental hazards from the existing ConocoPhillips Refinery and other industrial activities. The residents living nearest to the refinery are primarily low-income people and people of color. Economically disadvantaged people and people of color will bear the brunt of the health and environmental impacts of the refinery. These cumulative impacts must be assessed in terms of environmental justice. The location of the Project is directly in the predominantly Latino community of Wilmington. According to the 2000 Census, the Wilmington portion of Los Angeles is 86.74 percent Latino and nearly 92 percent people of color. Available at: www.losangelesalmanac.com/topics/Population/po24la.htm

These communities are already over-burdened by pollution and environmental hazards. SCAQMD's own air quality study shows that the residents of the Carson-San Pedro-Wilmington area already suffer from some of the highest cancer risks in the South Coast from breathing polluted air. CBE is concerned that the environmental justice impacts of the Project have not been considered because an EIR was not prepared.

V. The CEQA documents Must be Translated into Spanish

2-8

Many of the people most affected by this Project will be unable to participate meaningfully in the CEQA process if the documents are not translated into Spanish. CBE therefore requests that the Negative Declaration and all CEQA documents, be translated into Spanish and that public proceedings be conducted with simultaneous Spanish and English translation.

2-8 In community near the refinery, substantial portions of the affected population are Spanish-speaking and have been excluded from the public review and comment process, in violation of the underlying spirit of CEQA. Accordingly, all notices and documents must be translated into Spanish.

VI. Request for a Public Hearing to be held in Wilmington

2-9 In order to provide for greater public participation, especially in these affected low income communities and communities of color, CBE requests that the SCAQMD hold a public hearing in Wilmington before approving the Negative Declaration.

VII. Request for a Good Neighbor Agreement

2-10 Due to the cumulative negative health and environmental impacts imposed by the ConocoPhillips Refinery on the Carson and Wilmington communities, the Refinery should make an effort to positively impact these communities by entering into a Good Neighbor Agreement.

VIII. Request for Further Notification of Future Actions

2-11 CBE requests placement on any list of interested parties and notification of all future public meetings, CEQA documents, and any other notices related to the project. Please send all notices to Communities for a Better Environment, Attn: Scott Kuhn, 5610 Pacific Boulevard, Suite 203, Huntington Park, CA 90255, fax: 323.588.7079.

IX. Conclusion: CEQA Requires The Project Proponent to Prepare an EIR for the Project.

2-12 For all of the above reasons, CBE respectfully requests that the SCAQMD defer action on the Project until it prepares an EIR that fully complies with CEQA, analyzing all of the project's environmental and public health and safety impacts, and proposing methods to reduce or eliminate those impacts. Should you have any questions regarding this matter, please do not hesitate to contact CBE Legal Director Scott Kuhn at 323.826.9771 ext 108.

Sincerely,

Scott Kuhn, CBE Legal Director
Colleen Flynn, CBE Legal Intern

COMMENT LETTER NO. 2

LETTER FROM COMMUNITIES FOR A BETTER ENVIRONMENT

Scott Kuhn

February 25, 2004

Response 2-1

The SCAQMD disagrees that the SCR Negative Declaration violated CEQA requirements. CEQA requires the lead agency to evaluate a project by conducting an initial study "to determine whether an EIR or a negative declaration must be prepared (CEQA Guidelines §15365). The CEQA document, whether an EIR or negative declaration, is circulated to the public "to allow the public an opportunity to fully and meaningfully participate in the CEQA process." This process is not solely the result of or the requirement of an EIR. Specifically, the preparation of an EIR is required when it is determined that a project may have a significant effect on the environment (CEQA Guidelines §15064(a)(1)). As discussed in the Negative Declaration (see Chapter 2) and the responses below, no significant adverse environment effect has been identified for the proposed project. Therefore, the preparation of a negative declaration is appropriate for the proposed project (CEQA Guidelines §15070(a)). The negative declaration process allows the public an opportunity to participate in the CEQA process during a 30-day public review and comment period. An extension of the comment period was provided at the request of the commentator to allow an additional 10-days for public comments. Therefore, there was full opportunity for the public to review and comment on the SCR Negative Declaration. Finally, as explained in the following responses, the proposed project will generate substantial beneficial air quality effects, thus, providing public health benefits.

Response 2-2

This comment cites certain court cases regarding the need for an EIR and indicates that an EIR is needed when a "fair argument" indicates that significant impacts may occur, but fails to provide any data or analysis why the proposed project may generate significant impacts and, thus, require the preparation of an EIR. See Responses 1-1 regarding the preparation of a negative declaration and Response 1-3 regarding §21080 (c) of the Public Resources Code (PRC) that allows the preparation of a negative

declaration. As indicated in Responses 1-1 and 1-3, CEQA does not require the preparation of an EIR, when no significant impacts have been identified (CEQA Guidelines §15365).

In this comment no technical data or specific comments are provided that would qualify as "substantial evidence." The comment reflects the commentator's opinion that an EIR is required but provides no information or data to support that opinion. On the contrary, the Negative Declaration analyzed the environmental impacts associated with the proposed project and concluded, based on substantial evidence (e.g., the SCAQMD air quality significance thresholds) that the environmental impacts would be not significant, thus qualifying the preparation of a negative declaration.

CEQA Guidelines §15064(f)(4) indicates that "the existence of public controversy over the environmental effects of a project will not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment." CEQA Guidelines §15064(f)(5) further states 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. Substantial evidence shall include facts, reasonable assumptions predicated upon facts and expert opinion support by fact." This comment provides no substantial evidence that the proposed project will result in significant environmental impacts and, thus, require the preparation of an EIR. No uncertainty has been created by conflicting assertions and no opinion or speculation was used in the preparation of the negative declaration, as indicated in this comment.

In the case of Quail Botanical Gardens v. City of Encinitas, the court finds that the project will have a significant impact on views based on both expert and lay testimony. Neither are provided in this comment disputing conclusions in the negative declaration. In addition, the case concluded the courts should give the lead agency "the benefit of the doubt on any legitimate disputed issues of credibility." Finally, credible evidence that the proposed SCR Unit project would not have significant impacts was included in the Negative Declaration. For example, air emissions were calculated and compared to the established SCAQMD thresholds to determine that the proposed project's impacts on air quality were expected to be less than significant.

Response 2-3

The SCAQMD disagrees with the commentator's opinion that, "even if the emissions produced do not exceed the SCAQMD's threshold of significance, the pollution may nevertheless be significant . . ." This opinion is contrary to CEQA Guidelines §15064(f)(3) and §15064.7(a). The SCAQMD has established significance thresholds which are the levels used to determine if an increase in a pollutant is significant per CEQA. If the increase in emissions does not exceed the thresholds, then the impacts are

not significant. With regard to the opinions expressed in this comment concerning substantial evidence for preparing an EIR, please refer to Response 1-3.

As discussed on page 2-10 of the Negative Declaration, the proposed project is not expected to result in an increase in odors. Ammonia at certain levels can have a strong odor; however, the proposed project is not expected to generate substantial ammonia emissions, since the project will use aqueous ammonia and the ammonia will be stored in an enclosed pressurized tank. The Refinery has established procedures to minimize the potential for odors, as well as an odor response procedure for responding to internal or external reports of odors on a 24-hour basis to minimize the frequency and magnitude of odor events.

Because flue gases are quite hot and are usually discharged through a stack, any ammonia emissions would be quite buoyant and would rapidly rise to higher altitudes in the atmosphere without any possibility of lingering at ground level. The odor threshold of ammonia is one to five parts per million, but because of the buoyancy of ammonia emissions and an average prevailing wind velocity of about six miles per hour in the Basin, it is unlikely that ammonia emissions would exceed the odor threshold. In addition, significant dilution would occur before this material could reach a receptor because of the buoyancy of ammonia emissions. The maximum ground level concentration at an off-site receptor is expected to be less than one part per million. This concentration is below the odor detection limit (one part per million) and would not be expected to have any adverse impacts. Under normal operating practices, no odors are expected from the new equipment and, therefore, odor impacts are not expected to be significant.

The opinion of the commentator that the ammonia storage tank poses significant threats to health and the environment is not consistent with the hazard analysis completed for ammonia as part of the Negative Declaration (see Appendix B). The potential hazards associated with the use of ammonia have been evaluated in the Negative Declaration (see Negative Declaration, Appendix B) and were determined to be less than significant. The proposed project will use aqueous ammonia and not anhydrous ammonia. The potential impacts associated with anhydrous ammonia tend to be greater, as the ammonia is present in a concentrated form. Aqueous ammonia at concentrations less than 20 percent is not considered a regulated substance under federal Risk Management Plan requirements, due to the high concentration of water. The Refinery currently uses ammonia for a number of purposes so the project will not introduce any new chemicals to the Refinery. The analysis includes a tank failure that releases the entire contents of the tank. A release of the entire contents of the ammonia storage tank is not expected to generate ammonia vapor concentrations that exceed the Emergency Response Planning Guidelines (ERPG) 2 or 3 threshold levels (see Negative Declaration, pages 2-27 through 2-28 and Appendix B) or exposure to any person outside of the ConocoPhillips Carson Plant. The ERPG thresholds are the maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their ability to

take protective action. Therefore, no significant impacts were identified related to the use of 19 percent aqueous ammonia at the site.

While terrorism is a security concern, there is no evidence that the aqueous ammonia tank would be a target. In addition, there is equipment at a refinery that could have hazardous consequences but are necessary for the function of the operation. The ammonia is required to control emissions from the SCR. It should be noted that the cause of the release does not change the potential hazard impact analysis. The hazard analysis assumes that the content of the ammonia storage tank is completely discharged. Whether the release is caused by human error, equipment failure, an earthquake, terrorist act, or other cause, it will make no difference to the ammonia hazards. In other words, in any event an ammonia release is not expected to generate ammonia vapor concentrations that exceed the ERPG-2 or ERPG-3 threshold levels (see Negative Declaration, pages 2-27 through 2-28 and Appendix B) to any one outside of the ConocoPhillips Carson Plant. Moreover, the addition of one modest-sized ammonia storage tank will not make the refinery a more attractive target for terrorist attacks. The presence of the refinery is an existing baseline condition for CEQA purposes, and the one additional tank will not make it more visually conspicuous (Negative Declaration, p. 2-4 to 2-5) or create a significant new hazard in a worst-case release scenario (Negative Declaration, p. 2-27 to 2-28 and Appendix B).

Response 2-4

The SCAQMD has established significance thresholds which are the levels used to determine if an increase in a pollutant is significant. If the increase in emissions does not exceed the thresholds, then the impacts are not significant; therefore, the SCAQMD disagrees that impacts are significant if they do not exceed thresholds.

The proposed project is to construct an SCR Unit, which is an air pollution control device (Draft Negative Declaration page 1-4 through 1-6) to comply with ConocoPhillip's SCAQMD Rule 2009.1 Compliance Plan. The proposed project is expected to result in an emission reduction of about 66,000 pounds per year of NOx (see Draft Negative Declaration page 2-9). The large decrease in NOx emissions can be compared to the expected very small increase in emissions from the proposed project of one additional truck per day. Therefore, not only are the air quality impacts less than significant, the overall impact of the proposed project is to provide an overall emission reduction benefit in the Carson area (see Draft Negative Declaration page 2-10), the very area for which this commentator is concerned about the general air quality. Therefore, the proposed project will reduce emissions, reduce exposure to air pollutants, and improve air quality, thus helping the Basin to achieve and maintain ambient air quality standards.

The proposed project is not expected to generate emissions of any carcinogens and, therefore, will not impact or result in any increase in cancer causing toxic air contaminants. With no increase in cancer risk, mitigation is not necessary. The proposed

project may result in ammonia emissions due to ammonia slip. Ammonia is considered to have chronic and acute health effects. The predicted ammonia emissions are expected to be well below the acute and chronic hazard screening levels so that no significant impacts are expected associated with ammonia slip. In addition, the ammonia slip will be enforced with conditions on the air permits.

The mitigation measures recommended in this comment do not apply to this project. The mitigation measures mentioned in this comment apply to fugitive components that generate fugitive VOC emissions. The proposed project does not require any new valves, flanges or other fugitive VOC components. So mitigation of fugitive VOC component sources (which are not part of the project) is not required. The Negative Declaration identified no health or safety risks that would pose a need for monthly inspections as suggested by the commentator beyond the existing health and safety programs already in practice at the Refinery.

Response 2-5

The construction impacts associated with the proposed project were analyzed in the Negative Declaration and determined to be less than significant as discussed below. The commentator presents no evidence or technical data that the analysis in the Negative Declaration was inaccurate.

The air quality impacts associated with the proposed project including diesel exhaust and truck traffic were analyzed in the Negative Declaration (pages 2-8 and 2-9, and Appendix B). The SCR unit will be made at the manufacturer's facility and sent to the Refinery for installation. Minor construction is required, other than installation of the unit and connecting it to the appropriate equipment, e.g., Boiler 10. The estimated construction emissions are at least 50 percent below the significance threshold indicating that the construction emissions are well below the applicable construction significance thresholds for all pollutants and, therefore, less than significant (see Draft Negative Declaration page 2-9). The construction equipment expected as part of the proposed project includes an air compressor, backhoe, plate compactor, dump truck and forklift. The use of five pieces of construction equipment does not represent major construction efforts. Further, an estimated 20 workers will be required to install the SCR unit, which does not represent major construction efforts.

The noise impacts associated with the construction phase of the proposed project were analyzed in the Negative Declaration (see page 2-37 and 2-38). The construction noise level at the property boundaries is estimated to be about 55 decibels and the refinery is surrounded by other heavy industrial facilities. The noise level from the proposed project at the closest residential area is expected to be about 49 decibels, which is below ambient noise levels. Therefore, no significant adverse noise impacts are expected during the construction phase.

The traffic impacts associated with the construction phase of the proposed project were also analyzed in the Negative Declaration (see pages 2-45 and 2-46). Construction of the proposed project is expected to require one truck trip per day and about 20 worker trips per day. The small traffic volume generated by the proposed project is expected to be less than significant as the local streets carry between 17,500 and 27,000 vehicles per day.

Since construction will not cause significant impacts to any environmental resources identified on the environmental checklist, the mitigation measures proposed by the commentator are unnecessary and not required. In addition, many of the suggested mitigation measures address resource areas that are beyond those areas of potential impacts mentioned in the comment and that are either unaffected by the project or have less than significant impacts. Therefore, even if implemented, the measures would not mitigate the potential impacts, thus failing to fulfill the intentions and purpose of CEQA mitigation measures, including the requirement for an "essential nexus (i.e., connection) between the mitigation measure and the legitimate government interest" (CEQA Guidelines §15126.4(a)(4)(A).

Response 2-6

The SCAQMD disagrees that piecemealing of ConocoPhillips projects has occurred for the reasons addressed below in this comment.

The SCR project is intended to satisfy SCAQMD's RECLAIM program requirements and has not been piecemealed from any larger project. The comment that both the Carson and Wilmington Plants will undergo modifications at the same time because they are part of the same project is incorrect. The SCR project and ULSD projects have independent objectives and are on separate schedules. A Negative Declaration has also been prepared for the ULSD Project at the ConocoPhillips Wilmington Plant. The ULSD Project will allow ConocoPhillips to produce diesel fuel in compliance with state and federal regulations and has nothing to do with the proposed SCR Unit to control NOx emissions from Boiler 10 at the Carson Plant. The SCR unit can be built without any reliance on the ULSD project. Conversely, the ULSD project can be built whether or not the SCR Unit is installed. The two projects are independent and do not rely on each other in any manner. Therefore, separate analysis of these projects does not constitute piecemealing.

The Negative Declaration for the ULSD Project indicates that the project "includes physical modifications primarily to process facilities at the Wilmington Plant and only minor control system improvements at the Carson Plant." The control system improvements referred to in the ULSD Negative Declaration involve only minor physical modifications by existing workers (add thermocouples and modify some existing control valves), which are unrelated to Boiler 10 or the SCR Unit.

Based on the above, piecemealing of the SCR Project and ULSD Project has not occurred because the two projects are independent and do not rely on each other. The commentator is also referred to Responses 1-9, 1-10, and 1-11.

Response 2-7

Please see responses 1-2 and 2-3 regarding the less than significant contribution of impacts and beneficial impacts from the SCR project, individually and cumulatively. The project's potential impacts on all receptors, including those belonging to minority and low income communities were addressed in this analysis. Accordingly, since the proposed project will not cause a significant adverse impact, no significant disproportionate impact on disadvantaged communities or communities of color are realized. Please note that currently there are no requirements to analyze environmental justice as a separate issue in the CEQA process. Notwithstanding this, please note that the census data provided in the comment is for Wilmington. ConocoPhillips' Carson Plant is located in the City of Carson where Hispanics/Latinos comprise about 35 percent of the population. (www.losangelesalmanac.com/topics/population/po38htm)

The SCAQMD has demonstrated its commitment to environmental justice by adopting a comprehensive program of measures to reduce adverse environmental justice impacts. Please see the SCAQMD's website at www.aqmd.gov for more details on the environmental justice measures and additional public information. The original 10 environmental justice initiatives, adopted in 1997, have been completed or are ongoing. These include: Town Hall Meetings, ambient monitoring of air toxics, community response teams, expanded CEQA commenting, an Environmental Justice Task Force, participating in a City of Los Angeles Environmental Justice Forum, providing incentives for early clean-up or removal of diesel engines, improved field inspection technology, portable equipment guidelines to protect sensitive receptors, and amending air toxic control rules, Rules 1401 and 1402, to further reduce toxic emissions.

Beyond these original 10 initiatives, the SCAQMD has adopted a number of additional measures, which reduce emissions in areas impacted by air toxics. An outgrowth of the SCAQMD's Multiple Air Toxics Exposure Study (MATES-II) conducted in 1998-1999 was a landmark series of fleet rules requiring alternative fuel vehicles to replace diesel vehicles in many public fleets, including transit and school buses. Also, the SCAQMD adopted a rule to significantly reduce the sulfur content of diesel fuel.

Similarly, in March 2000, the SCAQMD adopted an Air Toxics Control Plan designed to achieve an additional 50 percent reduction in air toxics exposure, including measures for source-specific rules. The SCAQMD has also adopted measures to specifically reduce risks in the port areas. These include Rule 1158 amendments to prohibit open storage of petroleum coke, and a large number of incentive grants to reduce diesel emissions from marine vessels in the ports. Some incentive programs, including the Carl Moyer program for diesel clean-up, are required to target funds to areas having the highest exposure to

pollutant concentrations, including low income populations and communities of color, or both. The SCAQMD has voluntarily incorporated this concept into other incentive programs. The SCAQMD has also adopted a program of extensive targeted outreach toward ethnic communities in the basin, designed to insure these communities are adequately informed and know how to make their voices heard.

In July 2002, SCAQMD staff has proposed a series of further enhancements to the SCAQMD's environmental justice programs. In particular, staff proposed development of a low-emission and clean-equipment control measure for the category of off-road intermodal equipment, such as that operated at ports and large distribution centers, including off-road diesel equipment. This measure will further reduce diesel emissions in the port. In conjunction with the SCAQMD's environmental justice enhancements, the SCAQMD's Governing Board has directed staff to include more stringent control requirements for air toxics sources near sensitive receptors, in particular schools. Two recent rule projects, amendments to Rule 1469 and new Rule 1470, include more stringent requirements for sources near schools.

Thus, the SCAQMD is actively pursuing a myriad of measures to reduce risks, and is fully committed to implementing concrete measures to address environmental justice concerns. In discussing how to reduce disparate impacts, U.S. EPA has stated, "Efforts that focus on all contributions to the disparate impact, not just the permit at issue, will likely yield the most effective long-term solutions." (65 Fed.Reg. at 29662, June 27, 2000.) The SCAQMD is carrying out an aggressive program of controls for all sources within the SCAQMD's jurisdiction that contribute to air quality concerns in the affected area as well as a comprehensive program of environmental justice measures, consistent with U.S. EPA's recommendation.

Response 2-8

Public notice of the proposed project was provided per the requirements of CEQA. The Public Resources Code (PRC) §21092 requires that notice "shall be given to the last known name and address of all organizations and individuals who have previously requested notice and shall also be given by at least one of the following procedures:" (A) Publication in a newspaper of general circulation in the area affected by the proposed project. "If more than one area will be affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas." (B) posting of the notice on- and off-site in the area where the project is to be located; and (C) direct mailing to the owners and occupants of contiguous property shown on the latest equalized assessment roll.

Public notice of the availability of the Negative Declaration was provided in several different ways. First, notice was given via direct mailing to the last known name and address of all organizations and individuals who have previously requested notice. Second, notice was provided in the Los Angeles Times, the newspaper of largest

circulation on January 15, 2004 and in the Daily Breeze on January 16, 2004. These actions comply with the minimum CEQA requirements. In addition to these minimum requirements, additional noticing was provided as follows. Per PRC §21092(b)(3)(B), the notice was posted off-site at the Los Angeles County Clerk's Office (see also CEQA Guidelines §15187(d)). The notice was provided via electronic mail to a number of interested entities including environmental groups, public agencies and interested individuals that have expressed interest in receiving SCAQMD environmental notices. Finally, the document itself was available online at the SCAQMD's website the first day of the public comment period and also hardcopies of the document were available the first day of the public comment period at the SCAQMD's headquarters located at 21865 Copley Drive, Diamond Bar, California.

Based on the above, public notice has been provided on the proposed project in a manner that meets and exceeds the CEQA requirements for public notice for negative declarations. CEQA does not require that the documents be translated into Spanish. If anyone requested the notice to be translated, the SCAQMD has multi-lingual staff members to assist. No one requested such assistance. The SCAQMD has initiated a policy of translating some notices into Spanish or other languages where a particular language group may be affected by SCAQMD rules and regulations. This policy does not currently apply to CEQA documents.

Response 2-9

CEQA does not require that a public hearing be held as part of the CEQA process for a proposed project. CEQA Guidelines §15202 states in part "CEQA does not require formal hearings at any stage of the environmental review process. Public comments may be restricted to written communication" (CEQA Guidelines §15202). The request for a public hearing was considered. The environmental review of the project indicates that the proposed project has large environmental benefits on the whole and it is necessary to move forward with the proposed project in a timely manner to achieve the expected emission reductions and comply with SCAQMD Rule 2009.1. Further, no one else has requested a public hearing and only two comment letters were received on this project so that the SCAQMD does not believe that a public hearing on this project is warranted at this time.

Response 2-10

The proposed project is expected to result in cumulatively beneficial impacts on air quality by reducing NOx emissions and, therefore, create beneficial health impacts. See Responses 2-4 and 2-7. The intent of this comment is not clear and the definition of a "Good Neighbor Agreement" is not provided in this comment and is beyond the scope of the proposed project.

Response 2-11

Communities for a Better Environment is currently on the SCAQMD's CEQA mailing list to receive notification of the availability of SCAQMD CEQA documents and will continue to be included on the list of interested parties with respect to the SCR project and will be notified of future public meetings, documents, and other notices related to the project.

Response 2-12

No evidence has been provided to support the commentator's claim that an EIR is required for the proposed project. Further, as discussed in the above responses and the Draft Negative Declaration, there is no evidence of any significant adverse project-specific or cumulative impacts associated with the proposed project and, thus, the preparation of an EIR is not required (PRC §21080(c)).