NOTICE OF PREPARATION

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • http://www.aqmd.gov

SUBJECT: **NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT**
PROJECT TITLE: **VALERO WILMINGTON REFINERY ALKYLATION IMPROVEMENT PROJECT**

In accordance with the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (SCAQMD) is the Lead Agency and will prepare a Draft Environmental Impact Report (EIR) for the project identified above. The purpose of this Notice of Preparation (NOP) is to solicit comments on the environmental analysis to be contained in the EIR.

In conjunction with the development of the proposed project, it is necessary to address the potential adverse effects of the proposed project on the environment. The SCAQMD is preparing the appropriate environmental analysis consistent with CEQA. The Notice of Preparation (NOP) serves two purposes: to solicit information on the scope of the environmental analysis for the proposed project and notify the public that the SCAQMD will prepare a Draft EIR to further assess potential adverse environmental impacts that may result from implementing the proposed project. The Draft EIR will discuss all topics required by CEQA.

This NOP and the attached Initial Study are not SCAQMD applications or forms requiring a response from you. Their purpose is simply to provide information to you on the above project. If the proposed project has no bearing on you or your organization, no action on your part is necessary. The project's description, location, and potential environmental impacts are described in the NOP and the attached Initial Study.

The SCAQMD will hold a public hearing to discuss the proposed project and review the environmental issues to be discussed in the EIR on September 30, 2003 at Banning Landing Community Center, 100 E. Water Street, Wilmington, CA 90744 at 6:30 p.m.

Comments focusing on your area of expertise, your agency's area of jurisdiction, or issues relative to the environmental analysis should be addressed to Mr. James Koizumi at the address shown above, sent by FAX to (909) 396-3234 or e-mailed to http://www.jkoizumi@aqmd.gov. Comments must be received no later than 5:00 p.m on October 16, 2003. Please include the name and phone number of the contact person for your organization.

Project Applicant: Ultramar Inc., Valero Wilmington Refinery

Date: September 16, 2003 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor
Planning, Rules, and Area Sources
(909) 396-3054

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, California 91765-4182

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Project Title:
Valero Wilmington Refinery Alkylation Improvement Project

Project Location:
The Valero Wilmington Refinery is located at 2402 East Anaheim Street, Wilmington (Los Angeles), California.

Description of Nature, Purpose, and Beneficiaries of Project:
Modification of the existing alkylation process to eliminate the use of concentrated hydrofluoric acid by substituting the reduced volatility alkylation process ("ReVAP") and associated alkylation efficiency improvements.

Lead Agency:	**Division:**
South Coast Air Quality Management District	Planning, Rule Development and Area Sources

Initial Study and all Supporting Documentation are Available at:

SCAQMD Headquarters
21865 E. Copley Drive
Diamond Bar, CA 91765

Or by Calling:
(909) 396-2039

Or by Accessing:
http://aqmd.gov/ceqa/nonaqmd.html

Public Hearing on the NOP for the Ultramar EIR will be held:

Banning Landing Community Center 100 E. Water Street Wilmington, CA 90744	Tuesday, September 30, 2003 6:30 p.m.

The Public Notice of Preparation is provided through the following:

☑ Los Angeles Times (September 17, 2003)
☑ AQMD Website
☑ AQMD Mailing List

Review Period:
September 17, 2003 through October 16, 2003

CEQA Contact Person:	**Phone Number:**	**E-Mail Address**
James Koizumi	(909) 396-3234	jkoizumi@aqmd.gov

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Notice of Preparation/Initial Study
Valero Wilmington Refinery
Alkylation Improvements Project
SCH No.

September 16, 2003

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
Frances Keeler – Senior Deputy District Counsel

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EXECUTIVE OFFICER

BARRY WALLERSTEIN, D. Env.

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PROJECT DESCRIPTION

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ULTRAMAR INC.

VALERO WILMINGTON REFINERY

ALKYLATION UNIT IMPROVEMENT PROJECT

1.0 INTRODUCTION

The Alkylation Unit at the Ultramar Inc., Valero Wilmington Refinery uses concentrated hydrofluoric acid (HF) as a catalyst for the production of alkylate, a high octane blend stock highly important to the production of state and federally mandated reformulated gasoline. HF can volatize in the event of an accidental release, and is a toxic air contaminant. On February 12, 2003, the Ultramar Inc., Valero Wilmington Refinery (Refinery) and the South Coast Air Quality Management District (SCAQMD) entered into a Memorandum of Understanding (MOU) requiring the termination of the transport, storage and use of concentrated hydrofluoric acid at the Wilmington Refinery.

The Refinery agreed to adopt a modified alkylation process that eliminates the use of concentrated HF catalyst and substituting it with the proprietary Reduced Volatility Alkylation Process (ReVAP). ReVAP incorporates a suppressant in the HF that greatly reduces volatility in the event of a release with a concurrent reduction in safety risks in the surrounding area. Use of this modified process meets the SCAQMD's objectives with respect to elimination of concentrated HF.

Incorporation of ReVAP requires substantial improvements to the Alkylation Unit and related units and systems of the Refinery. The MOU recognizes that these improvements must be viewed in light of the objectives of both the California's Phase 3 Reformulated Gasoline (RFG 3) requirements and the Governor's executive order directing elimination of methyl tertiary butyl ether (MTBE) as an oxygenate and octane enhancer in California gasoline. Both these actions can result in the loss of gasoline production. The Refinery will incorporate alkylation efficiency improvements and design capacity enhancements to help offset any such losses. While increasing alkylate production capacity, the improvements will not affect the existing crude oil throughput of the Refinery.

The proposed project consists of the following principal components:

- Modify the existing Alkylation Unit to incorporate the ReVAP process, and enhance the alkylate production capacity to 20,000 barrels per day (bpd).

- Increase the existing Butamer Unit capacity to 17,000 bpd to provide sufficient feed for the enhanced Alkylation Unit with the ReVAP process. Modifications to the Liquified Petroleum Gas (LPG) Merox Treating Unit, Light Ends Units, and Naphtha Hydrotreater Unit, and installation of a new fuel gas treating system.

- Upgrade Refinery utility systems to support the improvements, including a new steam boiler with selective catalytic reduction (SCR), a new hot oil heater with SCR, modifications to an existing hot oil heater, a new cooling tower as well as modifications to an existing cooling tower, a new butane storage sphere, a new propane storage bullet,

a new hydrocarbon flare, a new aqueous ammonia storage tank, and a relocation of storage tanks.

The MOU establishes a schedule for the project with enforceable deadlines. The Refinery must complete construction and commence operations of the modified Alkylation Unit by December 31, 2005. To meet this schedule, the MOU sets a target date of March 1, 2004 for the issuance of all permits. Construction must start within seven months of the date when all permits have been issued.

1.1 AGENCY AUTHORITY

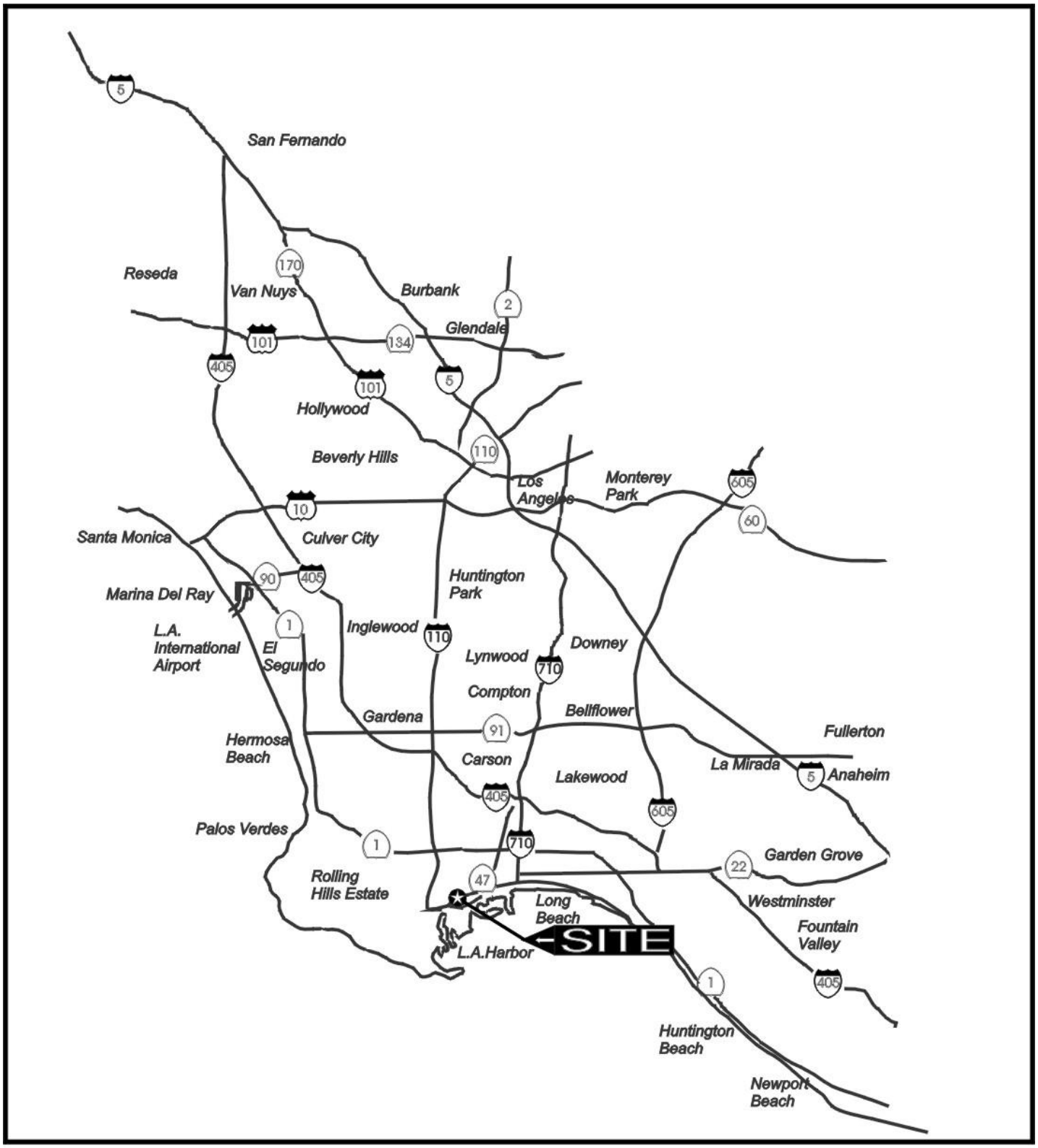
The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. To fulfill the purpose and intent of CEQA, the SCAQMD is the lead agency for this project and has prepared this Initial Study and Notice of Preparation (NOP) to address the potential environmental impacts associated with the Refinery's Alkylation Improvement Project.

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (Public Resources Code Section 21067). It was determined that the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines Section 15051(b)). The proposed project requires discretionary approval from the SCAQMD for modifications to existing stationary source equipment and installation of new stationary source equipment.

1.2 PROJECT LOCATION

The proposed project will occur at the Ultramar Wilmington Refinery, which is located at 2402 East Anaheim Street, in the Wilmington district of the City of Los Angeles in the southern portion of Los Angeles County (see Figure 1-1). The proposed modifications are entirely within the confines of this existing facility.

The Refinery is bounded to the north by Anaheim Street and industrial uses. Also northward of Anaheim Street is another major refinery complex. The Refinery is bounded on the south by an area used previously for oil field production facilities and which is now developed for marine cargo transport and storage facilities and other Port of Long Beach related uses. A Hydrogen Plant is located adjacent to and immediately west of the Ultramar Refinery (west of the Dominguez Channel) on Henry Ford Avenue. To the west of Henry Ford Avenue are additional industrial and commercial uses and the Port of Los Angeles. To the east are automobile storage yards, a cogeneration plant and a petroleum coke calcining plant. The Terminal Island Freeway (State Route 103) runs through the Refinery boundaries. Historically, there were oil production facilities



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REGIONAL MAP

Figure 1-1

Project No. 2185

N:\2185\Regional Map

scattered throughout this general area, none of which are producing. The closest residential area is about one mile northwest of the Refinery in Wilmington.

1.3 LAND USE AND ZONING

The Refinery is located in the Wilmington District of the City of Los Angeles within southern Los Angeles County. The community of Wilmington is generally urbanized and includes a substantial amount of industrial and port-related development. The Ports of Los Angeles and Long Beach are located along the coastal boundary of Wilmington.

The Wilmington area is bordered by the Harbor Freeway (Interstate 110) on the west, the Long Beach Freeway (Interstate 710) on the east, the San Diego Freeway (Interstate 405) on the north and the Pacific Ocean on the south. The Dominguez Channel runs adjacent to the Refinery from the north to the south. Railroad tracks service the area along the western boundary of the Refinery and along Alameda Street.

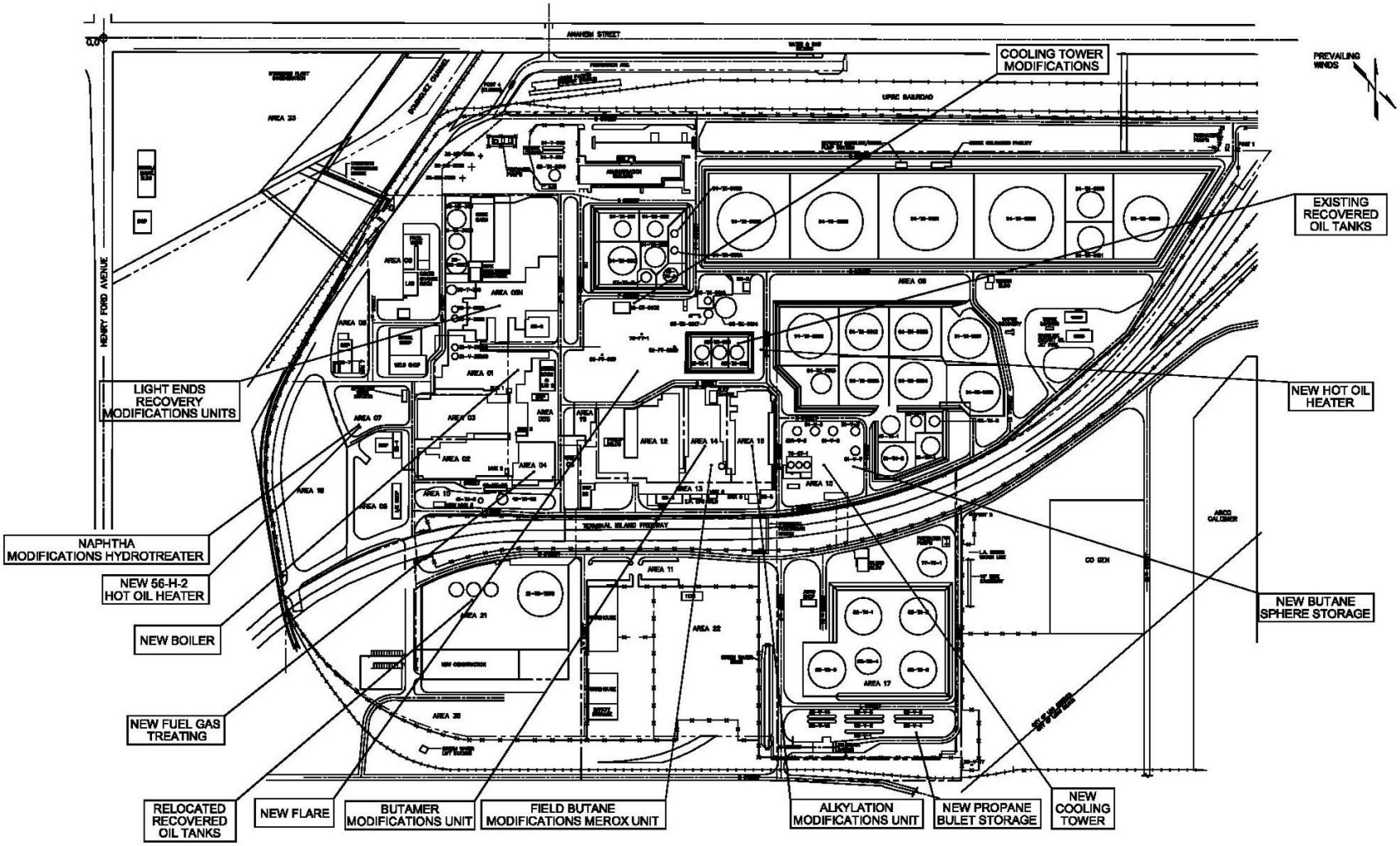
The proposed project is consistent with the zoning for the Refinery (M3-1) and with the Wilmington-Harbor City Plan (City of Los Angeles, 1993). All proposed modifications would occur within the confines of the existing Refinery.

1.4 EXISTING REFINERY CONFIGURATION AND OPERATION

Crude oils and distillates (both of which are also referred to as feedstocks), used to produce gasoline and other petroleum products, are delivered to marine terminals in the Port of Los Angeles/Port of Long Beach by ship. Feedstocks are delivered to the Refinery by pipelines. Crude oil is processed in the crude unit where it is heated and distilled into components, most of which are processed in downstream Refinery units. The heavy residual oil leaving the crude unit is further distilled in the vacuum unit to yield additional, lighter hydrocarbon products and the vacuum residuum. The lighter hydrocarbon components from the crude unit and vacuum unit are fed to other Refinery units for further processing, primarily the Fluid Catalytic Cracking Unit, gas oil hydrotreater, the Unibon, and the naphtha hydrotreater unit. The feedstocks are refined into the major Refinery products which include unleaded gasoline, diesel, jet fuels, low sulfur distillates, other distillate fuels, petroleum coke, and sulfur. Elemental sulfur and petroleum coke are produced as by-products of the refining process. Major processing units at the Refinery include the crude and vacuum distillation, delayed coking, catalytic reforming, hydrotreating, fluid catalytic cracking, alkylation, sulfur recovery, and auxiliary systems. Under the existing Refinery configuration, about 78,000 bpd of crude oil, and about 50,000 bpd of distillates are purchased and processed.

1.5 PROPOSED PROJECT Modifications to the REFINERY

The locations of the proposed new units and modified units are shown in Figure 1-2.



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SITE LOCATION MAP

Project No. 2185
I:\2185\Site Location Map

Figure 1-2

A. Transport of Catalyst

The Refinery proposes to adopt ReVAP, which is similar to conventional HF alkylation except the process is modified so that a proprietary vapor pressure suppression additive can be blended with the HF acid catalyst (referred to as modified HF). The proprietary additive is a non-volatile, non-odorous, low toxicity material that is completely miscible in the acid phase. It has very limited affinity for other hydrocarbons, including the alkylate product and acid soluble oil (ASO) by product, similar to the organic polymer produced in the current process. The unique physical properties of the additive significantly reduce the volatility of the acid at ambient conditions. This reduction in volatility proportionately reduces the amount of HF that can vaporize and subsequently disperse off-site from a given liquid release quantity. The modified HF catalyst reduces acid vapor pressure sufficiently to suppress the usual flash atomization process of hydrofluoric acid, causing most of the acid to fall to the ground as an easily controlled liquid and reduces the potential for off-site consequences of an accidental HF release.

HF is currently transported to the Refinery via truck. The proposed project will eliminate the transport of HF resulting in the reduction of 25 trucks per year.

The Refinery will obtain the modified HF acid catalyst already blended by the supplier. An HF/additive blend (modified HF) with a minimum of six percent additive by weight is anticipated. The supplier will deliver the catalyst by tank truck. The Refinery estimates that about 44 trucks per year will be required for the transport of modified HF. An additional two trucks per year are expected to be required to transport the HF additive (i.e., the additive only with no HF). The modified HF catalyst will be recovered on-site and sent back to the supplier for regeneration. Therefore, there will be a net increase of 21 trucks per year (46 trucks – 25 trucks) associated with the transport of modified HF.

B. Modifications to the Existing Alkylation Unit

In order to incorporate ReVAP into the existing Alkylation Unit and to enhance the alkylate production capacity to 20,000 bpd, modifications are required to the individual sections of the unit as discussed below. Alkylate production will continue to follow the basic process flow with changes to the following process and equipment:

- Modifications to the HF Acid Storage, Replenishment and Injection Section

  The existing Acid Storage Drum will be used to store the modified HF. A new recycle additive surge tank will provide sufficient surge volume for rapid additive concentration control in the reactor system acid. This vessel will also serve as a unit additive storage vessel at times when the unit is shutdown for maintenance.

- Modifications to the Reaction and Settling Section

  The ReVAP process requires larger reactors and a higher circulation rate than the present process. Two new alkylation reactors will be installed to operate in combination with the two existing alkylation

reactors. The existing two acid circulation pumps will be replaced with two new larger capacity pumps.

- Modified Product Separation (Fractionation) Section

  A Recontactor will be added to reduce the fluoride content of the feed to the Fractionation Section and to remove excessive acid from the feed to the fractionators. After separation of acid and hydrocarbon phases in the Recontactor, the hydrocarbon phase enters the Fractionation Section and excess is pumped back to the reactor acid pump section.

  The narrower top section of the Depropanizer will be replaced with one having a larger diameter to handle incrementally larger amounts of propane in the Alkylation Unit feed.

- Modified HF Stripping Section

  The existing butane alumina treaters and propane alumina treaters will be replaced with new treaters, and a new propane potassium hydroxide (KOH) treater will be installed and operate with the existing propane KOH treater to meet the enhanced Alkylation Unit operation requirements.

- New Additive Recovery from the Alkylate Product

  Trace amounts of ReVAP additive in the Isostripper alkylate product will be removed by a water wash extraction process in a new water wash column. The dilute additive/water stream from the water wash column bottoms is fed to the new evaporator column, which is mounted on the evaporator column kettle reboiler. The evaporator column concentrates the additive in the bottoms product.

- Modified HF Regeneration Section

  The existing acid regeneration system is undersized for the ASO that will be produced at the new alkylate production rates and will be replaced. A new rerun column will produce both a side draw stream for water removal and a bottoms product for ASO removal.

C. Modifications to the Existing Butamer Unit

In order to provide sufficient isobutane for enhanced alkylate, the Refinery proposes to upgrade the capacity of the Butamer Unit from 10,000 bpd to 17,000 bpd. To accomplish this will require a combination of new components and increasing the size (referred to as "debottlenecking") of the Deisobutanizer (DIB) column and related equipment.

The principal changes will be in the DIB (fractionation) column. The DIB column is both a tall and a large diameter column. Fractionation of isobutane from normal butane requires a relatively large number of fractionation stages due to the narrow boiling point difference between the light and heavy components. In its current configuration, the DIB has two reboilers, one heated with process waste heat and the second heated with steam. For the enhancement project, a new steam reboiler operating in parallel with the existing boiler is proposed as a replacement for the waste

heat reboiler, which will be used as a feed preheater. Other changes are proposed to improve the energy efficiency (steam requirements) of the unit.

D. Modifications to the Existing LPG Merox Treating Unit

Mercaptan sulfur and traces of hydrogen sulfide from butanes, which could poison the Butamer Unit catalyst and affect the alkylate product, are removed in LPG Merox Unit (Unit 64) by caustic wash. The LPG Merox Unit capacity must be increased from 6,500 bpd of field butanes to treat 10,000 bpd. The only modification required is replacement of existing caustic prewash drum with a new larger vessel.

E. Modifications to the Existing Light Ends Recovery Unit

The light ends recovery unit processes naphtha and byproduct gases from various units. Minor modifications to this unit will allow more butane to be desulfurized in the Naphtha Hydrotreater for feed to the Butamer Unit. Principal modifications include a new depropanizer feed drum and feed pumps, replacement of depropanizer tower trays, vessel and reboiler tube replacement, and new heat exchangers.

F. Modifications to the Existing Naphtha Hydrotreater Unit

The Naphtha Hydrotreater removes organic sulfur, oxygen, nitrogen, metals and other compounds from hydrocarbon fractions. Minor modifications will be made to provide sufficient LPG feed for the modified alkylation process. Principal modifications include a new debutanizer complex and modifications to heat exchangers and pumps. The new debutanizer separates the butane and light straight runs. The butane will be routed to the Light End Recovery Unit 43 for the recovery of butane for the Butamer Unit.

G. Proposed New Fuel Gas Treating System

The Refinery will install a new fuel gas treating system to reduce the sulfur content of the additional fuel gas to be consumed as a result of the Alkylation Unit improvements. The process uses a fiber contactor system to treat fuel gas with a circulating stream of amine and caustic to remove hydrogen sulfide, carbonyl sulfide, and mercaptans.

H. Utilities and Auxiliary Facilities

The proposed conversion to ReVAP and enhanced operation of the Alkylation Unit will require additional steam, cooling, and flaring capability, and additional butane storage capacity.

New Steam Boiler: The Refinery steam demand is expected to increase by approximately 200,000 pounds per hour (lbs/hr) due to the Alkylation Unit modifications. A new 245 million British thermal units per hour (mmBtu/hour) boiler will be installed to produce 300 pounds per square inch steam. The boiler will be equipped with SCR control equipment in accordance with SCAQMD requirements.

New Hot Oil Heater: A new 350 million Btu/hour Hot Oil Heater system will be installed to provide the heat source required to reboil the Isostripper Tower and the DIB in the Butamer. An SCR will be installed on the new heater for nitrogen oxide (NOx) control.

Modification to Existing Heaters: Ultramar proposes to modify an existing fired heater, 56-H-2, Hot Oil Heater, to provide additional process heat for the Alkylation ReVAP modifications. This heater is currently rated at 200 million Btu/hour (high heating value) heat release and is used to heat a circulating stream of desulfurized gas oil to provide process heat to the Naphtha Hydrotreater Unit. It shares an SCR system (for NOx emission control), induced draft fan, and exhaust stack with another fired heater, 56-H-1. The proposed modification would increase the rated capacity of 56-H-2 from 200 to 260 million Btu/hour, with the incremental heat being used for refinery processes to support the ReVAP modifications and Alkylation Unit expansion. No changes are proposed for 56-H-1.

New and Modified Cooling Towers: A new 5,000 gallons per minute (gpm) recirculating cooling tower is proposed to provide cooled water to the Alkylation Unit and to absorb the increased heat in the Reaction Section. The cooling water will then return to the cooling tower where it is distributed across the cooling tower and contacted with air to remove the absorbed heat by evaporative cooling. An existing cooling tower is proposed to be modified to increase the existing circulation rate of 9,500 gpm by 5,000 gpm for a total of 14,500 to supply the necessary cooling water.

New Emergency Flare: A new 250,000 lb/hr flare will be installed to safely depressure process equipment during emergency situations The new flare will operate in parallel with the existing flares, and will utilize the existing flare vapor recovery system. Emergency releases to the new flare system will flow into a new liquid blowdown drum to recover liquids. The vapors leaving the liquid blowdown drum will be routed to the existing flare vapor recovery system. Gases that cannot be recovered in the vapor recovery system will flow into a new knock out drum to recover any remaining liquids and then to the flare for combustion. The flare will be elevated, with a height of about 250 feet.

New Butane Storage Sphere: The increased flow of normal butane feed for the Butamer Unit will require a new 5,000 barrel pressurized Butane Storage Sphere. Butanes from the Refinery as well as purchased butanes will be stored in the new butane storage sphere. New butane transfer pumps will pump butane from this sphere to the Butamer Unit.

New Propane Storage Bullet: The modified Alkylation Unit will increase the production of propane product due to the increase in alkylation capacity. This will require a new 4,000 barrel Pressurized Propane Storage Bullet to store the added production. New propane transfer pumps will pump propane from this propane storage bullet to the existing truck loading facility.

New Aqueous Ammonia Tank: A new 15,000 gallon storage tank is proposed to store aqueous ammonia associated with the SCR Unit for the new Boiler.

Storage Tank Relocation: There are three storage tanks located immediately north of the Alkylation Unit and Butamer Unit, which will be removed to accommodate the improvements to the Alkylation Unit. The tanks will be relocated to Area 21 in the Southwest corner of the refinery property, within the vicinity of TK 1000.

DABWORD:2185:NOP1

CHAPTER 2

ENVIRONMENTAL CHECKLIST FORM AND RESPONSES

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 Alkylation Unit Improvement Project
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 E. Copley Drive Diamond Bar, CA 91765
Contact Person:	James Koizumi
Contact Phone Number:	(909) 396-3234
Project Sponsor's Name:	Ultramar Inc., Valero Wilmington Refinery
Project Sponsor's Address:	2402 East Anaheim Street, Wilmington (Los Angeles), California
General Plan Designation:	Refinery – Heavy Industrial
Zoning:	Refinery – M3-1 Heavy Industrial
Description of Project:	Modification of the existing alkylation process to eliminate the use of concentrated hydrofluoric acid by substituting the reduced volatility alkylation process ("ReVAP") and associated alkylation efficiency improvements.
Surrounding Land Uses and Setting:	The Refinery is located in an industrialized area of Los Angeles County. See Section 1.2 Project Location.
Other Public Agencies Whose Approval is Required:	City of Los Angeles California Coastal Commission

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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 a "√" 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 (EIR)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: September 16, 2003 Signature: Steve Smith

Steve Smith, Ph.D.
Program Supervisor

ENVIRONMENTAL CHECKLIST AND DISCUSSION

	Potentially Significant Impact	Less Than Significant Impact	No Impact
1.0 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?	☐	☑	☐

Checklist Response Explanation

1. a), b), and c) Construction activities are not expected to adversely impact views and aesthetics since most of the heavy equipment and activities will occur in the center portion of the Refinery and will not be visible to areas outside the Refinery. The majority of construction equipment is low in height and will not be visible to the surrounding area due to the presence of fencing and structures, which buffer the views of low structures at the Refinery. A few cranes may temporarily be visible to the surrounding industrial areas. Residential areas are located about one mile away and construction activities are not expected to be noticeable in these areas due to the distance from the Refinery.

The proposed project will introduce a minor visual change to the Refinery. The new and modified units will include a new flare, a new heater/boiler stack, and new units that will be visible to the areas outside of the Refinery. The new flare will be a maximum of about 250 feet, which is about the same height as the existing flares. The new and modified stacks and vessels will be about the same size profile as the existing Refinery units. The new units, additional stacks and new flare, specifically, would be visible from adjacent areas. The appearance of the new and modified units is not expected to differ significantly or be higher from other Refinery units so that no significant adverse impacts to aesthetics are expected. Residential areas are located about one mile away so that most of the new structures are not expected to be noticeable in these areas due to the distance from the Refinery.

The general area around Ultramar was zoned for heavy industrial uses (M3-1VL). The City of Los Angeles "VL" designation limits construction of buildings and structures to a height not greater than 45 feet. The City of Los Angeles in December, 1996 enacted a zoning ordinance which eliminated the 1VL height limit designation for the Refinery to make it consistent with the local land use plan (Los Angeles City Ordinance No. 171439, 1996). A portion of the property west of the Dominguez Channel acquired from the Port of Los Angeles was restricted to port-related uses. Ultramar in 1994 obtained a zoning variance from the City of Los Angeles, Office of the Zoning Administrator to allow Refinery projects on this property (Wilmington, Case No. ZA 94-0593(ZV)). Accordingly, the Ultramar property may be developed for Refinery applications free of height limitations and other restrictions.

No scenic highways or corridors are located in the vicinity of the Refinery. 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 Refinery, additional temporary lighting is not expected to be discernible from the existing permanent night lighting.

Additional permanent light sources will be installed on the new equipment to provide illumination for operations personnel at night, in accordance with applicable safety standards. These additional light sources are not expected to create an impact because the project components will be located within existing industrial facilities, which are already lighted at night for nighttime operations. Further, residential areas are located about one mile away from the Refinery so additional lighting at the site is not expected to be noticeable in residential areas. Therefore, no significant impacts to light and glare are anticipated from the proposed project.

Conclusion

No significant impacts on aesthetics are expected from the proposed project. Therefore, aesthetics impacts will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
2.0	**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?	☐	☐	☑

Checklist Response Explanation

2. a), b), and c) All proposed modifications would occur within the confines of the existing Refinery. The project would be consistent with the heavy industrial zoning for the Refinery (M3-1). No agricultural resources are present at or in the vicinity of the Refinery. Therefore, the proposed project would not convert farmland (as defined in 2.a above) to non-agricultural use or involve other changes in the existing environment that could convert farmland to non-agricultural use or conflict with agricultural land uses, or Williamson Act contracts.

Conclusion

No significant impacts on agricultural resources are expected from the proposed project. Therefore, agricultural resources impacts will not be addressed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
3.0 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)?	☐	☐	☑

Checklist Response Explanation

3. a) An inventory of existing emissions from the industrial facilities is included in the baseline inventory in the 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 (including the City of Los Angeles). 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 Los Angeles's General Plan. Further, the proposed project will contribute to the production of CARB Phase 3 reformulated gasoline, which was a control measure in a previously approved AQMP.

The 2003 AQMP demonstrates that applicable ambient air quality standards can be achieved within the timeframes required under federal law. This project must comply with applicable SCAQMD requirements and control measures for new or modified sources. It 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.

3. b), c), and f) Construction activities associated with the proposed project would result in emissions of CO, PM10, VOCs, NO_X and SOx. Construction activities include construction of new foundations, and installation of the new equipment. Construction-related activities will generate emissions from worker vehicles, trucks, and construction equipment. The air quality impacts associated with the construction phase of the proposed project are potentially significant and will be evaluated in the EIR.

The proposed project would add emission sources to the Refinery including heater, boiler, flare, pumps, valves, flanges, and pressure relief valves. The SCAQMD requires that BACT be installed on new emission sources within the South Coast Air Basin, which should minimize project-related emissions. Nonetheless, the proposed project impacts on air quality during the operational phase are potentially significant and will be evaluated in the EIR.

The proposed project may also alter the transport of raw materials to the Refinery and the transport of products from the Refinery. The emission impacts related to changes in the amount or type of material transported will be evaluated in the EIR.

The proposed project is expected to result in an increase in emissions from the operation of the Ultramar Refinery and has the potential to result in cumulative impacts. Since the project specific air quality impacts may be significant, they may contribute to impacts that are cumulatively considerable. The cumulative air quality impacts will be evaluated in the EIR.

3. d) New emission sources associated with the proposed project may emit toxic air contaminants. The impact of the emissions of toxic air contaminants on sensitive populations, including individuals at hospitals, nursing facilities, daycare centers, schools, and elderly intensive care facilities, as well as residential and off-site occupational areas, will be evaluated in the EIR.

3. e) The proposed project is not expected to create significant objectionable odors, either during construction or during operations. Sulfur compounds (e.g., hydrogen sulfide) are the primary odor source within Refinery operations. The proposed project would not alter the handling of sulfur and sulfur-bearing compounds at the Refinery. The sulfur-bearing materials are handled and treated in the Sulfur Recovery Units where they are converted to elemental (solid) sulfur. Elemental sulfur does not emit appreciable odor. The Refinery will continue to process sulfur-bearing materials in the Sulfur Recovery Units. The Refinery maintains a 24-hour staff available for odor investigation. This activity contributes to minimizing the frequency and

magnitude of odor events at the facility. New and modified components of the proposed project are required to comply with Best Available Control Technology (BACT) requirements as well as existing SCAQMD rules and regulations. Compliance with these requirements contributes to minimizing the frequency and magnitude of odor events at the facility. Therefore, no significant odor impacts are expected.

Conclusion

Project-specific and cumulative adverse air quality impacts associated with increased emissions of air contaminants (both criteria and toxic air contaminants) during the construction and operation phases of the proposed project will be evaluated in the EIR. Impacts to sensitive receptors also will be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
4.0.	**BIOLOGICAL RESOURCES.** Would the project:			
a)	Have 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?	☐	☐	☑

Checklist Response Explanation

4. a), b), c), d), e), and f) The proposed project will be located in a heavy industrial area, entirely within the boundaries of an existing industrial facility. The Refinery has been fully developed and is essentially void of vegetation with the exception of some landscape vegetation near administration buildings. The Refinery controls the growth of vegetation at the site for fire prevention purposes. All native habitats have long since been removed from the site. The proposed project does not include the acquisition of additional land for use by the Refinery or expansion outside of the Refinery's current boundaries, which further eliminates the potential for biological resource impacts. The proposed project will not have an adverse effect, either directly or indirectly or through habitat modifications, on any sensitive biological species, riparian habitat, or other sensitive natural habitat. The proposed project will not result in the addition or the elimination of water ponds that could be used by animals or migratory fowl. Further, the proposed project will not adversely affect federally protected wetlands as defined in §404 of the Clean Water Act. The Dominguez Channel is a concrete lined flood control channel near the Ultramar Refinery. There are no significant plant or animal resources, locally designated species, natural communities, wetland habitats, or animal migration corridors that would be adversely affected by the proposed project. There are no rare, endangered, or threatened species at the Refinery site. The project would not impact any local policies or ordinances that protect biological resources or conflict with the provisions of a Habitat Conservation Plan or other similar plan. Because the area in and near the Refinery is devoid of native habitat, impacts to other, non-listed species are not expected. Based on the above, no significant impacts on biological resources are expected from the proposed project and this issue will not be addressed in the EIR.

Conclusion

The construction/operation of the proposed project is not expected to have significant adverse impacts to biological resources since no native habitat is located within the confines of the Refinery. Therefore, biological resources will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
5.0	**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 of formal cemeteries?	☐	☐	☑

Checklist Response Explanation

5. a) There are no prehistoric or historic structures or objects within the Refinery or adjacent areas. The proposed improvements will be constructed within the confines of the existing Refinery and not affect structures in the surrounding area. No existing structures at the Refinery are considered architecturally or historically significant by the City or any other group.

5. b) and c) The entire Refinery site has been previously graded and developed. The larger Refinery structures and equipment are supported on concrete foundations. The remainder of the site is unpaved. Any archaeological or paleontological resources that may have been present prior to development are not expected to be found at the site due to past disturbance. In addition, no known recorded archaeological sites are located at or near the Refinery.

5. d) No known human remains or burial sites have been identified at the Refinery during previous construction activities so the proposed project is not expected to disturb any human remains.

Conclusion

No significant adverse impacts on cultural resources are expected from the proposed project. Therefore, impacts of the proposed project on cultural resources will not be addressed in the EIR.

		Significant Impact	Significant Impact	
6.0	**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?	☐	☑	☐

Checklist Response Explanation

6. a) The proposed project is not expected to conflict with an adopted energy conservation plan because there are no known energy conservation plans that would be impacted by the proposed project.

6. b), c), d) and e) An incremental increase in gasoline and diesel usage will occur during construction activities, e.g., operation of construction equipment, material delivery trucks, and worker commute vehicles. Gasoline usage for transportation activities in the Los Angeles region in 2001 was about 600,000 barrels per day or about 25 million gallons per day (CEC, 2002). Assuming construction-related activities in the future years would yield similar results, the fuel required by the proposed project would represent a very small portion of the projected demand. This demand is one-time only and represents a very small percentage of the total demand for fuels in the Los Angeles region. Therefore, the gasoline and diesel fuel usage for project construction is not considered a significant adverse impact or a wasteful use of energy resources.

Electrical power may be required for certain construction equipment, e.g., electric welders, lights, etc. However, most of the construction equipment is operated using gasoline and diesel fuels. The electricity requirement for the construction phase is expected to be within the normal electricity usage of the Refinery since electric welders require minimal electricity (about 35-50 horsepower). This requirement can be met with the existing electrical capacity so no significant impact on electricity is expected during the construction phase.

No significant increase in natural gas is expected during the construction phase of the proposed project since most of the construction equipment will be operated using gasoline and diesel fuels. None of the construction equipment is expected to use natural gas; therefore, no significant impacts to natural gas utilities are expected due to construction activities.

Operation of the proposed project will require about four megawatts per day of electricity. This electricity will be supplied by the Los Angeles Department of Water and Power (LADWP). The LADWP is the largest of the public-owned electric utilities in southern California and provides electricity service to most customers located in the City of Los Angeles (SCAG, 2001). The LADWP supplies more than 22 million megawatt hours of electricity a year. In August 2000, the LADWP's Integrated Resource Plan was approved. The Plan includes an additional 2,400 megawatts of electricity from repowering existing power plants, developing new renewable energy sources, and an increase in energy efficiency programs (LADWP, 2003). Based on the above, the LADWP has sufficient electricity generation capacity to handle the estimated increase of four megawatts of electricity from the proposed project. This electrical use will result in a small incremental increase in electricity supplied to the Refinery by LADWP and is not expected to be significant because it represents an extremely small percentage (less than 0.00002 percent) of the total electricity generating capacity.

Operation of the proposed project will require about 625 million Btu/hour in additional refinery fuel gas and natural gas to operate the proposed new heater and boiler. Most of the increase can be supplied via the refinery's fuel gas system. Additional natural gas also will be required. About 6,584 million cubic feet per day of natural gas is consumed in California. About 71 percent of the natural gas consumed in California is for industrial and electric generation purposes (CEC, 2002). It is assumed that about one-half of the required fuel use associated with the proposed project will be refinery fuel gas and one-half will be purchased natural gas, resulting in an increase of about 6.52 million cubic feet per day in natural gas consumption. The natural gas impacts from the implementation of the proposed project are less than 0.1 percent of the total natural gas usage and are expected to be less than significant. These energy impacts are expected to be less than significant because sufficient natural gas capacity and supplies are expected to be available.

Conclusion

No significant impacts on energy resources are expected from the proposed project. Therefore, impacts of the proposed project on energy resources will not be addressed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
7.0 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☑

Checklist Response Explanation

7. a) The City of Los Angeles is located within a seismically active region. The most significant potential geologic hazard at the Refinery is seismic shaking from future earthquakes generated by active or potentially active faults in the region. Seismic records have been available for the last 200 years, with improved instrumental seismic records available for the past 50 years. Based on review of earthquake data, most of the earthquake epicenters occur along the San Andreas, San Jacinto, Whittier-Elsinore and Newport-Inglewood 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. However, faults in the area are potential sources of strong ground shaking, including the following: 1) the San Andreas fault; 2) the Newport-Inglewood fault; 3) the Malibu-Santa Monica-Raymond Hills fault; 4) the Palos Verdes fault; 5) the Whittier-Elsinore fault; 6) the Sierra Madre fault; 7) the San Fernando fault; 8) the Elysian Park fault; and 9) the Torrance-Wilmington fault.

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.

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 Refinery increases the probability that an earthquake may adversely affect the Refinery. There is the potential for damage to the new structures 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 "8.0. 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 Los Angeles 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 Refinery will be required to obtain building permits, as applicable, for all new structures at the site. The Refinery shall submit building plans to the City of Los Angeles for review. The Refinery 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 and this issue will not be further addressed in the EIR.

7. b) and e) The proposed project is located within the confines of the existing Refinery. Concrete pavement presently supports several of the Refinery structures and equipment. Most of Refinery roads, including all high traffic roads have been paved. The local topography for the Refinery site is level.

During construction of the project the possibility exists for temporary erosion resulting from excavation and grading activities, if required. These activities are expected to be minor since the Refinery is generally flat and has already been graded. The proposed project involves the addition of new structures to an existing facility so that grading will be required to provide stable foundations. The Refinery estimates about 5,000 cubic yards of grading to be required for the proposed project. No unstable earth conditions or changes in geologic substructures are anticipated to occur with the project because of the limited grading and excavation involved and the character of the local topography. No significant impacts on topography and soils are expected.

During construction of the proposed project, the possibility exists for temporary erosion resulting from excavation and grading activities. These activities are expected to be minor since the proposed project will occur within already developed facilities in areas with generally flat topography. The proposed project involves the addition of new equipment to existing facilities so major grading/trenching is not expected to be required and is expected to be limited to minor foundation work and minor trenching for piping. Therefore, 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 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) Soil liquefaction can accompany strong earth movement caused by earthquakes. Liquefaction would most likely occur in unconsolidated granular sediments that are water saturated less than 30 feet below ground surface (Tinsley et al., 1985). The pore water pressure can increase in certain soils during extended periods of ground shaking which can change the soil from a solid to liquid state. Structures that are built on soils subject to liquefaction can sink during an earthquake and be damaged since the soils cannot support their weight.

The California Division of Mines and Geology has prepared seismic hazard map zones for areas in California as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6). The Ultramar Refinery is located in the Long Beach Quadrangle and the area has been mapped for seismic hazards by the Division of Mines and Geology. The Hazard Map for

the area indicates that the Refinery is located within an area where there has been historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements in the event of an earthquake (California Division of Mines and Geology, Map of Seismic Hazard Zones, Long Beach Quadrangle, March 25, 1999). 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.

The proposed project site is not subject to landslide or mudflow since the site is flat. No other unique geological resources have been identified at the Refinery.

7. d) No expansive soils as defined in Table 18-1-B of the Uniform Building Code are present in the proposed project areas. Therefore, the proposed project will not create substantial risk to life or property as a result of expansive soils. This area will not be evaluated further in the EIR.

7. e) The Refinery discharges wastewater to the local sewer system under an Industrial Wastewater Discharge Permit. Neither the Refinery nor the proposed project will use septic tanks or alternative wastewater disposal systems, therefore, no significant impacts on soils from alternative wastewater disposal systems are expected.

Conclusion

No significant impacts on geology and soils are expected from the proposed project. Therefore, impacts of the proposed project on geology and soils will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
8.0	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:			
a)	Create a significant hazard to the public or the environment through the routine transport, use, and 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 increase fire hazard in areas with flammable materials?	☑	☐	☐

Checklist Response Explanation

8. a) and b) The Refinery currently stores, uses and transports hazardous materials. The proposed project includes a number of modifications that may impact the hazards associated with the operation of the Refinery. The proposed project will eliminate the use of concentrated HF in the Alkylation Unit and substitute it for modified HF. The use of modified HF is expected to reduce the potential for off-site exposures to HF in the event of an accidental release during the refining process.

A new butane storage sphere and a new propane storage bullet will be installed which will increase the amount of butane and propane stored at the Refinery. There will be an increase in the amount of ammonia stored for use in the new SCR systems for the proposed new boiler and heater. In addition, a number of Refinery units are proposed to be modified including the Butamer Unit, Light Ends, LPG Merox Treating Unit, and the Naphtha Hydrotreater Unit. Other new units include installation of a new fuel gas treating system and a new flare system. There is the potential for hazard impacts associated with the operation of these new and modified units due to an accidental release, from either natural events (e.g., earthquakes) or human error.

An increase in the transport of hazardous materials to the Refinery may occur. Additional ammonia (30 to 60 percent by weight ammonia) for the new SCR units is expected to be transported via truck. In comparison to concentrated HF, additional modified HF will be required for the Alkylation Unit due to the modified HF catalyst. Furthermore, as stated above, the catalyst in the modified HF, which will be added by the supplier, will reduce the potential for off-site exposures to HF in the event of a release. The modified HF catalyst will be returned to the supplier for regeneration when fresh catalyst is delivered.

Upset and accident conditions may release hazardous materials into the environment. Even though, in comparison to the use of concentrated HF, the modified HF will reduce the potential for off-site exposures to HF in the event of a release, due to concerns regarding the use of HF, the potential effects of an accidental release of hazardous materials being stored, used and transported will be evaluated in the EIR.

8. c) The Refinery is not located within a one-quarter mile of an existing or proposed school site. The potential impacts of the proposed project on schools is expected to be less than significant.

8. d) In 1985, the Regional Water Quality Control Board (RWQCB) adopted Order 85-17 requiring Ultramar (and 14 other local refineries) to conduct subsurface investigations of soil and ground water. CEQA Section 21092.6 requires the lead agency to consult the lists compiled pursuant to Section 65962.5 of the Government Code to determine whether the project and any alternatives are located on a site which is included on such list. The Refinery is included on a list compiled by the California Environmental Protection Agency (CalEPA) and dated May 6, 1999. The Refinery is listed on the May 6, 1999 list because it is on a list of Cleanup and Abatement Orders prepared by the State Water Resources Control Board (Order No. 97-118). For sites which are listed pursuant to Government Code Section 65962.5, the following information is requested:

Applicant:	Ultramar Refinery
Address:	2402 Anaheim Street, Wilmington, California 90809
Phone:	(562) 491-6877
Address of Site:	2402 Anaheim Street, Wilmington, California 90809
Local Agency:	Wilmington, City of Los Angeles
Assessor's Book:	7440-2-20,22
List:	See above.
Regulatory ID No:	4B192023NO6
Date of List:	See above.

The proposed project is not expected to adversely affect the Refinery's Cleanup and Abatement Order. The Order will remain in effect and continue to establish requirements for site monitoring and clean up of existing contamination.

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

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 Refinery. All construction activities will occur within the confines of the existing Refinery so that no emergency response plans at other facilities should be impacted. The Refinery has implemented emergency response plans at its facility, but no substantial 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 Refinery.

8. h) The proposed project will not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees. The proposed project does not expose people or structures to wildland fires. Further, the proposed project is not located in an area where residents are intermixed with wildlands. No substantial or native vegetation exists within the operational portions of the Refinery. Therefore, no significant increase in fire hazards are expected at the Refinery associated with the proposed project.

8. i) Natural gas and refinery fuel gas (which has the same flammable properties as natural gas) are currently used at the site. The hazards associated with natural and Refinery fuel gas would result in a torch fire in the event that a release occurred and caught fire. Because of the location of the proposed project facilities, a torch fire would be expected to remain on-site so that there would be no public exposure to the fire hazards. However, because the Refinery and components of the proposed project will store large volumes of flammable materials, the potential fire hazards associated with the proposed project will be evaluated in the EIR.

Conclusion

The effects of an accidental release of hazardous materials being stored, used and transported are potentially significant and will be evaluated in the EIR. Fire hazards associated with increased use of refinery fuel gas and natural gas will also be analyzed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
9.0	**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?	☐	☑	☐

Checklist Response Explanation

9.2. a), k), l), and o) Wastewater Generation

The Refinery currently discharges an average of 900,000 gallons per day of wastewater. Ultramar's current Industrial Wastewater Discharge Permit allows discharge of 1,076,000 gallons per day. The proposed project is expected to increase the wastewater discharged by an estimated 87,000 gallons per day. The increased wastewater is expected to include boiler blowdown. Therefore, the proposed project will be within the existing Industrial Wastewater Discharge Permit so no modifications to this permit will be necessary.

The Refinery maintains onsite wastewater treatment equipment. Wastewater from the Refinery is treated and sampled in compliance with the Los Angeles County Sanitation Districts (LACSD)

Industrial Wastewater Discharge Permit. The LACSD places limitations on wastewater parameters including oil and grease, pH, temperature, heavy metals, organic compounds and so forth. Wastewater that complies with the LACSD permit requirements is discharged to the sewer. Wastewater that does not comply is returned to the source for further treatment. Wastewater will continue to be discharged in compliance with the LACSD Industrial Wastewater Discharge permit so no significant impacts on wastewater are expected from the proposed project.

Pursuant to the RWQCB Order No. 85-17, a groundwater monitoring program was implemented in 1985 to evaluate groundwater quality at and in the vicinity of the Refinery. Ground water monitoring consists of a network of monitoring wells, which includes wells located within and down gradient of the site. Previous groundwater contamination has been identified at the Refinery and recent groundwater monitoring results indicate that groundwater contamination still exists. The Refinery has implemented hydrocarbon removal and recovery activities for groundwater.

Construction activities could uncover contaminated soils, given the heavily industrialized nature of the Refinery and the fact that refining activities, petroleum storage, and distribution have been conducted at the site for a number of years. Currently, there is no evidence that soil contamination is located within the areas proposed for grading, trenching or excavation. The excavation at the Refinery is anticipated at about 5,600 cubic yards.

Excavated soils that contain concentrations of certain substances, including heavy metals and hydrocarbons, generally are regulated under California hazardous waste regulations. No significant impacts are expected from the construction-related potential for encountering contaminated soils during excavation since there are numerous local, state (Title 22 of the California Code of Regulations) and federal rules which regulate the handling, transportation, and ultimate disposition of contaminated soils. Title 22 of the California Code of Regulations establishes many requirements for hazardous waste handling, transport and disposal, including requirements to use approved disposal/treatment facilities, use certified hazardous waste transporters, and use manifests to track hazardous materials, among many other requirements. Contaminated soil found during previous construction activities has generally not been considered hazardous waste.

9. b) and n) Water Demand

Potable water is supplied to the Ultramar Refinery by the LADWP. The Ultramar Refinery is located in the LADWP's Harbor Area Water Service District, and all potable water in the area is purchased by the LADWP from the Metropolitan Water District. Potable water enters the Refinery via a ten-inch fire service line that stems off a 12-inch main line. The Refinery currently uses about 36 million gallons of water per day. This water is used in many of the refining processes at the facility including crude desalting, cooling towers, and steam generation.

The proposed project is expected to increase the water demand at the site by about 434 gallons per minute or about 625,000 gallons per day. The additional water will be used for boiler make-

up water, cooling tower make-up, and steam. The increase in water demand may exceed the thresholds established by SB610 and so that water demand is potentially significant.

Small quantities of water may also be required during the construction phase for dust control. The water use will be minor and will cease following the construction phase. The construction phase is not expected to generate wastewater.

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

The Ultramar Refinery is located immediately east of the Dominguez Channel, less than one-half mile north of the Cerritos Channel, and approximately 1.3 miles west of the Los Angeles River. The Los Angeles River and the Dominguez Channel are the major drainages that flow into the Los Angeles-Long Beach Harbor complex. Sediments and contaminants are transported into the harbor with the flows from the Los Angeles River and, to a lesser degree, the Dominguez Channel.

The Los Angeles River drains an 832-square mile watershed basin, and enters Long Beach Harbor approximately 2.2 miles east of the proposed project. The Los Angeles River watershed is controlled by a series of dams, and an improved river channel with a design flow capacity of 146,000 cubic feet per second.

The Dominguez Channel originates in the area of the Los Angeles International Airport and flows southward into the East Channel of the Los Angeles Harbor. The Dominguez Channel, an 8.5-mile long structure, drains approximately 80 square miles west of the Los Angeles River drainage basin. Permitted discharges from industrial sources are a substantial percentage of the persistent flows in the Dominguez Channel. Water quality objectives and beneficial uses for the Dominguez Channel tidal prism have been established by the RWQCB, Los Angeles Region, in the Water Quality Control Plan for the Los Angeles River Basin (1978).

Changes will be required to the Refinery's storm water collection system since new units will be added related to the proposed project. Portions of the project area are currently paved and will remain paved. Of the approximately 37,000 square feet needed for grading about 17,000 square feet will be converted from permeable to impermeable surfaces. The new units will be curbed and existing units will remain curbed to contain runoff. Storm water runoff within process unit areas will be handled in the Refinery oily wastewater system and sent to the on-site wastewater treatment system prior to discharge to the LACSD system. The surface water runoff is expected to be handled within the current wastewater treatment system. Storm water from components of the proposed project outside the process areas, such as storage tanks, will be managed under the Refinery's Storm Water Pollution Prevention Plan. Non-process area storm water is collected in a separate system and discharged to the storm water system operated by the Port of Long Beach for ultimate discharge to the Cerritos Channel.

No significant changes to surface water runoff are expected due to the proposed project. The project will be constructed within the currently developed Refinery boundaries. Runoff from the facilities will be handled in the existing surface water treatment systems. Runoff will be collected, treated (if applicable), and discharged under the requirements of the existing storm

water permit, National Pollutant Discharge Elimination System (NPDES) permit or the Industrial Wastewater Discharge Permit. Because the topography of the site will remain unchanged during operation, the proposed project is expected to result in a minor increase the surface water runoff due to the increase in paved areas associated with the proposed project. The increase is expected to be nominal and can be handled in the existing storm water system. Therefore, no significant adverse impacts are expected to result from water runoff associated with the proposed project.

9. g), h), and i) Flooding

The proposed project involves the construction to and modifications within an existing Refinery and does not include the construction of any housing, nor would it require placing housing within a 100-year flood hazard area. The Refinery is not located within a 100-year flood hazard area so the proposed project would not impede or redirect 100-year flood flows. The project is not located within a flood zone and would not expose people or property to any known flood-related hazards.

9. j) Other Hazards

There are no open ponds at the site so that the potential for seiching is considered to be less than significant. The proposed project site is located near the Los Angeles/Long Beach Harbor which has breakwaters constructed to protect the port areas so the potential for a tsunami to adversely affect the Refinery site is considered less than significant. The proposed project site is located in a flat area with no hills or mountains nearby so the potential for significant impacts from mudflows is considered less than significant**.**

Conclusion

Potential adverse impacts of the proposed project on water demand are potentially significant and will be evaluated in the EIR. The potential adverse impacts of the proposed project on other hydrology and water quality resources are expected to be less than significant and will not be evaluated further in the EIR.

	Potentially Significant Impact	**Less Than Significant Impact**	**No Impact**
10.0 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?	☐	☐	☑

Checklist Response Explanation

10. a) The proposed project would occur entirely within the boundaries of the existing Refinery and, therefore, would not disrupt or divide an established community.

10. b), and c) The Refinery is located in the Wilmington District of the City of Los Angeles within southern Los Angeles County. The community of Wilmington is generally urbanized and includes a substantial amount of industrial and port-related development. The Ports of Los Angeles and Long Beach are located along the coastal boundary of Wilmington.

The Wilmington area is bordered by the Harbor Freeway (Interstate 110) on the west, the Long Beach Freeway (Interstate 710) on the east, the San Diego Freeway (Interstate 405) on the north and the Pacific Ocean on the south. The Dominguez Channel runs adjacent to the Refinery from the north to the south. Railroad tracks service the area along the western boundary of the Refinery and along Alameda Street.

The project would be consistent with the zoning for the Refinery (M3-1) and with the Wilmington-Harbor City Plan (City of Los Angeles, 1993). All proposed modifications would occur within the confines of the existing Refinery.

The Ultramar Refinery is located within the California Coastal Zone and regulated by the California Coastal Commission. The proposed modifications at the Refinery are expected to require the issuance of either a Coastal Development Permit or a de minimus waiver to assure that the project will comply with the coastal protection requirements of the California Coastal Act. The California Coastal Commission in the past has reviewed development at the Ultramar Refinery and has issued 11 coastal development permits and five de minimus waivers (minor development projects which did not require a Coastal Development Permit). For each Coastal Development Permit at the Refinery, the Commission found the proposed Refinery development to be consistent with the goals and policies of the California Coastal Act. The development in the proposed project is similar to the development that the California Coastal Commissions has approved in previous permit actions. The proposed Refinery development will not impede or otherwise adversely impact recreation or other coastal uses. The heavily industrial character of the general area and the extensive port development has eliminated or greatly reduced most traditional coastal recreation opportunities in the vicinity of the Refinery. Therefore, the

proposed project is consistent with current Port activities and development, so its is consistent with the goals and policies of the California Coastal Act for the Port area and is not expected to have significant adverse impacts on coastal resources.

Conclusion

The impact of the proposed project on land use is expected to be less than significant. Land use issues will not be further addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
11.0	**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?	☐	☐	☑

Checklist Response Explanation

11. a), and b) The only significant resource in the vicinity of the Refinery is the production of oil from the Wilmington field. While much of the operation for this field has been decommissioned, limited production facilities remain in the vicinity of the Refinery. None of these production facilities will be affected by the proposed project in any way so no significant adverse impacts are expected.

Conclusion

No significant adverse impacts to mineral resources are expected from the construction/operation of the proposed project so these resources will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
12.0	**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 airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑

Checklist Response Explanation

12. a), b), c), and d) Construction activity for the proposed project will generate noise associated with the use of heavy construction equipment and construction-related traffic. The construction equipment at the Refinery will include welding machines, trucks, cranes, compressors, loaders, concrete pumps, graders, and pavers. The estimated noise level during equipment installation is expected to be an average of about 80 decibels (dBA) at 50 feet from the center of construction activity. Most of the construction noise sources will be located near ground level, so the noise levels are expected to attenuate. Nonetheless, the potential construction noise impacts may be significant.

The proposed project is expected to produce noise in excess of current operations. The proposed project will add new noise sources to the Refinery including pumps, fans, a boiler, a heater and a flare. These noise increases are potentially significant and the impacts will be evaluated in the EIR.

12. e) and f) The proposed project site is not located within an airport land use plan or within two miles of a public or private use airport. Therefore, the proposed project would not expose people residing or working in the area to noise related to airports.

Conclusion: The noise impacts associated with the proposed project are potentially significant and will be addressed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
13.0 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?	☐	☐	☑

Checklist Response Explanation

13. a), b) and c) Construction activities at the Refinery will not involve the relocation of individuals, impact housing or commercial facilities, or change the distribution of the population because the proposed project will occur completely within the boundaries of an existing industrial facility site. The construction work force, which is temporary, is expected to come from the existing labor pool in the southern California area. Additionally, the project operation is not expected to require new permanent employees at the Refinery. Since all potential impacts will occur at an existing industrial facility, displacement of housing of any type is not anticipated. Therefore, construction and operation of the proposed project is not expected to have a significant adverse impact on population, population distribution, or housing.

Conclusion

No significant adverse impacts on population, population distribution, or housing are expected due to the proposed project; therefore, this issue will not be discussed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
14.0. 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?	☐	☐	☑

Checklist Response Explanation

14. a) Fire Protection

Construction activities are not expected to result in an increased need for fire response services. Construction activities include safeguards, monitoring for hazards with equipment designed to detect sources of flammable gases and vapors, written procedures, training, and authorization of equipment used on-site.

Compliance with state and local fire codes is expected to minimize the need for additional fire protection services. The Refinery is served by its own emergency response team along with local fire department and other emergency services. The proposed project will include requirements for fire protection services that are available from existing services. Fire-fighting and emergency response personnel and equipment will continue to be maintained and operated at the Refinery. Close coordination with local fire departments and emergency services will also continue.

It is expected that the required fire-flow requirements for this project will be the same as other portions of the Refinery (9,000 to 12,000 gpm). The Refinery has a total fire-flow of about 22,000 gpm, including a 60,000 barrel firewater storage tank. Ultramar has over 100 on-site fire hydrants. Additional fire hydrants may be required near new Refinery units. Fireflow is expected to be sufficient to handle the proposed project.

Existing fire protection at the Refinery includes two foam trailers with a foam portioning pump; three hired gun monitors which consist of nozzles that can deliver 2,000 gpm of water or foam; tank trucks with foam carrying capabilities; two 50-gallon foam hose reel stations with each Refinery unit, each capable of delivering 110 gpm; deluge systems within Refinery Units and over hydrocarbon pumps; on-site fire water hydrants; dry chemical extinguishers; fixed firewater monitors within process units each capable of delivering a minimum of 500 gpm; and portable fire monitors within each unit to quickly establish water flow. The on-site foam-making capability at the Refinery is about 6,000 to 7,000 gallons.

In addition, Ultramar maintains an on-site Emergency Response Team composed of 20-25 personnel per shift with fire-fighting experience. Members of the team receive hands-on fire training on a quarterly basis.

The fire access to the Refinery including ingress/egress roads, fire lanes, and locations of fire hydrants will not be affected by the proposed project. All fire access points, fire lanes and the locations of fire hydrants already have been approved by the City of Los Angeles Fire Department. Currently, there are two ingress/egress points to the Refinery used by contractors and employees. Two additional ingress/egress points exist specifically to provide fire access to the Refinery. These access points allow for adequate overhead space (i.e., not less than 20 feet clear to the sky) and adequate width for off-site fire-fighting equipment to reach the new and existing refinery units. The existing fire lanes are capable of accommodating off-site fire-fighting apparatus and have a minimum of 28 feet where fire hydrants are installed. No significant impacts are expected because of the existing fire-fighting capabilities at the Refinery.

14. b) Police Protection

The City of Los Angeles Police Department is the responding agency for law enforcement needs in the vicinity of the proposed project. The project site is located within the jurisdiction of the Los Angeles Police Department's Harbor Division. The Harbor Division Station, located at 2175 John Gibson Boulevard in San Pedro, is approximately four miles from the project site. The station has six to twelve units available for response, depending on the time of day. Because police units are in the field, response times vary depending on the location of the nearest unit.

Construction activities within the confines of the Ultramar Refinery will be monitored by the existing security force stationed at the Refinery 24 hours a day, seven days a week. The security force includes five guards during the day (two at each of the two entrances and one roving guard) and two guards at night (one at the one entrance opened at night and one roving guard). The Refinery is fenced and a 24-hour security force will continue to be maintained. Entry and exit of the construction work force will be monitored and no additional or altered police protection is expected.

14. c) Schools

Construction activities at the Refinery will not involve the relocation of individuals, impact housing or change the distribution of the population. No increase in the number of permanent workers is required as part of the proposed project. Thus, the proposed project will not alter existing, or require additional schools.

14. d) Parks

No significant increase in the number of Ultramar employees is expected due to operation of the proposed project. Therefore, this project would not affect existing, or increase the demand for additional new parks.

14. e) Other Public Facilities

No significant increase in the number of Ultramar employees is expected due to operation of the proposed project. Therefore, this project would not affect the maintenance of public facilities, nor would it create an increase in demand for additional public facilities such as new roads. Since the proposed project will not increase the demand for additional public facilities, it is not expected to affect service ratios, response times, or other performance objectives.

Conclusion

No significant adverse impacts on public services are expected due to the proposed project; therefore, this issue will not be discussed further in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
15.0	**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?	☐	☐	☑

Checklist Response Explanation

15. a) The proposed project would not increase the demand for neighborhood or regional parks, or other recreational facilities in the area since the project is not expected to increase the local population. This proposed project will not adversely affect existing recreational opportunities. Due to the heavy industrialization of the area, there are no recreational opportunities of significance at or in the immediate vicinity of the Refinery.

15. b) This proposed project will not include new recreational facilities or require expansion of existing recreational facilities since it is not expected to increase the local population in any way.

Conclusion

No significant adverse impacts on recreation are expected from the proposed project. Therefore, impacts of the proposed project on recreation will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
16.0.	**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?	☐	☑	☐

Checklist Response Explanation

16. a) Construction Activities: The demolition activities during construction of the revised proposed project could result in the generation of hazardous/solid waste. It is estimated that the demolition wastes would be minimal, about 10 tons, since no major demolition is expected. The wastes would be disposed of over about a one year period. This represents a small portion (less than one percent) of the daily total solid waste received at Puente Hills landfill (a total of 11,686 tons per day, assuming all 10 tons of wastes were disposed on in one day) (LACDPW, 2001). The actual disposal of demolition waste is expected to be distributed throughout the first three months of the construction period. Further, a portion of the demolition wastes is expected to be salvaged for metal content. Therefore, no significant adverse impacts are expected to the existing landfill capacity due to construction of the proposed project.

The preparation of the site and construction related to the revised proposed project, including excavation and grading, has the potential to generate hazardous materials and wastes. An estimated 100 cubic yards of soil may be contaminated. If hazardous materials were encountered

during demolition or excavation activities, it would be treated on-site or disposed of off-site at an approved facility. Options available for off-site disposal include non-hazardous and hazardous waste landfills. If hydrocarbons are encountered during installation of project-related equipment, they would be recovered and processed in existing Refinery units for conversion into products. Based on the above, the solid and hazardous waste impacts associated with the construction phase of the proposed project are not expected to be significant.

Project Operation: Operational activities resulting from this proposed project are expected to generate additional hazardous wastes (e.g., additional spent catalyst from the Butamer Unit, alumina and calcium fluoride from the Alkylation Unit). About 13 tons per year of spent catalysts from the Butamer Unit are expected to be generated and reclaimed for metal content so that there would be no increase in waste sent to a landfill from this waste stream.

The proposed project is also expected to result in an increase in spent alumina of about 435 tons per year from the stripping section in the Alkylation Unit. The spent alumina is currently recycled at a cement kiln and will continue to be sent to a cement kiln for recycling so no increase in disposal of spent alumina is expected.

Aspects of this project have been designed to minimize waste generation (e.g., improving operational efficiency of units to lengthen life of catalysts). Spent potassium hydroxide is expected to be neutralized and be discharged as wastewater.

The ReVAP additive is recovered in a new additive recovery module and returned to the supplier for reblending, as a recycled product. Any HF lost into the process is recovered and neutralized with KOH in the neutralization section of the Alkylation Unit. KOH is regenerated with lime, which yields insoluble calcium fluoride. Calcium fluoride is dewatered in the neutralization basin, and sent for off-site disposal as hazardous waste. Calcium fluoride has been sent to Kettlemen Hills or an out-of-state hazardous waste facility for disposal. Kettleman Hills has an estimated 6.5 million cubic yard capacity and expects to continue receiving wastes for approximately 18 years under their current permit, or for approximately another 24 years with an approved permit modification (Personal Communication, Terry Yarbough, Chemical Waste Management Inc., June 2000). The proposed project is expected to increase the amount of calcium fluoride by about 180 tons per year, which can be handled at the Kettlemen Hills facility, or alternatively, the waste can be transported to other out-of-state facilities. In either event, sufficient capacity exists to handle this waste stream so no significant impacts are expected.

16. b) The Refinery currently complies, and the facilities associated with the proposed project is expected to continue to comply, with federal, state, and local regulations related to solid and hazardous wastes.

Conclusion

No significant adverse impacts on solid/hazardous waste are expected from the proposed project. Therefore, impacts of the proposed project on solid/hazardous waste will not be addressed in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
17.0	**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 ?	☐	☑	☐
f)	Result in inadequate parking capacity?	☐	☑	☐

Checklist Response Explanation

17. a) and b) The proposed project will increase the traffic in the area associated with construction workers, construction equipment, and the delivery of construction materials. An average of about 350 workers is expected, with about 15 truck trips during the peak construction period. This level of traffic is potentially significant.

The permanent work force at the Refinery is not expected to increase as a result of this project and operation-related traffic is expected to be minimal. An estimated 4,700 additional truck trips per year, or an average of 16 truck trips per day, is expected in connection with operation of the proposed project. The content of these trucks vary and include modified HF, the HF additive, KOH, alumina, aqueous ammonia, butane, and propane.

17. c) The proposed project includes modifications to existing facilities and new facilities at an existing Refinery. The modifications and new structures will be similar in height and appearance to the existing Refinery structures and are not expected to result in a change to air traffic patterns. The nearest airport is located about 10 miles north of the Refinery and the Refinery is outside of the normal flight pattern of this airport. In addition, 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 substantially increase traffic hazards or create incompatible uses at or adjacent to the site. The proposed project does not include construction of roadways that could include design hazards. Emergency access at the refinery will not be impacted by the proposed project and Ultramar will continue to maintain the existing emergency access gates to the Refinery.

17. f) Parking for the construction workers will be provided within the confines of the existing refinery site and sufficient parking exists at to handle the estimated workers. No increase in permanent workers is expected following the construction phase. 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).

Conclusion

The traffic impacts associated with the construction phase and increased truck traffic associated with the operation of the proposed project are potentially significant and will be evaluated in the EIR. The impacts of the proposed project on other transportation related areas are expected to be less than significant and will not be considered further in the EIR.

		Potentially Significant Impact	Less Than Significant Impact	No Impact
18.0	**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?	☑	☐	☐

Checklist Response Explanation

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 and Section 5.0 – Cultural Resources.

18. b) and c) The areas where there is the potential for cumulative adverse environmental impacts include air quality, hazards/hazardous materials, hydrology/water quality (water demand), noise, and transportation/traffic. The proposed project will result in an increase in emissions, hazard impacts, water use, noise sources and traffic from the operation of the proposed project and has the potential to result in cumulative impacts. The potential cumulative impacts will be evaluated in the EIR.

Conclusion

Project specific impacts to the following environmental areas will be further analyzed in the EIR: air quality, hazard and hazardous materials, water demand, noise, and transportation/traffic. Potential adverse cumulative impact to these environmental areas will also be evaluated in the EIR.

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DABWORD:2185NOP2

CHAPTER 3
ACRONYMS AND GLOSSARY

ACRONYMS AND ABBREVIATIONS
GLOSSARY

CHAPTER 3.0

ACRONYMS AND GLOSSARY

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
AHM	Acutely Hazardous Material
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASO	Acid Soluble Oil
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
bpd	barrels per day
BTU	British Thermal Units
BTU/hr	British Thermal Units per hour
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CaF_2	Calcium Fluoride
CalARP	California Accidental Release Prevention Program
CalEPA	California Environmental Protection Agency
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
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
dBA	A-weighted noise level measurement in decibels
DIB	Deisobutanizer
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
^oF	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
gpm	gallons per minute
H_2	Hydrogen
HAZOP	hazards and operation process
HDS	Hydrodesulfurization unit
HF	Hydrofluoric acid
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
ICU	Intersection Capacity Utilization
ID #	Identification number
ISCST3	Industrial Source Complex Model Short Term Version 3
^oK	degrees Kelvin
KOH	Potassium hydroxide
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LACDPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAER	lowest achievable emission reduction
LEL	lower explosive limit
lbs	pounds
lbs/hr	pounds per hour
L_{dn}	day-night average sound level
L_{eq}	energy equivalent sound level

Lmax	Maximum sound level
Lmin	Minimum sound level
LOS	Level of Service
LPG	liquefied petroleum gas
Lpk	Peak sound level
M-2	zone code associated with Heavy Manufacturing
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
mmBtu/hr	million British thermal units per hour
MOU	Memorandum of Understanding
m/s	meters per second
MTBE	methyl tertiary butyl ether
mw	megawatts
MWD	Metropolitan Water District of Southern California
N_2	nitrogen
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
NS	No significant impacts
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 equivalent aerodynamic 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	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch (gauge)

PSM	Process Safety Management Program
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
RECLAIM	Regional Clean Air Incentives Market
REL	Reference exposure level
ReVAP	Reduced Volatility Alkylation Process
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
SB	Senate Bill
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 Coast Guard
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
volatiles	purgeable organics
WRD	Water Replenishment District

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.
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.
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.
Distillation	The process of heating a liquid to its boiling point and condensing and collecting the vapor.
Flares	Emergency equipment used to incinerate refinery gases during upset, startup, or shutdown conditions.
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.
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.
MTBE meet content;	Methyl tertiary butyl ether; used in gasoline blending to the reformulated gasoline specifications for oxygen MTBE also raises the octane number of gasoline.
Naphtha naphthas	A crude distillation unit cut in the range of C_7-420^o; 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
Octane reflects the	Measurement of the burning quality of the gasoline; 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.
Palentological	Prehistoric life.
Peak Hour	This typically refers to the hour during the AM peak period (typically 7 AM to 9 AM) or the PM peak period (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.
Reactor	Vessels in which desired reactions take place.
Refinery gas (fuel gas)	Gas produced from refinery operations used primarily for 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.
Stripper or Splitter	Refinery equipment used to separate two components in a feed stream; examples include sour water strippers and naphtha splitters.

Comments and Response to Comments Received on Notice of Preparation

Department of Water and Power the City of Los Angeles

JAMES K. HAHN
Mayor

Commission
DOMINICK W. RUBALCAVA, *President*
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KENNETH T. LOMBARD
SID C. STOLPER
SUSAN C. PARKS, *Secretary*

DAVID H. WIGGS, *General Manager*
FRANK SALAS, *Chief Administrative Officer*

December 1, 2003

Mr. James Koizumi
South Coast Air Quality
Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

Dear Mr. Koizumi:

Subject: Valero Wilmington Refinery Alkylation Improvement Project
Review of Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)

The Los Angeles Department of Water and Power (LADWP) has reviewed your NOP of a Draft EIR to evaluate utility service needs for the proposed project and/or potential related impacts to utility facilities due to proposed project construction activity. For reference, the proposed project is located at 2402 East Anaheim Street, in the Wilmington district of the City of Los Angeles in the southern portion of Los Angeles County (see Thomas Bros. Maps, page 794, H6).

The proposed project involves various improvements related to the adoption of a modified alkylation process that eliminates the use of concentrated hydrofluoric acid (HF) catalyst and substituting it with the proprietary Reduced Volatility Alkylation Process (ReVAP). HF is currently used as a catalyst for the production of alkylate, a high-octane blend stock important to the production of state and federally mandated reformulated gasoline. 1-1

We are providing information for consideration and incorporation into the planning, design, and development efforts for the proposed project. Regarding water needs for the proposed project, this letter does not constitute a response to a water supply assessment due to recent state legislative activity (i.e., SB 901, SB 610, and SB 221) for development projects to determine the availability of long-term water supply. Our understanding is that a water supply assessment by the water supply agency needs to be requested and completed prior to issuing a draft Negative Declaration or draft EIR.

Before investing resources in preparation of a water supply assessment, we recommend that you contact LADWP (Mr. Alvin Bautista, [213] 367-0800 or by e-mail at Alvin.Bautista@water.ladwp.com) and provide specific project details as requested to help staff make a determination on whether or not the proposed project meets the criteria for compliance with this legislation. 1-1 cont.

If proposed project parameters (e.g., development details such as type, square footage, anticipated water demand by 2020, population increase, etc.) are such that they are subject to state law requiring a water availability assessment, a separate request must be made in writing to:

Mr. Gerald A. Gewe
Chief Operating Officer – Water System
Los Angeles Department of Water and Power
111 North Hope Street, Room 1455
Los Angeles, CA 90012

The following are our comments to the NOP:

Water Needs

1. Items 9.b) and n) Water Demand
   a. Third sentence should read "Potable water enters the Refinery via a ten-inch domestic service line and a ten-inch fireline service that stem off a 16-inch main line." 1-2
   b. The fourth sentence states, "The Refinery currently uses about 36 million gallons per day." This number is extremely large and is probably incorrect. If this number is correct, a review of the existing LADWP water facilities will be required. 1-3 1-4
   c. Second paragraph – the additional 625,000-gpd water demand may reduce the fire protection residual water pressure at the meter. A new fire and domestic flow "Service Advisory Request (SAR)" should be requested from the LADWP.

2. Item 14.a)
   a. Third paragraph states, "It is expected that the required fire-flow requirement for this project will be the same as other portions of the Refinery (9,000 to 12,000 gpm)." This statement sounds like this project's fire-flow requirements are additional to the existing requirements. If this is in addition, new services may be required. 1-5

Once a determination of the proposed project fire demands has been made, LADWP will assess the need for additional facilities, if any.

1-6

As the project proceeds further in the design phase, we recommend the project applicant or designated Project Management Engineer confer with a single point-of-contact at LADWP (Mr. Hugo Torres, [213] 367-1178 or by e-mail at Hugo.Torres@water.ladwp.com) to make arrangements for water supply service needs.

1-7

Power Needs

LADWP, under the Los Angeles City Charter, has an obligation to serve its customers within the City of Los Angeles. The facility is presently served from four underground 34.5-kV cables to IS130. There may be no significant load increase that would require LADWP to expand electric service to the facility.

1-8

However, if proposed project may involve changes to distribution service interconnections to the facility or an increase in load, we recommend the project applicant or designated Project Management Engineer confer with a single point-of-contact at LADWP (Mr. James M. Laschober, [213] 367-3469 or by e-mail at James.Laschober@ladwp.com) for dealing with power services and infrastructure needs.

LADWP Programs to Assist Customer Water and Power Needs

1-9

LADWP has a number of programs that are intended to serve existing and prospective customer water and power needs. Since the proposed project is in the planning and design phase, it may be a good idea to review these programs to consider the feasibility of incorporating measures in the design, project development, and operations of the proposed facilities. The benefit of these programs is cost savings to the customer while at the same time being environmentally friendly. Existing and prospective customers of LADWP are encouraged to join us in this effort by taking part in our "Green Power for a Green LA" program. Call 800 GREEN LA (800-473-3652), or visit www.GreenLA.com as well as www.LADWP.com to learn more about the various programs available.

1-10

Green Power for a Green LA Program. LADWP is committed to replacing electricity generated from fossil fuel-burning power plants with energy generated from renewable resources such as the sun, wind, water, biomass, and geothermal. Mr. John Giese is the Green Power Program Manager and can be reached at (213) 367-0434 or by e-mail at John.Giese@ladwp.com.

Trees for a Green LA. As part of its ongoing commitment to environmental initiatives that reduce energy use, improve air quality, and beautify local communities, LADWP is sponsoring the *Trees for a Green LA* program. One of the main goals of the program is to add an estimated 200,000 shade trees to the Los Angeles urban environment starting in March 2002. The program is intended to provide shade trees to LADWP residential customers to provide natural cooling and thus reduce air conditioning electricity use. Ms. Leilani Johnson is the Program Manager and can be reached at (213) 367-3023 or by e-mail at Leilani.Johnson@ladwp.com. 1-11

Energy Efficiency. LADWP suggests consideration and incorporation of energy-efficient design measures for building new commercial and/or remodeling existing facilities. Implementation of applicable measures would exceed Title 24 energy efficiency requirements. LADWP continues to offer a number of energy efficiency programs to reduce peak electrical demand and energy costs. Mr. Donald Cunningham is the Director of Energy Efficiency Solutions and can be reached at (213) 367-1375 or by e-mail at Don.Cunningham@ladwp.com. 1-12

Solar Energy. Solar power is a renewable, nonpolluting energy source that can help reduce our dependence on fossil fuels. Ms. Josephine Gonzalez is the Solar Energy Program Manager and can be reached at (213) 367-0414 or by e-mail at Josephine.Gonzalez@ladwp.com. 1-13

Electric Transportation. LADWP is promoting this program by providing our customers with information and assistance that greatly simplifies the process of buying electric vehicles and installing a charger(s). Mr. Scott Briasco is the Electric Transportation Program Manager and can be reached at (213) 367-0239 or by e-mail at Scott.Briasco@ladwp.com. 1-14

Water Conservation. LADWP is always looking for means to assist its customers to use water resources more efficiently and welcomes the opportunity to work with new developments to identify water conservation opportunities. Mr. Thomas Gackstetter is the Water Conservation Program Manager and can be reached at (213) 367-0936 or by e-mail at Thomas.Gackstetter@water.ladwp.com. 1-15

Water and Energy Conservation

Based on the proposed project, some of the enclosed energy and water conservation measures may apply and should be considered for inclusion in the proposed project. If there are any questions concerning the recommended conservation measures, please contact our Customer Outreach, or for more details on various water conservation methods available, contact the Water Conservation Office at (800) 544-4498. 1-16

Consideration of these conservation measures, including possible use of recycled materials and recycling area requirements for new developments (see Ordinance

No. 171687), early on in the design of the proposed project would facilitate incorporation into project implementation based on economic, technical, environmental and marketing objectives. 1-17

Please include LADWP in your mailing list and address it to the undersigned in Room 1044. We look forward to reviewing your environmental document for the proposed project. If there are any additional questions, please contact Mr. Val Amezquita of my staff at (213) 367-0429.

Sincerely,

Charles C. Holloway
Supervisor of Environmental Assessment

VA:gc
Enclosures
c: Mr. Alvin Bautista
Mr. Hugo Torres
Mr. James Laschober
Mr. John Giese
Ms. Leilani Johnson
Mr. Don Cunningham
Ms. Josephine Gonzalez
Mr. Scott Briasco
Mr. Thomas Gackstetter
Mr. Val Amezquita

LADWP WATER & ENERGY CONSERVATION MEASURES

IMPACT OF THE PROPOSED PROJECT ON THE WATER SYSTEM AND METHODS OF CONSERVING WATER LOS ANGELES DEPARTMENT OF WATER AND POWER

IMPACT ON THE WATER SYSTEM

If the estimated water requirements for the proposed project can be served by existing water mains in the adjacent street(s), water service will be provided routinely in accordance with the Los Angeles Department of Water and Power's (LADWP) Rules and Regulations. If the estimated water requirements are greater than the available capacity of the existing distribution facilities, special arrangements must be made with the LADWP to enlarge the supply line(s). Supply main enlargement will cause short-term impacts on the environment due to construction activities.

In terms of the City's overall water supply condition, the water requirement for any project that is consistent with the City's General Plan has been taken into account in the planned growth in water demand. Together with local groundwater sources, the City operates the Los Angeles-Owens River Aqueduct and purchases water from the Metropolitan Water District of Southern California. These three sources, along with recycled water, will supply the City's water needs for many years to come.

Statewide drought conditions in the mid-1970s and late 1980s dramatically illustrated the need for water conservation in periods of water shortage. However, water should be conserved in Southern California even in years of normal climate because efficient use of water allows increased water storage for use in dry years as well as making water available for beneficial environmental uses. In addition, electrical energy is required to treat and deliver all water supplies to the City and the rest of Southern California. Conserving water contributes to statewide energy conservation efforts. Practicing water conservation also results in decreased customer operating costs.

WATER CONSERVATION

LADWP assists residential, commercial, and industrial customers in their efforts to conserve water. Recommendations listed below are examples of measures that conserve water in both new and existing construction:

1. The landscape irrigation system should be designed, installed, and tested to provide uniform irrigation coverage for each zone. Sprinkler head patterns should be adjusted to minimize over spray onto walkways and streets. Each zone (sprinkler valve) should water plants having similar watering needs (do not mix shrubs, flowers and turf in the same watering zone).

6. Ensure that buildings are well-sealed to prevent outside air from infiltrating and increasing interior space-conditioning loads. Where applicable, design building entrances with vestibules to restrict infiltration of unconditioned air and exhausting of conditioned air.

7. A performance check of the installed space-conditioning system should be completed by the developer/installer prior to issuance of the certificate of occupancy to ensure that energy-efficiency measures incorporated into the project operate as designed.

8. Finish exterior walls with light-colored materials and high-emissivity characteristics to reduce cooling loads. Finish interior walls with light-colored materials to reflect more light and, thus, increase lighting efficiency.

9. Use a white reflective material for roofing meeting California standards for reflectivity and emissivity to reject heat.

10. Install thermal insulation in walls and *ceilings* which exceeds requirements established by the California Code of Regulations.

11. Design window systems to reduce thermal gain and loss, thus, reducing cooling loads during warm weather and heating loads during cool weather.

12. Install heat-rejecting window treatments, such as films, blinds, draperies, or others on appropriate exposures.

13. Install fluorescent and high-intensity-discharge (HID) lamps, which give the highest light output per watt of electricity consumed, wherever possible including all street and parking lot lighting to reduce electricity consumption. Use reflectors to direct maximum levels of light to work surfaces.

14. Install photosensitive controls and dimmable electronic ballasts to maximize the use of natural daylight available and reduce artificial lighting load.

15. Install occupant-controlled light switches and thermostats to permit individual adjustment of lighting, heating, and cooling to avoid unnecessary energy consumption.

16. Install time-controlled interior and exterior public area lighting limited to that necessary for safety and security.

17. Control mechanical systems (HVAC and lighting) in the building with timing systems to prevent accidental or inappropriate conditioning or lighting of unoccupied space.

COMMERCIAL ENERGY EFFICIENCY MEASURES

During the design process, the applicant should consult with the Los Angeles Department of Water and Power, Efficiency Solutions Business Group, regarding possible energy efficiency measures. The Efficiency Solutions Business Group encourages customers to consider design alternatives and information to maximize the efficiency of the building envelope, heating, ventilation, and air conditioning, building lighting, water heating, and building mechanical systems. The applicant shall incorporate measures to meet or, if possible, exceed minimum efficiency standards for Title XXIV of the California Code of Regulations. In addition to energy efficiency technical assistance, the Department may offer financial incentives for energy designs that exceed requirements of Title XXIV for energy efficiency.

1. Built-in appliances, refrigerators, and space-conditioning equipment should exceed the minimum efficiency levels mandated in the California Code of Regulations.

2. Install high-efficiency air conditioning controlled by a computerized energy-management system in the office and retail spaces which provides the following:

   - A variable air-volume system which results in minimum energy consumption and avoids hot water energy consumption for terminal reheat;

   - A 100-percent outdoor air-economizer cycle to obtain free cooling in appropriate climate zones during dry climatic periods;

   - Sequentially staged operation of air-conditioning equipment in accordance with building demands; and

   - The isolation of air conditioning to any selected floor or floors.

   - Consider the applicability of the use of thermal energy storage to handle cooling loads.

3. Cascade ventilation air from high-priority areas before being exhausted, thereby, decreasing the volume of ventilation air required. For example, air could be cascaded from occupied space to corridors and then to mechanical spaces before being exhausted.

4. Recycle lighting system heat for space heating during cool weather. Exhaust lighting-system heat from the buildings, via ceiling plenums, to reduce cooling loads in warm weather.

5. Install low and medium static-pressure terminal units and ductwork to reduce energy consumption by air-distribution systems.

RESPONSE TO COMMENT LETTER NUMBER 1

DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES

DECEMBER 1, 2003

Response 1-1

The SCAQMD understands that LADWP supplies water to the Ultramar Inc. – Valero Wilmington Refinery. Since the preparation of the Notice of Preparation/Initial Study, it has been determined that the proposed project does not require a water supply assessment study per the requirements of CEQA Guidelines §15083.5. Under CEQA Guidelines §15083.5, a water supply assessment is required when: (1) a proposed project increases the water demands by the equivalent of 500 dwelling units; (2) the proposed requires revision to the land use element of a general plan or specific plan: **and** (3) a city or county has determined that an EIR is required for the proposed project. The Alkylation Improvement Project does not require revisions to a land use element of a general plan or specific plan so there is no requirement for a water supply assessment study.

Response 1-2

Your comment is noted. Potable water enters the Refinery via a ten-inch fire service line that stems off a 16-inch main line, instead of a 12-inch main line.

Response 1-3

The water demand listed in the NOP is incorrect. Operators at the Refinery estimate that their current water consumption is about 650 gallons per minute or about 936,000 gallons per day (about 341,640,000 gallons per year).

Response 1-4

It is noted that the Refinery will need to submit a service advisory request from LADWP prior to completion of the proposed project.

Response 1-5

New fire services are not expected to be required. Ultramar has over 100 on-site fire hydrants. Additional fire hydrants may be required near new Refinery units. The existing fireflow is expected to be sufficient to handle the proposed project as most

portions of the proposed project involve modifications to existing units. It is understood that the need for additional fire services will be reviewed as part of determining applicability of the proposed project with appropriate fire codes.

Response 1-6

Your comment is noted regarding the contact for water supply service needs.

Response 1-7

As noted in this comment, the proposed project is not expected to require a significant increase in electricity or expanded electrical service to the facility.

Response 1-8

The proposed project is not expected to require a significant increase in electricity or expanded electrical service to the facility. Your comment is noted regarding the contact for electrical service needs.

Response 1-9

Your comment is noted regarding Green Power for a Green LA. Most of the measures identified in the Green Power for a Green LA web page (www.GreenLA.com) is for residential and commercial uses and generally does not apply to large industrial facilities.

Response 1-10

Your comment is noted regarding replacing electricity from fossil fuel-burning power plants with energy generated from such resources as the sun, wind, water, biomass, and geothermal are noted. Ultramar purchases electricity from LADWP and does not have sufficient resources to develop electricity from the identified renewable energy sources.

Response 1-11

Your comment is noted regarding the Trees for a Green LA are noted. Planting trees at the Refinery is inappropriate as they are considered a fire hazard in close proximity to the operating portions of the Refinery.

Response 1-12

Your comment regarding energy efficient design measures is noted. The measures in Title 24 generally apply to residential and commercial buildings and not to refinery processes. The electrical use associated with the proposed project is related to refinery equipment and not residential or commercial uses.

Response 1-13

Your comment regarding solar energy is noted.

Response 1-14

Your comment regarding electric transportation is noted. Transportation emissions are not a significant emissions source associated with the proposed project as no new workers are expected as part of the proposed project.

Response 1-15

Your comment regarding the efficient use of water resources and the related contact is noted.

Response 1-16

Your comments regarding energy and water conservation measures are noted. The identified measures are primarily associated with residential development and commercial development (e.g., landscaping irrigation systems, installation, photosensitive controls, time-controlled lighting, air condition efficiency measures). The proposed project does not include any residential or commercial development so most of these measures are not applicable to the proposed project.

Response 1-17

See Responses 1-6 through 1-15. The identified conservation measures generally apply to residential or commercial development. The proposed project does not include any residential or commercial development so most of these measures are not applicable to the proposed project.

Your comment regarding electric transportation is noted. Long-term transportation emissions are not a significant emission source associated with the proposed project as no new workers are expected to be required.

Response 1-15

Your comment regarding the efficient use of water resources and the related contact is noted. Where possible, water will be recycled and re-used as part of the proposed project.

Response 1-16

Your comments regarding energy and water conservation measures are noted. The identified measures are primarily associated with residential development and commercial development (e.g., landscaping irrigation systems, installation, photosensitive controls, time-controlled lighting, air conditioning efficiency measures). The proposed project does not include any residential or commercial development so most of these measures are not applicable to the proposed project.

Response 1-17

See Responses 1-6 through 1-15. The identified conservation measures generally apply to residential or commercial development. The proposed project does not include any residential or commercial development so most of these measures are not applicable to the proposed project. 2-1

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

2-2

2-3

January 27, 2003

Mr. James Koizumi
South Coast Air Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182

Dear Mr. Koizumi:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED VALERO WILMINGTON REFINERY ALKYLATION IMPROVEMENT PROJECT – "WILMINGTON" (EIR #1810/2003)

The Notice of Preparation of an Environmental Impact Report for the proposed Valero Wilmington Refinery Alkylation Improvement Project has been reviewed by the Planning Division, Land Development Unit, and Forestry Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:
The subject property is totally within the City of Los Angeles and does not appear to have any impact on the emergency responsibilities of this Department. It is not a part of the emergency response area of the Consolidated Fire Protection District.

LAND DEVELOPMENT UNIT:
This project is located entirely in the City of Wilmington. Therefore, the City of Los Angeles Fire Department has jurisdiction concerning this project and will be setting conditions. This project is located in close proximity to the jurisdictional area of the Los Angeles County Fire Department. However, this project is unlikely to have an impact that necessitates a comment concerning general requirements from the Land Development Unit of the County of Los Angeles Fire Department. Should any questions arise, please contact Inspector Marvin Dorsey at (323) 890-4235.

FORESTRY DIVISION:
The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Final Environmental Impact Report.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

David R. Leininger

DAVID R. LEININGER, CHIEF, FORESTRY DIVISION
PREVENTION BUREAU

DRL:sc

RESPONSE TO COMMENT LETTER NUMBER 1

DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES

DECEMBER 1, 2003

Response 2-1

The SCAQMD understands that the proposed project is not expected to impact the emergency responsibilities of the Fire Department.

Response 2-2

The SCAQMD understands that the proposed project is not expected to have an impact on general requirements of the Land Development Unit of the County of Los Angeles Fire Department.

Response 2-3

The proposed project is located within a heavy industrial area of Wilmington. The Refinery and surrounding area is urbanized. Stormwater is managed through the Refinery's Storm Water Pollution Prevention Plan and the site is flat so that erosion is not a problem at the Refinery. As discussed in the Notice of Preparation/Initial Study, the site is completely developed and does not contain any native vegetation or habitat. Vegetation (other than some landscape vegetation) has been eliminated from the site, in part, to minimize fire hazards. There is no known rare or endangered species at the site. No oak trees are located near the site and no oak trees will be impacted by the proposed project.

The Refinery is not located in a high fire hazard zone. Existing fire protection at the Refinery includes two foam trailers with a foam portioning pump; three nozzles that can deliver water or foam; tank trucks with foam carrying capabilities; two 50-gallon foam hose reel stations within each Refinery unit; deluge systems; on-site fire water hydrants; dry chemical extinguishers; fixed firewater monitors within process units each capable of delivering a minimum of 500 gpm; and portable fire monitors within each unit to quickly establish water flow. In addition, Ultramar maintains an on-site Emergency Response Team composed of 20-25 personnel per shift with fire-fighting experience. Members of the team receive hands-on fire training on a quarterly basis.

As discussed in the Notice of Preparation/Initial Study, the entire Refinery site has been previously graded and developed. The larger Refinery structures and equipment are supported on concrete foundations. The remainder of the site is unpaved. Any archaeological or paleontological resources that may have been present prior to development are not expected to be found at the site due to past disturbance. In addition, no known recorded archaeological sites are located at or near the Refinery.

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

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October 9, 2003

Mr. James Koizumi
SCAQMD Headquarters
21865 E. Copley Drive
Diamong Bar, CA 91765

RE: SCAG Clearinghouse No. I 20030536 Valero Wilmington Refinery Alkylation Improvement Project

Dear Mr. Koizumi:

Thank you for submitting the **Valero Wilmington Refinery Alkylation Improvement Project** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Valero Wilmington Refinery Alkylation Improvement Project**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **September 16-30, 2003** Intergovernmental Review Clearinghouse Report for public review and comment.

3-1

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Regional Planner
Intergovernmental Review

RESPONSE TO COMMENT LETTER NUMBER 2

SOUTHERN CALIFORNIA OF GOVERNMENTS (SCAG)

OCTOBER 9, 2003

Response 3-1

The SCAQMD understands that the SCAG does not consider the proposed project to be regionally significant.