SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Addendum to the Final Environmental Impact Report for the

Chevron – El Segundo Refinery California Air Resources Board (CARB) Phase 3 Clean Fuels Project

SCH. No. 2000081088

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1.0 INTRODUCTION

To comply with the California Air Resources Board (CARB) Phase 3 Reformulated Gasoline regulations, Chevron Products Company (Chevron) proposed modifications to its El Segundo Refinery and three distribution terminals. The proposed project was necessary to produce reformulated gasoline in accordance with Senate Bill 521 – The Methyl Tertiary Butyl Ether (MTBE) Public Health and Environmental Protection Act of 1997, and Executive Order D-5-99 to phase out the use of MTBE in gasoline. As part of the Executive Order, CARB adopted additional new reformulated gasoline specifications to maintain emission reductions obtained as part of the CARB Phase 2 reformulated gasoline regulations.

As lead agency, the South Coast Air Quality Management District (SCAQMD), prepared a Final Environmental Impact Report (FEIR), certified in November 2001, to evaluate the potential environmental impacts associated with the proposed modifications to the Chevron refinery and three gasoline distribution terminals (Montebello, Van Nuys and Huntington Beach). The primary objective of the proposed project in the 2001 FEIR was to install new equipment and modify existing equipment at the refinery and three distribution terminals to comply with the CARB Phase 3 regulations to remove MTBE from product gasoline and to produce and distribute product gasoline meeting reformulated gasoline specifications, which required the use of an oxygenate instead of MTBE. The only oxygenate approved for use in CARB Phase 3 reformulated gasoline is ethanol.

Subsequent to certifying the 2001 FEIR, Chevron proposed a change to the approved project in 2002. The SCAQMD reviewed the proposed modifications and determined that an Addendum was the appropriate document to be prepared in accordance with the California Environmental Quality Act (CEQA) because the project did not require any physical modifications that would affect any environmental areas. During construction of the proposed project analyzed in the 2001 FEIR, Chevron determined that one of the mitigation measure measures to reduce hazard impacts, mitigation measure (MM) H-2, applied only to reducing hazard impacts to the refinery. The mitigation measure was not applicable to the distribution terminals. The mitigation measure was modified to apply to the distribution terminals. The change was evaluated and did not require physical changes at the terminals. As a result, no emission increases or emission reductions were associated with this change to the 2001 FEIR. No other environmental areas were affected by modifying MM H-2. Since the modification to MM H-2 did not generate any significant new impacts or make existing significant impacts substantially worse, the 2002 Addendum was prepared and subsequently certified in April 2002.

The currently proposed project modifications involve changes to a portion of the CARB Phase 3 project evaluated in the 2001 FEIR. Chevron is proposing to modify that portion of the 2001 FEIR project associated with maintaining the gasoline production volume that was reduced when MTBE was replaced with ethanol. Replacing MTBE with ethanol results in a six to 10 percent reduction in total gasoline volume produced. Construction of the portion of the project to maintain gasoline production volume analyzed in the 2001 FEIR did not occur as scheduled (between October 2002 and September 2003) because during construction of the initial phases of the project it was discovered that further engineering to refine the effectiveness of maintaining gasoline production volume was necessary. Chevron is now proposing to eliminate a number of new pieces of equipment (e.g., Fluid Catalytic Cracking (FCC) Wet Gas Compressor, FCC Debutanizer, etc.) and instead make minor modifications to existing equipment and add one new distillation column. As a result, the scope of the portion of the project to maintain gasoline production volume would be substantially reduced. The details of the proposed changes are explained in Section 5.3 and Table

5-3 of this Addendum. The SCAQMD has evaluated the proposed changes to the Chevron El Segundo refinery (as detailed in Section 5.3 and Table 5-3) and determined that the currently proposed project modifications do not create any new significant adverse environmental impacts or make substantially worse any existing significant adverse environmental impacts and, as a result, only minor additions or changes would be necessary to make the previous 2001 Final EIR adequate for the project as revised. Therefore, when considering the effects of the previous modifications to the original project analyzed in the 2002 Addendum and the currently proposed project modifications, the SCAQMD has concluded that an Addendum is the appropriate document to be prepared in accordance with CEQA to evaluate potential environmental impacts associated with the currently proposed project modifications.

2.0 BASIS FOR DECISION TO PREPARE AN ADDENDUM

The SCAQMD was the lead agency responsible for preparing the 2001 FEIR and is the public agency that has the primary responsibility for approving the currently proposed project modifications. Therefore, the SCAQMD is the appropriate lead agency to evaluate the potential environmental effects of the currently proposed project modifications that are the subject of this Addendum.

Based on the environmental analysis of the currently proposed project modifications, the SCAQMD has concluded that the only environmental areas affected by the currently proposed project modifications are construction and operational air quality. Relative to construction, the 2001 FEIR analyzed four distinct construction portions (1) eliminating of ether blending; (2) reducing gasoline vapor pressure; (3) maintaining gasoline sulfur reduction; and (4) maintaining gasoline volume. The currently proposed project modifications only affect the construction portion to maintain gasoline production volume. Construction of all other portions of the CARB Phase 3 project has been completed. As a result, the currently proposed project modifications do not affect construction activities associated with any of the other three construction portions.

Construction activities evaluated in the 2001 Final EIR related to 1) eliminating ether blending; (2) reducing gasoline vapor pressure; and (3) maintaining gasoline sulfur reduction occurred simultaneously. Peak daily construction emissions in the 2001 FEIR occurred during construction of these three portions. Construction activities associated with maintaining gasoline production volume occurred after completion of most of the activities associated with these three other project portions. The construction analysis for the currently proposed project modifications includes the addition and deletion of equipment which was anticipated to be required for the effort to maintain gasoline production volume evaluated in the 2001 FEIR (see discussion in Section 5.0). Since the currently propose project modifications only affect construction activities associated with maintaining construction volume, construction emissions associated with this portion have been recalculated. Peak daily emissions associated with the currently proposed project modification were then compared to the peak daily emissions in the 2001 FEIR that occurred during construction of the other three project portions. The results indicate that peak construction activities associated with the currently proposed project modifications to maintain gasoline production volume are less than the peak daily construction activities associated with the three other project portions identified in the 2001 Final EIR. Based on this conclusion, no new significant adverse impacts are expected from the currently proposed project modifications and existing significant adverse impacts identified in the 2001 FEIR will not be substantially worse.

Relative to operational impacts, it was concluded in the 2001 Final EIR that VOC, NOx, SOx, and PM10 emissions exceeded the relevant significance thresholds and, therefore, were concluded to be

significant. Operational emissions from the currently proposed project modifications were recalculated and compared to the operational emission estimates in the 2001 Final EIR. It was concluded that because a number of new pieces of equipment were eliminated from the project, there would be a net reduction in anticipated operation emissions for CO, NOx and PM10. VOC and SOx emissions increased, but not substantially, that is, they did not increase in an amount that exceeded relevant operational significance thresholds.

During construction of the project in 2002, Chevron operators concluded that hazard impacts mitigation measure H-2 applied only to the Chevron El Segundo refinery. The project evaluated in the 2002 Addendum consisted of a modification to hazards impact mitigation measure H-2 so it would apply to mitigating potential hazard impacts at the refinery's distribution terminals as well as to the refinery. The project modifications associated with the 2002 Addendum to the 2001 FEIR did not include any physical changes to the environment and, therefore, was not expected to affect any environmental areas during construction or operation. As a result, in comparing the impacts identified in the 2001 Final EIR with the effects of both the project evaluated in the 2002 Addendum and the currently proposed project modifications, the results indicate that no new significant adverse impacts are expected, and that no existing impacts identified in the 2001 FEIR or the 2002 Addendum will be made worse (or are substantially greater).

Therefore, it can be concluded that the currently proposed project modifications do not create new significant adverse environmental effects or increase the severity of previously identified significant effects in the 2001 FEIR or 2002 Addendum. As a result, pursuant to CEQA Guidelines §15164(a) this document constitutes an Addendum to the 2001 FEIR for the Chevron El Segundo Refinery CARB Phase 3 Clean Fuels Project. Section 6.0 of this Addendum further explains the basis for the determination to prepare an addendum.

CEQA Guidelines §15164(a) allows a lead agency to prepare an Addendum to a FEIR if all of the following conditions are met.

- Substantial changes with respect to the circumstances under which the project is undertaken do not require major revisions to the previous FEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- No new information becomes available which shows new significant effects, significant effects substantially more severe than previously discussed, or additional or modified mitigation measures.
- Only minor technical changes or additions are necessary to make the FEIR under consideration adequate under CEQA.
- The changes to the FEIR made by the Addendum do not raise important new issues about the significant effects on the environment.

3.0 BACKGROUND CEQA DOCUMENTS

The activities associated with the Chevron – El Segundo Refinery CARB Phase 3 Clean Fuels Project were evaluated sequentially in the following CEQA documents. A summary of each of the CEQA documents prepared for this project is presented below.

Notice of Preparation/Initial Study (NOP/IS) of a Draft EIR for the proposed Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project, August 2000.

A NOP/IS was prepared for the Draft EIR for the Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project and released for a 30-day public review and comment period on August 18, 2000. The Initial Study (IS) included a project description and an environmental checklist, which contained a preliminary analysis of the potential environmental effects that may result from implementing the proposed project. The NOP/IS concluded that an EIR evaluating impacts to the following environmental topics was necessary: air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology/water quality, land use and planning, noise, public services, solid and hazardous waste and transportation/circulation. Topic areas that were found not to be potentially significant were: aesthetics, agricultural resources, energy, mineral resources, recreation and population/housing.

Draft EIR for the Proposed Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project, July 2001.

The Draft EIR for the Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project was released for a 45-day public review and comment period on July 25, 2001. The Draft EIR evaluated air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology/water quality, land use and planning, noise, public services, solid and hazardous waste and transportation/circulation, and determined that only air quality (construction emissions, operational emissions of NO_x, SO_x, VOC and PM10), hazards, noise (increased noise during rail spur operations at Montebello Terminal) and transportation/circulation (increased traffic during construction at the refinery) were significant and could not be mitigated to a level of insignificance.

Final EIR for the Proposed Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project, November 2001.

The Final EIR included applicable changes to the text of the Draft EIR and the responses to comments received during the public review and comment period. Five comment letters were received during the Draft EIR public review and comment period, and responses to these comments can be found in Exhibit 1 of the 2001 FEIR. Based on the findings of significance for air quality, hazards, noise and transportation/circulation, a Statement of Findings, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan were prepared. The FEIR was certified on November 30, 2001 (SCH 2000081088).

Addendum to FEIR for Proposed Chevron - El Segundo Refinery CARB Phase 3 Clean Fuels Project, April 2002.

Subsequent to the certification of the 2001 FEIR, Chevron found that while MM H-2 was feasible for the refinery, it was not applicable to the three distribution terminals (Montebello, Van Nuys and Huntington Beach). As a result, the proposed project in the 2002 Addendum focused on revising MM H-2. MM H-2 was developed and intended to reduce the risk of upset from a new pentane storage sphere at the refinery, a new ethanol storage tank at the Montebello distribution terminal, and the conversion of three tanks to ethanol at the Van Nuys and Huntington Beach terminals. The 2002 Addendum revised MM H-2 to retain the mitigation measure to reduce potential hazard risks at the refinery, and add applicable/feasible mitigation measures to reduce hazard risks associated with the new ethanol tank at the Montebello terminal, as well as the three tanks converted to ethanol service at the Van Nuys and Huntington Beach distribution terminals.

The revisions to Mitigation Measure H-2 made implementation of the mitigation measure feasible without comprising the level of risk reduction intended by the original measure. The revisions to Mitigation Measure H-2 do not result in any physical changes at the distribution terminals and, therefore, does not change the analysis of air quality impacts or the conclusions in the Final EIR. No emission increases or reductions or changes to any other environmental topics were identified for the proposed modified project analyzed in the addendum. Relative to other environmental areas, the proposed modification did not result in changes to the analysis of any of the other environmental areas and did not result in changes to any of the conclusions in the 2001 FEIR. The increase in risk associated with a catastrophic failure of the pentane and ethanol storage tanks related to the originally proposed project is considered significant even after the implementation of Mitigation Measure H-2 as written in the Final EIR and as revised in the 2002 Addendum. The 2002 Addendum was certified on April 12, 2002.

4.0 PROJECT LOCATION

The currently proposed project modifications apply to the Chevron El Segundo refinery. No modifications are expected to occur at the three distribution terminals, so a discussion of the location of these three facilities is not required or included. The refinery is located at 324 West El Segundo Boulevard in the City of El Segundo and bounded by El Segundo Boulevard to the north, Sepulveda Boulevard to the east, Rosecrans Avenue to the south and Vista Del Mar to the west.

5.0 PROJECT DESCRIPTION

Section 5.0 presents a description of the projects evaluated in the 2001 FEIR and the 2002 Addendum, as well as a description of the currently proposed project modifications. Although the currently proposed project modifications affect only one portion of the project evaluated in the 2001 FEIR, a full description of the project analyzed in the 2001 FEIR is provided to present a clear understanding of the previous proposed project with the currently proposed project.

This section presents the initial project evaluated in the 2001 FEIR, the project analyzed in the 2002 Addendum and the currently proposed project modification to show the chronology of activities which have occurred, or are expected to occur, to comply with the CARB Phase 3 reformulated gasoline regulations.

5.1 Project as Analyzed in 2001 FEIR

The 2001 FEIR evaluated modifications at the Chevron El Segundo Refinery and their three distribution terminals (Montebello, Van Nuys and Huntington Beach) in order to comply with CARB Phase 3 reformulated gasoline regulations to remove MTBE from product gasoline and distribute product gasoline complying with reformulated gasoline specifications which required the use of ethanol as an oxygenate instead of MTBE. Appendix A of this 2004 Addendum includes a copy of the Introduction and Executive Summary from the 2001 FEIR, which presents an overview of the project analyzed in the 2001 FEIR. Tables 5-1 and 5-2 provide an overview of the modifications and new equipment associated with the 2001 FEIR project. It is important to note, as shown in Table 5-1, the 2001 FEIR analyzed four distinct modification portions (1) eliminating ether blending; (2) reducing gasoline vapor pressure; (3) maintaining gasoline sulfur reduction; and (4) maintaining gasoline production volume. Further, the construction of portions (1) through (3) occurred simultaneously in one distinct phase. Portion (4), maintaining gasoline production volume, occurred as a separate distinct phase, starting after completion of the construction activities associated with the first three portions. The highlighted/shaded sections within Table 5-1 are the modifications and new equipment evaluated in the 2001 FEIR that did not occur as scheduled. These modifications did not occur because they were eliminated from the project and cancelled, or during construction it was determined that further engineering for that particular modification was necessary. All highlighted/shaded sections with Table 5-1 are related to modifications associated with maintaining gasoline production volume.

Table 5-1
Project as Analyzed in 2001 FEIR

Primary Driving Force	Equipment/Process	Nature of Change
Elimination of Ether Blending	TAME Plant – Reaction Section	Demolition
Gasoline Vapor Pressure Reduction	Alkylate Depentanizer – Distillation Column Pumps, Heat Exchangers, Air Cooler	Modifications New Equipment
	Isomax Light Gasoline Depentanizer – Effluent Cooler/Heat Exchanger Distillation Column and Trays; Air Cooler, Heat Exchangers, Vessels, Pumps	Modifications New Equipment
	FCC Light Gasoline Depentanizer – Distillation Column Pumps, Heat Exchangers	Modifications New Equipment
	Pentane Storage Sphere Export Railcar Load Rack Pumps, Sphere, Compressor, Loading Areas	New Equipment Modifications Modifications
	Cogeneration Trains A and B Pumps, Heat Exchanger, Vessel	New Equipment
	Additional Gasoline Storage Pumps, Heat Exchanger, Tank	New Equipment
	Alkylation Unit[a]	
	• Refinery Deisobutanizer Reactivation - Distillation Column Cooling Tower, Pumps, Vessel, Heat Exchangers	Modifications New Equipment
	• Alkylation Plant Modifications – Distillation Column Pumps, Contactors, Vessels	Modifications New Equipment

Table 5-1 (Continued)
Project as Analyzed in November 2001 FEIR

Primary Driving Force	Equipment/Process	Nature of Change
Maintain Gasoline Sulfur Reduction	FCC Light Gasoline Splitter – Air Cooler, Pumps, Vessel, Distillation Column And Trays	New Equipment
	Naphtha Hydrotreater #1 (NHT-1) – Furnace, Pumps, Tank, Air Cooler, Heat Exchanger	New Equipment
	Naphtha Hydrotreater #3 (NHT-3)	Change in Service
Maintain Gasoline Volume	Fluid Catalytic Cracking Unit Expansion • FCC Wet Gas Compressor (WGC) Interstage System – Pumps, Vessel, Heat Exchanger	New Equipment
	• FCC Deethanizer – Distillation Column Pumps, Vessel, Heat Exchangers	Modifications New Equipment
	• FCC Debutanizer – Pumps, Vessel, Distillation Column, Heat Exchangers	New Equipment
	• FCC Depropanizer – Pumps, Vessel, Distillation Column, Heat Exchangers	New Equipment
	• FCC C3 Treating – Pumps, Vessels, Distillation Column	New Equipment
	• FCC Main Air Blower Rotor Upgrade- Air Blower Rotor; Turbine Rotor Upgrades	New Equipment
	• FCC Stack Emissions Reduction – Flue Gas Fans, Pump, Vessel, Catalyst Beds Flue Gas Stack	New Equipment Modification
`	• FCC Relief/Vapor Recovery System – Heat Exchangers, Compressor, Pumps, Vessels	New Equipment
Note: The 2001 FEIR project description incorrectly included the proposed modifications and installation of new equipment associated with the alkylation unit as part of the gasoline vapor pressure reduction portion. The modifications and installation of new equipment associated with the alkylation unit are actually associated with the portion to maintain gasoline production volume.		
Source: 2001 FEIR, Table 2.6-1, pages 2-9 and 2-10.		

Construction and operation of the modifications at the distribution terminals as evaluated in the 2001 FEIR and outlined in Table 5-2 have been completed and will not be affected by the currently proposed project modifications.

Table 5-2
Distribution Terminal Changes Evaluated in 2001 FEIR

Terminal	Proposed Change and/or Addition
Montebello Terminal	Ethanol Storage • New 50,000-bbl storage tank. Ethanol Unloading (Truck) • Two new pumps and grounding systems and associated piping and hoses. • Two new concrete pads, each 12 feet by 70 feet, for containment and drainage. • New card reader and touch screen at unloading area. Ethanol Unloading (Rail) • New rail spur • Two new pumps and 12 new hoses manifolded for simultaneous unloading of 12 rail cars. • New piping from the unloading pumps to the new storage tank. Ethanol Blending (On Rack) • Two new pumps and associated filters and piping. • New meters and control valves to provide ratio blending at loading rack. Ethanol Blending (Off Rack) • Two new pumps and associated filters and piping.
Van Nuys Terminal	Ethanol Storage • Convert two existing gasoline storage tanks to ethanol service. Ethanol Unloading • Two new pumps and associated piping and hoses. • New card reader and touch screen at unloading area. Ethanol Blending (On Rack) • Two new pumps and associated filters and piping. • New controllers to provide ratio blending of gasoline at loading rack. • New turbine meters, control valves, and related equipment for ethanol blending at loading rack.
Huntington Beach Terminal	Ethanol Storage • Convert one existing diesel fuel aboveground storage tank to ethanol service. Ethanol Unloading • Two new pumps and associated piping and hoses. • New card reader and touch screen at unloading area. Ethanol Blending (On Rack) • Two new pumps and associated filters and piping. • New controllers to provide ratio blending of gasoline at loading rack. • New turbine meters, control valves, and related equipment for ethanol blending at loading rack. Ethanol Blending (Off Rack) • Two new pumps and associated filters and piping.
Source: 2001 FEIR, Table 2.6-2, pages 2-20 and 2-21.	

5.2 Project as Analyzed in 2002 Addendum

Subsequent to the certification of the 2001 FEIR and during the implementation of MM H-2, Chevron determined that, although MM H-2 could feasibly be implemented at the refinery, it was not applicable to the operation and maintenance activities at the three distribution terminals. MM H-2 was developed and intended to reduce the risk of upset from a new pentane storage sphere at the refinery, a new ethanol storage tank at the Montebello distribution terminal, and the conversion of three tanks to ethanol at the Van Nuys and Huntington Beach terminals. The 2002 Addendum revised MM H-2 to retain the mitigation measure to reduce potential hazard risks at the refinery, and add applicable mitigation measures to reduce hazard risks at the three distribution terminals.

The 2002 Addendum project did not include any physical changes to the environment, emissions increases, or emissions reductions because the modifications only affected how existing equipment would operate in an emergency. For example, manual shutdown does not require installation of new equipment, but are standard parts of any existing or new equipment. Further, fire deluge systems, e.g., water deluge or foam fire deluge systems, as appropriate, were already installed at the facilities. The project modifications associated with the 2002 Addendum to the 2001 FEIR did not include any physical changes to the environment and, therefore, was not expected to affect any environmental areas during construction or operation. The modifications evaluated in the 2002 Addendum are not related and do not have any effects on the currently proposed project because they only affected operations at the distribution terminals. The currently proposed project modifications do not affect in any way operations at the distribution terminals.

Mitigation measure H-2 in the 2001 FEIR included the following:

> *The following factors will help to reduce the risk of upset from the new pentane storage tank to be located at the refinery. They represent the application to new refinery equipment and processes of practices and procedures currently implemented at the Chevron facilities.*
>
> - *24-hour per day, seven day per week staffing;*
> - *fire detectors;*
> - *manual shutdown of liquid into or out of the pentane tank in case of fire, which will minimize the quantity of release; and*
> - *high-pressure fire deluge systems and protective coatings for the pentane storage tank and support structures to reduce the possibility of BLEVEs [boiling liquid expanding vapor explosions] caused by fires in the vicinity of these facilities.*

Mitigation measure H-2 was revised in the 2002 Addendum as follows:

> *The following equipment and processes, practices and procedures will be implemented at the Chevron facilities to reduce the risk of upset from the new pentane storage sphere to be located at the refinery and the ethanol storage tanks to be located at the Montebello, Van Nuys and Huntington Beach terminals:*
>
> *<u>Refinery</u>*
>
> - *24-hour per day, seven day per week staffing;*
> - *fire detectors;*
> - *manual shutdown of liquid into or out of the pentane tank in case of fire, which will minimize the quantity of release; and*
> - *high-pressure fire deluge systems and protective coatings for the pentane storage tank and support structures to reduce the possibility of boiling liquid expanding vapor explosions (BLEVEs) caused by fires in the vicinity of these facilities.*
>
> *<u>Terminals</u>*
>
> - *The terminals will be staffed with operators and maintenance personnel approximately 20 hours per day and intermittently by drivers during the other hours;*
> - *24-hour per day remote monitoring of tank levels and pipeline conditions;*
> - *manned tank switches during the transfer of ethanol into and out of the tanks;*
> - *fire detectors;*
> - *manual shutdown of liquid into or out of the ethanol tanks in case of fire, which will minimize the quantity of release; and*
> - *foam fire suppression systems at the Van Nuys and Montebello terminals.*

5.3 Currently proposed Project Modifications

The currently proposed project modifications involve changes to a portion of the CARB Phase 3 project evaluated in the 2001 FEIR. Chevron is proposing to modify that portion of the 2001 FEIR project associated with maintaining the gasoline production volume that was reduced when MTBE was replaced with ethanol. Replacing MTBE with ethanol results in a six to 10 percent reduction in total gasoline volume produced. Construction of this portion of the project analyzed in the 2001 FEIR did not occur as scheduled (between October 2002 and September 2003) because during construction of the initial phases of the project it was discovered that further engineering to refine the effectiveness of maintaining gasoline production volume was necessary. The SCAQMD has evaluated the proposed changes to the Chevron El Segundo refinery (as detailed in Table 5-3) and determined that the currently proposed project modifications do not create any new significant adverse environmental impacts or make substantially worse any existing significant adverse environmental impacts identified in the 2001 FEIR or 2002 Addendum.

The following currently proposed project modifications will not only meet the objectives to maintain gasoline production volume, but also reduce FCCU stack emissions more effectively than what was proposed in the 2001 FEIR. In addition, Table 5-3 outlines the changes from the 2001 FEIR to the currently proposed project.

Modification of internal FCCU catalyst regenerator:

Chevron determined that modifying the internal FCCU regenerator to improve combustion of the coke on the catalyst would lower the amount of coke on the regenerated catalyst and increase FCCU throughput; reduce CO emissions in the regenerator flue gas and allow compliance with the new MACT 2 requirements without the use of an add-on catalyst system; and reduce NO_x emissions by eliminating the "hot spots" in the regenerator.

Permanently remove the number 39 CO Boiler from service.

When the FCCU was originally built, the number 39 CO Boiler was needed to burn excess CO created during the catalyst regeneration process. Since that time, regenerator designs have changed significantly, and the amount of CO in the regenerator flue gas has reduced substantially. Therefore, the number 39 CO Boiler is no longer necessary as part of the air pollution control system.

Modify heat exchangers and pumps within the FCCU:

Chevron determined that the existing distillation columns at the FCCU have adequate capacity to handle the increased feed rate to the plant, so replacement of the deethanizer, debutanizer, depropanizer and C3 treating units to increase capacity is no longer necessary, only the minor modification of the heat exchangers and pumps within the FCCU would be required.

Build a new deisobutanizer column:

Chevron determined that constructing a new distillation column to separate the isobutane and normal butane upstream of the alkylation plant would be more efficient than reactivating an existing deisobutanizer and adding two new contactors in the alkylation plant along with a new settling vessel. A new deisobutanizer column would reduce the total butane feed rate to the alkylation plant and increase the production capacity of the plant without adding new equipment in the alkylation plant.

It is important to note that the currently proposed project modifications will not require an increase in the volume of crude throughput from the current volume.

Table 5-3
Comparison of Currently Proposed Project Modifications to Maintain Gasoline Production Volume with the 2001 FEIR Project

Equipment/Process	Proposed Project in 2001 FEIR	Currently Proposed Project
Alkylation Unit[a]		
• Refinery Deisobutanizer Reactivation Distillation Column Cooling Tower, Pumps, Vessel, Heat Exchangers	Modifications New Equipment	New Distillation Column New Pumps, Vessels, Heat Exchangers Eliminated
• Alkylation Plant Modifications – Distillation Column Pumps, Contactors, Vessels	Modifications New Equipment	Eliminated
Fluid Catalytic Cracking Unit Expansion		
• FCC Wet Gas Compressor (WGC) Interstage System – Pumps, Vessel, Heat Exchanger	New Equipment	Eliminated
• FCC Deethanizer – Distillation Column Pumps, Vessel, Heat Exchangers	Modifications New Equipment	Minor Modifications Eliminated, Existing Equipment Modifications
• FCC Debutanizer – Pumps, Vessel, Distillation Column, Heat Exchangers	New Equipment	Eliminated, Existing Equipment Modifications
• FCC Depropanizer – Pumps, Vessel, Distillation Column, Heat Exchangers	New Equipment	Eliminated, Existing Equipment Modifications
• FCC C3 Treating – Pumps, Vessels, Distillation Column	New Equipment	Eliminated
• FCC Main Air Blower Rotor Upgrade- Air Blower Rotor; Turbine Rotor Upgrades	New Equipment	Eliminated
• FCC Stack Emissions Reduction – Flue Gas Fans, Pump, Vessel, Catalyst Beds Flue Gas Stack	New Equipment Modification	Modify FCCU Catalyst Regenerator Internals
• FCC Relief/Vapor Recovery System – Heat Exchangers, Compressor, Pumps, Vessels	New Equipment	Eliminated

[a] Note: The 2001 FEIR project description incorrectly included the proposed modifications and installation of new equipment associated with the alkylation unit as part of the gasoline vapor pressure reduction portion. The modifications and installation of new equipment associated with the alkylation unit are actually associated with the portion to maintain gasoline production volume. Modification of MM H-2 evaluated in the 2002 Addendum did not involve modifications to any of the pieces of equipment identified in this table

Source: 2001 FEIR, Table 2.6-1, pages 2-9 and 2-10.

6.0 IMPACT ANALYSIS

Section 6.0 presents a description of the impact analysis in the 2001 FEIR and the 2002 Addendum, as well as the impact analysis associated with the currently proposed project modifications. Although the currently proposed project modifications affect only one portion of the project evaluated in the 2001 FEIR, a full description of the impacts analyzed in the 2001 FEIR is provided to present a clear understanding of the previous proposed project with the currently proposed project.

This section presents the initial project evaluated in the 2001 FEIR, the project analyzed in the 2002 Addendum and the currently proposed project modification to show the chronology of the impact analysis, and to show the comparison of the currently proposed project modifications with the 2001 FEIR project and the 2002 Addendum project. The 2001 FEIR and 2002 Addendum, as well as the currently proposed project modifications comply with the CARB Phase 3 reformulated gasoline requirements.

6.1 Summary of Impacts in 2001 FEIR

The NOP/IS for the 2001 FEIR project evaluated all 17 of the environmental topics in accordance with CEQA and determined that six of the 17 environmental topics would not be significantly adversely affected by the proposed project (aesthetics, agricultural resources, energy, mineral resources, population/housing and recreation). No comments were received that disagreed with this conclusion. Eleven of the 17 environmental topics required further evaluation in an EIR. The 2001 FEIR concluded that the following seven of the 11 environmental topics evaluated in the EIR would not be significantly adversely affected by the proposed project or could be mitigated to a level of insignificance: biological resources, cultural resources, geology and soils, hydrology/water quality, land use, public services, and solid and hazardous waste. Section 7.0 of this Addendum discusses the affects of the currently proposed project modifications on the environmental topics not found to be significant and the environmental topics mitigated to a level of insignificance as concluded in the 2001 FEIR. The analysis shows that these environmental areas would not be substantially affected by the currently proposed project modification. Therefore, the conclusions for these environmental topic areas from the 2001 FEIR do not change as a result of implementing the currently proposed project modifications.

The following four environmental topic areas were concluded to be significantly adversely affected by the proposed project analyzed in the 2001 FEIR, even after mitigation: (1) air quality (construction emissions and operational emissions of NOx, SOx, VOC and PM10) [Appendix B is a copy of the impact section from the 2001 FEIR which evaluates air quality impacts and recommends mitigation measures.]; (2) hazards (risk of catastrophic failure of new units, storage tanks and pipelines); (3) noise (related to rail car operations at the Montebello terminal); and (4) transportation/traffic (construction-related traffic).

6.2 Summary of Impacts in 2002 Addendum

Subsequent to the certification of the 2001 FEIR and during the implementation of MM H-2, Chevron determined that, although MM H-2 could feasibly be implemented at the refinery, it was not applicable to the operation and maintenance activities at the three distribution terminals. MM H-2 was developed and intended to reduce the risk of upset from a new pentane storage sphere at the refinery, a new ethanol storage tank at the Montebello distribution terminal, and the conversion of three tanks to ethanol at the Van Nuys and Huntington Beach terminals. The 2002 Addendum

revised MM H-2 to retain the mitigation measure to reduce potential hazard risks at the refinery, and add applicable mitigation measures to reduce hazard risks at the three distribution terminals.

The 2002 Addendum project did not include any physical changes to the environment, emissions increases, or emissions reductions. The project analyzed in the 2002 Addendum was administrative in nature to ensure the implementation of a mitigation measure to reduce potential hazard risks at both the refinery and three distribution terminals. As a result there were no new significant adverse environmental impacts, nor did the 2002 Addendum make any existing environmental impacts substantially worse.

6.3 Analysis of Impacts from the Currently proposed Project Modifications

This Addendum evaluated all 17 of the environmental topic areas as required by CEQA, and concluded that four environmental topic areas were potentially significant: air quality, hazards, noise and transportation/circulation. This section will present the results of the evaluation of the potential impacts associated with the currently proposed project modifications.

Section 7.3 presents the analysis of the 13 environmental topic areas which were evaluated in this Addendum (based on the currently proposed project modifications) and found not to be potentially significant.

6.3.1 Air Quality

Both construction and operational air quality impacts are typically analyzed for each project. The construction phase may be further divided into specific sub-phases, such as: demolition (if applicable); site preparation (grubbing and grading); and construction (construction of the structures, laying asphalt, painting, etc.).

Air quality impacts that equal or exceed the significance thresholds identified in Table 6-1 are considered to be significant adverse air quality impacts. The air quality significance thresholds in Table 6-1 are the same thresholds of significance used in the 2001 FEIR.

Table 6-1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction**	**Operational**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Mass Daily Thresholds		
Pollutant	**Construction**	**Operational**
Toxic Air Contaminants and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	

Table 6-1 (Continued)
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds	
Ambient Air Quality for Criteria Pollutants	
NO2 1-hour average annual average	 20 μg/m^3 or 1.0 parts per hundred million 1 μg/m^3 or 0.05 parts per hundred million
PM10 24-hour average annual geometric average	 2.5 μg/m^3 1.0 μg/m^3
Sulfate 24-hour average	 1 μg/m^3
CO 1-hour average 8-hour average	 1.1 mg/m^3 or 1.0 parts per million 0.50 mg/m^3 or 0.45 parts per million
μg/m^3 = microgram per cubic meter; mg/m^3 = milligram per cubic meter; ≥ greater than or equal to	

Construction Emissions

Construction activities were evaluated in the 2001 FEIR based on four distinct project portions (1) eliminating ether blending; (2) reducing gasoline vapor pressure; (3) maintaining gasoline sulfur reduction; and (4) maintaining gasoline volume. Construction of these four portions occurred between January 1, 2002 and September 30, 2003. Further, the construction of portions (1) through (3) occurred simultaneously in one distinct phase. Portion (4), maintaining gasoline production volume, occurred as a separate distinct phase, starting after completion of most of the construction activities associated with the first three portions. The peak daily construction emissions were projected to occur during construction of portions (1) through (3) between May and July 2002. Construction of these three portions has been completed.

The construction activities related to the currently proposed project modifications are only associated with maintaining gasoline production volume. Construction activities associated with maintaining gasoline production were expected to occur between October 2002 and September 2003, after completion of most of the portions (1) through (3) when peak daily construction emissions occurred (May through July 2002). Based on the construction schedule of the project portions, construction activities associated with maintaining gasoline production volume did not contribute to peak day construction emissions. Since the currently propose project modifications only affect construction activities associated with maintaining construction volume, construction emissions associated with this portion have been recalculated. Once calculated, peak daily emissions associated with the currently proposed project modification will be compared to the peak daily emissions in the 2001 FEIR that occurred during construction of the other three project portions.

As analyzed in the 2001 FEIR, Refinery construction activities at their peak were expected to require a maximum of 340 workers, working five days a week, from 6:30 a.m. to 5:00 p.m. (see Appendix B for the air quality impact analysis from the 2001 FEIR, which outlines the methodology and assumptions used to derive the conclusions in the FEIR). The complete construction schedule for the 2001 FEIR activities can be found in Appendix C, Table 2. Table 6-2 shows the peak daily construction emissions (mitigated) as presented in the 2001 FEIR. The peak daily construction emissions occurred between May and July 2002.

Table 6-2
Peak Daily Construction Emissions in 2001 FEIR

Activity/Location	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
Refinery construction common activities	381.7	95.8	549.7	51.0	209.3
Refinery construction motor vehicles	475.6	70.3	185.6	0.0	246.6
Alkylate dependanizer construction	38.5	9.6	77.6	7.4	4.8
Isomax dependanizer construction	31.9	7.6	62.5	6.1	3.8
Pentane storage sphere construction	119.4	21.4	190.6	20.8	10.7
Pentane railcar loading facility construction	73.2	14.8	127.1	13.2	7.4
NHT-1 construction	32.7	8.3	67.0	6.4	4.2
Additional gasoline storage construction	231.6	45.0	390.1	41.3	22.5
FCC stack emissions reduction construction	0.0	0.0	0.0	0.0	0.0
Alkylation plant modifications construction	0.0	0.0	0.0	0.0	0.0
Huntington Beach terminal construction	96.1	50.5	80.9	5.4	35.0
Montebello terminal construction	127.5	55.1	99.1	7.1	36.6
Van Nuys terminal construction	96.1	50.5	80.9	5.4	35.0
Totals	**1,704.4**	**429.0**	**1,911.2**	**164.1**	**615.9**
CEQA Significance Threshold	**550**	**75**	**100**	**150**	**150**
Significant? (Yes/No)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Note: Sums of individual values may not equal totals because of rounding					

Peak refinery construction activities associated with the currently proposed project modifications are expected to occur between late 2004 and June 2005. A maximum of 396 workers would be required, working seven days a week, two ten-hour shifts (198 workers per shift) over a three week period in early 2005, when the FCCU is scheduled to be shut down for maintenance. The pre-shutdown construction period is anticipated to occur in late 2004 requiring an average of 68 construction workers, working one ten-hour shift per day, five days per week. The post-shutdown construction period is anticipated to occur in early 2005 requiring an average of 40 construction workers, working one ten-hour shift per day, five days per week. Once the FCCU shutdown is complete, construction of the new deisobutanizer would occur and require an average of 75 workers per day, assuming one ten-hour shift per day, five days per week.

Table 6-3 shows the maximum daily construction emissions (mitigated) associated with maintaining gasoline volume production as presented in the 2001 FEIR. These construction emissions were expected to occur between October 2002 and September 2003. Comparing Table 6-2 with Table 6-3 illustrates that the peak daily construction emissions in the 2001 FEIR exceed the peak daily construction emissions to maintain gasoline volume.

Table 6-3
Peak Daily Construction Emissions Associated with the Currently Proposed Project Modifications to Maintain Gasoline Production Volume from the 2001 FEIR

Activity	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
Construction to Maintain Gasoline Production Volume					
FCC Stack Emissions Reduction Construction	33.8	8.2	67.2	6.5	4.1
Alkylation Plant Modifications Construction	14.5	2.8	24.5	2.6	1.4
Refinery Construction Common Activities	381.7	95.8	549.7	51.0	209.3
Refinery Construction Motor Vehicles	475.6	70.3	185.6	0.0	246.6
Alkylate Depentanizer Construction	38.5	9.6	77.6	7.4	4.8
Isomax Depentanizer Construction	31.9	7.6	62.5	6.1	3.8
Pentane Storage Sphere Construction	119.4	21.4	190.6	20.8	10.7
Pentane Railcar Loading Facility Construction	73.2	14.8	127.1	13.2	7.4
Van Nuys Terminal Construction	96.1	50.5	80.9	5.4	35.0
Total	**1,216.5**	**270.2**	**1,274.1**	**103.9**	**517.6**
Total Maximum Daily Emissions	**1,264.8**	**281.2**	**1,365.8**	**113.0**	**523.2**
Note: Sums of individual values may not equal totals because of rounding					

It is important to note that "other concurrent emissions" from the construction activities associated with the three project portions that overlap with maintaining gasoline production volume, e.g., Van Nuys Terminal construction, pentane railcar loading facility construction, pentane storage sphere construction, etc., did occur as scheduled between October 2002 and September 2003 and, therefore, are complete. However, rather than simply calculating emissions only associated with maintaining gasoline production volume and comparing that result with the peak maximum daily emissions from the 2001 Final EIR (Table 6-2), the SCAQMD took a more conservative approach. The SCAQMD calculated construction emissions for the currently proposed project modifications to maintain gasoline production volume (i.e., construction of the FCCU and alkylation equipment) and added these emissions to the other concurrent emissions activities, that is, construction activities that were shown in the 2001 Final EIR to overlap with construction activities to maintain gasoline production volume even though these construction activities have already occurred and are completed. This approach is a more conservative approach and provides an "apples to apples" comparison.

Table 6-4 shows the *revised* maximum daily construction emissions (mitigated) related to the currently proposed project modifications associated with maintaining gasoline volume production (i.e., construction of the FCCU and alkylation equipment) and emissions from other concurrent activities even though these construction activities have been completed. Construction emission calculations, assumptions, emission factors, etc., used to calculate construction emissions from the currently proposed project modifications can be found in Appendix C.

Table 6-4
Revised Maximum Daily Construction Emissions Associated with the Currently Proposed Project Modifications to Maintain Gasoline Volume Production

Activity	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
Revised Construction Activities to Maintain Gasoline Production					
Modifications to the FCCU and alkylation plant	474.0	71.5	428.7	42.3	37.9
Refinery Construction Common Activities	381.7	95.8	549.7	51.0	209.3
Refinery Construction Motor Vehicles	475.6	70.3	185.6	0.0	246.6
Alkylate Depentanizer Construction	38.5	9.6	77.6	7.4	4.8
Isomax Depentanizer Construction	31.9	7.6	62.5	6.1	3.8
Pentane Storage Sphere Construction	119.4	21.4	190.6	20.8	10.7
Pentane Railcar Loading Facility Construction	73.2	14.8	127.1	13.2	7.4
Van Nuys Terminal Construction	96.1	50.5	80.9	5.4	35.0
Total Other Construction Activities	**1,216.5**	**270.2**	**1,274.1**	**103.9**	**517.6**
Total	**1,690.5**	**341.6**	**1,702.8**	**146.2**	**555.6**
Note: Sums of individual values may not equal totals because of rounding					

Table 6-5 presents a comparison of the peak daily construction emissions (mitigated) from the 2001 FEIR and the revised maximum (peak) daily construction emissions associated with the currently proposed project modifications (mitigated) to maintain gasoline production volume. Actual emissions from the currently proposed project modifications are expected to be even less due to the fact that the other concurrent construction activities have already occurred and will not be part of the currently proposed project modifications. As previously noted, the project analyzed in the 2002 Addendum to the 2001 Final EIR did not require physical medications requiring construction activities of any type. As a result, Table 6-5 shows no construction emissions for the 2002 Addendum project. Since Table 6-5 demonstrates that construction emissions from the currently proposed project modification and the 2002 Addendum remain less than the peak daily construction emissions in the 2001 FEIR, the currently proposed project modifications do not create new significant adverse construction-related air quality impacts, or make previously identified significant construction-related air quality impacts substantially worse. This analysis of construction-related air quality impacts associated with the currently proposed project modifications contributes to the conclusion that an addendum is the appropriate CEQA document for the currently proposed project modifications.

Table 6-5
Comparison of 2001 FEIR Peak Daily Construction Emissions with the Currently Proposed Project Modifications to Maintain Gasoline Production Volume Peak Daily Construction Emissions and Construction Emissions from the 2002 Addendum Project

Activity	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
2001 FEIR Peak Daily Construction Emissions	1,704.4	429.0	1,911.2	164.1	615.9
Construction Emissions from 2002 Addendum Project	0	0	0	0	0
Currently proposed Project Modifications Peak Daily Construction Emissions	1,216.5	270.2	1,274.1	103.9	517.6
2002 and 2004 Addenda Total	1,216.5	270.2	1,274.1	103.9	517.6
Do the currently proposed project and 2002 Addendum emissions exceed the 2001 FEIR Peak Daily Construction Emissions?	**No**	**No**	**No**	**No**	**No**

Operational Emissions

Operational emissions associated with the 2001 FEIR are the difference between the emissions at the refinery and three distribution terminals (baseline), and the emissions after the portions of the CARB Phase 3 project evaluated in the 2001 FEIR are constructed. Table 6-6 presents the peak daily operational emissions from the 2001 FEIR.

As shown in Table 6-6, the primary operational emissions from the 2001 FEIR project were attributed to indirect sources (e.g. marine tanker deliveries to the Port of Los Angeles, and tanker truck deliveries of ethanol to the three distribution terminals). No feasible mitigation measures were identified to reduce emissions from these sources to a level of insignificance. As a result, operational emissions in the 2001 FEIR exceeded the significance thresholds for VOC, NO_x, SO_x and PM10.

The currently proposed project modifications to maintain gasoline volume production consist of fugitive VOC emissions from valves, pumps and flanges, and combustion emissions from the FCCU stack. The numbers and types of valves, pumps and flanges to be modified to maintain gasoline production volume is different in the currently proposed project than was anticipated in the 2001 FEIR project. Additionally, modifying the FCCU regenerator and removing the number 39 CO boiler from service as part of the currently proposed project modifications, instead of installing a CO catalyst and an SCR system as evaluated in the 2001 FEIR, reduces CO and PM10 emissions from the FCCU.

Table 6-6
Peak Daily Operational Emissions from the 2001 FEIR

Source	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
DIRECT EMISSIONS					
El Segundo Refinery					
Fugitive VOC from process components	0.0	-46.7	0.0	0.0	0.0
Modified equipment (FCC)	0.0	0.0	0.0	153.4	268.8
Modified equipment (NHT 1)	12.2	6.6	-29.4	7.3	13.7
Cogen Trains A and B	0.0	0.0	0.0	0.0	0.0
New tank 1016	0.0	34.3	0.0	0.0	0.0
Sulfur recovery plant	0.0	0.0	0.0	0.2	0.0
Total	**12.2**	**-5.9**	**-29.4**	**160.9**	**282.5**
Huntington Beach Terminal					
Fugitive VOC from process components	0.0	32.3	0.0	0.0	0.0
Converted ethanol storage tank	0.0	-0.1	0.0	0.0	0.0
Total	**0.0**	**32.2**	**0.0**	**0.0**	**0.0**
Montebello Terminal					
Fugitive VOC from process components	0.0	40.2	0.0	0.0	0.0
New ethanol storage tank	0.0	5.0	0.0	0.0	0.0
Total	**0.0**	**45.2**	**0.0**	**0.0**	**0.0**
Van Nuys Terminal					
Fugitive VOC from process components	0.0	46.7	0.0	0.0	0.0
Converted ethanol storage tanks	0.0	-9.1	0.0	0.0	0.0
Total	**0.0**	**37.6**	**0.0**	**0.0**	**0.0**
Port of Los Angeles					
Ethanol tanker truck loading	0.0	31.7	0.0	0.0	0.0
Total Direct Emissions	**12.2**	**140.7**	**-29.4**[a]	**160.9**[a]	**282.5**
INDIRECT EMISSIONS					
Refinery switch engine (railcars)	2.2	1.2	21.3	0.2	0.5
Montebello locomotive (rail deliveries)	2.3	1.2	21.5	0.2	0.5
Ethanol tanker truck deliveries to distribution terminals	21.5	5.2	95.0	0.0	71.4
Ethanol marine tanker deliveries to POLA	355.4	199.3	3,000.7	2,336.2	488.4
Total Indirect Emissions	**381.4**	**207.0**	**3,138.4**	**2,336.6**	**560.8**
Total Direct and Indirect Emissions	**393.6**	**347.8**	**3,138.4**	**2,336.6**	**843.3**
CEQA Significance Thresholds	**550**	**55**	**55**	**150**	**150**
Significant?	**NO**	**YES**	**YES**	**YES**	**YES**

Table 6-7 summarizes the peak daily operational emissions associated with the currently proposed project modifications. Peak daily operational emissions of all pollutants except VOC, are lower than the peak daily operational emissions in the 2001 FEIR. Although the VOC operational emissions are higher based on the currently proposed project modifications, the increase is less than the SCAQMD significance threshold of 55 pounds a day, and therefore, remains insignificant. Thus, operational peak daily emissions from the currently proposed project modifications will not cause new significant adverse operational-related air quality impacts nor would they substantially increase the severity of the significant operational-related air quality impacts identified in the 2001 FEIR. Appendix D provides the supporting calculations for the operational emissions associated with the currently proposed project.

Table 6-7
Peak Daily Operational Emissions Associated with the Currently Proposed Project Modifications to Maintain Gasoline Production Volume

Source	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
DIRECT EMISSIONS					
El Segundo Refinery					
Fugitive VOC from process components	0.0	1.3	0.0	0.0	0.0
Modified equipment (FCC)	-4,857.6	0.0	0.0	0.0	20.8
Modified equipment (NHT 1)	12.2	6.6	-29.4	7.3	13.7
Cogen Trains A and B	0.0	0.0	0.0	0.0	0.0
New tank 1016	0.0	34.3	0.0	0.0	0.0
Sulfur recovery plant	0.0	0.0	0.0	0.2	0.0
Total	**-4,845.3**	**42.1**	**-29.4**	**7.5**	**34.5**
Huntington Beach Terminal					
Fugitive VOC from process components	0.0	32.3	0.0	0.0	0.0
Converted ethanol storage tank	0.0	-0.1	0.0	0.0	0.0
Total	**0.0**	**32.2**	**0.0**	**0.0**	**0.0**
Montebello Terminal					
Fugitive VOC from process components	0.0	40.2	0.0	0.0	0.0
New ethanol storage tank	0.0	5.0	0.0	0.0	0.0
Total	**0.0**	**45.2**	**0.0**	**0.0**	**0.0**
Van Nuys Terminal					
Fugitive VOC from process components	0.0	46.7	0.0	0.0	0.0
Converted ethanol storage tanks	0.0	-9.1	0.0	0.0	0.0
Total	**0.0**	**37.6**	**0.0**	**0.0**	**0.0**
Port of Los Angeles					
Ethanol tanker truck loading	0.0	31.7	0.0	0.0	0.0
Total Direct Emissions	**-4,845.3**	**188.7**	**-29.4**	**7.5**	**34.5**
INDIRECT EMISSIONS					
Refinery switch engine (railcars)	2.2	1.2	21.3	0.2	0.5
Montebello locomotive (rail deliveries)	2.3	1.2	21.5	0.2	0.5
Ethanol tanker truck deliveries to distribution terminals	21.5	5.2	95.0	0.0	71.4
Ethanol marine tanker deliveries to POLA	355.4	199.3	3,000.7	2,336.2	488.4
Total Indirect Emissions	**381.4**	**207.0**	**3,138.4**	**2,336.6**	**560.8**
Total Direct and Indirect Emissions	**-4,463.9**	**395.8**	**3,109.1**	**2,344.1**	**595.3**

Table 6-8 presents a comparison of the peak daily operational emissions from the 2001 FEIR and the revised maximum (peak) daily operational emissions associated with the currently proposed project modifications. Table 6-8 also shows that the project evaluated in the 2002 Addendum did not generate operational equipment because this project did not require physical changes to new or existing equipment or require other onsite modifications. Since Table 6-8 demonstrates that operational emissions from the currently proposed project modification and the 2002 Addendum project are note substantially greater than the peak daily operational emissions in the 2001 FEIR. The operational emissions from the currently proposed project modifications do not create new significant adverse operational-related air quality impacts, or make previously identified significant operational-related air quality impacts substantially worse. This analysis of operational-related air quality impacts associated with the currently proposed project modifications contributes to the conclusion that an addendum is the appropriate CEQA document for the currently proposed project modifications.

Table 6-8
Comparison of 2001 FEIR Peak Daily Operational Emissions with the Currently Proposed Project Modifications to Maintain Gasoline Production Volume Peak Daily Operational Emissions

CEQA Document	CO (lbs/day)	VOC (lbs/day)	NO_x (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)
2001 FEIR peak daily operational emissions	393.6	347.8	3,138.4	2,336.6	843.3
Emissions from 2002 Addendum Project	0	0	0	0	0
Currently proposed project modifications peak daily operational emissions	-4,463.9	395.8	3,109.1	2,344.1	595.3
Total Change in operational emissions	**-4,067.30**	**48**	**-29.3**	**7.5**	**-248**
Does modified project substantially increase operational emissions?	**No**	**No**	**No**	**No**	**No**

***Negative numbers represent emission reductions**

Health Risks

Fugitive toxic air contaminant (TAC) emissions from process components depend on the types and concentrations of TACs contained in the process streams that pass through the components. The process streams involved in the currently proposed project modifications will be different from those anticipated in the 2001 FEIR, because different process units will be modified. As a result, fugitive TAC emissions will also be different. Further, Chevron recently developed revised estimates of TAC emissions from the FCCU stack.

The estimates of TAC emissions associated with the currently proposed project modifications are detailed in Appendix E. These emission rates were used to evaluate potential health risks from the currently proposed project modifications in a health risk assessment (HRA), following the same procedures used for the 2001 FEIR. The results of the HRA are shown in Table 6-9. The 2001 FEIR concluded that project-related TAC emissions would not cause significant health risks. The currently proposed project modifications also concluded that project-related TAC emissions would not cause significant new health risks, or make any existing health risks worse. Since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect HRA results.

Table 6-9
Toxic Air Contaminant Risk Associated with the Currently Proposed Project Modifications to Maintain Gasoline Production Volume

Health Impact	Risk	Significance Threshold
Maximum Incremental Cancer Risk	0.045 in 1 million	10 in 1 million
Project Increment Chronic Hazard Index (both Chronic and Acute)	0.001	1.0

Ambient Air Quality Impacts

The 2001 FEIR concluded that direct operational emissions from PM10 exceeded the significance threshold of 150 lbs/day. As a result, the 2001 FEIR included air quality dispersion modeling to evaluate any potential impacts associated with the operational PM10 emissions on ambient air quality. The results of the air quality dispersion modeling concluded that there would be no significant impacts to PM10 ambient air quality. The direct operational emissions of CO and NOx

did not exceed the significance threshold and thus, no air quality dispersion modeling was performed for these contaminants.

For the currently proposed project modifications, none of the direct operational emissions of PM10, CO or NOx exceeded the significance threshold, or exceeded the amount presented in the 2001 FEIR. Since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect PM10 emissions results. As a result, no air quality dispersion modeling was required or performed for the currently proposed project modifications.

6.3.2 Hazards

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

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

These are the same hazards significance criteria used in the 2001 FEIR.

The 2001 FEIR project included an evaluation of potential hazards and risk of upset scenarios, and the potential adverse affects on the community and environment if an upset were to occur. Although the 2001 FEIR evaluated several scenarios based on "worst-case" conditions, and included feasible mitigation measures, the 2001 FEIR concluded that the increased risks associated with the new storage tanks, other new and modified units, and truck and rail car deliveries, remained significant.

The currently proposed project modifications to maintain gasoline production volume will not increase the risk beyond that outlined in the 2001 FEIR, or cause new hazards. The quantity of hazardous materials at the refinery will remain the same, and the manner in which hazardous materials are handled, stored and transported will remain the same. The currently proposed project modifications will not increase hazards at the refinery or make existing hazards worse. Since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect hazard analysis results.

As a result, although the currently proposed project modifications do not create new hazards, or cause existing hazards to be made worse, the hazard risk at the refinery remains significant, the same as concluded in the 2001 FEIR (even after mitigation).

6.3.3 Noise

Noise is usually defined as sound that is undesirable because it interferes with speech communication and hearing, is intense enough to damage hearing, or is otherwise annoying (unwanted noise). Impacts on noise will be considered significant if:

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

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

These are the same noise significance criteria used in the 2001 FEIR.

The noise section of the 2001 FEIR evaluated both construction and operational noise levels at the refinery and three distribution terminals.

The FEIR concluded that construction-related noise impacts were not significant at the refinery, the Van Nuys distribution terminal and the Huntington Beach terminal. Construction-related noise impacts were mitigated to a level of insignificance at the Montebello distribution terminal. (The addition of a rail spur at the Montebello distribution terminal was a construction-related noise impact which required mitigation.)

The FEIR concluded that operational-related noise impacts were not significant at the Van Nuys and the Huntington Beach distribution terminals. Operational-related noise impacts were mitigated to a level of insignificance at the refinery, but remained significant at the Montebello distribution terminal due to the rail spur and locomotive activities.

The currently proposed project modifications apply only to the refinery. As a result, potential noise impacts at any of the three distribution terminals will not be affected by the currently proposed project modifications, nor will any existing impacts at the distribution terminals be made worse.

The currently proposed project modifications will require construction within the confines of the refinery boundaries, and the duration will be less (approximately eight months) than what was anticipated in the 2001 FEIR (one year and nine months). Further, construction activities are expected to be within the city noise ordinance limits. As a result, as with the 2001 FEIR, the currently proposed project modifications are not expected to cause significant construction-related noise impacts. Since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect construction noise analysis results.

The 2001 FEIR concluded that operational noise impacts could be mitigated to a level of insignificance. The currently proposed project modifications do include changes to existing equipment (FCCU and the alkylation plant); however, the modifications also include permanently removing a CO boiler from service. Further, the currently proposed project modifications do not include the addition of any equipment which would produce additional noise, or cause existing noise levels to be exceeded. Operational activities at the refinery are also subject to city noise ordinance limits. Since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect operational noise analysis results. As a result, it is not expected that the currently proposed project modifications will create new significant noise impacts, or cause existing impacts to be made worse.

6.3.4 Transportation/Circulation

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

- The volume to capacity ratio increases by two percent for intersections with a level of service (LOS) rating of E or F for more than two months.
- Peak period levels on major arterials are disrupted to a point where LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.

- There is an increase in traffic (e.g., 350 heavy-duty truck round-trips per day) that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

These are the same transportation/circulation significance criteria used in the 2001 FEIR.

Construction

The 2001 FEIR evaluated potential construction and operational transportation-related impacts and concluded that construction-related traffic was significant; however, operational traffic was not significant.

The 2001 FEIR used an average vehicle occupancy of 1.3 persons per vehicle for an average of 200 workers per day; which calculated to 154 daily worker vehicles during construction. Construction activities were expected to occur over a one year and nine month duration, with the peak occurring over a three-month period. Construction worker commute traffic was expected to cause a significant impact to one intersection (Sepulveda Boulevard/SR1 and El Segundo Boulevard) in the vicinity of the refinery during the evening commute period (typically 3:00 p.m. to 6:00 p.m.). The FEIR concluded that transportation impacts would be significant during construction.

The currently proposed project modifications anticipate a maximum peak of 198 workers in a ten-hour shift and a minimum of 40 workers in a ten-hour shift. Construction activities are expected to occur over an eight-month duration, with the peak occurring over a three-week period. Using the same 1.3 vehicle occupancy and an average of 100 workers, there would be 77 daily worker vehicles during construction.

The transportation-related activities associated with the construction of the currently proposed project modifications are less than the construction evaluated in the 2001 FEIR. In addition, the construction duration is less (eight months, as compared with one year and nine months), with the peak occurring for only three weeks. Even if the currently proposed project modifications assume a "worst-case" scenario, construction-related transportation impacts will not exceed those identified in the 2001 FEIR, or make the existing significant impacts worse. Similarly, since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect construction traffic analysis results.

Operational

The 2001 FEIR concluded that operational-related transportation impacts were not significant. The currently proposed project modifications will not modify the existing traffic and circulation in the vicinity of the refinery, and are therefore not significant. The currently proposed project modifications include changes to existing equipment within the refinery boundaries. No hiring of additional labor to operate this new or modified equipment is required, existing personnel can accommodate manpower needs. Further, although the equipment and/or processes within the refinery will be altered as a result of the currently proposed project modifications, the operational traffic is not expected to change. Similarly, since the project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals, it also does not affect operational traffic analysis results. Therefore, no new operational-related transportation impacts are expected, nor will any existing impacts be made worse as a result of the currently proposed project modifications.

7.0 TOPIC AREAS FOUND NOT TO BE POTENTIALLY SIGNIFICANT

7.1 2001 FEIR

A NOP/IS was prepared for the Chevron El Segundo CARB Phase 3 Clean Fuels Project, which evaluated the 17 environmental topics in accordance with CEQA. The NOP/IS eliminated six of the 17 topic areas from further consideration in the draft EIR. The six environmental topic areas eliminated by the NOP/IS are presented below along with a brief summary of why they were excluded from further consideration (e.g. found to not be potentially significant).

Aesthetics - The 2001 FEIR project occurred within the confines of the existing refinery and three distribution terminals, which are located within commercial/industrial areas. As a result, the 2001 FEIR project was not expected to significantly impact aesthetics or the existing character of the surrounding area.

Agricultural Resources - The 2001 FEIR project will occur within the confines of the existing refinery and three distribution terminals which are located within commercial/industrial areas. No agricultural resources exist at the Chevron El Segundo refinery or at any of the three distribution terminals. As a result, no impacts to agricultural resources will occur.

Energy - The 2001 FEIR project did not include modifications to the refinery or three distribution terminals, which would require new or additional power or natural gas. Further, modifications to existing electrical systems to support the proposed project at these facilities would not cause a significant adverse effect on local or regional energy supplies, or on peak/base period demands.

Mineral Resources - The 2001 FEIR project will occur within the confines of the existing (paved) refinery and three distribution terminals, which are located within commercial/industrial areas. No mineral resources are known to be located within these existing facilities. As a result, no impacts to mineral resources are expected.

Population/Housing - The 2001 FEIR project will not directly or indirectly induce growth in the area of the refinery or three distribution terminals. The proposed project involves modifications to existing facilities within commercial/industrial areas and will not displace substantial numbers of existing housing or require the construction of new housing. Because of the large population base within the greater Los Angeles area, it is expected that the existing labor pool would accommodate the labor requirements for both construction and operational activities in support of the proposed project. As a result, no impacts to population/housing are expected as a result of the proposed project.

Recreation - The 2001 FEIR project will not affect existing recreational facilities or require the construction or expansion of recreational facilities primarily because the project will not directly or indirectly induce growth, or cause there to be a need for recreational facilities.

The 2001 FEIR evaluated the 11 remaining environmental topics as potential significant impacts and concluded that seven of the 11 topic areas would not be adversely affected by the proposed project. These areas are listed below along with a summary as to why they were found not to be potentially significant.

Biological Resources - The 2001 FEIR evaluated potential significant adverse impacts to the El Segundo blue butterfly, the pacific pocket mouse and the beach spectacle pod (a California native plant). Since population occurrences of the butterfly are limited to the blue butterfly sanctuary of the El Segundo refinery, it was concluded that the proposed project (located one-half mile away) was not anticipated to impact the El Segundo blue butterfly. The Pacific pocket mouse historically inhabits coastal strand, coastal dunes, river alluvium, and coastal sage scrub on marine terraces; however, has not been sighted since 1938. As a result, it is not anticipated that the proposed project will impact the Pacific pocket mouse or its habitat. The beach spectacle pod is a California native plant that has not been sighted since 1884. This species is not expected to occur within the refinery or distribution terminal properties and therefore would not be impacted by the proposed project. As a result, the 2001 FEIR determined that no impacts to biological resources were expected to occur as a result of the proposed project.

Cultural Resources - The 2001 FEIR evaluated potential significant adverse impacts to cultural resources and concluded that potential impacts to cultural resources could be mitigated to a level of insignificance by incorporating and implementing mitigation measures to protect and preserve any cultural resources discovered during construction activities.

Geology and Soils – The 2001 FEIR identified potential significant adverse impacts to geology and soils and concluded that potential impacts could occur, including wind or water erosion of soils during construction activities; significant earthquake-induced ground motion; and liquefaction/subsidence potential at the Van Nuys Terminal. The 2001 FEIR incorporated mitigation measures to reduce these potential impacts to a level of insignificance.

Hydrology and Water Quality - The 2001 FEIR evaluated potential significant adverse impacts to water supply and water quality. Water supply needs associated with the proposed project (e.g. watering during construction activities for dust control purposes) were determined to be 1,490 gallons per day, well below the SCAQMD's significance threshold of 5,000,000 gallons per day, and therefore not considered significant. Further, the proposed project does not include activities, which would deplete groundwater resources/supplies or interfere with recharge activities during either construction or operational activities.

Land Use - The 2001 FEIR modifications to the Chevron El Segundo refinery and the three distribution terminals would occur within the confines of the existing refinery and three distribution terminals which are located within commercial/industrial areas. No changes to land use are expected to occur, nor acquisition of additional land to support the proposed project. As a result, no significant adverse impacts to land use were expected to occur as a result of the 2001 FEIR project.

Public Services - The 2001 FEIR project included modifications to existing industrial facilities and will not create a need for additional public services personnel or equipment at either the refinery or the three distribution terminals. The 2001 FEIR concluded that no significant adverse impacts to public services were expected to occur as a result of the 2001 FEIR project.

Solid and Hazardous Waste - The 2001 FEIR evaluated potential significant adverse impacts to both hazardous and non-hazardous solid waste during construction and

operation, and concluded that the 2001 FEIR project would not cause significant adverse impacts. The volume of both hazardous and non-hazardous solid waste associated with the 2001 FEIR project was estimated and the capacity of existing hazardous and non-hazardous solid waste disposal facilities was found to be adequate to accommodate the expected volume.

7.2 2002 Addendum

Subsequent to the certification of the FEIR, Chevron determined that while MM H-2 could be implemented at the refinery, it was not applicable to the three distribution terminals (Montebello, Van Nuys and Huntington Beach). MM H-2 was developed and intended to reduce the risk of upset from a new pentane storage sphere at the refinery, a new ethanol storage tank at the Montebello distribution terminal, and the conversion of three tanks to ethanol at the Van Nuys and Huntington Beach terminals. The change to MM H-2 was determined to be administrative in nature and did not result in any emission increases, emission reductions, or any physical changes to the environmental setting of the refinery or three distribution terminals.. No new significant impacts were associated with the 2002 Addendum and no significant impacts associated with the 2001 FEIR were made worse by the 2002 Addendum project modifications. The project analyzed in the 2002 Addendum did not require physical changes at the refinery or distribution terminals; it also does not affect or contribute to any environmental effects resulting from the currently proposed project. Further, the 2002 Addendum project was only applicable to the distribution terminals while the currently proposed project modifications apply only to activities at the Chevron Refinery in El Segundo.

7.3 Currently proposed Project Modifications

This Addendum evaluated the 17 environmental topics in accordance with CEQA and eliminated 13 of the 17 topic areas from further consideration. The 13 topic areas found not to be significant along with a summary of the basis for finding these topics not significant is presented below.

Aesthetics - The currently proposed project modifications occur within the confines of the existing refinery, which is located within a commercial/industrial area. As a result, the currently proposed project modifications are not expected to significantly impact aesthetics or the existing character of the surrounding area.

Agricultural Resources - The currently proposed project modifications will occur within the confines of the existing refinery, which is located within a commercial/industrial area. No agricultural resources exist at the Chevron El Segundo refinery, and therefore no impacts to agricultural resources are expected.

Energy - The currently proposed project modifications does not include any modifications to the refinery, which would require new or additional power or natural gas. Further, modifications to existing electrical systems to support the proposed project at this facility would not cause a significant adverse effect on local or regional energy supplies, or on peak/base period demands.

Mineral Resources - The currently proposed project modifications will occur within the confines of the existing (paved) refinery, which is located within a commercial/industrial area. No mineral resources are known to be located within this existing facility, and therefore no impacts to mineral resources are expected.

Population/Housing - The currently proposed project modifications will not directly or indirectly induce growth in the area of the refinery. The proposed project involves

modifications to an existing facility within a commercial/industrial area and will not displace substantial numbers of existing housing or require the construction of new housing. Because of the large population base within the greater Los Angeles area, it is expected that the existing labor pool would accommodate the labor requirements for both construction and operational activities in support of the proposed project. As a result, no impacts to population/housing are expected as a result of the 2004 Addendum.

Recreation - The currently proposed project modifications will not affect existing recreational facilities or require the construction or expansion of recreational facilities primarily because the project will not directly or indirectly induce growth, or cause there to be a need for recreational facilities.

Biological Resources - Construction and operation of the currently proposed project modifications will occur within previously disturbed portions of the refinery. No biological resources were found within the confines of the refinery, and therefore no impacts to biological resources are expected to occur.

Cultural Resources – Construction and operation of the currently proposed project modifications will occur within previously disturbed portions of the refinery. The currently proposed project modifications will include the same mitigation measure as included in the 2001 FEIR, to protect and preserve any cultural resources discovered during construction activities. As a result, the currently proposed project modifications are not expected to have a significant adverse impact on cultural resources.

Geology and Soils – The currently proposed project modifications would involve less ground disturbance during construction than the project evaluated in the 2001 FEIR, which would reduce the potential for soil erosion. Additionally, the potential hazards from earthquake-induced ground motion would be the same as in the 2001 FEIR. The mitigation measures related to geology and soils impacts identified in the 2001 FEIR will be included in the currently proposed project modifications to reduce any geology and soils impacts to a level of insignificance.

Hydrology and Water Quality – This Addendum evaluated potential significant adverse impacts to water supply and water quality. Water supply needs associated with the proposed project (e.g. watering during construction activities for dust control purposes) were determined to be well below the SCAQMD's significance threshold of 5,000,000 gallons per day, and therefore not considered significant. Further, the proposed project does not include activities, which would deplete groundwater resources/supplies or interfere with recharge activities during either construction or operational activities.

Land Use – The currently proposed project modifications to the Chevron El Segundo refinery will occur within the confines of the existing refinery located within a commercial/industrial area. No changes to land use are expected to occur, nor acquisition of additional land to support the proposed project. As a result, no significant adverse impacts to land use are expected to occur as a result of the currently proposed project modifications.

Public Services - The currently proposed project modifications includes modifications to existing industrial facilities and will not create a need for additional public services personnel or equipment at either the refinery or the three distribution terminals. As a result, no significant adverse impacts to public services are expected to occur as a result of the currently proposed project modifications.

Solid and Hazardous Waste – This Addendum evaluated potential significant adverse impacts to both hazardous and non-hazardous solid waste during construction and operation, and concluded that the currently proposed project modifications will not cause significant adverse impacts. The volume of both hazardous and non-hazardous solid waste associated with the currently proposed project modifications is not expected to exceed the capacity of existing hazardous and non-hazardous solid waste disposal facilities.

8.0 CONCLUSION

In 2004, Chevron proposed a modification to a portion of the project evaluated in the 2001 FEIR associated strictly with maintaining gasoline production volume, which was reduced as a result of replacing MTBE with ethanol. Analysis of the currently proposed project modification indicated that it would not create new significant adverse impacts in any environmental areas analyzed in the 2001 FEIR or make substantially worse any existing significant adverse impacts. In fact, the analysis showed that the currently proposed project modification would produce substantial CO and PM10 operational emission reductions compared to the proposed project analyzed in the 2001 FEIR. Based on the environmental analysis prepared for the currently proposed project modification, the SCAQMD has quantitatively and qualitatively demonstrated that the proposed project modification qualifies for an addendum to make the previously certified 2001 FEIR complete.

9.0 REFERENCES

SCAQMD (August 2000) - Initial Study for the Draft Environmental Impact Report for: Chevron El Segundo Refinery California Air Resources Board (CARB) Clean Fuels Project.

SCAQMD (July 2001) - Draft EIR for the Chevron El Segundo Refinery California Air Resources Board (CARB) Phase Clean Fuels Project.

SCAQMD (November 2001) - Final EIR for the Chevron El Segundo Refinery California Air Resources Board (CARB) Phase 3 Clean Fuels Project.

SCAQMD (April 2002) - Addendum to the Final EIR for the Chevron El Segundo Refinery California Air Resources Board (CARB) Phase 3 Clean Fuels Project.