

APPENDIX A

NOTICE OF PREPARATION AND INITIAL STUDY



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

**SUBJECT: NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL
IMPACT REPORT**

**PROJECT TITLE: CHEVRON PRODUCTS COMPANY
EL SEGUNDO REFINERY
PRODUCT RELIABILITY AND OPTIMIZATION 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.

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.

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. Mike Krause at the address shown above, sent by FAX to (909) 396-3324, or e-mailed to mkrause@aqmd.gov. Comments must be received no later than 5:00 p.m. on September 11, 2007. Please include the name and phone number of the contact person for your organization.

Project Applicant: Chevron Products Company

Date: August 10, 2007 **Signature:**

Steve Smith, Ph.D.
Program Supervisor
Planning, Rules, and Area Sources

Reference: California Code of Regulations, Title 14, Sections 15082, 15103, and 15375

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

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Project Title:

Chevron Products Company El Segundo Refinery – Proposed Product Reliability and Optimization Project

Project Location:

The Chevron Products Company El Segundo Refinery is located at 324 West El Segundo Boulevard, El Segundo, CA 90245

Description of Nature, Purpose, and Beneficiaries of Project:

Chevron is proposing modifications to and installation of new equipment at the El Segundo Refinery. Proposed modifications will occur in the No. 2 Crude Unit, No. 2 Residuum Stripper Unit, Minalk/Merox Unit, Fluidized Catalytic Cracking Unit, Alkylation Unit, Vacuum Residuum Desulfurization Unit, Isomax Unit, Cogeneration Facilities, and the Railcar Loading/Unloading Rack. New process units include sulfur processing facilities (i.e., Sour Water Stripper, Sulfur Recovery Unit, and Tail Gas Unit), Vapor Recovery and Flare System, Water Treatment Facilities (i.e., reverse osmosis units and oxygen removal units), and additional storage capacity. The purpose of these modifications and additions is to increase the reliability and capacity of specific existing Refinery processing equipment.

Lead Agency:

South Coast Air Quality Management District

Division:

Planning, Rule Development and Area Sources

Initial Study and all Supporting Documentation are Available at:

SCAQMD Headquarters
21865 Copley Drive
Diamond Bar, CA 91765

Or by Calling:
(909) 396-2039

Or by accessing:

<http://aqmd.gov/ceqa/nonaqmd.html>

Scheduled Scoping Meeting Date:

A CEQA scoping meeting will be held on August 21, 2007, in the Friends of the Library Room at the El Segundo Public Library, 111 West Mariposa Avenue, El Segundo, CA 90245 at 6:00 p.m., for the proposed project.

The Notice of Preparation is provided through the following:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Los Angeles Times and Daily Breeze (August 10, 2007) | <input checked="" type="checkbox"/> SCAQMD Website |
| <input checked="" type="checkbox"/> El Segundo Herald | |
| <input checked="" type="checkbox"/> SCAQMD Public Information Center | <input checked="" type="checkbox"/> Interested Parties |
| | <input checked="" type="checkbox"/> SCAQMD Mailing List |

Review Period:

August 10, 2007 through September 11, 2007

CEQA Contact Person:

Mike Krause

Phone Number:

(909) 396-2706

E-Mail Address

mkrause@aqmd.gov

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Initial Study for:
Chevron Products Company El Segundo Refinery
Product Reliability and Optimization Project**

August 2007

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Mike Harris – Senior Deputy District Counsel
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CHAPTER 1

PROJECT DESCRIPTION

Introduction
Agency Authority
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Proposed Project Modifications to the Refinery
Construction Schedule

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

Chevron Products Company is proposing a project at its El Segundo Refinery (Refinery) to increase the reliability, flexibility and capacity of specific Refinery equipment. The overall focus of this project is to increase the reliability of the Refinery's existing equipment, increase the capacity of certain existing equipment, and optimize the ability of specific processes to increase production of transportation fuels and other chemical products derived from the refining process. With respect to the transportation fuel products, the California Energy Commission's report entitled *Transportation Fuels, Technologies, and Infrastructure Assessment* states: "... as California's population and economic output grow, demand for transportation services and fuel will grow. Petroleum will continue to be the energy resource of choice ... total demand for gasoline and diesel fuels will increase by almost 35 percent over the next 20 years." (CEC, 2003)

The Product Reliability and Optimization (PRO) project includes modifications to existing specific process units, and also new infrastructure that supports and links these units to other processes, units or facilities throughout the Refinery. The proposed project will involve physical changes and additions to multiple process units and operations as well as operational and functional improvements within the confines of the Refinery with no increase in crude throughput.

1.2 AGENCY AUTHORITY

The California Environmental Quality Act (CEQA), Public Resources Code § 21000 et seq., requires the evaluation of environmental impacts for proposed projects and requires the identification and implementation of feasible methods to reduce, avoid or eliminate significant adverse impacts from these projects. To fulfill the purpose and intent of CEQA, the SCAQMD is the lead agency for this project and has prepared a Notice of Preparation and Initial Study (NOP/IS) to solicit information on the scope of the environmental analysis, provide a preliminary analysis of environmental impacts, and notify the public that a Draft Environmental Impact Report (DEIR) will be prepared that will evaluate the potential environmental impacts associated with implementing the Refinery PRO Project.

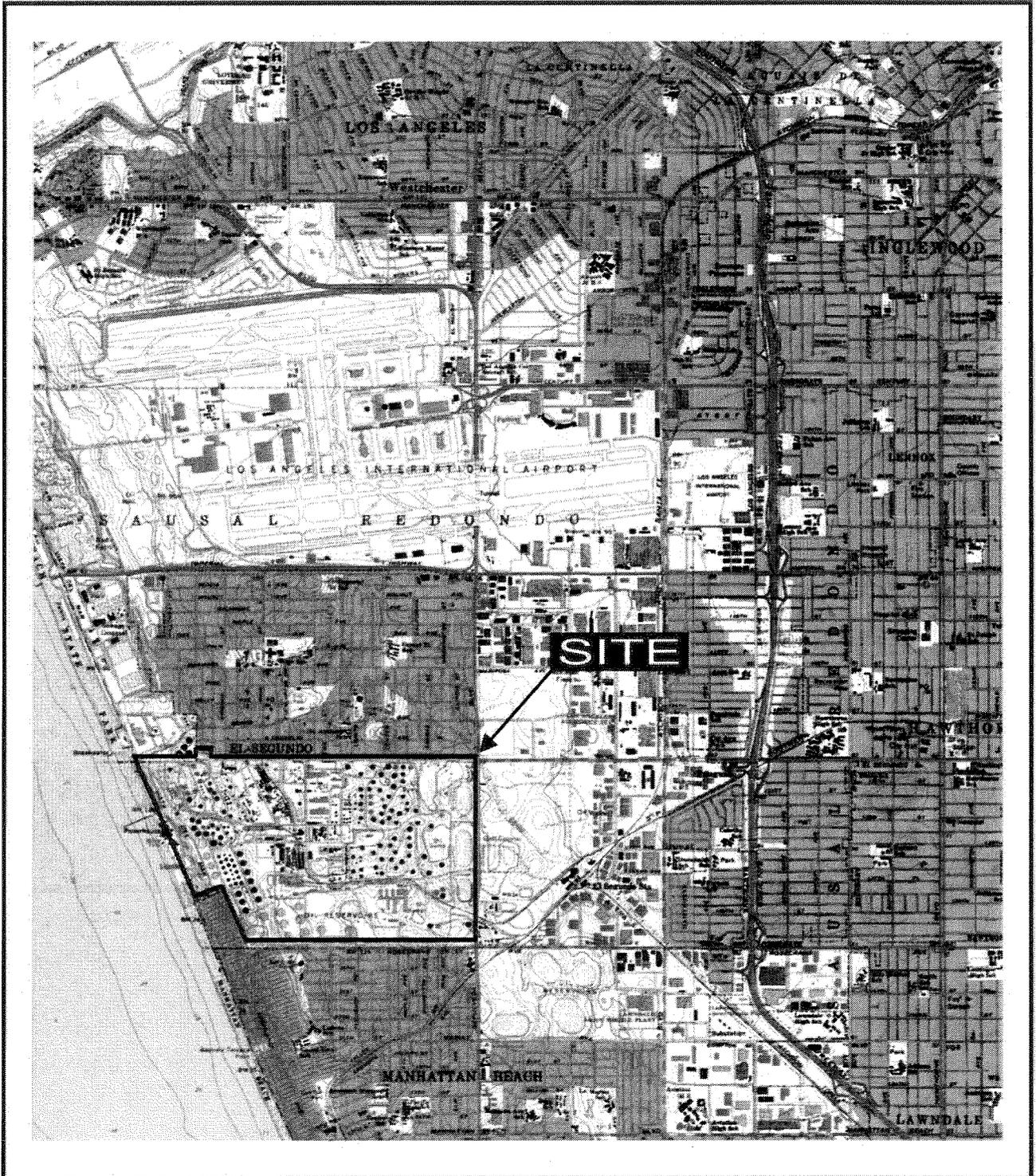
The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (Public Resources Code §21067). It was determined that the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines §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.

1.3 PROJECT LOCATION

The proposed project will occur within the confines of the Chevron Products Company El Segundo Refinery, except for the improvements at the West Basin Municipal Water District that is located just east and also just north of the Refinery. The Refinery, which was constructed over 90 years ago, is located within the overall southern California region, as shown in Figure 1-1. The Refinery is located at 324 West El Segundo Boulevard in the City of El Segundo, California, as shown in Figure 1-2. The El Segundo Refinery occupies an irregularly shaped parcel of land, between Vista Del Mar on the west, El Segundo Boulevard on the north, Sepulveda Boulevard on the east, and Rosecrans Avenue on the south. The proposed location within the Refinery for the process unit modifications and additions are shown in Figure 1-3.

Land use at the Refinery and in the surrounding vicinity is consistent with the City of El Segundo General Plan land use designations for the area. The Land Use element of the General Plan currently in force was adopted in December 1992, and no revisions have occurred since that time (City of El Segundo Planning Department, 2005). The strip of development on the north side of El Segundo Boulevard between Main Street and Richmond Boulevard, northeast of the Refinery's main office visitor parking lot and approximately one-half mile west of the No. 4 Crude Unit, is part of the Downtown Specific Plan, adopted in August 2000. The Refinery site is zoned by the City of El Segundo as Heavy Industrial (M-2) (City of El Segundo Planning Department, 2005).

The Chevron Refinery is located in an area of mixed land uses, with industrial, recreation, residential, and commercially zoned areas nearby. Land use to the north of the Chevron Refinery is primarily residential, with a mix of commercial and light industrial zoning mixed in. The predominant adjacent land uses west of the Refinery are nearly all heavy industrial or open space, which includes Dockweiler State Beach, Manhattan Beach, and the El Segundo Generating Station, although a small parcel of land at the southwest corner of the Chevron property is made up of commercial and multiple-family residential. Directly south of the Refinery, there is a single-family residential use bordering the entire length of the Refinery separated by Rosecrans Avenue. The corridor immediately east of the proposed site is comprised of a golf course at the corner of Sepulveda Boulevard and El Segundo Boulevard, with light commercial and heavy industrial zoning for the rest of the tract.



Environmental Audit, Inc.



SITE LOCATION MAP
Chevron Products Company
El Segundo Refinery

1.4 PROPOSED PROJECT MODIFICATIONS TO THE REFINERY

The following discussions describe each of the proposed Refinery modifications. The locations of both the proposed new and modified components are shown in Figure 1-3.

1.4.1 PROPOSED PROCESS UNIT MODIFICATIONS

The following units will be modified as part of the PRO project.

1.4.1.1 No. 2 Crude Unit

The No. 2 Crude Unit provides the initial separation of crude oil by distillation. The various distillates are then further refined in other processing units in the Refinery. The proposed modifications to the No. 2 Crude Unit include rerouting pressure relief devices (PRDs) to the proposed new Vapor Recovery and Flare System. In addition, two knock-out drums will be added to the unit to collect any liquids released from the PRDs in the No. 2 Crude Unit, the No. 2 Residuum Stripper Unit, and the Minalk/Merox Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent to atmosphere.

1.4.1.2 No. 2 Residuum Stripper Unit

The No. 2 Residuum Stripper Unit (RSU) processes the heavy hydrocarbons from the bottom of the No. 2 Crude Unit using vacuum distillation to produce various weight gas oils. The proposed modifications to the No. 2 RSU are limited to rerouting PRDs to the proposed new Vapor Recovery and Flare System via the two new knock-out drums in the No. 2 Crude Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent to atmosphere.

1.4.1.3 Minalk/Merox Unit

The Minalk/Merox Unit converts sulfur compounds (mercaptans) to disulfides using a catalyst. The proposed modifications to the Minalk/Merox Unit are limited to rerouting PRDs to the proposed new Vapor Recovery and Flare System via a new knock-out drum in the No. 2 Crude Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent.

1.4.1.4 Fluidized Catalytic Cracking Unit

The Fluidized Catalytic Cracking Unit (FCCU) converts heavy petroleum gas oils into lighter, more valuable products such as gasoline, liquefied petroleum gas (LPG), and refinery intermediates. The unit consists of a number of major sections, including the Reactor Section, the Regenerator Section, the Main Fractionator Section and the Gasoline Recovery Unit. The reactor is the vessel where preheated feed is vaporized, contacted by

regenerated catalyst, and cracked into lighter components. In the Regenerator Section, spent catalyst from the reactor is regenerated with oxygen to remove carbon. The reaction mix from the reactor enters the Main Fractionator where the separation of cracked gas oils and lighter products takes place. The Gasoline Recovery Unit receives gases and liquids from the Main Fractionator overhead. The uncondensed gases in this overhead steam are compressed by the wet gas compressor before being routed to the deethanizer where most of the hydrogen, methane and ethane are separated from the stream and sent to further processing to capture sulfur compounds for commercial sale. The remaining overhead stream is then routed to the Refinery's fuel gas system. Fuel gas is burned to provide heat to operate the Refinery.

The proposed FCCU modifications do not functionally change the process flow and control of the FCCU. The purpose of the modifications is to more efficiently separate intermediate streams and to improve energy efficiency. The modifications and equipment additions are as follows:

- Install a new motorized main air blower replacing the existing steam turbine driven main air blower (the existing equipment will be idled);
- Install a new depropanizer column replacing three smaller existing distillation columns;
- Install a new gas recovery stripping column;
- Install a new gas recovery absorber column;
- Install new pumps; and,
- Install new heat exchangers.

1.4.1.5 Alkylation Unit

The Alkylation Unit combines light olefins (propylene, butylene and pentenes) with isobutane to produce an alkylate product for use as a gasoline blending component. The unit provides the controlled conditions for the alkylation reaction, which occurs in the presence of sulfuric acid catalyst. The Alkylation Unit also produces propane and normal butane as secondary commercial product streams. The proposed modifications to the Alkylation Unit include supplemental cooling that will be supplied by a new cooling tower (see Section 1.4.2.4) and additional heat exchangers. The depropanizer Column C-12, located in the older section of the Alkylation area, will be removed. This column is one of the three depropanizers being removed as part of FCCU upgrades. The purpose of the modifications is to improve reliability through more efficient cooling (i.e., heat removal) and improve product separation in the Unit.

1.4.1.6 Vacuum Residuum Desulfurization Unit

The Vacuum Residuum Desulfurization (VRDS) Unit desulfurizes and denitrifies gas oil feedstock for the FCCU. There are two parallel reactor trains, each consisting of two reactors in series. Feed to the reactors is mixed with hydrogen and then preheated in reactor feed/effluent heat exchangers and a feed heater. Treated gas oil from the reactors

passes through the hot high pressure separator to remove hydrogen and then to the hot low pressure separator to remove remaining gases and then fed to the Hydrogen Sulfide (H₂S) Stripper Column. VRDS product from the bottom of the stripper is cooled and pumped to the FCCU or to intermediate tankage. Hydrogen from the hot high pressure separator is cooled and sent through two liquid separators to the Diethanolamine (DEA) Scrubber to capture hydrogen sulfide prior to being directed to the reactors. The hydrogen sulfide is converted to commercial grade sulfur in the Sulfur Recovery Units.

The purpose of this modification is to allow taking one of the parallel reactor trains out of service to replace the catalyst while the other train remains in service. The unit modifications and additions are as follows:

- Installing valve manifolds to separate the reactor trains;
- Installing a new, parallel hot high pressure separator;
- Repiping of the existing Recycle Hydrogen Heat Exchangers and Recycle Hydrogen Air Coolers to split them between the two trains; and,
- Installing new facilities to allow sulfiding of fresh catalyst in one reactor train with the other train in operation. This includes installation of two new separator vessels, a new sulfiding recycle hydrogen compressor, and a new recycle hydrogen air cooler. In addition, the existing VRDS Product Coolers will be repiped so they can be used in the catalyst sulfiding loop.

1.4.1.7 ISOMAX Unit

The ISOMAX Unit converts light and intermediate gas oils into jet fuel, motor gasoline, and LPG. The feed and makeup hydrogen are passed through four parallel CKN (a Century Type Isomax Catalyst for deNitrification) reactor modules to convert sulfur and nitrogen to hydrogen sulfide and ammonia. The hydrogen sulfide and ammonia are absorbed in water that is injected into the reaction stream, removed from the unit, and processed in other units in the Refinery. Then unconverted CKN product and additional hydrogen are passed through two parallel Isoreactor modules, where the bulk of the conversion takes place. Products are separated from the reaction mix in the distillation section.

The unit will be modified to increase the feed capacity by approximately 7,000 - 10,000 barrels per day (BPD) and to produce two additional products, diesel fuel and FCCU feed. The purpose of the modifications is to accommodate the improved gas oil production from previous projects and optimize output from the Unit.

In the CKN section, a new feed surge drum will be added; the two existing feed booster pumps and one of the main feed pumps will be replaced. The existing power recovery turbine will be coupled to the new motor-driven main feed pump to reduce electrical power requirements in normal operation. Feed/effluent heat exchangers in each module will be replaced with larger units to preclude the need for fired heater modifications. A new hydrogen booster compressor will be installed.

The Distillation Section modifications include:

- Installing a new vacuum distillation column, and appurtenances;
- Augmenting the existing air-cooled overhead condensers for the Topping Column and Isosplitter Column with new modules;
- Replacing the existing feed/effluent heat exchanger with a larger unit; and,
- Replacing three Isosplitter Column bottoms pumps with larger pumps.

1.4.1.8 Cogeneration Facilities

The Refinery currently operates a cogeneration plant to supply most of the electricity and steam used by processing equipment. To supplement electrical needs, electricity is purchased from offsite sources (e.g., Southern California Edison (SCE)). The existing cogeneration plant will be expanded by an additional 49 megawatts (MW). The new 49 MW Cogeneration Train D (Cogen Train D) will consist a natural gas and refinery gas-fired turbine, a new steam-driven turbine, electrical generators, feed gas compressors, knockout and surge pots, waste heat boilers to generate steam, a carbon monoxide oxidation catalyst unit, and a selective catalytic reduction (SCR) unit or other control technology to control emissions. Expansion of this facility will decrease the Refinery's need for offsite sources of electricity.

1.4.1.9 Railcar Loading/Unloading Rack

The Refinery currently ships and receives LPG by trucks and rail cars. As part of the PRO Project, the LPG Loading/Unloading Rack will be expanded by the addition of two new loading/unloading positions for added flexibility that will increase the ability to optimize gasoline blending.

1.4.1.10 Utility Improvements

SCE and the West Basin Municipal Water District (WBMWD) may improve systems to service the proposed project. SCE improvements expected to be made include new and upgraded power substations on site. WBMWD currently provides boiler feed water from secondary-treated effluent from the Hyperion Wastewater Treatment Plant that has been further processed by filtration, chlorination, and demineralization by reverse osmosis. WBMWD also currently provides cooling tower water from secondary-treated effluent from the Hyperion Wastewater Treatment Plant that has been further processed by filtration, chlorination, and denitrification. Improvements as part of the PRO project at WBMWD, located nearby, include increasing reverse osmosis and denitrification water production facilities.

1.4.2 PROPOSED NEW PROCESS UNITS

The following discussions describe each of the proposed new units at the Refinery. The locations of both the proposed new and modified components are shown in Figure 1-3.

1.4.2.1 Sulfur Recovery Facilities

Sour Water Stripper

A new Sour Water Stripper (SWS) with a capacity of 300 gallons per minute (gpm) will be constructed to supplement the existing plants. Sour water is a process water stream that contains sulfur compounds, primarily hydrogen sulfide, and nitrogen compounds, primarily ammonia. The sulfur and nitrogen are contained in crude oil and are recovered from the crude for use when it is processed. This stripper will allow for increased processing of sour water and production of commercial grade sulfur. The overhead stream from the stripper, containing hydrogen sulfide, ammonia and water vapor, will be fed to a new Sulfur Recovery Unit (SRU).

Sulfur Recovery Unit

A new sulfur recovery unit (SRU) with a capacity of 175 long tons per day will be installed to process increased amounts of hydrogen sulfide to commercial grade, molten sulfur for sale. Ammonia in the feed stream to the SRU will be converted to atmospheric nitrogen and water and exhausted through the Tail Gas Unit (TGU) to the atmosphere.

Tail Gas Unit

The exhaust from the SRU will be vented to a new TGU for further processing before discharging to the atmosphere. The TGU will include a new incinerator.

1.4.2.2 Vapor Recovery and Flare System

A new closed relief system, including vapor recovery compressors and an elevated flare will be installed. The flare will not exceed 200 feet in height. The PRDs on the No. 2 Crude Unit, the No. 2 Residuum Stripper Unit, and the Minalk/Merox Unit that currently vent to atmosphere will be routed to this new Vapor Recovery and Flare System. In addition, PRDs from the new Sulfur Recovery Unit and Tail Gas Unit will be routed to this new Vapor Recovery and Flare System. The recovered gases will be treated prior to being added to the existing Refinery fuel gas system.

1.4.2.3 Additional Storage Capacity

The proposed project will require additional storage of intermediate hydrocarbon streams and products. A new LPG sphere (Tank 722), two new FCCU light gasoline tanks (Tanks 302 and 303), and a new Isomax diesel tank (Tank 447) with the flexibility to

store other products will be added. In addition, new pumps will be added to transfer materials to and from the new tanks.

1.4.2.4 Cooling Tower

A new cooling tower with a water circulation rate of approximately 30,000 gpm will be constructed to support cooling needs at the existing Alkylation Unit, new SRU, new SWS, and new TGU.

1.4.2.5 Hydrogen Compression and Transfer Facilities

Additional hydrogen compression and transfer facilities will be installed to supply Refinery units with hydrogen at the required pressures.

1.5 CONSTRUCTION SCHEDULE

As shown in Figure 1-4, the construction schedule for individual components of Chevron Products Company's PRO Project are expected to overlap to a certain extent. Construction activities for most aspects of the proposed project are expected to begin in the first quarter of 2008 and be completed by the fourth quarter of 2009.

Figure 1-4

**Chevron Products Company El Segundo Refinery
Product Reliability and Optimization Project
Construction Schedule**

Project	2008												2009											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
MODIFICATIONS																								
No. 2 Crude Unit PRDs																								
No. 2 Residuum Stripper Unit PRDs																								
Minalk/Merox Unit PRDs																								
FCCU																								
Alkylation Unit																								
VRDS Unit																								
Isomax Unit																								
Cogeneration Facilities																								
Railcar Loading/Unloading Rack																								
NEW UNITS																								
Sulfur Recovery Facilities																								
SWS																								
SRU																								
TGU																								
Vapor Recovery and Flare System																								
Additional Storage Facilities																								
Cooling Tower																								

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CHAPTER 2

ENVIRONMENTAL CHECKLIST

- Introduction
- General Information
- Environmental Factors Potentially Affected
- Determination
- Environmental Checklist and Discussion
 - Aesthetics
 - Agricultural Resources
 - Air Quality
 - Biological Resources
 - Cultural Resources
 - Energy
 - Geology and Soils
 - Hazards and Hazardous Materials
 - Hydrology and Water Quality
 - Land Use and Planning
 - Mineral Resources
 - Noise
 - Population and Housing
 - Public Services
 - Recreation
 - Solid/Hazardous Waste
 - Transportation/Traffic
 - Mandatory Findings of Significance
- References

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:	Chevron Products Company El Segundo Refinery Product Reliability and Optimization Project
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
Contact Person:	Mike Krause
Contact Phone Number:	(909) 396-2706
Project Sponsor's Name:	Chevron Products Company
Project Sponsor's Address:	324 West El Segundo Boulevard, El Segundo, CA 90245
General Plan Designation:	Heavy Industrial
Zoning:	M-2 Heavy Industrial
Description of Project:	Chevron proposes modifications to multiple Refinery process units at the El Segundo Refinery to increase the reliability, flexibility and capacity of specific refinery equipment. Refer to Section 1.4 for a more complete description.
Surrounding Land Uses and Setting:	The Chevron Refinery is located in an area of mixed uses, with industrial, recreation, residential, and commercial uses nearby. The predominant adjacent land uses include: Dockweiler State Beach, Manhattan Beach and the El Segundo Generating Station to the west; a residential area of Manhattan Beach to the south; a golf course, a commercial and light industrial corridor to the east; and commercial/light industrial and residential areas of El Segundo to the north.
Other Public Agencies Whose Approval may be Required:	City of El Segundo

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental checklist provides a standard evaluation tool to identify a proposed project's potential adverse environmental impacts. 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.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/
Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Solid/Hazardous Waste | <input checked="" type="checkbox"/> Transportation/
Traffic | <input checked="" type="checkbox"/> 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: August 10, 2007

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

1. a), b), and c) The Chevron Refinery is located in an area of mixed uses, with industrial, recreation, residential, and commercial uses nearby. The predominant adjacent land uses include: Dockweiler State Beach, Manhattan Beach and the El Segundo Generating Station to the west; a residential area of Manhattan Beach to the south; a golf course, a commercial and light industrial corridor to the east; and commercial and residential areas of El Segundo to the north. Some of these areas, particularly those associated with the beaches and Santa Monica Bay, are of scenic value.

Most project activities will take place within the boundaries of the existing Refinery (see Figure 1-3), except for the improvements at the WBMWD that is located just east and also just north of the Refinery. The new Refinery and WBMWD equipment to be installed as part of the proposed project will be similar in size, appearance, and profile to the existing facilities and equipment at the El Segundo Refinery and WBMWD. There are a number of existing tall structures in the Refinery. These include the Atmospheric Distillation Column, Furnace Stacks at the No. 4 Crude Unit, and Furnace Stacks at the No. 2 Crude Unit, which are 215, 155, and 171 feet tall, respectively. The Continuous Catalytic Reformer process plant is about 172 feet tall. The top of the Main Fractionator at the Coker is approximately 122 feet above grade. Drilling structures on top of the coke drums are 240 feet high. Also, the top of the FCCU Reactor is about 230 feet above grade.

The primary changes with potential for visual resources impacts will be associated with the proposed installation of the Cogen Train D, the New Flare, and other new structures, which include the SWS, SRU, TGU, and tanks. The Cogen Train D will be of similar design and adjacent to the existing Cogen Trains A, B, and C and is not expected to be visually discernable from the existing Trains. The New Flare will be located in the central portion of the Refinery in an area adjacent to other flares and will be of similar height. The other new structures will be located in the central areas of the Refinery adjacent to similar structures and are not expected to be visually discernable from the existing facility. While the new structures have the potential to add to the existing visual character, the quality of the site will not be substantially or significantly degraded because the locations and designs of the new structures are similar to the existing equipment.

The Refinery site is zoned by the City of El Segundo as M-2 (Heavy Manufacturing), with a variety of zoning (commercial to industrial) surrounding the Refinery, reflecting the diverse land uses. Section 15-6B-7 of the City of El Segundo Municipal Code provides Site Development Standards with which all uses within the M-2 zone must comply. Section 15-6B-7B states that buildings and structures in the M-2 zone shall not exceed a height of 200 feet. Thus, the proposed project structures would be consistent and in compliance with the height requirements of the City of El Segundo.

The proposed project is located in an existing industrial facility and will be industrial in nature. The proposed project, once complete, will not be discernable from the existing Refinery and will not change any scenic vistas. No scenic resources are present within the Refinery. Therefore, the proposed project will not have substantial adverse effects on scenic vistas or scenic resources.

1. d) Construction activities associated with the proposed project are planned to occur over two shifts during the peak construction period; therefore, construction activities will occur during the nighttime as well as the daytime. Construction activities are proposed adjacent to the existing Refinery units, which are already lighted for safety purposes during nighttime operations. Additional lighting may be required to provide adequate lighting during nighttime construction activities, but these light sources will be directed towards the Refinery and the locations of construction activities (i.e., away from residential areas), are temporary, and are not expected to be noticeable to the surrounding community because of their central location in the Refinery (see Figure 1-3).

There will be minimal additional permanent light sources required as part of the proposed project. New lighting that will be installed on the proposed equipment (i.e., SRU, TGU, and Cogen Train D) will be consistent in intensity and type with the existing lighting on equipment and other nearby Refinery structures. Because of the central location of the proposed new sources, the light sources are expected to blend in with existing light sources and not be noticeable to the surrounding community. The new Refinery equipment will be illuminated at night for safety and security purposes.

Based on these considerations, the proposed project is not expected to create substantial new sources of light or glare which would adversely affect day or nighttime views in the area.

Conclusion

Based upon these considerations, no significant impacts on aesthetics (i.e., impacts to the visual character to the site and surrounding areas) are expected from the proposed project. Therefore, aesthetic impacts will not be analyzed 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

2. a) All proposed modifications would occur within the confines of the existing Refinery. The proposed project would be consistent with the heavy industrial zoning for the Refinery (M2). No agricultural resources are present at or in the vicinity of the Refinery and no new land will be acquired as part of the proposed project. Further, the proposed project would not convert farmland (as defined in Question 2.a) 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.

2. b) and c) Land in the vicinity of the Refinery is not currently zoned for agricultural use. The proposed project does not conflict with an existing agricultural zone or Williamson Act contract and does not include converting agricultural land for non-agricultural uses.

Conclusion

Based upon these considerations, no significant impacts on agricultural resources are expected from the proposed project. Therefore, agricultural resources impacts will not be further analyzed 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

3. a) The Final 2007 Air Quality Management Plan (AQMP) demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are some of the inputs used to develop the AQMP. As indicated in the Population and Housing and Transportation/Traffic sections, the proposed project will only require approximately 12 additional Refinery employees and will not generate significant worker-related traffic during operation. Therefore, the proposed project will not cause increases in the growth projections in the City of El Segundo General Plan. Additionally, this project must comply with applicable SCAQMD requirements and control measures for new or modified sources. For example, new emission sources associated with the proposed project are required to comply with the SCAQMD's Regulation XIII - New Source Review requirements that include the use of Best Available Control Technology (BACT) and emission reduction credit offsets for any emission increases greater than one pound per day. It must also comply with prohibitory rules, such as SCAQMD Rule 403 – Fugitive Dust. By meeting these requirements, the project will be consistent with the goals and objectives of the AQMP.

3. b) Most of the proposed project components will generate emissions including the modifications to the No. 2 Crude Unit, the No. 2 Residuum Stripper Unit, the Isomax Unit, the FCC Unit, the Alkylation Unit, and others. The proposed project must comply with SCAQMD rules and regulations. Some portions of the proposed project such as Vapor Recovery and Flare System are being completed to reduce potential Refinery emissions and improve safety.

Construction activities associated with the proposed project would result in emissions of carbon monoxide (CO), particulate matter less than ten microns in diameter (PM10), volatile organic compounds (VOCs), nitrogen oxides (NOx) and sulfur oxides (SOx). Construction activities include standard land preparation activities involving grading, pouring new foundations, and all other activities associated with the 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 compressors, pumps, valves, and flanges. Some of the proposed project modifications in the Isomax Unit and VRDS Unit will result in an increase in the throughput of the unit, and some new units will be installed that will increase emissions of criteria pollutants and greenhouse gases (i.e., the new Flare, Cogen Train D, SRU, SWS, and TGU). The SCAQMD requires the installation of BACT for new and modified 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 materials transported will be evaluated in the EIR.

3. c) The proposed project may result in an increase in emissions from the operation of the 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 are potentially significant and 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 sources of odors from existing operations throughout the Refinery. The sulfur-bearing materials are processed in the proposed new SRU and the existing SRUs where they are converted to commercial grade (molten) sulfur, which does not emit an appreciable odor. The Refinery will continue to process sulfur-bearing materials in the existing SRUs and the proposed project would increase the sulfur production capacity of the Refinery. The proposed new TGU will use a mixture of methyl diethanol amine (MDEA) and an alkanolamine mixture, while the existing TGUs use sodium hydroxide and sodium bisulfite solutions. Sodium hydroxide, sodium bisulfite, MDEA, and an alkanolamine mixture do not produce odors. The use of the MDEA and the alkanolamine mixture is expected to be more efficient than the currently used solutions. The proposed project is not expected to increase the potential for odors since the exhaust from the SRU vents to the TGU where it is incinerated prior to discharge to atmosphere and the PRDs associated with natural gas and refinery fuel gas will be routed to the new Vapor Recovery and Flare System.

Ammonia will be used in the SCR to aid in the control of NO_x emissions. Ammonia can have a strong odor; however, the proposed project is not expected to generate substantial ammonia emissions, since the project will use aqueous ammonia, and the ammonia will be stored in existing tanks with controls to reduce ammonia emissions and transported in enclosed piping to the SCR unit at the proposed Cogen Train D. Ammonia emissions from the SCR unit stack (also referred to as ammonia slip) will be limited to 5 parts per million (ppm). Since exhaust emissions are buoyant as a result of being heated, ammonia will disperse and ultimate ground level concentrations will be substantially lower than 5 ppm. Five ppm is below the odor threshold for ammonia of 20 ppm (OSHA, 2007).

The Refinery maintains a 24-hour environmental surveillance effort, which helps to minimize the frequency and magnitude of odor events. No odors are expected from the new equipment. In addition, all new and modified components of the proposed project will be required to comply with BACT requirements as well as existing SCAQMD rules and

regulations, including Rule 402 - Prohibition of Nuisances. Recovering sulfur from process streams and compliance with BACT and Rule 402 are expected to help minimize the frequency and magnitude of odor events at the Refinery. Therefore, no significant odor impacts are expected from constructing and operating the proposed project.

3. f) The Final 2007 AQMP demonstrates that, with aggressive adoption and implementation of control measures, applicable federal ambient air quality standards can be achieved within the timeframes required under federal law. This proposed project must comply with applicable SCAQMD rules and regulations as well as control measures applicable to new or modified sources. For example, new emission sources associated with the proposed project are required to comply with SCAQMD Regulation XIII – New Source Review requirements that include the use of BACT. The project proponent must also comply with prohibitory rules, such as Rule 403, for the control of fugitive dust. By meeting these requirements, the project will be consistent with the goals and objectives of the AQMP to improve air quality in the Basin. Further, the proposed project is consistent with the Final 2007 AQMP and is not expected to diminish an existing air quality rule or a future compliance requirement.

Conclusion

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

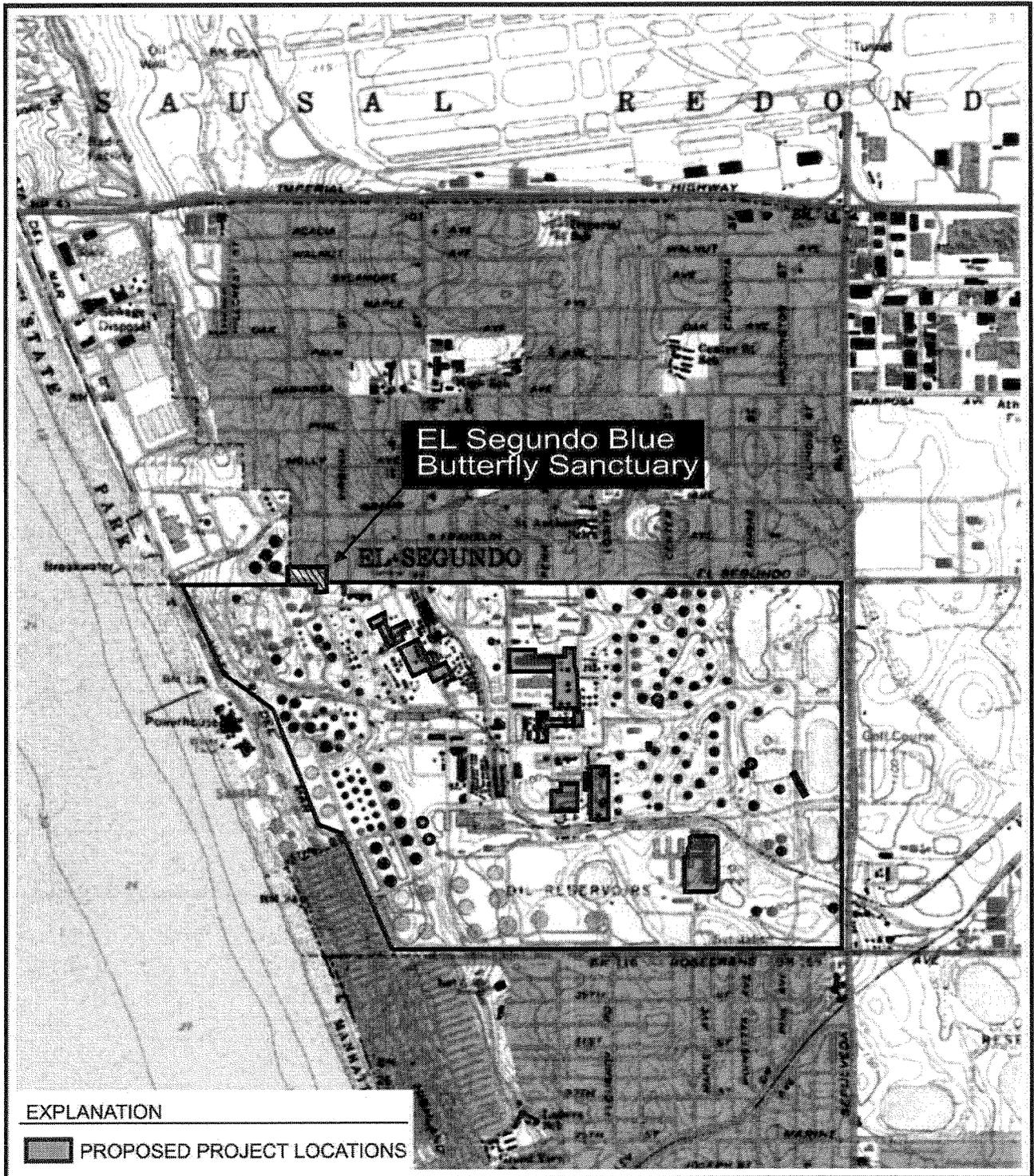
	Potentially Significant Impact	Less Than Significant Impact	No Impact
4.0. BIOLOGICAL RESOURCES. Would the project:			
a) Have substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

4. a), b), c), d), and f) The proposed project would be located within existing boundaries of the Chevron Refinery, which is zoned and has been used for heavy industrial purposes since 1911, and has already been graded and developed. The Refinery site does not support riparian habitat, federally protected wetlands (as defined by §404 of the Clean Water Act), or migratory corridors. With the exception of some decorative landscaping around the perimeter of the site, plants have previously been removed from operating areas of the Refinery for safety reasons. There are three special-status species that have been reported in the immediate vicinity of the Refinery: two animal species (the El Segundo Blue Butterfly and the Pacific pocket mouse) and one plant species (the beach spectaclepod).

The El Segundo Blue Butterfly (*Euphilotes battoides allyni*) is a small (wing span of less than one inch), brightly colored butterfly that historically has been found in the El Segundo sand dunes of Los Angeles County. Because of extensive habitat loss, degradation, and fragmentation due to urban development, the butterfly's habitat has been reduced to two areas: sand dunes near the Los Angeles International Airport (LAX), which contain the largest population of the butterfly; and two acres at the butterfly sanctuary that was created within the property of the Chevron El Segundo Refinery (see Figure 2-1).



 Environmental Audit, Inc.

El Segundo Blue Butterfly Sanctuary Chevron El Segundo Refinery

The El Segundo Blue Butterfly was listed as an endangered species by the federal government in 1976. The butterfly was discovered on an undeveloped portion of the Refinery property in 1975, and, shortly thereafter, the area where the butterfly was found in the northwest portion of the Refinery property was voluntarily fenced by Chevron to protect the butterfly's habitat and the coastal buckwheat plant (*Eriogonum parvifolium*), upon which the butterfly feeds during all stages of its life cycle.

Because the buckwheat plant at the Refinery's butterfly sanctuary has been threatened by various invasive species and annual grasses (e.g., tumbleweeds, rye grass, and ice plant), efforts have been made on an ongoing basis since the early 1980s to inhibit weed growth and stimulate buckwheat growth. Approximately 5,000 buckwheat plants have been transplanted at the Refinery since 1983 (Chevron 2005). In the mid 1980s, there were only about 400 of these butterflies at the Chevron butterfly sanctuary; at present there are approximately 10,000 (Chevron 2005b). The butterfly population on LAX property also has increased, from a population of approximately 500 in 1985 to between 40,000 and 50,000 in 2001 (City of Los Angeles, 2001).

The Pacific pocket mouse (*Perognathus longimembris pacificus*) is a small brownish rodent that lives in fine-grained sandy areas (coastal strand, coastal dunes, coastal sage scrub, and river alluvium) in the immediate vicinity of the Pacific Ocean in southwestern California (SCAQMD, 2001). Historically, the mouse's range extended from Los Angeles County south to the Mexican border, including portions of the Chevron Refinery property. Only a few known populations remain, and they are in Orange County (Dana Point) and San Diego County (Camp Pendleton). The Pacific pocket mouse was last reported in the area of the Chevron Refinery in 1938, and, thus, is not expected to exist at the Refinery at present because habitat that could be used by the Pacific pocket mouse is no longer present at the Refinery.

The beach spectaclepod (*Dithyrea maritime*) is a small low-growing perennial herb. The species is native to California and occurs in foredunes, active sand, and dune scrub from San Luis Obispo south to Baja California. The beach spectaclepod is considered extremely rare by the California Native Plant Society; it is listed as threatened by the State of California and as a Species of Concern by the federal government. The only reported occurrence for this plant at the Refinery site was in 1884, and the species is not expected to exist at the Refinery at present because the Refinery site has been continuously cleared of all vegetation since 1911 for safety reasons (SCAQMD, 2001).

The proposed project activities will take place at an existing Refinery, whose active areas (including the locations where Refinery equipment will be modified and constructed) have been highly disturbed and contain no significant biological resources. No impacts are expected to special status species. The Pacific pocket mouse and beach spectaclepod have not been sighted at the Refinery in decades (since 1938 for the mouse and since the late 19th century for the spectaclepod).

The Refinery area population of the federally endangered El Segundo Blue Butterfly has increased substantially over the past 20 years, due to the existence of and habitat

improvements at the Refinery butterfly sanctuary. These increases in the El Segundo Blue Butterfly population have occurred while Refinery operations have continued nearby. The distance between the project construction site and the Blue Butterfly Sanctuary is approximately 650 feet, with other existing Refinery equipment located in closer proximity. The proposed project would not be expected to have significant adverse impacts on the El Segundo Blue Butterfly.

In summary, the proposed project would have no significant adverse impacts on special-status animal or plant species.

The proposed project does not occur within the confines of the Refinery butterfly sanctuary and, therefore, does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4. e) Because modifications to implement the proposed project will occur entirely within the boundaries of the existing Refinery, the project will not conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans of any type.

Conclusion

The proposed project is not expected to adversely affect special-status animal and plant species or other biological resources (riparian habitats, wetlands, or migratory corridors); or conflict with ordinances or conservation plans. Therefore, biological resources will not be evaluated further 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

5. a) CEQA Guidelines §15064.5 states that resources listed in the California Register of Historical Resources or in a local register of historical resources are considered “historical resources.” A records search was conducted at the South Central Coastal Information Center (SCCIC) in August 2005 of all recorded archaeological sites and survey reports within a 0.5 mile radius of the El Segundo Refinery (SCAQMD, 2006). Federal, state and local historic listings were reviewed along with historic maps. In addition, this background research was supplemented by an internet search for relevant historical information. The research revealed that the listings of the National Register of Historic Places, California Historical Landmarks, California State Historic Resources Inventory, California Points of Historical Interest, and Los Angeles County Landmarks include no properties within the Refinery. One historic site, P-186856, (that could include buildings, structures, objects, districts, and landscapes, the details of which are kept confidential to protect the resource) is recorded at the outer edge of the 0.5-mile radius and outside of the Refinery boundary (SCAQMD, 2006, Appendix A). Because the proposed project activities will occur entirely within the existing Refinery boundaries, site P-186856 would not be directly or indirectly impacted by the proposed project. Based on the results of these records searches, the proposed project will not cause an adverse change in the significance of a resource listed in the California Register of Historical Resources or in a local register of historical resources.

Additionally, CEQA Guidelines §15064.5(a)(3) states that “generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing in the California Register of Historical Resources including the following:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- (D) Has yielded or may be likely to yield information important in prehistory or history”.

The California Register eligibility criteria are modeled on those of the eligibility criteria of the National Register of Historic Places. Generally, resources (buildings, structures,

equipment) that are less than 50 years old are excluded from listing in the National Register of Historic Places unless they can be shown to be exceptionally important (SCVTA/FTA, 2004). The proposed project will not affect any structures that are more than 50 years old and, because of the industrial nature of the structures onsite, are not considered to be exceptionally important. Therefore, the proposed project will not cause an adverse change in the significance of a resource potentially eligible for listing in the California Register of Historical Resources.

5. b), c), and d) The August 2005 records search indicated that 14 archaeological investigations have been performed within a 0.5-mile radius of the Refinery, including three surveys of small linear areas within the Refinery boundaries (SCAQMD, 2006). No prehistoric sites or Native American sacred lands are recorded within the Refinery boundaries or within a 0.5-mile radius of the facility. No paleontological resources or unique geological features are known to exist at the facility.

The 90 plus years of operations at the El Segundo Refinery have included extensive ground disturbance associated with the construction and operation of Refinery facilities and equipment. Proposed project activities will take place in areas where the ground surface has been previously disturbed. The extent of previous earth disturbance has reduced the likelihood that previously unknown archaeological or paleontological resources will be encountered during project construction. However, it is possible that intact prehistoric deposits may occur below the disturbed horizon, although the proposed project will not involve extensive subsurface construction activities.

While the likelihood of encountering cultural resources is low, if such resources were to be encountered unexpectedly during ground disturbance associated with construction of the proposed project, there would be the potential for significant adverse impacts. To minimize the risk of adverse impacts occurring, project construction will incorporate a number of standard protective measures during earth-disturbing activities:

- If cultural resources are exposed, a professional archaeologist and a Gabrielino/Tongva representative will be retained to monitor the subsurface work;
- The archaeological monitor will have the authority to temporarily halt or redirect earth disturbance work in the vicinity of the exposed cultural resources, so the find can be evaluated and mitigated as appropriate; and
- As required by State law, if human remains are unearthed, no further disturbance will occur until the County Coroner has made the necessary findings concerning the origin and disposition of these remains. The Native American Heritage Commission will be notified if the remains are determined to be of Native American descent.

Conclusion

The proposed project is not expected to have significant adverse impacts on historic or prehistoric cultural resources or paleontological resources. Therefore, cultural resources will not be evaluated further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
6.0 ENERGY. Would the project:			
a) Conflict with adopted energy conservation plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in the need for new or substantially altered power or natural gas utility systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)			
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Checklist Response Explanation

6. a) and e) The proposed project is not expected to conflict with energy conservation plans or energy standards. The proposed project will include the installation of additional Cogeneration Facilities. Conserving energy and complying with existing energy standards minimizes operating costs and, therefore, encourages the efficient use of energy. New equipment installed as part of the proposed modifications is expected to be as energy efficient as possible. Further, energy used to operate the new equipment is not considered a wasteful use of energy that will interfere or conflict with existing energy conservation plans. The proposed project is not expected to conflict with an adopted energy conservation plan because there is no known energy conservation plan that would apply to this proposed project. The proposed project is not expected to substantially increase the Refinery's energy demand.

6. b), c), and d) The Chevron Refinery is currently served by three existing Cogeneration Units and supplemented by Southern California Edison (SCE) for electricity supply. Natural gas is supplied by the Southern California Gas Company and used in conjunction with refinery fuel gas.

Construction: Electrically powered welding machines and other construction equipment may be used during construction, but the increase in electrical demand will be within the variation in load already supplied by SCE. Because of the limited availability of natural gas-powered construction equipment, it is expected that construction could include a few, but very limited number of this type of equipment. As a result, limited or no impacts on natural gas utility systems are expected during construction activities. Therefore, no significant adverse impacts on energy are expected during the construction period.

Operation: The proposed project is expected to require additional electricity. The additional Cogen Train D, which is part of the proposed project, is expected to supply all the power for the proposed project. No increase in electricity is expected to be required from a public utility once the project is complete. However, as the project moves towards completion additional electricity may be required prior to Cogen Train D becoming operational. The availability of the interim demand for power is being investigated. Therefore, peak demand on local and regional energy supplies are potentially significant and will be evaluated in the EIR.

The proposed project will use either natural gas, Refinery fuel gas, or a combination and will result in a maximum increase of approximately 14 million standard cubic feet per day in natural gas use at the Cogen Train D, the SRU and TGU, and the new Flare. Sufficient natural gas supplies exist, about 5,700 million cubic feet per day (SCAQMD, 2007), so that the increase in natural gas use is not expected to be significant.

Conclusion

The proposed project-specific energy resources impacts associated with increased demand for natural gas do not have a potential to create significant adverse impacts. Therefore, energy resource impacts with respect to natural gas will not be evaluated further in the EIR. However, the proposed project is expected to increase electricity demand, and, therefore, energy resource impacts with respect to electricity will be evaluated further 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:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
• Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

7. a), c), and d) Geological Hazards The proposed project will be constructed in an area of known seismic activity. Approximately 35 active faults are known to exist within a 50-mile radius of the Refinery. Of primary concern are two active faults: the Newport-Inglewood Fault, approximately five miles north of the Refinery, and the Palos Verdes Fault, approximately 3.8 miles south of the site.

The Newport-Inglewood Fault Zone represents the most significant source of strong seismic ground shaking at the Refinery. The Newport-Inglewood Fault Zone extends more than 40 miles from Newport Bay to Beverly Hills and trends to the northwest. The greatest concentration of seismic events on the Newport-Inglewood Fault Zone is related to the 1933 Long Beach earthquake and its aftershocks. The fault is considered capable of generating a 6.9 magnitude earthquake.

Another significant fault in the immediate Refinery vicinity is the Palos Verdes Fault Zone. This fault extends approximately 72 miles from Santa Monica Bay south to Lausen Knoll in the southern San Pedro Channel. The Palos Verdes fault is considered capable of a 7.1 magnitude earthquake. As cited in the Final EIR for the Chevron-El Segundo Refinery

CARB Phase 3 Clean Fuels Project, evaluations by the California Division of Mines and Geology (CDMG) indicate that there is a 10 percent probability of earthquake ground motion exceeding 0.45g at the Refinery site over a 50-year period (CDMG, 1998).

Although within a seismically active area, according to the Alquist-Priolo Earthquake Fault Zoning Maps and Fault Activity Map of California (1994), the El Segundo Refinery is not located on a fault trace that would define the site as a special seismic study zone under the Alquist-Priolo Act. Thus, the risk of earthquake-induced ground rupture is considered less than significant.

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 impact the Refinery. There is the potential for damage in the event of an earthquake. Impacts of an earthquake could include structural failure, spill, etc. The hazards of a hazardous materials release during an earthquake are addressed in the "8. Hazards and Hazardous Materials" section below.

New structures must be designed to comply with the Uniform Building Code Zone 4 requirements since the proposed project is located in a seismically active area. The City of El Segundo 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 Chevron 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 El Segundo for review. The Chevron 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 adverse impacts from seismic hazards 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. Therefore, no significant adverse impacts due to landslides or mudflows are expected.

Liquefaction is a mechanism of seismic ground failure in which earthquake-caused ground motion causes loose, water-saturated, cohesionless soils to be transformed to a liquid state. The Refinery site has not been identified as an area where liquefaction is considered a significant potential risk (CDMG, 1998 and SCAQMD, 2001). The site also is not considered to be an area with the potential for permanent ground displacement due to earthquake-induced landslides or due to heavy precipitation events (CDMG, 1998 and SCAQMD, 2001).

7. b) Topography and Soils The proposed project is located within the confines of the existing Chevron Refinery. Concrete foundations presently support Refinery structures and equipment. Most of the Refinery roads, including all high traffic roads have been paved. Some portions of the site have also been landscaped. The operating portions of the Refinery are relatively flat. No unstable earth conditions, loss of top soil, changes in topography or changes in geologic substructures are anticipated to occur with the proposed project because of the limited grading and excavation involved. No significant adverse impacts on topography and soils are expected.

The proposed project involves adding new equipment to existing facilities so construction activities are limited to foundation work and trenching for piping. At most, ground disturbance will be limited to installing foundations for new units and trenching for piping and utilities. Since the proposed project will occur within already developed facilities; no significant adverse impacts related to soil erosion are expected. No significant change in topography is expected because little grading/trenching is required that could substantially increase wind erosion or runoff from affected sites.

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

7. e) Waste Discharge The proposed project is expected to generate additional wastewater discharged by the Refinery. The Chevron Refinery discharges wastewater to the ocean under a National Pollutant Discharge Elimination System (NPDES) permit. Neither the Refinery nor the proposed project will use septic tanks or alternative wastewater disposal systems, therefore, no significant adverse impacts on soils from alternative wastewater disposal systems are expected.

Conclusion

No significant adverse impacts on geology and soils are expected from the proposed project. Therefore, geology and soils impacts will not be evaluated further 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Significantly increase fire hazard in areas with flammable materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Checklist Response Explanation

8. a) and b) Though hazard analyses have been previously completed for the equipment at the existing Refinery, the proposed project may alter the existing hazards setting. For example, some of the new units that are proposed to be installed, such as the new SWS and SRU, may increase the amount of hydrogen sulfide containing materials handled on-site and increase the potential hazards at the Refinery in the event of a release from the SWS or SRU. The proposed project could also increase the potential for fires and explosions associated with additional storage/use of flammable materials (i.e., LPG, gasoline, diesel, etc.). In addition, the proposed project may increase the quantity of hazardous materials that will need to be transported to or from the Refinery (e.g., LPG, etc.). The proposed project may also alter the transportation modes for feedstock and products delivered to and shipped from the Refinery and related terminals. The potential hazard impacts related to the proposed project are potentially significant and will be addressed in the EIR.

Increases in potential hazards associated with the implementation of the proposed project could potentially alter the probability for upset and accident conditions that could cause a release of hazardous materials into the environment. The potential effects of an accidental release of the additional hazardous materials being stored, used and transported as part of implementing the proposed project will be evaluated in the EIR.

8. c) The proposed project affected units are not located within a one-quarter mile of an existing or proposed school site. Since the proposed project will not create emissions of acutely hazardous materials, or handle hazardous or acutely hazardous materials, substances or waste within one-quarter of a mile of an existing or proposed school, no potential hazards impacts are expected to affect schools.

8. d) The existing Refinery is listed as a hazardous materials site compiled pursuant to Government Code §65962.5; however, the proposed project equipment and activities are similar to the existing equipment and activities related to refining crude oil. The proposed

project will be constructed within the confines of the existing Chevron Refinery. In 1985, the Regional Water Quality Control Board (RWQCB) adopted Order 85.17 requiring the Chevron Refinery (and other local refineries and terminals) 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 the list because it is on a list of Cleanup and Abatement Orders prepared by the State Water Resources Control Board (Order No. 85-17). For sites which are listed pursuant to Government Code Section 65962.5, the following information is requested:

Applicant: Chevron Products El Segundo Refinery
Address: 324 West El Segundo Boulevard, El Segundo, California 90245
Phone: (310) 615-5267
Address of Site: 324 West El Segundo Boulevard, El Segundo, California 90245
Local Agency: City of El Segundo
Assessor's Book: 4138-016-005
List: Cleanup and Abatement Order
Regulatory ID No: 008336901.
Date of List: February 14, 1985

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. Currently, there is no evidence that soil contamination is located within the areas proposed for grading, trenching or excavation. 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.

Excavated soils that contain concentrations of certain substances, including heavy metals and hydrocarbons, generally are regulated under California hazardous waste regulations. Any required soil remediation will be handled under the approved SCAQMD Rule 1166 plan by using an organic vapor analyzer and visual inspection for detection of VOC and other hydrocarbons. Soil which demonstrates a VOC reading in excess of 50 ppm or greater at a distance of up to three inches from the surface or which otherwise appears contaminated will be segregated and stockpiled for further analysis. Soils, which exceed the standards specified in the plan, will be segregated and managed as contaminated soil with treatment or disposal managed in accordance with state hazardous waste regulations. No significant adverse 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, including SCAQMD Rule 1166. 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. Soil sampling will be conducted in the event excavation is necessary and the Refinery will comply with all applicable rules and regulations.

8. e) and f) The Refinery is located within two miles of LAX. However, the modifications to the facilities required for the proposed project are comparable to existing facilities and would not increase safety hazards for people residing or working in the proposed project area. The height of the proposed new process equipment will not exceed the 200-foot height threshold that would require Federal Aviation Administration notification, as specified in 14 CFR §17.13(a) and Federal Aviation Regulation Part 77. Therefore, no safety hazards are expected from the proposed project at any airports in the region.

There are no private airstrips in the vicinity of the Refinery. Therefore, the proposed project would not be exposed to hazards from private airstrip activity.

8. g) The proposed project is not expected to interfere with adopted emergency response plans or emergency evacuation plans. The proposed project will result in modifications to the existing Refinery. All construction activities will occur within the confines of the existing Refinery or nearby, so that no emergency response plans would be effected. Chevron has implemented emergency response plans at its facility, but no modifications to the plans are expected as a result of the proposed project because there will be no change in the materials stored on site or the manner in which those materials are handled. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evaluation plan. Procedures for emergency response are provided to employees along with training guidelines and the use of personal protective equipment. All construction and operation personnel will be safety-trained in accordance with Chevron's procedures. The proposed project is not expected to alter the route that employees would take to evacuate the site, as the evacuation routes generally direct employees outside of the main operating portions of the Refinery. The proposed project is not expected to impact any emergency response plans.

8. h) The proposed project will not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees and will not expose people or structures to wildland fires because the Refinery is not located near any forested wildlands. The Refinery will continue to use and produce flammable materials. No substantial wildland or native vegetation exists within the Refinery. Only landscape vegetation is present around the perimeter of the Refinery. Therefore, no significant increase in wildland fire hazards is expected at the Refinery associated with the proposed project.

8. i) New vessels, such as the knock-out drum for the vapor recovery system and the new storage tanks, will be required as part of the proposed project and are expected to contain flammable materials. Due to the proximity of the new vessels and the sources of these flammable materials within the Refinery, should a fire occur, it would likely remain on-site and not be exposed to the public. Nonetheless, because existing components at the Refinery currently store large volumes of flammable materials and the proposed project will also involve 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 the proposed new vessels 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
n) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Checklist Response Explanation

9. a), f), k), l), and o) Wastewater Generation Refinery wastewater is currently collected and treated in two separate drain and treatment systems: a segregated system and an unsegregated system. The unsegregated system, which consists of an API separator and induced air flotation (IAF) units, is normally used for non-process wastewater, including cooling tower blowdown, steam condensate, a portion of the water pumped from groundwater recovery wells, and other wastewater streams containing free oil recovered with primary (physical) treatment only. Primary treatment consists of the separation of oil, water, and solids in two stages. During the first stage (API separator), wastewater moves very slowly through the separator allowing free oil to float to the surface and be skimmed off and solids to settle to the bottom. Periodically, the separator is shut down and the sludge is collected for disposal. The second stage utilizes an IAF unit, which bubbles air through the wastewater, and both oil and suspended solids are skimmed off the top. The unsegregated system is also used to collect and treat stormwater. Both structural (impoundments, berms, and curbs) and non-structural (inspections and training) controls are used to keep contaminants from entering the unsegregated system. The unsegregated system can be operated such that flow can be diverted to effluent diversion tankage or to the segregated treatment system, where additional treatment can be performed.

The segregated system is normally used to treat process wastewater containing emulsified oil, organic chemicals, and a portion of the water pumped from groundwater recovery wells. This system consists of gravity separators, a dissolved air flotation (DAF) unit, and activated sludge units for secondary (biological) treatment. In secondary treatment, dissolved oil and other organic pollutants may be consumed biologically by microorganisms. Effluent that does not meet the discharge limits may receive additional solids removal from an auxiliary off-specification DAF unit or be routed to two auxiliary effluent diversion tanks for additional IAF treatment. The biosolids from the biological treatment are disposed to the sanitary sewer for treatment by the Hyperion Treatment Plant under an Industrial Waste Discharge Permit.

The proposed project is expected to generate effluent water composed of cooling tower and boiler blowdown and unrecycled stripped water from the SWS. The existing treatment facilities onsite may have the capability to treat the project wastewater to permit limits. However, further analysis is necessary to determine the extent, if any, of the modifications. Therefore, potentially significant adverse impacts associated with wastewater discharges will be analyzed further in the EIR.

9. b) and n) Water Supply The Refinery currently consumes approximately 10 million gallons of water per day. Approximately 2.6 million gallons per day of fresh/potable water, which is produced by the West Basin Municipal Water District (WBMWD), is used. In addition, approximately 7.5 million gallons per day of reclaimed water, which is also produced by the WBMWD, is consumed. The WBMWD applies tertiary treatment to the secondary-treated effluent from the City of Los Angeles Hyperion Treatment Plant. Approximately 200,000 gallons of reclaimed water per day is used for irrigation of Refinery perimeter landscaping, approximately 3.5 million gallons per day of denitrified reclaimed

water is used for the cooling towers, and approximately 3.8 million gallons per day of demineralized reclaimed water is used for boiler feed water.

As part of the proposed project, boiler feed water and cooling tower makeup water will be required. No demand on groundwater or potable water will be made by the project. The WBMWD will supply reclaimed water for the project consistent with reclaimed water currently supplied for similar uses at the Refinery. The additional reclaimed water supplied by WBMWD may require expansion of the WBMWD treatment facility. Therefore, potentially significant adverse impacts associated with water demand will be analyzed further in the EIR.

9. c), d), e), and m) Surface Water The proposed project would be constructed at an existing Refinery and involves the construction of new structures and the demolition and replacement of others. The Refinery is mostly paved, and the proposed project primarily consists of modifications to the existing Refinery, so minimal grading will be required. Ground disturbance will be limited to activities required to install foundations and trenching. The proposed project is not expected to increase the stormwater runoff from the Chevron Refinery. No new storm drainage facilities, expansion of existing storm facilities, changes to drainage facilities, or changes in the drainage patterns are expected as part of the proposed project. Since stormwater discharge or runoff is not expected to change in volume or water quality, no significant adverse stormwater quality or stormwater drainage impacts are expected to result from the operation of the proposed project.

9. g), h), and i) Flood Hazards The proposed project would be constructed at 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 proposed project is not located within a flood zone and would not expose people or property to any known flood-related hazards. Thus, no significant adverse impacts associated with flood hazards are expected.

9. j) Other Hydrology Impacts The Refinery is located approximately 900 feet from the ocean at elevations from 45 feet to 174 feet above sea level. Based on the Refinery's distance and elevation in relation to the ocean, the proposed project is not expected to result in increased risk of seiche or tsunami. The proposed project site is located in a flat area with no hills or mountains nearby so the potential for significant adverse impacts from mudflows is considered less than significant. Thus, no significant adverse impacts associated with seiches, tsunamis, or mud flows are expected.

Conclusion

The potential adverse impacts of the proposed project on hydrology and water quality resources, with the exception of wastewater treatment facilities and water supply facilities, are expected to be less than significant and will not be analyzed further in the EIR. The potential adverse impacts of the proposed project on wastewater treatment facilities and water supply facilities will 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

10. a) The proposed project includes improvements and modifications within an existing industrial facility that is zoned and used for heavy manufacturing. No established communities are located on the Refinery property, and consequently, the proposed project will not physically divide an established community.

10. b) The Refinery is located in the City of El Segundo within Los Angeles County in an urbanized area which includes a substantial amount of industrial development, due to the proximity of LAX. The areas surrounding the Refinery can generally be characterized as a blend of heavy and light industrial, commercial, medium- and high-density residential, and industrial/manufacturing.

Land use at the Refinery and in the surrounding vicinity is consistent with the City of El Segundo General Plan land use designations for the area. The Land Use element of the General Plan currently in force was adopted in December 1992, and no revisions have occurred since that time (City of El Segundo, 2007). The strip of development on the north side of El Segundo Boulevard between Main Street and Richmond Boulevard, northeast of the Refinery’s main office visitor parking lot and approximately one-half mile west of the No. 4 Crude Unit is part of the Downtown Specific Plan, adopted in August 2000. The Refinery site is zoned by the City of El Segundo as Heavy Industrial (M-2) (City of El Segundo, 2007a).

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The overall activities and products produced at the Refinery will remain the same. The proposed modifications would not conflict with the City of El Segundo General Plan land use designation for the Refinery site nor would they conflict with the Downtown Specific Plan for the area north of the Refinery site. The proposed project would not require zoning or land use changes. The modifications and additions proposed at the Refinery as part of the proposed project would be subject to plan check review by the City of El Segundo during the building permit approval process. Since the proposed project is consistent with all zoning ordinances and General and Specific Plan policies and goals, no significant adverse land use impacts are expected from the proposed project.

10. c) Because the location of the proposed project is in an industrialized area for which no habitat or natural community conservation plans exist, the proposed project will not conflict with local habitat conservation plans or natural community conservation plans. (See also the discussion for item 4.e.)

Conclusion

The proposed project would not physically divide an established community and it would not conflict with the applicable land use plans, policies, and regulations of the City of El Segundo or create any significant adverse land use impacts. Therefore, land use and planning impacts will not be discussed further 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

11. a) & b) The proposed project will be constructed on land within an existing industrial site. There are no known mineral resources on the Refinery site. Any potential loss of mineral resources from the extraction of the crude oil processed takes place off-site and will continue regardless of the proposed project. Therefore, the proposed project will not result in

the loss of a known mineral resource that would be of value to the region and residents of the state. Similarly, because there are no known mineral resources on the project site, the project will not 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.

Conclusion

No significant adverse impacts to mineral resources are expected from the construction and operation of the proposed project. Therefore, mineral resources impacts will not be analyzed 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

12. a), b), c), and d) Construction activities associated with the proposed project will generate noise from heavy construction equipment and construction-related traffic. The types of construction equipment that will be used at the Refinery include, but are not limited to, welding machines, trucks, cranes, compressors, loaders, concrete pumps, graders, and pavers. The estimated noise level during installation of various equipment is expected to average about 80 decibels (dBA) at 50 feet from the center of construction activity. Most of the construction noise sources will be located at or near ground level, so the noise levels are expected to attenuate. Nonetheless, the potential generation and exposure to construction noise impacts may be significant.

Once constructed, 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 compressors, pumps, and fans. These anticipated increases in noise sources are potentially significant and the impacts of noise generation and excessive groundborne vibration will be analyzed further in the EIR.

12. e) and f) The proposed project site is not located within an airport land use plan or within the vicinity of a private airstrip. The proposed project is located within two miles of LAX. The proposed project would not add residential units to the area. The types of noise expected from the proposed project would be unlikely to significantly interact with noise generated from the airport, since the new equipment would be located about two miles south of the airport. Further, the Refinery is not located within the normal flight pattern of the airport. Thus, the proposed project would not increase the noise levels to people residing or working in the area, relative to existing noise levels from LAX.

Conclusion

The noise impacts associated with the proposed project are potentially significant and will be analyzed further in the EIR.

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)?

Potentially Significant Impact	Less Than Significant Impact	No Impact
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<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant Impact	No Impact
a) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

13. a), b), and c) Construction of the proposed project will take place over a period of approximately 24 months at an existing Refinery located in a highly urbanized and populous area of southern California. At the peak of construction, approximately 1,000 temporary construction jobs will be created by the proposed project. Because of the large size of the construction work force available in the southern California area, all 1,000 temporary construction jobs are expected to be filled from the existing regional labor pool. Once construction is completed, approximately 12 additional staff is expected to be needed at the Refinery for long-term operation of the proposed project. Thus, the proposed project will not induce substantial growth either directly or indirectly.

Because the proposed project will occur within an existing facility located in a highly urbanized area, no additional housing will be necessary to accommodate the labor force needed during construction and, further, no existing housing or population will be displaced. Substantial housing growth in the area will not occur as a result of the proposed project. Therefore, no significant adverse population or housing impacts are expected to result from the proposed project.

Conclusion

No significant adverse impacts on population size, population distribution, or housing are expected to result from proposed project construction and operation. Therefore, population and housing impacts 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

14. a) To respond to emergency situations, the Chevron El Segundo Refinery maintains an on-site fire department. The Refinery fire department adheres to National Fire Protection Association standards and is recognized as a professional functioning fire department by the California State Fire Marshal's office. The department is staffed with trained and certified fire fighters and emergency medical technicians. The Refinery fire department is capable of responding to petroleum and structure fires, hazardous materials releases, and confined-space rescues on average within three minutes. Due to the local proximity of the Refinery fire department, the response in containing and controlling fire situations is much more effective.

The on-site fire department holds regular training sessions and drills in conjunction with local fire departments (e.g., City of El Segundo). Also, the Refinery is active in the Beach Cities Community Awareness and Emergency Response (CAER) organization, where industry and local government agencies coordinate emergency response activities, and is a sponsor of the Community Alert Network (CAN) telephone call-out system.

The Chevron fire department includes a full-time staff of approximately 18, with a three-person crew on duty at the Refinery at all times. In addition, a Fire Prevention Officer, a Training Officer, a Relief Battalion Chief, and the Fire Chief are on duty Monday through Friday during the day shift. To supplement the Fire Department, an Emergency Response Team consisting of personnel from various Operating Divisions of the Refinery is trained and available to assist with any fire emergencies.

The Refinery is also served by the City of El Segundo Fire Department, which maintains two fire stations within the city and, as mentioned above, cooperates in emergency response planning with industrial facilities in the community, such as the Chevron Refinery.

The Refinery notifies the City of El Segundo Fire Department when an incident occurs at the Refinery that might affect the environment or pose a life safety hazard to employees or the public. The Refinery also maintains a mutual aid agreement with other Los Angeles area refineries, under which Chevron can request the assistance of other refineries' resources to assist in managing and controlling a major incident.

The proposed project during both construction and operation will not substantially change the load on the Refinery's fire fighting and emergency response resources and would not be expected to create the need for additional fire protection services or resources by Chevron or the City of El Segundo. The proposed project involves the installation of new vessels and storage facilities at the Refinery and new fire hazards will be added to the Refinery. However, the Refinery will continue to operate the existing on-site fire department with continued close coordination with local fire departments and emergency services. Fire stations in the areas near the Refinery are equipped to handle emergency response incidents at industrial facilities. No significant adverse impacts on fire protection are expected.

14. b) The Refinery is an existing facility with a 24-hour security force for people and property currently in place. The Refinery is fenced and access provided by security-controlled gates. Because the proposed project will not significantly change Refinery staffing or substantially expand the existing facilities within the Refinery, there is expected to be no increased need for new or expanded police protection.

14. c), d), and e) The local workforce is more than adequate to fill the short-term construction positions required for this project. Therefore, there will be no increase in the local population and, thus, no impacts are expected to schools, parks, or other public facilities.

Conclusion

No significant adverse impacts to public services are expected to occur as a result of the proposed project. Therefore, public services impacts 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

15. a) As previously concluded in Section 13, Population and Housing, of this document, implementation of the proposed project is not expected to increase the local population. Therefore, implementation of the proposed project is not expected to increase the demand for neighborhood or regional parks, or other recreational facilities and it will not adversely affect existing recreational facilities.

15. b) Implementation of the proposed project does not include new recreational facilities or require expansion of existing recreational facilities and, thus, will not have an adverse physical effect on the environment.

Conclusion

No significant adverse impacts on recreation are expected from the proposed project. Therefore, recreation impacts will not be analyzed 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Checklist Response Explanation

16. a) and b) Solid waste generation and disposal will increase during construction of the proposed project. The wastes are expected to consist of demolition debris including concrete, asphalt, wood, and metal debris, and normal construction debris including cardboard, paper, and plastic. The solid waste generated during construction will be disposed in an appropriately classified disposal facility by a licensed contractor. Potential impacts of solid waste disposal during construction will be evaluated further in the EIR.

If contaminated soils are encountered during the project construction, the soils would be removed for proper disposal in accordance with SCAQMD Rule 1166 and requirements of other agencies such as the RWQCB. The potential occurrence of contaminated soils and the removal procedure will be evaluated further in the EIR.

The proposed project will perform the same functions as the existing equipment with some change to the scale of operations at the Refinery. Solid or hazardous waste generation rates (i.e., volume and/or frequency of disposal) may increase as a result of the proposed project operation. Therefore, potential impacts of project solid and hazardous waste disposal on available waste disposal facilities will be evaluated further in the EIR.

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

Conclusion

Proposed project solid/hazardous waste generation has the potential for significant adverse impacts on disposal facilities. Therefore, impacts of the proposed project on solid/hazardous waste will be analyzed further 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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Response Explanation

17. a) and b) Construction of the proposed project will increase the traffic in the area associated with 1,000 construction workers, construction equipment, and the delivery of construction materials. The impacts of the traffic during the construction phase will be analyzed in the EIR.

Once construction of the proposed project is completed, the existing work force at the Refinery is expected to increase by approximately 12 staff. The receipt and transport of operational materials are expected to change as a result of this project so that operation-related traffic may increase. Therefore, the impacts of the traffic during the operational phase will be analyzed in the EIR.

17. c) The proposed project includes modifications to existing equipment and installation of new equipment within the existing Refinery. The proposed modifications and new structures will be similar in height and appearance to the existing Refinery structures. Since the proposed modifications and new structures will be less than 200 feet in height and are not expected to result in a change to air traffic patterns, notification to the Federal Aviation Administration pursuant to Advisory Circular AC 70/7460-2K is not required. Further, since the Refinery is located about two miles south of the nearest airport, LAX, the Refinery is located outside of the normal flight pattern of LAX. In addition, the proposed project will not involve the delivery of materials via air cargo 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 Refinery. 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 Chevron will continue to maintain the existing emergency access gates to the Refinery.

17. f) Additional parking for the construction workers will be required. Although adequate parking is available on-site, due to the large number of construction workers, traffic patterns will be evaluated in the EIR and the most appropriate parking plan will be developed to minimize traffic impacts. Therefore, parking will be evaluated in the EIR.

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 and operational phases of the proposed project are potentially significant and will be analyzed 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Checklist Response Explanation

18. a) The proposed project does not have the potential to adversely affect the quality of 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, as proposed, 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, energy, hazards/hazardous materials, hydrology/water quality, noise, solid/hazardous waste, and transportation/traffic, which have the potential to impact humans. The proposed project has the potential to result in an increase in emissions, energy demand, hazard impacts, water treatment facilities, noise sources, waste generation, and

traffic from the construction of the proposed project and has the potential to result in cumulative impacts. The potential cumulative impacts will be analyzed, as necessary, in the EIR.

Conclusion.

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

CHAPTER 2: ENVIRONMENTAL CHECKLIST

REFERENCES:

- California Department of Conservation - Division of Mining and Geology (CDMG), 1998. Official Map of Seismic Hazard Zones (ground motion, liquefaction and landslides), Los Angeles Quadrangle, <http://www.conserv.ca.gov/dmg>.
- Chevron Products Company, 2005. Butterfly Facts, downloaded from <http://www.chevron.com/products> on July 1.
- Chevron Products Company. 2005b. Environmental Performance, El Segundo Refinery, Natural Resources, downloaded from <http://www.chevron.com/products> on July 1.
- City of El Segundo, 2007. City of City of El Segundo, General Plan, Land Use Element. last revised 1992, http://testweb.elsegundo.org/depts/planningsafety/planning/general_plan/3landuse.htm.
- City of El Segundo, 2007. City of City of El Segundo, General Plan, Land Use Element. last revised 1992, http://testweb.elsegundo.org/depts/planningsafety/planning/general_plan/3landuse.htm.
- Occupational Safety and Health Administration (OSHA), 2007. OSHA Safety and Health Topics: Ammonia Refrigeration, <http://www.osha.gov/SLTC/ammoniarefrigeration/index.html>
- Santa Clara Valley Transportation Authority/Federal Transit Administration (SCVTA/FTA) . 2004. Draft EIS/EIR Silicon Valley Transit Corridor Project. April 2004.
- South Coast Air Quality Management District (SCAQMD), 2001. Final Environmental Impact Report, Chevron –El Segundo California Resources Boards (CARB) Phase 3 Clean Fuels Project. November 2001.
- SCAQMD, 2003. Final Localized Significance Threshold Methodology. June 2003.
- SCAQMD, 2003a. Final Negative Declaration, Chevron Products Company Refinery Proposed Hydrogen Plant Project, SCH No.2003051116, July, 2003.
- SCAQMD, 2006. Final Environmental Impact Report, Chevron Products Company – El Segundo Refinery Heavy Crude Project, SCH No. 2005091152, August 2006.
- SCAQMD, 2007. Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, SCH No. 2006111064, June 2007.

ACRONYMS

ABBREVIATION	DESCRIPTION
API	American Petroleum Institute
AHM	Acutely Hazardous Material
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
Basin	South Coast Air Basin
BPD	barrels per day
CAER	Community Awareness and Emergency Response
CAN	Community Alert Network
CARB	California Air Resources Board
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CPUC	California Public Utilities Commission
CUP	Conditional Use Permit
CWMI	Chemical Waste Management Inc.
C4	butane
DAF	Dissolved Air Flootation
dBA	A-weighted noise level measurement in decibels
DEA	diethanolamine
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
ERPG	Emergency Response Planning Guideline
°F	Degrees Fahrenheit
FCCU	Fluid Catalytic Cracking Unit
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
g	acceleration of gravity
gpm	gallons per minute
GWh	Gigawatts per hour
H ₂	Hydrogen
H ₂ S	hydrogen sulfide
HAZOP	Hazardous operation process analysis
HDS	Hydrodesulfurization

CHAPTER 2: ENVIRONMENTAL CHECKLIST

HI	Hazard Index
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
IAF	Induced Air Flootation
ID #	Identification number
ISCST3	Industrial Source Complex Model Short Term Version 3
^o K	degrees Kelvin
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LADPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAER	lowest achievable emission reduction
LARWQCB	Los Angeles Regional Water Quality Control Board
LAX	Los Angeles International Airport
LEL	Lower Explosive Limit
lbs	pounds
lbs/hr	pounds per hour
LFL	Lower Flammable Limit
Lmax	Maximum sound level
Lmin	Minimum sound level
LOS	Level of Service
LPG	liquefied petroleum gas
m/s	meters per second
MATES	Multiple Air Toxic Exposure Study
MDEA	methyl diethanol amine
MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
MW	megawatts
mmscf	million standard cubic feet
mmscf/day	million standard cubic feet per day
MICR	Maximum Individual Cancer Risk
MWD	Metropolitan Water District of Southern California
N ₂	nitrogen
NH ₃	ammonia
NAAQS	National Ambient Air Quality Standards
nanograms/m ³	nanograms per cubic meter
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Agency
NOP	Notice of Preparation
NOP/IS	Notice of Preparation/Initial Study
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSR	New Source Review
OSHA	Occupational Safety and Health Administration
pH	potential hydrogen ion concentration

PM10	particulate matter less than 10 microns in diameter
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PRD	pressure relief device
PRC	Public Resources Code
PRO	Product Reliability and Optimization
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
RCRA	Resource Conservation and Recovery Act
RECLAIM	Regional Clean Air Incentives Market
Refinery	Chevron El Segundo Refinery
REL	Reference exposure level
RFG	reformulated fuels gasoline
RMP	Risk Management Plan
RMPP	Risk Management and Prevention Program
RVP	Reid Vapor Pressure
RWQCB	Regional Water Quality Control Board, Los Angeles Region
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison Company
SCFH	standard cubic feet per hour
SCH	State Clearinghouse
SCR	Selective Catalytic Reduction
SEP	Supplemental Environmental Project
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SPCC	Spill Prevention, Control and Countermeasure
SRU	Sulfur Recovery Unit
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWS	Sour Water Stripper
T-BACT	Toxics Best Available Control Technology
TACs	toxic air contaminants
TGU	Tail Gas Unit
TPH	total petroleum hydrocarbons
ULSD	Ultra low sulfur diesel
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USC	United States Code

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USDA	United States Department of Agriculture
USGS	United States Geological Society
ug/l	micrograms per liter
ug/m ³	micrograms per cubic meter
UVCE	Unconfined Vapor Cloud Explosion
V/C	volume to capacity ratio
VOCs	volatile organic compounds
VRDS	Vacuum Residuum Desulfurization
WGS	Wet Gas Scrubber
WBMWD	West Basin Municipal Water District

GLOSSARY

TERM	DEFINITION
Ambient Noise	The background sound of an environment in relation to which all additional sounds are heard
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.
Cooling Tower	A cooling tower is a heat rejection device, which extracts waste heat to the atmosphere through the cooling of a water stream to a lower temperature. Common applications for cooling towers are providing cooled water for manufacturing and electric power generation.
Condensate	Steam that has been condensed back into water by either raising its pressure or lowering its temperature
Cogeneration	A cogeneration unit is a unit that produces electricity and thermal energy.
Cracking	The process of breaking down higher molecular weight hydrocarbons to components with smaller molecular weights by the application of heat; cracking in the presence of a suitable catalyst produces an improvement in product yield and quality over simple thermal cracking.
Crude Oil	Crude oil is "unprocessed" oil, which has been extracted from the subsurface. It is also known as petroleum and varies in color, from clear to tar-black, and in viscosity, from water to almost solid.
dB	The decibel (dB) is one tenth of a <i>bel</i> where one bel represents a difference in noise level between two intensities I_1 , I_0 where one is ten times greater than the other. (A) indicates the measurement is weighted to the human ear.

CHAPTER 2: ENVIRONMENTAL CHECKLIST

Distillation	The process of heating a liquid to its boiling point and condensing and collecting the vapor.
Feedstock	Material used as a stream in the refining process.
Flares	Emergency equipment used to incinerate refinery gases during upset, startup, or shutdown conditions
Flue Gas	Gases produced by burning fuels in a furnace, heater or boiler.
Heat exchanger	Process equipment used to transfer heat from one medium to another.
Heater	Process equipment used to raise the temperature of refinery process streams.
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 or feedstocks by reacting them with hydrogen.
Isomerization	The rearrangement of straight-chain hydrocarbon molecules to form branch chain products; normal butane may be isomerized to provide a portion of the isobutane feed needed for the alkylation process.
L ₅₀	Sound level exceeded 50 percent of the time (average or mean level).
Liquefied Petroleum Gas (LPG)	Liquefied light end gases often used for home heating and cooking; this gas is usually 95 percent propane, the remainder being split between ethane and butane.
Mercaptans	Sulfur-containing compounds

Naphtha	<p>A crude distillation unit cut in the range of C₇-420°; naphthas are subdivided – according to the actual crude distillation cuts - into light, intermediate, heavy, and very heavy virgin naphthas; a typical crude distillation operation would be:</p> <table><tr><td>C₇-160°</td><td>-</td><td>light naphtha</td></tr><tr><td>160-280°</td><td>-</td><td>intermediate naphtha</td></tr><tr><td>280-330°</td><td>-</td><td>heavy naphtha</td></tr><tr><td>330-420°</td><td>-</td><td>very heavy naphtha</td></tr></table>	C ₇ -160°	-	light naphtha	160-280°	-	intermediate naphtha	280-330°	-	heavy naphtha	330-420°	-	very heavy naphtha
C ₇ -160°	-	light naphtha											
160-280°	-	intermediate naphtha											
280-330°	-	heavy naphtha											
330-420°	-	very heavy naphtha											
Natural Gas	<p>A mixture of hydrocarbon gases that occurs with petroleum deposits, principally methane together with varying quantities of ethane, propane, butane, and other gases.</p>												
Octane	<p>Measurement of the burning quality of the gasoline; reflects the suitability of gasoline to perform in internal combustion engines smoothly without letting the engine knock or ping.</p>												
Olefins	<p>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.</p>												
Paleontological	<p>Prehistoric life.</p>												
Peak Hour	<p>This typically refers to the hour during the morning (typically 7 AM to 9 AM) or the evening (typically 4 PM to 6 PM) in which the greatest number of vehicles trips are generated by a given land use or are traveling on a given roadway.</p>												
Pentane	<p>Colorless, flammable isomeric hydrocarbon, derived from petroleum and used as a solvent or fuel.</p>												
Reactor	<p>Vessels in which desired reactions take place.</p>												
Refinery fuel gas	<p>Gas produced from refinery operations used primarily for fuel gas combustion in refinery heaters and boilers.</p>												
Reformate	<p>One of the products from a reformer; a reformed naphtha; the naphtha is then upgraded in octane by means of catalytic or thermal reforming process.</p>												
Reformulated Gasoline	<p>New gasoline required under the federal Clean Air Act and California Air Resources Board to reduce emissions.</p>												

CHAPTER 2: ENVIRONMENTAL CHECKLIST

Reid Vapor Pressure	The vapor pressure of a product determined in a volume of air four times greater than the liquid volume at 100°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 may change in intensity.
Selective Catalyst Reduction	An air pollution control technology that uses a catalyst to remove nitrogen oxides from flue gas.
Sour	Refinery streams with more than 2.5 percent sulfur.
Stripper or Splitter	Refinery equipment used to separate two components in a feed stream; examples include sour water strippers and naphtha splitters.
Sweet	Refinery streams with less than 0.5 percent sulfur.

COMMENTS AND RESPONSE TO COMMENTS RECEIVED ON THE NOP/IS

CHEVRON PRODUCTS EL SEGUNDO REFINERY PRODUCT RELIABILITY AND OPTIMIZATION PROJECT

RESPONSE TO COMMENTS RECEIVED ON NOP/IS

INTRODUCTION

The NOP/IS was circulated for a 30-day public review and comment period, which started on August 10, 2007, and ended September 11, 2007.

The NOP/IS included a detailed project description, the environmental setting for each environmental resource, and an analysis of each environmental resource on the California Environmental Quality Act (CEQA) checklist including all potentially significant environmental impacts. The SCAQMD received five comment letters on the NOP/IS during the public comment period. Responses to the comment letters are presented herein. The comments are bracketed and numbered. The related responses are identified with the corresponding number and are included in the following pages.

Comment Letter	Commentator
#1	NAHC
#2	Dept. of Transportation
#3	SCAG
#4	PUC
#5	Michael Pell (citizen)

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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ds_nahc@pacbell.net



August 14, 2007

Mr. Michael Krause, Air Quality Specialist
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Re: SCH# 2007081057; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for Chevron Products Company El Segundo Refinery Product Reliability & Optimization Project, Los Angeles County, California

Dear Mr. Krause:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

- ✓ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:
 - If a part or the entire (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded in or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission (NAHC) for:
 - A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.
 - Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact.
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15084.5 (f). In areas of identified archeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

1-1

1-2

1-3

1-4

1-5

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigations plans.

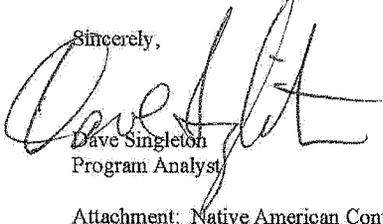
- CEQA Guidelines §15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the Initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American groups, identified by the NAHE, to ensure the appropriate and dignified treatment of Native American human remains and any associated grave goods.
- Health and Safety Code §7050.5, Public Resources Code §5097.98 and CEQA Guidelines §15064.5(d) mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in CEQA Guidelines §15370 when significant cultural resources are discovered during the course of project planning or execution.

1-6

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,



Dave Singleton
Program Analyst

Attachment: Native American Contact List

Native American Contacts
Los Angeles County
August 14, 2007

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribes.net
(213) 489-5001 - Officer
(909) 262-9351 - cell
(213) 489-5002 Fax

Ti'At Society
Cindi Alvitre
6602 Zelzah Avenue Gabrielino
Reseda , CA 91335
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Band of Mission Indians of CA
Ms. Susan Frank
PO Box 3021 Gabrielino
Beaumont , CA 92223
(951) 897-2536 Phone/Fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Administrator
4712 Admiralty Way, Suite 172 Gabrielino Tongva
Marina Del Rey , CA 90292
310-570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
5450 Slauson, Ave, Suite 151 PMB Gabrielino Tongva
Culver City , CA 90230
gtongva@verizon.net
562-761-6417 - voice
562-920-9449 - fax

Gabrielino/Tongva Tribal Council
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
ChiefRBwife@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Gabrielino Tongva Indians of California Tribal Council
Mercedes Dorame, Tribal Administrator
20990 Las Flores Mesa Drive Gabrielino Tongva
Malibu , CA 90265
Pluto05@hotmail.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2007081057; CEQA Notice of Preparation (NOP) for Chevron Products Company El Segundo Refinery Product Reliability & Optimization Project; Los Angeles county, California (SCAQMD).

COMMENT LETTER NO. 1
NATIVE AMERICAN HERITAGE COMMISSION

Response 1-1

The SCAQMD notes that the Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources.

The SCAQMD is aware of the requirements of CEQA Guidelines §15064.5 and has complied with this section as well as all other relevant CEQA requirements. As stated on pages 2-14 through 2-17 of the NOP/IS for the Chevron Products El Segundo Refinery Product Reliability and Optimization Project, potential significant adverse impacts on cultural resources were not anticipated. This conclusion is based on the fact that there are no prehistoric or historic cultural resources or paleontological resources within the boundaries of the Chevron El Segundo Refinery.

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 of the Refinery are not expected to be found at the site due to past disturbance. In addition, an August 2005 records search indicated that 14 archaeological investigations have been performed within a 0.5-mile radius of the Refinery, including three surveys of small linear areas within the Refinery boundaries. No prehistoric sites or Native American sacred lands are recorded within the Refinery boundaries or within 0.5-mile radius of the facility. No paleontological resources are known to exist at the facility.

If cultural resources were to be encountered unexpectedly during ground disturbance associated with construction of the proposed project, proper procedures (i.e., contacting professional archaeologist and a Gabriellino/Tongva representative, temporarily halting or redirecting disturbance work in vicinity, etc.) will be taken. Further, the Refinery's site does not contain known paleontological resources and, thus, the proposed project is not expected to adversely affect any sites of paleontological value.

Response 1-2

The Chevron Products El Segundo Refinery PRO project is proposed to occur within the boundaries of an existing petroleum refinery. The site has been previously disturbed to accommodate refinery projects associated with the placement and relocation of infrastructure (i.e., underground utilities and piping) and no cultural resources or native American remains were found during these subsurface activities in or surrounding the property (i.e., area of potential effect).

Federal state and local historic listings were reviewed along with historic maps. In addition, this background research was supplemented by an internet search for relevant

historical information. The research revealed that the listings of the National Register of Historic Places, California Historical Landmarks, California State Historic Resources Inventory, California Points of Historical Interest, and Los Angeles County Landmarks include no properties within the Refinery. One historic site, P-186856, (that could include buildings, structures, objects, districts, and landscapes, the details of which are kept confidential to protect the resource) is recorded at the outer edge of the 0.5-mile radius and outside of the Refinery boundary. Because the proposed project activities will occur entirely within the existing Refinery boundaries, site P-186856 would not be directly or indirectly impacted by the proposed project. Based on the results of these records searches, the proposed project will not cause an adverse change in the significance of a resource listed in the California Register of Historical Resources or in a local register of historical resources.

As a result, based on historical activities at the site, the proposed project was determined to not cause a potential “substantial adverse change in the significance of any historical resource” which would require a further evaluation of cultural resources in the draft EIR. See also Response 1-1.

Response 1-3

An archaeological inventory survey was not required to be performed for the proposed project. See responses 1-1 and 1-2 for reasons why a survey was not required because a previous 2005 survey of records indicated that no prehistoric or historic resources are located in the Refinery property or within a .05 mile radius of the Refinery.

Response 1-4

As noted in Response 1-1, additional archaeological investigations are not required for the Chevron Products El Segundo Refinery, so it is not necessary to contact the Native American Heritage Commission.

Construction activities for the proposed projects at the Chevron Products El Segundo Refinery include standard procedures for accidentally encountering any archaeological, Native American or cultural resources on-site. Compliance with all local, state and federal regulations (and notifications) will occur in the event of an accidental discovery of any cultural or historic resources.

A mailing list of the Native American contacts provided by the commentator has been created by SCAQMD. Notice of availability of the Draft EIR for Chevron’s PRO project and all other projects where the SCAQMD is the lead agency under CEQA will be sent to the contacts provided by the commentator.

Response 1-5

As noted in Response 1-1, no previous excavation activities at the facility have discovered any cultural or archaeological resources. Further, as concluded on pages 2-14

through 2-17 of the NOP/IS for the Chevron Products El Segundo Refinery Product Reliability and Optimization Project, no impacts to cultural resources were determined to result from the proposed project. As a result, no further analysis of cultural resources is required.

Based on the historical use of the site and the numerous previous construction activities which included subsurface activities, the likelihood of encountering cultural resources is low.

Response 1-6

With regard to the potential for discovery of Native American remains, refer to Responses 1-1, 1-2 and 1-5.

As stated on pages 2-14 through 2-17, the NOP/IS study did not identify the presence or likely presence of Native American human remains. Therefore, agreements with Native Americans to assure appropriate treatment of Native American human remains are not required unless Native American human remains are discovered during site excavation. The Refinery will keep a record of Native American contacts if human remains are discovered and follow proper procedure. See also Responses 1-1, 1-2 and 1-5.

As noted in Responses 1-1 and 1-2, discovery of human remains relative to the proposed project is not anticipated. However, the Chevron Products El Segundo Refinery Product Reliability and Optimization Project construction activities will cease to prevent further disturbance if human remains are unearthed, until the County Coroner has made the necessary findings with respect to origin and disposition, as required by Public Resources Code 5097.98-99 and Health and Safety Code 7050.5.

CEQA Guidelines §15370(a) defines avoidance as: “Avoiding the impact altogether by not taking a certain action or parts of an action.” As stated on pages 2-14 through 2-17 of the NOP/IS, the presence or likely presence of Native American human remains was not identified as a potential significant impact. See also Responses 1-1 and 1-2. Therefore, it is not necessary to avoid potential impacts to cultural resources by not taking a certain action or parts of an action. However, in the event significant cultural resources in the form of Native American human remains are discovered, construction activities will cease and Chevron Products will comply with proper federal, state and local regulations as described in Response 1-5.

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711



*Flex your power!
Be energy efficient!*

August 22, 2007

Mr. Mike Krause
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Dear Mr. Krause:

Notice of Preparation of a Draft Environmental Impact Report for Chevron Products Company El Segundo Refinery Product Reliability and Optimization Project; SCH# 2007081057

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operational safety, noise, and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public-use and special-use airports and heliports.

2-1

The proposal is for the modification to and installation of new equipment at the El Segundo Refinery. The project site is located approximately 6,400 feet south of the Los Angeles International Airport.

Page 2-25 of the Notice of Preparation states that the height of the proposed new process equipment will not exceed the 200-foot height threshold that would require Federal Aviation Administration (FAA) notification, as specified in "14 CFR § 17.13(a)" of the Federal Aviation Regulation (FAR) Part 77. Actually submission of a Notice of Proposed Construction or Alteration (Form 7460-1) will be required by the FAA in accordance with FAR Part 77 Section 77.13 (a)(2)(i), which states that the FAA must be notified for any construction within 20,000 feet of a public-use or military airport which exceeds the FAR Part 77 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet in length. Form 7460-1 is available on-line at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> and should be submitted electronically to the FAA.

2-2

The protection of airports from incompatible land use encroachment is vital to California's economic future. Los Angeles International Airport is an economic asset that should be protected through effective airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports in California is both a local and a State issue, airport staff, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and working in the vicinity of an airport. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

2-3

Mr. Mike Krause
August 22, 2007
Page 2

These comments reflect the areas of concern to the Division with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our Caltrans District 7 Los Angeles office concerning surface transportation issues.

2-4

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,



SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, LAX, Los Angeles County Airport Land Use Commission

COMMENT LETTER NO. 2
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response 2-1

The SCAQMD notes that Caltrans has technical expertise in airport-related land use and planning issues.

Response 2-2

The SCAQMD notes that Chevron may be required to comply with applicable reporting requirements of the Federal Aviation Administration. Please note that the Chevron Refinery is not located within the flight path of LAX and that there are numerous existing Refinery structures in excess of 200 feet in height at the Refinery including furnace stacks (215'), coke drums (240'), the FCCU reactor (230'), and flares. The proposed new structures will be similar in size and character to the existing structures. If required, Chevron will comply with any and all FAA notification requirements.

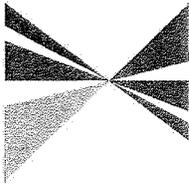
Response 2-3

The comments on land use compatibility are noted. The Refinery has been at the existing site since the 1920's and land use conflicts with LAX have not occurred. Also, please see pages 2-30 through 2-31 in the NOP/IS regarding land use compatibility. The land use at the Refinery and in the surrounding vicinity is consistent with the City of El Segundo General Plan land use designations. Also, please note that there are a number of existing multi-story buildings north of the Refinery between the Refinery and LAX. Also, see Response 2-2 regarding the height of existing Refinery structures.

Response 2-4

The SCAQMD appreciates your comments. Please see responses 2-1 through 2-3. Caltrans District 7 Los Angeles office was included on the list of Reviewing Agencies on the form sent to the State Clearinghouse.

SOUTHERN CALIFORNIA



ASSOCIATION OF GOVERNMENTS

Main Office

818 West Seventh Street
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Los Angeles, California
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Imperial County: Viktor Carrillo, Imperial County • Jon Edney, El Centro

Los Angeles County: Yvonne B. Burke, Los Angeles County • Zev Yaroslavsky, Los Angeles County • Richard Atarcon, Los Angeles • Jim Aldinger, Manhattan Beach • Harry Baldwin, San Gabriel • Tony Cardenas, Los Angeles • Stan Carroll, La Habra Heights • Margaret Clark, Rosemead • Gene Daniels, Paramount • Judy Dunlap, Inglewood • Rae Gabelich, Long Beach • David Gafin, Downey • Eric Garcetti, Los Angeles • Wendy Greuel, Los Angeles • Frank Gurulé, Culahy • Janice Halin, Los Angeles • Isadore Hall, Cuyington • Keith W. Harris, Azusa • Jose Huizar, Los Angeles • Jim Jeffra, Lancaster • Tom LaBonge, Los Angeles • Paula Lantz, Pomona • Barbara Messina, Alhambra • Larry Nelson, Artesia • Paul Nowatka, Torrance • Pam O'Connor, Santa Monica • Bernard Parks, Los Angeles • Jan Perry, Los Angeles • Ed Reyes, Los Angeles • Bill Rosenbluh, Los Angeles • Greg Smith, Los Angeles • Tom Sykas, Walnut • Mike Ten, South Pasadena • Tomia Reyes-Oranga, Long Beach • Antonio Villarigosa, Los Angeles • Dennis Washburn, Calabasas • Jack Weiss, Los Angeles • Herb J. Wesson, Jr., Los Angeles • Dennis Zipe, Los Angeles

Orange County: Chris Morby, Orange County • Christine Barcos, La Palma • John Beaumont, Brea • Lou Bone, Justin • Debbie Cook, Huntington Beach • Leslie Daigle, Newport Beach • Richard Dixon, Lake Forest • Troy Edgar, Los Alamitos • Paul Gleab, Laguna Niguel • Robert Hernandez, Anaheim • Sharon Quirk, Fullerton

Riverside County: Jeff Stone, Riverside County • Thomas Buckley, Lake Elsinore • Bonnie Fickinger, Moreno Valley • Ron Forreidge, Riverside • Greg Pettis, Cathedral City • Ann Roberts, Temecula

San Bernardino County: Gary Ovirt, San Bernardino County • Lawrence Dale, Barstow • Paul Eaton, Montclair • Lee Ann Garcia, Grand Terrace • Tim Jasper, town of Apple Valley • Larry McCallen, Highland • Deborah Robertson, Rialto • Alan Wagner, Ontario

Tribal Government Representative: Andrew Masiel Sr., Pecharanga Band of Luiseño Indians

Ventura County: Linda Parks, Ventura County • Glen Becker, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneeme

Orange County Transportation Authority: Art Brown, Buena Park

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Keith Millhouse, Moorpark

August 24, 2007

Mr. Michael Krause
SCAQMD
21865 Copley Drive
Diamond Bar, CA 91765-4182

RE: SCAG Clearinghouse No. I 20070500 Chevron Products Company El Segundo Refinery

Dear Mr. Krause:

Thank you for submitting the **Chevron Products Company El Segundo Refinery** 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 **Chevron Products Company El Segundo Refinery**, 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 **August 1-15, 2007 Intergovernmental Review Clearinghouse Report** for public review and comment.

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) 236-1856. Thank you.

Sincerely,

Sheryll Del Rosario
SHERYLL DEL ROSARIO
Associate Planner
Intergovernmental Review

Doc #139268

3-1

COMMENT LETTER NO. 3
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Response 3-1

SCAQMD would like to thank SCAG for their review and comments. The SCAQMD understands that SCAG does not consider the Chevron Products El Segundo Refinery Product Reliability and Optimization Project regionally significant per its intergovernmental review responsibilities and, therefore, has no comments.

RESPONSE TO COMMENTS

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, Governor

PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013



September 7, 2007

Mike Krause
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Dear Mr. Krause:

Re: SCH# 2007081057; Chevron Products Company El Segundo Refinery Product Reliability and Optimization Project

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings

4-1

The Commission's Rail Crossings Engineering Section (RCES) is in receipt of the *Notice of Completion & Environmental Document Transmittal-NOP* from the State Clearinghouse. RCES is concerned that the proposed development at El Segundo Boulevard and Sepulveda Boulevard (Lat 33.916343, Long -118.396128) may increase traffic volumes not only on streets and at intersections, but also at the Sepulveda Boulevard (DOT# 760615N) crossing. This includes considering pedestrian circulation patterns/destinations with respect to railroad.

4-2

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

4-3

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

4-4

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Dan Miller, UPRR

COMMENT LETTER NO. 4
CALIFORNIA PUBLIC UTILITIES COMMISSION

Response 4-1

The SCAQMD notes that the Public Utilities Commission has jurisdiction over the safety of highway-rail crossing in California. The proposed project does not include design, alteration or closer of highway-rail crossings.

Response 4-2

Please see the Chapter 4, Subsection 4.8 – Traffic and Circulation in the Draft EIR for a discussion of the traffic impacts associated with the proposed project. The proposed project impacts on traffic are limited to the construction phase when approximately 900 construction workers are expected during peak construction periods. However, once construction is complete, no increase in traffic from current conditions is expected. Therefore, the proposed project is not expected to result in significant traffic impacts that could impact railroad crossings following completion of the project construction phase.

Response 4-3

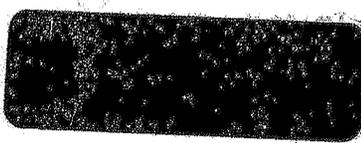
See Response 4-2 regarding traffic impacts.

Response 4-4

The SCAQMD will include the Public Utilities Commission in any notifications regarding the proposed project.

MAIL UNIT
LOS ANGELES POLICE DEPARTMENT
P. O. BOX 30158
LOS ANGELES, CA 90030

OR



8-10-07

54499

DEIR request

Dear SIR/MADAM

Please send me a copy of the ~~NAP~~ and the IS for the CHEVRON PRODUCERS EL SEGUNDO Project at either of the above PO Boxes. Due to its size, you may want to use my work PO Box (although the information is for my personal use).

5-1

I hope that I will receive copies of the ~~EIR~~ and future reports/documents on this project.

Please add me to the mailing list to receive reports on other major projects.

THANK YOU VERY MUCH.

Sincerely
Michael Pell

RECEIVED
AUG 14 2007
PUBLIC RECORDS UNIT

COMMENT LETTER NO. 5
MICHAEL PELL

Response 5-1

A copy of the NOP/IS has been sent per the request of the commentator. The SCAQMD will include the Mr. Pell in any further notifications regarding the proposed project.