

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

**Attachment 1: Statement of Findings, Statement of  
Overriding Considerations, and Mitigation  
Monitoring Plan**

**Chevron Products Company – El Segundo Refinery  
Heavy Crude Project**

SCH NO. 2005091152

August 2006

**Executive Officer**

Barry R. Wallerstein, D.Env.

**Deputy Executive Officer**

**Planning, Rule Development, and Area Sources**

Elaine Chang, Dr.PH

**Assistant Deputy Executive Officer**

**Planning, Rule Development, and Area Sources**

Laki Tisopulos, Ph.D., P.E.

**Planning and Rules Manager**

**CEQA and Socioeconomic Analyses**

Susan Nakamura

**Prepared by:** ENSR Corporation

**Reviewed by:** Michael Krause, Air Quality Specialist

Steve Smith, Ph.D. – Program Supervisor, CEQA

Barbara Baird – Principal Deputy District Counsel, SCAQMD

Jeri Voge – Senior Deputy District Counsel, SCAQMD

## **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT GOVERNING BOARD**

Chairman:

WILLIAM A. BURKE, Ed.D.  
Speaker of the Assembly Representative

Vice Chairman:

S. ROY WILSON, Ed.D.  
Supervisor, Fourth District  
Riverside County Representative

### **MEMBERS:**

MICHAEL D. ANTONOVICH  
Supervisor, Fifth District  
Los Angeles County Representative

JANE CARNEY  
Senate Rules Committee Appointee

RONALD O. LOVERIDGE  
Mayor, City of Riverside  
Cities Representative, Riverside County

GARY OVITT  
Supervisor, Fourth District  
San Bernardino County Representative

JAN PERRY  
Councilmember, 9th District  
Cities Representative, Los Angeles County, Western Region

MIGUEL A. PULIDO  
Mayor, City of Santa Ana  
Cities Representative, Orange County

TONIA REYES URANGA  
Councilwoman, City of Long Beach  
Cities Representative, Los Angeles County, Eastern Region

JAMES SILVA  
Supervisor, Second District  
Orange County Representative

CYNTHIA VERDUGO-PERALTA  
Governor's Appointee

DENNIS YATES  
Mayor, City of Chino  
Cities Representative, San Bernardino County

### **EXECUTIVE OFFICER:**

BARRY R. WALLERSTEIN, D. Env.

**TABLE OF CONTENTS**

	Page
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>2.0 SUMMARY OF THE PROPOSED PROJECT .....</b>	<b>3</b>
<b>3.0 SIGNIFICANT ADVERSE IMPACTS WHICH CAN BE REDUCED BELOW A SIGNIFICANT LEVEL .....</b>	<b>6</b>
3.1 PM10 Emissions During Construction .....	6
3.2 Noise During Construction .....	6
<b>4.0 SIGNIFICANT ADVERSE IMPACTS WHICH CANNOT BE REDUCED BELOW A SIGNIFICANT LEVEL.....</b>	<b>6</b>
4.1 Air Quality .....	6
4.2 Hazards.....	8
4.3 Traffic.....	9
<b>5.0 STATEMENT OF FINDINGS .....</b>	<b>9</b>
5.1 Potentially Significant Impacts which Cannot Be Mitigated to a Level of Insignificance .....	9
5.2 Impacts Associated with Project Alternatives.....	11
5.3 Statement of Findings Conclusion .....	12
<b>6.0 STATEMENT OF OVERRIDING CONSIDERATIONS .....</b>	<b>12</b>
<b>7.0 MITIGATION MONITORING PLAN .....</b>	<b>14</b>
7.1 Introduction .....	14
7.2 Air Quality .....	14
7.3 Hazards.....	20
7.4 Noise .....	21
7.5 Conclusion .....	22

**LIST OF TABLES**

Table 1 Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project .....	23
--	----

**ATTACHMENT 1**

---

**STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING  
CONSIDERATIONS, AND MITIGATION MONITORING PLAN**

**INTRODUCTION**

**SUMMARY OF THE PROPOSED PROJECT**

**SIGNIFICANT ADVERSE IMPACTS WHICH CAN BE REDUCED  
BELOW A SIGNIFICANT LEVEL**

**SIGNIFICANT ADVERSE IMPACTS WHICH CANNOT BE REDUCED  
BELOW A SIGNIFICANT LEVEL**

**STATEMENT OF FINDINGS**

**STATEMENT OF OVERRIDING CONSIDERATIONS**

**MITIGATION MONITORING PLAN**

This page intentionally left blank

## **1.0 INTRODUCTION**

Chevron Products Company (Chevron) is proposing to modify its El Segundo Refinery to enable it to refine more heavy crude oil. The refinery processes both heavy and light crude oils to produce motor fuels and other saleable petroleum products. Heavy crude oils are more dense and viscous than light crude oils and generally produce smaller amounts of motor fuels per barrel than light crude oils. Because most new crude oil discoveries in the world are heavier than historic crude oil supplies, Chevron is proposing modifications to the refinery to maintain or slightly increase its current production levels of saleable petroleum products by being able to process more heavy crude oil and less light crude oil than it currently processes. Maintaining current production levels of saleable products while processing more heavy crude oil will require an annual increase of approximately five percent in the total amount of crude oil processed by the refinery. The proposed project will also reduce sulfur dioxide (SO<sub>2</sub>) emissions from refinery fuel gas combustion.

To process more heavy crude oil, the refinery operators are proposing modifications to the No. 4 Crude Distillation Unit and the Delayed Coking Unit (Coker). Chevron is also proposing modifications to the No. 6 H<sub>2</sub>S Plant to improve the removal of sulfur compounds from refinery fuel gas to assist the refinery in complying with SCAQMD Regulation XX - Regional Clean Air Incentives Market (RECLAIM), and to increase the reliability of the removal process.

The proposed refinery modifications were determined to be a "project" as defined by the California Environmental Quality Act (CEQA) (California Public Resources Code §21000 et seq.). The SCAQMD is the lead agency because it has primary approval authority over the project and, therefore, has prepared a Final Environmental Impact Report (EIR) pursuant to CEQA Guidelines §15089 and §15132.

The Notice Of Preparation/Initial Study (NOP/IS) of a Draft EIR for the Chevron - El Segundo Refinery Heavy Crude Project were released for a 30-day public review and comment period on September 29, 2005. The NOP/IS contains a project description and the environmental checklist as required by the CEQA Guidelines. A copy of the NOP/IS is included in Appendix A of the Final EIR. The environmental disciplines that were determined to have the potential to be significantly adversely affected by the proposed project and that were further analyzed in the EIR include: air quality, hazards and hazardous material, hydrology and water quality, noise, solid and hazardous waste, and transportation/traffic. The NOP/IS concluded that there would be no significant adverse impacts on: aesthetics, agricultural resources, biological resources, cultural resources, energy, geology and soils, land use and planning, mineral resources, population and housing, public services, or recreation.

The Draft EIR for the proposed Heavy Crude Project was released for a 45-day public review and comment period beginning on April 25, 2006. The comment period ended on June 8, 2006. Two comment letters were received during the comment period for the Draft EIR and one additional letter was received after the close of the public comment period. Responses to these comment letters were prepared and are included in Appendix F of the Final EIR. The analyses of air quality

impacts and mitigation measures in the Final EIR were modified from those in the Draft EIR due to some additional information provided by the applicant. None of the modifications alter any conclusions reached in the Draft EIR, nor provide new information of substantial importance relative to the draft document that would require recirculation of the Draft EIR pursuant to CEQA Guidelines §15088.5. Therefore, the modified Draft EIR is now a Final EIR.

Based on the analyses in the EIR, impacts on hydrology and water quality, solid and hazardous wastes, and transportation and traffic were determined not to be significant. Adverse noise impacts during construction were determined to be mitigable to less than significant levels. Environmental resources where significant adverse environmental impacts could occur after implementation of mitigation measures were air quality and hazards and hazardous materials. Accordingly, a Statement of Findings and a Statement of Overriding Considerations are required for the potentially significant adverse air quality and hazards and hazardous materials impacts per CEQA Guidelines §15091 and §15093, respectively.

The Final EIR includes the NOP/IS (September 29, 2005) and the Draft EIR (April, 2006). The Final EIR includes a project description, the environmental setting, environmental impacts and mitigation measures, project alternatives, cumulative impacts, a hazards analysis (Appendix C of the Final EIR), a noise analysis (Appendix D of the Final EIR), a traffic analysis (Appendix E of the Final EIR) and responses to comments (Appendix F of the Final EIR). All documents comprising the Final EIR for the proposed project are available at SCAQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, 91765. These documents can be obtained by contacting the SCAQMD's Public Information Center at (909) 396-2039 or by accessing the SCAQMD's CEQA webpages at <http://www.aqmd.gov/ceqa/nonaqmd.html>.

When considering a proposed project that has one or more significant adverse effects for approval, a public agency must make one or more written findings for each of those significant adverse effects, accompanied by a brief rationale for each finding (Public Resources Code §21081 and CEQA Guidelines §15091). The analysis in the Final EIR concluded that the proposed project has the potential to generate significant adverse air quality and hazards and hazardous materials impacts.

For a proposed project with significant adverse impacts, CEQA requires the lead agency to balance the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental impacts when determining whether to approve the project. Under CEQA Guidelines §15093(a), "If the specific economic, legal, social, technological, or other benefits of a project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable.'" Thus, after adopting the Statement of Findings, as discussed above, the agency must adopt a "Statement of Overriding Considerations" to approve a project with significant adverse environmental effects.

The following sections of this document include a summary of the proposed project, the Statement of Findings, Statement of Overriding Considerations and, pursuant to CEQA Guidelines §15097, a Mitigation Monitoring Plan.

## **2.0 SUMMARY OF THE PROPOSED PROJECT**

The No. 4 Crude Unit performs the initial steps in refining most of the crude oil processed by the refinery. The No. 4 Crude Unit includes both an atmospheric distillation column and a vacuum distillation column. The atmospheric distillation column performs an initial separation of the crude oil at atmospheric pressure into several components, including methane, ethane, liquid petroleum gas (LPG), naphtha, raw jet fuel, raw diesel fuel, gas oil and atmospheric residuum. These components are processed by other process units in the refinery. The atmospheric residuum is sent from the atmospheric distillation column to the vacuum distillation column for separation into light gas oil, heavy gas oil and vacuum residuum.

Processing more heavy crude oil will change the relative amounts of various products produced by the No. 4 Crude Unit. In particular, the quantity of vacuum residuum produced from each barrel of crude oil will increase, but the No. 4 Crude Unit cannot currently handle the increase. Therefore, Chevron is proposing modifications to the No. 4 Crude Unit that will enable it to handle the increased vacuum residuum production. The design changes required to handle the increased vacuum residuum production will result in an overall increase in the crude-oil processing capacity of the No. 4 Crude Unit of approximately five percent, while resulting in a reduction in the amount of light crude oil processed.

Proposed modifications to the No. 4 Crude Unit include modifying internal components of the atmospheric and vacuum distillation columns to improve distillation efficiency; replacing steam ejectors on the vacuum distillation column to increase column production capacity; modifying and adding new heat exchangers to increase heat recovery and reduce pressure drop; modifying pumps to handle higher viscosity material; replacing piping with larger diameter pipes to reduce pressure drop; and installing additional automated controls for existing equipment to improve emergency response and normal operating efficiency.

The Coker processes the vacuum residuum produced by the crude units. The vacuum residuum is heated and fed into vessels called coke drums. It remains inside the coke drums under pressure for approximately 12 hours, where it cracks into lighter materials. These light materials boil off in the coke drums, leaving behind a solid coal-like material called petroleum coke. The light materials are separated into raw gasoline, raw jet fuel, raw diesel fuel, and gas oil in the Coker Main Fractionator column, and are processed further by other process units in the refinery. After the cracking process is completed, the coke drum is stripped with steam, cooled with water, opened, and the coke is “drilled” out of the drum with a high-pressure water system. The entire cycle time for a batch of coke in a coke drum is 15 hours. The petroleum coke is reduced in size by a primary crusher. Belt conveyors transport the crushed petroleum coke from the primary crusher to a secondary crusher, which discharges into truck loading hoppers. The loaded trucks transport the petroleum coke to the Port of Los Angeles or the Port of Long Beach. The petroleum coke is exported from the port for use in heating and manufacturing operations by third parties at various locations within or outside California.

The current annual average vacuum residuum feed capacity of the Coker is 60 thousand barrels per operating day (MBPOD). Chevron is proposing modifications to increase the annual average

capacity of the Coker to 75 MBPOD to accommodate the increase in vacuum residuum production by the crude units when they process more heavy crude oil. Petroleum coke production will increase by 510 tons per day, from an annual average of 3,950 tons per day to 4,460 tons per day. Approximately 20 additional truck trips per day will be required to export the increased quantities of petroleum coke from the refinery. The production of light products by the Coker will also increase.

Proposed modifications to the Coker include the installation of new heat exchangers to increase heat transfer; installation of a new cooling water supply and return system from Cooling Tower No. 9 to the Coker to increase coke-drum cooling capacity; replacement of an existing depropanizer with a larger depropanizer to increase propane removal capacity; replacement of the Coker Main Fractionator column with a larger column to increase light-product separation capacity; installation of new pumps and upgrades to existing pumps to increase pumping capacity, upgrades to the gas compression equipment at the Coker to increase capacity, modifications to the coke drums and coke drilling systems to reduce the cycle time from 15 hours to 12 hours; and installation of additional automated controls for existing equipment to improve emergency response and normal operating efficiency.

The current capacity of the petroleum coke conveying system is adequate to accommodate the proposed increase in petroleum coke production, so Chevron is not proposing to increase the conveying system's capacity. Chevron is, however, proposing to modify portions of the petroleum coke conveying system to allow more efficient handling of the petroleum coke and to reduce particulate matter emissions during petroleum coke transport and export truck loading operations.

The No. 6 H<sub>2</sub>S Plant treats the sulfur-containing gases (called sour gases) from the Coker overhead gas compressor, the Coker waste compressor, the Low Pressure Distillation gas recovery compressor, the flare gas recovery Houdry Compressors and overhead gas from a depropanizer to remove sulfur compounds. The No. 6 H<sub>2</sub>S plant includes a Stacked Absorber column, which consists of a diethanolamine (DEA) absorber section at the bottom of the column and a water wash section at the top of the column. The DEA absorber section removes most of the hydrogen sulfide (H<sub>2</sub>S) in the sour gas by dissolving it in DEA, while the water wash section prevents DEA carryover in the gases leaving the column. The gas from the Stacked Absorber is further processed in the Merox section of the No. 6 H<sub>2</sub>S Plant to remove mercaptans. The treated fuel gas (called sweet fuel gas) is then routed to an existing fuel gas mix drum.

The H<sub>2</sub>S-containing DEA (called rich DEA) that leaves the DEA absorber section in the Stacked Absorber column is processed by the No. 5 H<sub>2</sub>S Plant to remove the H<sub>2</sub>S. The resulting lean DEA is returned to the No. 6 H<sub>2</sub>S plant for reuse. Currently, the No. 6 H<sub>2</sub>S Plant must be shut down when the No. 5 H<sub>2</sub>S Plant is out of service, either for planned maintenance or when operational problems occur because rich DEA from the No. 6 H<sub>2</sub>S Plant cannot be regenerated. The process units that produce the sour gas that is treated by the No. 6 H<sub>2</sub>S Plant must also be shut down when the No. 6 H<sub>2</sub>S Plant is shut down in order to avoid combustion of untreated fuel gas with high sulfur concentrations. Thus, shutdown of the No. 5 H<sub>2</sub>S Plant requires shutdown of refinery

process units serviced by the No. 6 H<sub>2</sub>S Plant in addition to the units serviced by the No. 5 H<sub>2</sub>S Plant.

Chevron is proposing to install a new DEA Regenerator in the No. 6 H<sub>2</sub>S Plant, which will regenerate the rich DEA from the No. 6 H<sub>2</sub>S Plant and eliminate the need to send the rich DEA to the No. 5 H<sub>2</sub>S Plant for regeneration. The H<sub>2</sub>S produced by the regenerator will be processed by the refinery's Sulfur Recovery Units to remove the H<sub>2</sub>S and convert it to elemental sulfur, which is subsequently exported from the refinery for sale. Chevron is also proposing to install a new Relief Caustic Scrubber in the No. 6 H<sub>2</sub>S Plant to remove H<sub>2</sub>S from the acid gas produced by the proposed new DEA regenerator in case of an emergency that would prevent the Sulfur Recovery Units from processing the acid gas. Chevron is also proposing to install a new Jet Wash Column to absorb any remaining carbonyl sulfide (COS) from the process gas stream leaving the Merox section of the No. 6 H<sub>2</sub>S Plant. The proposed Jet Wash column will use circulating jet or diesel fuel to absorb COS from the gas stream.

The overall construction period for the proposed project is expected to last a total of 22 months. Peak overall construction employment is anticipated to be 694 workers, and average construction employment over the entire 22-month construction period is estimated at about 242 workers.

During most of the construction period, construction will take place 10 hours per day, from 6:30 a.m. to 5:00 p.m., five days per week, Monday through Friday. Turnarounds, which are times when refinery equipment is removed from service for maintenance activities, are scheduled for the No. 4 Crude Unit from late-March 2007 through early-May 2007 and for the Coker from mid-September 2007 through November 2007. A substantial amount of the construction for the proposed modifications to the No. 4 Crude Unit and the Coker, such as replacement of internal components, can only take place during these turnarounds when the units are out of service. Therefore, to minimize the amount of time that the units are out of service, construction during the turnarounds will take place in two 10-hour shifts, from 6:30 a.m. to 5:00 p.m. and from 6:30 p.m. to 5:00 a.m., six days per week, Monday through Saturday.

Chevron will arrange for parking for construction workers at an off-site location (the parking lot of Dockweiler Beach State Park) on Vista Del Mar, northwest of the refinery. Shuttle buses will be used to transport the construction workers between the parking facility and the refinery. Chevron will specify in construction contracts that construction workers access the parking facility by traveling on the Interstate 105 (I-105) freeway and West Imperial Highway, which are on the northern boundary of the City of El Segundo, and Vista Del Mar, which is on the western boundary of El Segundo. This route which will avoid construction worker travel on heavily congested surface streets.

No additional employees will be required on-site to operate any new equipment as a result of implementing the proposed project.

### **3.0 SIGNIFICANT ADVERSE IMPACTS WHICH CAN BE REDUCED BELOW A SIGNIFICANT LEVEL**

The Final EIR identified two potentially significant adverse environmental impact that can be reduced to a level of insignificance: 1) emissions of particulate matter with an aerodynamic diameter of 10 microns or less (PM10) associated with construction; and 2) increased noise during construction of the proposed modifications at the No. 4 Crude Unit.

#### **3.1 PM10 Emissions During Construction**

PM10 emissions during construction are from construction equipment exhaust, on- and off-site motor vehicles, on- and off-site fugitive dust. To mitigate these impacts to a level of insignificance, the project proponent will employ mitigation measures AQ-1, AQ-10 and AQ-11, presented in Section 4.1.

#### **3.2 Noise During Construction**

To mitigate noise impacts during construction to a level of insignificance, the project proponent will employ the following mitigation measure:

- N-1 Locate compressors used during construction of the proposed No. 4 Crude Unit modifications south of existing process equipment or shield them with 3/4-inch thick plywood shrouds located on the north side of the compressors

### **4.0 SIGNIFICANT ADVERSE IMPACTS WHICH CANNOT BE REDUCED BELOW A SIGNIFICANT LEVEL**

There are four potentially significant adverse environmental impacts that cannot be reduced to a level of insignificance: (1) emissions associated with construction; (2) cumulative emissions associated with operation; (3) increased risk from catastrophic failure of new pressure vessels at the No. 6 H<sub>2</sub>S Plant; and (4) cumulative traffic during construction.

#### **4.1 Air Quality**

The potential significant adverse air quality impacts from construction include emissions of carbon monoxide (CO), volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>). from construction equipment exhaust, on- and off-site motor vehicles, and architectural coatings and paving. Additionally, cumulative construction emissions of CO, VOC, NO<sub>x</sub> and PM10 are expected to remain significant following mitigation. To mitigate these impacts to the greatest extent feasible, the project proponent will employ the following measures:

- AQ-1 Diesel-powered construction equipment will be fueled with emulsified diesel fuel throughout construction of the proposed project.

The California Air Resources Board has established an interim procedure for verification of emission reductions for alternative diesel fuels. This procedure has been used to verify emission reductions from the use of four alternative diesel fuels:

PuriNOx diesel fuel developed by Lubrizol Corporation, Aquazole fuel developed by TotalFinaElf, Clean Fuels Technology's emulsified diesel fuel, and O2 Diesel Fuel developed by O2 Diesel, Inc. Specifically, Lubrizol's water-emulsified PuriNOx diesel fuel has been verified to reduce NOx emissions by 14 percent and PM10 emissions by 62.9 percent (ARB, 2001).

Chevron supplies PuriNOx to customers in the South Coast Air Basin from its Montebello distribution terminal. Chevron will ensure that the quantities of PuriNOx required for construction equipment for the proposed project will be available.

Prior to the start of construction for the proposed project, Chevron will verify that the construction equipment operates properly when fueled with PuriNOx diesel fuel. Minor modifications to the equipment will be made, if necessary, to enable it to operate properly using PuriNOx diesel fuel.

AQ-2 All construction equipment diesel engines shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, §2423(b)(1) unless such engine is not available for a particular item of equipment within the southern California area for use for the needed construction equipment for the proposed project. Construction equipment engines will be required to meet Tier 1 California standards if equipment with engines that meet Tier 2 standards are not available, unless such engine is not available for a particular item of equipment.

AQ-3 In the event a Tier 2 or Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons:

- (1) There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or
- (2) The construction equipment is intended to be on-site for ten (10) days or less.

The use of a particulate filter may be terminated immediately if one of the following conditions exists:

- (1) The use of the particulate filter is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in backpressure;
- (2) The particulate filter is causing or is reasonably expected to cause significant engine damage; or

- (3) The particulate filter is causing or is reasonably expected to cause a significant risk to workers or the public.
- AQ-4 All construction equipment shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
- AQ-5 Heavy construction equipment shall not remain running at idle for more than five minutes.
- AQ-6 The engine size of construction equipment shall be the minimum practical size to support the required scope of work for the equipment.
- AQ-7 If feasible, apply retrofit technologies to the large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as selective catalytic reduction (SCR), oxidation catalysts, air enhancement technologies, alternative fueled equipment, etc., will be evaluated. These technologies will be required if they are commercially available and can feasibly be retrofitted onto the construction equipment.
- AQ-8 Use electric welders instead of gas or diesel welders in portions of the refinery where electricity is available.
- AQ-9 Use on-site electricity rather than temporary power generators in portions of the refinery where electricity is available.
- AQ-10 Sweep principal paved on-site motor vehicle routes inside of the facility to reduce surface silt loading.
- AQ-11 Water as needed to prevent visible emissions from soil excavation activities at the refinery boundary. At a minimum, the frequency of watering of active excavation sites will be increased from two to three times per day.
- AQ-12 Use surface coatings that comply with a VOC content limit of 0.84 pound per gallon (100 grams per liter) as required by SCAQMD Rule 1113 - Architectural Coatings for industrial maintenance coatings manufactured after June 30, 2006. The calculation of unmitigated VOC emissions from on-site surface coating assumed the coatings would meet the current limit of 2.09 pounds per gallon (250 grams per liter), because Rule 1113 allows a coating that is manufactured prior to the effective date of an applicable limit to be sold, supplied, offered for sale, or applied for up to three years after the specified effective date.

Operational emissions of CO, VOC, NO<sub>x</sub> and PM<sub>10</sub> are expected to be cumulatively significant. Because emissions of these pollutants during the operation of the proposed project by itself are not significant, feasible mitigation measures for the proposed project have not been identified.

#### **4.2 Hazards**

Due to the inherent hazard risks associated with the materials transported, stored and used in refinery operations, and the refining processes in general, the risk of large-scale upset conditions is

---

always present to some degree. The project will result in an increased risk from the potential for catastrophic failure of new pressure vessels in the No. 6 H<sub>2</sub>S Plant and the subsequent release of H<sub>2</sub>S. To mitigate potential risk of upset impacts to the greatest extent feasible, the project proponent will employ the following mitigation measure:

H-1 A pre-startup safety review will be performed for those additions and modifications proposed under the project where the change is substantial enough to require a change in the process safety information and/or where an acutely hazardous and/or flammable material would be used. The review will be performed by personnel with expertise in process operations and engineering. The review will verify the following:

- Construction and modifications are in accordance with design specifications and applicable codes;
- Safety, operating, maintenance, and emergency procedures are in place and are adequate;
- Process hazard analysis recommendations have been addressed and actions necessary for start-up have been completed; and
- Training of each operating employee and maintenance worker has been completed.

### **4.3 Traffic**

Traffic associated with construction of the proposed project will cause a significant adverse cumulative impact on two freeway segments. Feasible mitigation measures for these potential impacts have not been identified.

## **5.0 STATEMENT OF FINDINGS**

CEQA prohibits a public agency from approving or carrying out a project for which a CEQA document has been completed, which identifies one or more significant adverse environmental effects of the project, unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding (CEQA Guidelines §15091). The following sets forth findings for the significant adverse impacts identified in the EIR that cannot be reduced to insignificance and the rationale for each finding. The findings are supported by substantial evidence in the record as explained in each finding. This Statement of Findings will be included in the record of project approval and will also be noted in the Notice of Determination.

### **5.1 Potentially Significant Impacts which Cannot Be Mitigated to a Level of Insignificance**

The Final EIR identified four potentially significant adverse environmental impacts that cannot be reduced to a level of insignificance: (1) air quality emissions associated with construction

activities; (2) cumulative emissions associated with operation; (3) hazards associated with project operation; and (4) cumulative traffic during construction.

**1. Construction emissions of carbon monoxide (CO), volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) would exceed SCAQMD significance thresholds during maximum construction activity periods.**

Finding: The SCAQMD makes the following findings with respect to this impact: (1) mitigation measures were incorporated into the project that would reduce the significant adverse construction air quality impacts, but not to insignificance; (2) such mitigation measures are within the jurisdiction of the SCAQMD; and (3) no other feasible mitigation measures are available to reduce the significant impact to air quality during construction.

Explanation: The construction emissions of CO, VOC and NO<sub>x</sub> are expected to exceed the applicable SCAQMD significance thresholds during peak construction activities (see Final EIR pages 4-5 through 4-10). Twelve mitigation measures to minimize these impacts were imposed on the proposed project and are set forth in the attached Mitigation Monitoring Plan.

Although these measures did not reduce construction emissions below the SCAQMD significance thresholds, no other feasible mitigation measures or project alternatives were determined to be available. Further, the construction emission calculations were based on conservative data and assumptions and likely overestimate actual emissions. In addition, the construction emissions will not have a long-term adverse air quality impact because these emissions will cease following the completion of the estimated 22-month construction phase (actually the peak construction phase).

**2. Operational emissions of of CO, VOC, NO<sub>x</sub> and PM10 are expected to be cumulatively significant.**

Finding: The SCAQMD makes the following findings with respect to this impact: (1) Emissions of these pollutants during the operation of the proposed project by itself are not significant; (2) feasible mitigation measures for the proposed project have not been identified.

Explanation: Cumulative operational emissions of CO, VOC, NO<sub>x</sub> and PM10 are expected to exceed the applicable SCAQMD significance thresholds. (see Final EIR pages 6-5 through 6-6). Because operational emissions of these pollutants from the proposed project alone are less than the applicable SCAQMD significance thresholds and because emissions of these pollutants from another project by themselves exceed the significance thresholds, the SCAQMD has determined that the impacts from the proposed project are not cumulatively considerable. Therefore, feasible mitigation measures for operational emissions from the proposed project have not been identified.

**3. Operational impacts associated with modifications to the No. 6 H<sub>2</sub>S Plant could result in significant hazard impacts.**

Finding: The SCAQMD makes the following findings with respect to this impact: (1) mitigation measures were incorporated into the project that would reduce the significant adverse hazard impacts, but not to insignificance; (2) such mitigation measures are within the jurisdiction of the SCAQMD; and (3) no other feasible mitigation measures or project alternatives have been identified to minimize the potentially significant adverse hazard impacts associated with the proposed project.

Explanation: The proposed project could result in significant adverse impacts related to the “worst-case” hazards associated with modifications to the No. 6 H<sub>2</sub>S Plant (see Final EIR, pages 4-53 through 4-54).

There are a number of rules and regulations that Chevron has or must comply with that serve to minimize the potential significant adverse impacts associated with hazards at the facility. Additionally, one mitigation measure was proposed to further minimize the potentially significant adverse impacts associated with the proposed modifications to the No. 6 H<sub>2</sub>S Plant. No other feasible mitigation measures were identified for the proposed project that could reduce significant adverse hazard impacts to insignificance.

**4. Traffic associated with construction of the proposed project could cause a significant adverse cumulative impact on two freeway segments.**

Finding: The SCAQMD makes the following findings with respect to this impact: (1) significant adverse cumulative impacts to traffic on two segments of the I-405 freeway may occur during construction of the proposed project; (2) these impacts will be temporary and will cease after construction of the proposed project is completed; (3) feasible mitigation measures for these impacts have not been identified; and (4) adverse cumulative impacts to traffic on these freeway segments during construction will remain significant.

Explanation: The proposed project could result in significant adverse cumulative impacts to traffic on two freeway segments during construction (see Final EIR, pages 6-11 through 6-12). However, traffic during construction of the proposed project alone is not anticipated to cause significant adverse impacts to traffic or transportation. No feasible mitigation measures for the proposed project were identified. Therefore, adverse cumulative impacts to traffic on these freeway segments during construction will remain significant.

**5.2 Impacts Associated with Project Alternatives**

**1. Project alternatives are not available to reduce the potentially significant impacts.**

Finding: The SCAQMD finds that the identified project alternatives would not achieve the goals of the project with fewer or less severe environmental impacts.

Explanation: Potential adverse environmental impacts from three project alternatives were analyzed and it was determined that no feasible project alternatives were identified that would achieve the goals of the project with fewer or less severe environmental impacts than the proposed project (see Final EIR, pages 5-1 through 5-16).

Alternatives evaluated in this EIR included: (1) Using the Existing Coker Main Fractionator Column Instead of Replacing It with a Larger, More Efficient Column; (2) Adding Heating and Insulation to Crude Oil Storage Tanks; and (3) the No Project alternative. No feasible alternatives have been identified that would reduce the proposed project's environmental impacts to less than significant while achieving the project objectives of processing more heavy crude oil while maintaining the production of motor fuels and other saleable products by the refinery. Consequently, the proposed project is considered the preferred project to ensure that Chevron will be able to achieve all the objectives of the proposed project.

### **5.3 Statement of Findings Conclusion**

Changes or alterations have been incorporated into the project to mitigate or minimize the potentially significant adverse environmental effects associated with certain project impacts, i.e., air quality impacts during construction, and hazards and hazardous materials associated with proposed project operations. No additional feasible mitigation measures or project alternatives, other than those already included in the Final EIR, have been identified that can further mitigate the potentially significant project impacts on air quality and hazards and meet the proposed project objectives.

All feasible mitigation measures identified in the Final EIR have been adopted as set forth in the mitigation monitoring plan. The analysis also indicated that the alternatives would not reduce to insignificant levels the significant impacts identified for the proposed project.

The proposed project is intended to enable the refinery to process more heavy crude oil while maintaining the production of motor fuels and other saleable products by the refinery. If the proposed project were not implemented, future refinery output would be reduced as available crude oils become heavier, assuming permit conditions are not exceeded, because the production capacity of the equipment that currently processes light crude oil would be reduced when processing heavy crude oil. Alternatively, the costs to maintain current production levels would increase as the price of lighter crude oils increases and overall supply is reduced. Both of these situations would threaten the future economic viability of the refinery and supplies to the regional community. Based on these considerations, the SCAQMD finds that the proposed project achieves the best balance between minimizing potential adverse environmental impacts and achieving the project objectives. The SCAQMD further finds that all of the findings presented here are supported by substantial evidence in the record.

The record of approval for this project may be found in the SCAQMD's Clerk of the Board's Office located at SCAQMD Headquarters in Diamond Bar, California.

## **6.0 STATEMENT OF OVERRIDING CONSIDERATIONS**

If significant adverse impacts of a proposed project remain after incorporation of feasible mitigation measures, or no feasible measures to mitigate the adverse impacts are identified, the lead agency must make a determination that the benefits of the project outweigh the unavoidable, significant, adverse environmental effects if it is to approve the project. CEQA requires the

decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental impacts when determining whether to approve the project (CEQA Guidelines §15093(a)). If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable (CEQA Guidelines §15093(a)). Accordingly, a Statement of Overriding Considerations regarding potentially significant adverse environmental impacts resulting from the proposed project, as set forth below, has been prepared for the SCAQMD's decision makers' consideration. Pursuant to CEQA Guidelines §15093(c), the Statement of Overriding Considerations will be included in the record of the project approval and will also be noted in the Notice of Determination.

Having reduced the potential effects of the proposed project through all feasible mitigation measures as described above, and balancing the benefits of the proposed project against its potential unavoidable adverse impacts on air quality and hazards, the SCAQMD finds that the following benefits of the project outweigh the potentially significant unavoidable adverse impacts for the following reasons:

1. Most new crude oil discoveries in the world are heavier than historic crude oil supplies. The refinery processes both heavy and light crude oils. Heavy crude oils are more dense and viscous than light crude oils and generally produce smaller amounts of motor fuels per barrel than light crude oils. In the future, refinery output would be reduced as available crude oils become heavier, because the production capacity of the equipment that currently processes light crude oil would be reduced when processing heavy crude oil. Alternatively, the costs to maintain current production levels would increase as the price of lighter crude oils increases and overall supply is reduced. Both of these situations would threaten the future economic viability of the refinery and petroleum fuel supplies to the regional community.
2. The long-term effect of existing SCAQMD rules and Air Quality Management Plan (AQMP) control measures is the reduction of emissions district-wide, contributing to attaining and maintaining state and federal ambient air quality standards (AAQS). The AQMP, which is updated every three years, identifies air pollutant levels relative to federal and state AAQS, establishes baseline and future emissions, and develops control measures to ensure attainment of the AAQS. Increased construction emissions associated with the proposed project will be accounted for in future revisions to the AQMP. As a result, the proposed project is not expected to hinder progress in attaining all state and federal AAQS.
3. The analyses of the significant adverse impacts were based on conservative assumptions regarding the construction and operation of the proposed project. The actual project impacts (e.g., construction emission estimates) are expected to be less

than estimated in the EIR. Further, the hazard impacts are based on worst-case assumptions that would only occur on rare occasions.

In balancing the benefits of the overall project with the project's unavoidable and significant adverse environmental impacts, the SCAQMD finds that the project benefits outweigh the unavoidable adverse impacts, such that these impacts are acceptable. The SCAQMD further finds that substantial evidence presented in the Final EIR supports the need to adopt the Final EIR despite the project's potential adverse impacts.

## **7.0 MITIGATION MONITORING PLAN**

### **7.1 Introduction**

CEQA requires an agency to prepare a plan for reporting and monitoring compliance with and implementation of measures to mitigate significant adverse environmental impacts. Mitigation monitoring requirements are included in CEQA Guidelines §15097 and Public Resources Code §21081.6, which specifically state:

When making findings as required by subdivision (a) of Public Resources Code §21081 or when adopting a negative declaration pursuant to Paragraph (2) of subdivision (c) of Public Resources Code §21080, the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment (Public Resources Code §21081.6). The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of an agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.

The provisions of CEQA Guidelines §15097 and Public Resources Code §21081.6 are triggered when the lead agency certifies a CEQA document in which mitigation measures, changes, or alterations have been required or incorporated into the project to avoid or lessen the significance of adverse impacts identified in the CEQA document. Public Resources Code §21081.6 leaves the task of designing a reporting or monitoring plan to individual public agencies.

To fulfill the requirements of CEQA Guidelines §15097 and Public Resources Code §21081.6, the SCAQMD must develop a plan to monitor project compliance with those mitigation measures adopted as conditions of approval for the proposed Chevron - El Segundo Refinery Heavy Crude Project. The following subsections identify the specific mitigation measures identified in the EIR and the public agency responsible for monitoring implementation of each mitigation measure.

### **7.2 Air Quality**

The following mitigation measures are required to minimize the potential short-term significant adverse air quality impacts during project construction.

**IMPACT SUMMARY:** Unmitigated construction-related emissions of CO, VOC, NO<sub>x</sub>, and PM10 would exceed the applicable SCAQMD significance threshold for daily construction emissions. Emission sources include worker vehicles, heavy construction equipment, grading activities, and emissions from coating activities. The mitigation measures listed below are intended to minimize the emissions associated with these sources and are anticipated to reduce PM10 emissions to insignificance. No feasible mitigation measures have been identified to reduce emissions from on-road trips to less than significant levels. Additionally, no feasible mitigation measures have been identified to reduce CO, VOC or NO<sub>x</sub> emissions to insignificance. CEQA Guidelines §15364 defines feasible as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”

**AQ-1** Diesel-powered construction equipment will be fueled with emulsified diesel fuel throughout construction of the proposed project.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-1 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-1:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-1 as specified in Table 1.

**AQ-2** All construction equipment diesel engines shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, §2423(b)(1) unless such engine is not available for a particular item of equipment within the southern California area for use for the needed construction equipment for the proposed project. Construction equipment engines will be required to meet Tier 1 California standards if equipment with engines that meet Tier 2 standards are not available, unless such engine is not available for a particular item of equipment.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-2 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its

enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-2:** Chevron shall submit to the SCAQMD, prior to initiation of construction, information in writing on the availability of Tier 2 and Tier 1 construction equipment. During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-2 as specified in Table 1.

**AQ-3** In the event a Tier 2 or Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a diesel particulate filter, unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. Chevron shall submit to the SCAQMD, prior to initiation of construction, information in writing on why particulate filters are not practical. For purposes of this condition, the use of such devices is “not practical” if, among other reasons:

- (1) There is no available particulate filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or
- (2) The construction equipment is intended to be on-site for ten (10) days or less.

The use of a particulate filter may be terminated immediately if one of the following conditions exists:

- (1) The use of the particulate filter is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in backpressure;
- (2) The particulate filter is causing or is reasonably expected to cause significant engine damage; or
- (3) The particulate filter is causing or is reasonably expected to cause a significant risk to workers or the public.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-3 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-3:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-3 as specified in Table 1.

**AQ-4** All construction equipment shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-4 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-4:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-4 as specified in Table 1.

**AQ-5** Heavy construction equipment shall not remain running at idle for more than five minutes.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-5 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-5:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-5 as specified in Table 1.

**AQ-6** The engine size of construction equipment shall be the minimum practical size to support the required scope of work for the equipment.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-6 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-6:** Chevron shall submit to the SCAQMD, prior to initiation of construction, information in writing verifying that the minimum practical size construction equipment to support the scope of

work for the equipment was selected. During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-6 as specified in Table 1.

**AQ-7** If feasible, apply retrofit technologies to the large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as selective catalytic reduction (SCR), oxidation catalysts, air enhancement technologies, alternative fueled equipment. etc., will be evaluated. These technologies will be required if they are commercially available and can feasibly be retrofitted onto the construction equipment.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-7 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-7:** Chevron shall submit to the SCAQMD, prior to initiation of construction, information in writing regarding its efforts to obtain retrofit technologies as described in AQ-7. During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-7 as specified in Table 1.

**AQ-8** Use electric welders instead of gas or diesel welders in portions of the refinery where electricity is available.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-8 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-8:** Chevron shall submit to the SCAQMD, prior to initiation of construction, a map of the project showing the areas of the refinery where electric welders can and cannot be used. During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-8 as specified in Table 1.

**AQ-9** Use on-site electricity rather than temporary power generators in portions of the refinery where electricity is available.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-9 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-9:** Chevron shall submit to the SCAQMD, prior to initiation of construction, a map of the project showing the areas of the refinery where electricity can be used and where temporary power generators will be used. During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-9 as specified in Table 1.

**AQ-10** Sweep principal paved on-site motor vehicle routes inside of the facility to reduce surface silt loading.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-10 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-10:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-10 as specified in Table 1.

**AQ-11** Water as needed to prevent visible emissions from soil excavation activities at the refinery boundary. At a minimum, the frequency of watering of active excavation sites will be increased from two to three times per day.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-11 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron

Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-11:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-11 as specified in Table 1.

**AQ-12** Use surface coatings that comply with a VOC content limit of 0.84 pound per gallon (100 grams per liter) as required by SCAQMD Rule 1113 - Architectural Coatings for industrial maintenance coatings manufactured after June 30, 2006. The calculation of unmitigated VOC emissions from on-site surface coating assumed the coatings would meet the current limit of 2.09 pounds per gallon (250 grams per liter), because Rule 1113 allows a coating that is manufactured prior to the effective date of an applicable limit to be sold, supplied, offered for sale, or applied for up to three years after the specified effective date.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure AQ-12 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMAQ-12:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure AQ-12 as specified in Table 1.

### **7.3 Hazards**

The following mitigation measure is required to minimize the potential short-term significant adverse noise impacts during project construction.

**IMPACT SUMMARY:** A catastrophic failure of a proposed new pressure in the No. 6 H<sub>2</sub>S Plant could potentially expose persons to H<sub>2</sub>S concentrations that exceed the Emergency Response Planning Guidelines concentration. The mitigation measure listed below is intended to minimize the risk of occurrence of such a failure. However, no feasible mitigation measures have been identified to reduce the consequence of a failure to insignificance. CEQA Guidelines §15364 defines feasible as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”

**H-1** A pre-startup safety review will be performed for those additions and modifications proposed under the project where the change is substantial enough to require a change in the process safety information and/or where an acutely hazardous and/or flammable material would be used. The review will be performed by personnel with expertise in process operations and engineering. The review will verify the following:

- Construction and modifications are in accordance with design specifications and applicable codes;
- Safety, operating, maintenance, and emergency procedures are in place and are adequate;
- Process hazard analysis recommendations have been addressed and actions necessary for start-up have been completed; and
- Training of each operating employee and maintenance worker has been completed.

If it is determined during the pre-startup safety review that design and construction techniques alone cannot reduce the risk, further measures will be evaluated.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure H-1 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMH-1:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure H-1 as specified in Table 1.

#### **7.4 Noise**

The following mitigation measure is required to minimize the potential short-term significant adverse noise impacts during project construction.

**IMPACT SUMMARY:** Construction-related noise would exceed the applicable SCAQMD significance threshold for construction noise impacts north of the refinery, in the City of El Segundo. These significant adverse noise impacts are caused primarily by construction of the proposed modifications to the No. 4 Crude Unit. The mitigation measure listed below is required to reduce these impacts to less than significant levels.

**N-1** Locate compressors used during construction of the proposed No. 4 Crude Unit modifications south of existing process equipment or shield them with 3/4-inch thick plywood shrouds located on the north side of the compressors.

**IMPLEMENTING PARTY:** The SCAQMD finds that Mitigation Measure N-1 is the responsibility of Chevron.

**MONITORING AGENCY:** The SCAQMD has made this mitigation measure fully enforceable through a legally binding instrument, Attachment 2 for the Chevron Products Company – El Segundo Refinery Heavy Crude Project Declaration of Certification, signed by the Chevron Refinery Manager and the SCAQMD’s Executive Officer. The SCAQMD through its enforcement authority in issuing permits for this project will ensure compliance with this mitigation measure.

**MMN-1:** During construction of the proposed project and for two years following completion of construction, Chevron shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with Mitigation Measure N-1 as specified in Table 1.

## **7.5 Conclusion**

In accordance with the monitoring action items outlined in Table 1 of this Mitigation Monitoring Plan, Chevron will be required to submit to the SCAQMD initial reports and other supporting documentation prior to the start of construction and quarterly reports during the construction phase of the proposed project. The SCAQMD and Chevron will evaluate the effectiveness of this Mitigation Monitoring Plan during the construction period. If either the Mitigation Monitoring Plan or the mitigation measures as set forth in this document are deemed inadequate, the SCAQMD or another responsible agency may require Chevron to employ additional or modified monitoring measures and/or measures to effectively mitigate identified significant adverse impacts to the levels identified in the Final EIR.

**Table 1**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-1/Establish contractual arrangement for supply of emulsified diesel fuel during construction	Chevron	Submit letter to SCAQMD verifying contractual arrangement.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction
AQ-1/Verify that all diesel-fueled construction equipment operates properly when fueled with emulsified diesel fuel	Chevron	Submit list to SCAQMD of all diesel-fueled equipment that specifies: 1. Equipment ID; 2. Equipment type; 3. Equipment manufacturer and model; 4. Engine horsepower rating; 5. Actions taken to verify proper operation with emulsified diesel fuel; and, 6. Modifications made to allow proper operation with emulsified diesel fuel.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and quarterly thereafter
AQ-1/Purchase emulsified diesel fuel	Chevron	Maintain records of emulsified diesel fuel deliveries including date of each delivery and quantity delivered.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction for initial delivery and daily thereafter

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-1/Fuel construction equipment with emulsified diesel fuel	Chevron	Maintain records of refueling for each piece of equipment including: 1. Equipment ID; 2. Equipment type; 3. Date refueled; and, 4. Quantity of fuel.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-2/Verify that each construction equipment diesel engine meets, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines or that such an engine is not available	Chevron	Submit a list to SCAQMD of all diesel-fueled equipment that specifies: 1. Equipment ID; 2. Equipment type; 3. Equipment manufacturer, equipment model and engine model; 4. Engine horsepower rating; 5. Engine emission certification standard; 6. If not certified to California Tier 2 or better, documentation from construction contractor that a California Tier 2 certified engine is not available.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and prior to use on-site of a new piece of equipment

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-2 (continued)/Verify that each construction equipment diesel engine that does not meet the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines meets the Tier 1 standard or that such an engine is not available	Chevron	Submit a list to SCAQMD of all diesel-fueled equipment that does not meet California Tier 2 standards that specifies: 7. Equipment ID; 8. Equipment type; 9. Equipment manufacturer, equipment model and engine model; 10. Engine horsepower rating; 11. Engine emission certification standard; 12. If not certified to California Tier 1, documentation from construction contractor that a California Tier 1 certified engine is not available.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and prior to use on-site of a new piece of equipment

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-3/Equip diesel construction equipment engines 100 hp or above that do not meet California Tier 2 or Tier 1 standards with particulate filters	Chevron	Submit a list to SCAQMD of all diesel-fueled equipment rated at 100 hp or above that do not meet, at a minimum, California Tier 1 emission standards, that specifies: 1. Equipment ID; 2. Equipment type; 3. Equipment manufacturer, equipment model and engine model; 4. Engine horsepower rating; 5. A statement that the engine will be equipped with a particulate filter or a statement documenting why use of a particulate filter is not practical.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and prior to use on-site of a new piece of equipment
AQ-4/Maintain and tune construction equipment to manufacturers' specifications	Chevron	Maintain maintenance records for construction equipment.	1. SCAQMD 2. SCAQMD 3. Prior to start of and throughout construction
AQ-5/Construction equipment operators to limit equipment idling to five minutes	Chevron	Perform and record results of visual observations of equipment idling duration.	1. SCAQMD 2. SCAQMD 3. Weekly during construction

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-6/Review construction equipment that is expected to be used with Chevron's contractor and select appropriate equipment that minimizes engine size	Chevron	Maintain a list of the heavy-duty construction equipment that is used on-site and the applicable engine size.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and prior to use on-site of a new piece of equipment
AQ-7/If feasible, apply retrofit technologies to the large off-road construction equipment that will be operating for significant periods	Chevron	Submit a report to the SCAQMD that documents Chevron's evaluation of the availability of retrofit technologies for large construction equipment.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction
AQ-8/Identify construction areas within the refinery where electricity is not available on a site plan and specify in construction contracts that diesel or gasoline welders are only allowed in those areas.	Chevron	Maintain records of where gasoline or diesel welders are used.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction 4. Throughout construction

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-9/Identify construction areas within the refinery where electricity is not available on a site plan and specify in construction contracts that diesel or gasoline generators are only allowed in those areas.	Chevron	Maintain records of where gasoline or diesel generators are used.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction 4. Throughout construction
AQ-10/ Sweep principal paved on-site motor vehicle routes inside of the facility	Chevron	Maintain records of paved road sweeping that document which roads are swept and when.	1. SCAQMD 2. SCAQMD 3. Daily during construction
AQ-11/Water active soil excavation sites three times per day, or more frequently if needed to prevent visible emissions from soil excavation activities at the refinery boundary. Watering is not required during periods of rainfall.	Chevron	Maintain records of: 1. Dates, times and locations of watering soil excavation sites; 2. Results of observations of visible emissions at the closest downwind refinery boundary when emissions are observed at active excavation sites.	1. SCAQMD 2. SCAQMD 3. Daily during construction

**Table 1 (continued)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
AQ-12/ Use surface coatings that comply with a VOC content limit of 0.84 pounds per gallon (100 grams per liter)	Chevron	Maintain records of: 1. Purchases of surface coatings for on-site use including purchase date, manufacturer, product and VOC content; 2. Quantity of each surface coating used on-site.	1. SCAQMD 2. SCAQMD 3. Daily during construction
H-1/Perform a pre-startup safety review for those additions and modifications where the change is substantial enough to require a change in the process safety information and/or where an acutely hazardous and/or flammable material would be used. The review will be performed by personnel with expertise in process operations and engineering.	Chevron	Submit a report to the SCAQMD that documents the additions and modifications included in the pre-startup safety review and the findings and conclusions from the review.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and operations

**Table 1 (concluded)**  
**Mitigation Monitoring Plan for Chevron - El Segundo Refinery Heavy Crude Project**

<b>Mitigation Measure/Implementation Requirement</b>	<b>Party Responsible for Implementing Mitigation</b>	<b>Monitoring Action</b>	<b>1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase</b>
N-1/Locate compressors used during construction of the proposed No. 4 Crude Unit modifications south of existing process equipment or shield them with 3/4-inch thick plywood shrouds located on the north side of the compressors	Chevron	Maintain records of: 1. Dates when compressors are used for construction at the No. 4 Crude Unit; 2. Locations of compressors on a plot plan that shows the location of existing process equipment; 3. Descriptions and locations of shrouds used to reduce noise.	1. SCAQMD 2. SCAQMD 3. Daily during construction at No. 4 Crude Unit