September 2006 SCH No. 2005111057

BP CARSON REFINERY

SAFETY, COMPLIANCE AND OPTIMIZATION PROJECT

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

Executive Officer
Barry Wallerstein, D. Env.

Deputy Executive Officer
Planning, Rule Development, and Area Sources
Elaine Chang, DrPH

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

Planning and Rules Manager
Planning, Rule Development, and Area Sources
Susan Nakamura

Submitted to:
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Prepared by:
ENVIRONMENTAL AUDIT, INC.

Reviewed by: Barbara Radlein - Air Quality Specialist
Steve Smith, Ph.D. - Program Supervisor
Jeri Voge - Senior Deputy District Counsel

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Mayor, Chino
Cities Representative, San Bernardino County

EXECUTIVE OFFICER

BARRY WALLERSTEIN, D. Env.

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I. INTRODUCTION

BP is proposing a safety, compliance and optimization project at its existing Carson Refinery (Refinery). The proposed project will involve physical changes and additions to multiple process units and operations as well as operational and functional improvements within the confines of the existing Refinery. The portion of the proposed project related to enhancing safety will focus on modifications to the Coker Gas Debutanizer pressure relief valve, as well as adding equipment to the Fluid Catalytic Cracking Unit (FCCU), Fluid Feed Hydrodesulfurization (FFHDS), vapor recovery system, and flare system. The portion of the proposed project related to compliance will involve physical modifications to existing refinery units including the FCCU, FFHDS, vapor recovery system, and flare system so as to comply with multiple South Coast Air Quality Management District (SCAQMD) rules (e.g., Rule 1105.1 – PM10 and Ammonia Emissions from Fluid Catalytic Cracking Units, Rule 1118 – Control of Emissions From Refinery Flares, and Rule 1173 – Further Reductions of VOC Emissions From Storage Tanks at Petroleum Facilities) and to implement the terms of a settlement agreement between the SCAQMD and BP. Other modifications are proposed that will optimize operations relating to various existing refinery units including the FFHDS, the FCCU, the Alky Merox Unit, the Alkylation Unit, the Hydrocracker Unit, and the Sulfur Plant at the Refinery.

The proposed refinery modifications were determined to be a "project" as defined by the California Environmental Quality Act (CEQA) and Public Resources Code (PRC) §21000 et. seq.). The SCAQMD is 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.

To fulfill the purpose and intent of CEQA, the SCAQMD, as the lead agency for this project, prepared and released a Notice of Preparation and Initial Study (NOP/IS) to address the potential environmental impacts associated with the BP Carson Refinery Safety, Compliance, and Optimization Project. The NOP/IS were circulated for a 30-day comment period beginning on November 10, 2005. The NOP/IS were circulated to neighboring jurisdictions, responsible agencies, other public agencies, and interested individuals in order to solicit input on the scope of the EIR. Two comment letters were received on the NOP/IS during the public comment period. The NOP/IS formed the basis and focus of the technical analyses in the Draft EIR. The following environmental issues were identified in the NOP/IS as potentially significant and were further addressed in the EIR: Air Quality, Hazards and Hazardous Materials, Noise, and Transportation/Traffic. The NOP/IS concluded that there would be no significant adverse impacts on aesthetics, agriculture resources, biological resources, cultural resources, energy, geology and soils, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, and solid and hazardous waste. A copy of the NOP/IS is included in Appendix A of the Final EIR.

The Draft EIR for the BP Safety, Compliance, and Optimization Project was released for a 45-day public review and comment period from June 20, 2006 to August 3, 2006. No comment letters were received during the comment period for the Draft EIR. Subsequent to the release of the Draft EIR, additional engineering review of the permit application was completed that resulted in minor changes to fugitive components (e.g., the number of valves, pumps, flanges, etc.) and related air emissions. Changes to the proposed project were evaluated and minor modifications have been made to the Draft EIR such that it is now a Final EIR. However, none of the modifications alter any conclusions reached in the Draft EIR, or 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. The environmental disciplines that were determined to have potentially significant impacts, and were further analyzed in the EIR, included air quality, hazards and hazardous materials, noise, and transportation and traffic. After further environmental analyses, the environmental resources where significant adverse environmental impacts would occur after implementation of mitigation measures were air quality and hazard and hazardous materials. Based on the analysis in the EIR, impacts on noise and transportation and traffic were determined not to be significant. Accordingly, both 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 consists of an NOP/IS (November 8, 2005), a Draft EIR (June 2006), a Health Risk Assessment (Volume II) (June 2006), and a revised Health Risk Assessment (August 2006). The Final EIR includes a project description, the environmental setting, environmental impacts and mitigation measures, cumulative impacts, project alternatives, a hazards analysis (Appendix D of the Final EIR), and a traffic analysis (Appendix E of the Final EIR). All documents comprising the Final EIR for the proposed project are available at the SCAQMD, 21865 Copley Drive, Diamond Bar, California, 91765. These documents can also 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 for approval a proposed project that has one or more significant adverse effects, a public agency must make one or more written findings for each significant adverse effect, 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 the Statement of Findings, Statement of Overriding Considerations and, pursuant to CEQA Guidelines §15097, a Mitigation, Monitoring and Reporting Plan.

II. SUMMARY OF THE PROPOSED PROJECT

The proposed project modifications are outlined in this section. All components of the proposed project focus on enhancing safety, achieving compliance, and optimizing the operations of the existing Refinery. Subsequent to the release of the Draft EIR, additional engineering review of the SCAQMD permit applications for certain refinery unit modifications was completed that resulted in minor changes to fugitive component counts and related air emissions. The details of these changes are provided in Appendix B of the Final EIR.

A. MODIFY EXISTING FLUID CATALYTIC CRACKING UNIT

The FCCU processes heavier feedstocks, known as gas oils, which are then upgraded into lighter components used for gasoline blending. The proposed project will involve several changes to the FCCU and related systems, such as required modifications to comply with Rule 1105.1 and other proposed changes that will improve the operational efficiency of the FCCU. To comply with the PM10 and ammonia emissions standards in Rule 1105.1, BP operators are proposing to replace their existing flue gas air pollution control system for the FCCU, which consists of two dry electrostatic precipitators (ESPs), with one new dual chamber ESP.

In addition, other proposed modifications to the FCCU will involve changes in piping, heat exchangers, pumps, as well as modifications to the internal configuration of the FCCU vessels. The overall impact of these modifications will not increase the capacity of the FCCU. Modifications to three systems of the FCCU are proposed including the Gas Plant, the Preheat, and the Disengager Reactor Modifications. The Gas Plant modifications will mainly involve improvements to heat exchangers, pumps, and piping. Modifications proposed to the Absorber Overhead Cooler, Absorber Bottoms Reboiler, Rerun Overhead Condensers, Rerun Overhead Product Coolers, and replacement of the Rerun Overhead Pumps would allow recovery of more FCC gasoline. The Feed Preheat Modifications mainly involve improvements to heat exchangers and piping to improve heat recovery and increase feed preheat temperature. The Disengager Reactor modifications would upgrade the Rough Cut Cyclone gas outlet tubes to reduce internal reactor erosion.

B. INSTALL NEW FLUID FEED HYDRODESULFURIZATION REACTOR

BP currently has one FFHDS reactor that removes sulfur compounds from the feed to the FCCU to produce lower sulfur end products as well as lower stack emissions. BP is proposing to install a second FFHDS reactor to run in parallel with the existing FFHDS reactor so that the FFHDS can run for longer periods of time between turnarounds. The proposed project will also allow the FFHDS to remove more sulfur from the feed, resulting in a lower sulfur product that is fed to the FCCU.

C. MODIFY EXISTING ALKY MEROX UNIT

The purpose of the Alky Merox unit is to remove sulfur-containing compounds from the olefin feed streams to the Iso-Octene and Alkylation units, and therefore, produce lower sulfur gasoline blending component products from the Iso-Octene and Alkylation Units. Currently, the Alky Merox unit does not have the capability of processing all of the olefin streams produced at the Refinery. Producing lower sulfur gasoline is desirable because low sulfur gasoline results in fewer sulfur oxide emissions from mobile sources that use the fuel, plus it complies with local, state and federal sulfur content limitations for gasoline.

The current capacity of the Alky Merox unit is limited to processing approximately 600 barrels per hour. Olefins are fed through the Extractor to the Water Wash Tower. Sour olefins are fed to the extractor to reduce the concentration of sulfur containing compounds. The capacity of the Extractor is also currently limited to processing 600 barrels per hour. The proposed modifications to the Alky Merox unit will increase the Extractor capacity to 1,000 barrels per hour, which will be large enough to process all of the olefins at the Refinery. The proposed modifications will also include installing new vessels, piping, and other ancillary equipment.

D. MODIFY EXISTING ALKYLATION UNIT

The main function of the Alkylation Unit is to convert olefins into alkylate. BP plans to purchase additional olefin feed as part of the proposed project. Also, as a result of the proposed modifications to the FCCU, more olefin is expected to be produced. BP expects that the existing Iso-Octene unit will be capable of processing a portion of the additional olefin, and the Alkylation Unit will process the balance. To handle the processing of additional olefin, BP proposes to increase the olefin feed throughput to the Alkylation Unit by approximately 15 percent. The proposed modifications to the Alkylation unit will primarily affect piping, pumps, heat exchangers, and other ancillary equipment. Additionally, modifications are proposed to the Deisobutanizer, Debutanizer, and Depropanizer towers to improve capacity, efficiency, and product quality.

E. MODIFY EXISTING HYDROCRACKER UNIT

The Hydrocracker Unit processes high sulfur diesel feeds into both ultra-low sulfur diesel and gasoline blending components. The throughput of the Hydrocracker Unit is currently limited by the availability of the fractionation gas plant, the capacity of the distillation tower, and by other product cooling constraints. Hydraulic constraints in the reaction section of the Hydrocracker Unit also limit the feed rate. An increased fractionation gas plant capacity will be achieved by converting the lean oil absorber tower to a low pressure diethanolamine (DEA) scrubber tower so that the fractionator overhead compressor's feed gas can be processed into fuel gas. BP proposes to replace the liquid/gas distributor trays in the reaction section with new, state of the art trays. This proposed change will result in more efficient use of the catalyst and allow higher feed rates. BP proposes to increase the feed throughput to the Hydrocracker unit by approximately 10 percent by addressing these limitations. The proposed project also includes modifying piping, controls, and ancillary equipment.

F. MODIFY EXISTING COKER GAS DEBUTANIZER PRESSURE RELIEF VALVE

To comply with Rule 1173, BP is proposing to replace the pressure relief valve on the Debutanizer Tower and route the future emergency gas releases to an existing flare.

G. MODIFY EXISTING SULFUR PLANT

BP's existing Sulfur Plant currently converts hydrogen sulfide and ammonia-rich acid gases into elemental sulfur, water, and nitrogen. The current capacity of the Sulfur Plant is permitted to produce 449.33 long tons per day (LT/D) of elemental sulfur from the four Claus Units (A, B, C and D). The proposed modifications will help the sulfur plant to consistently operate at higher production rates closer to, without exceeding, the permitted capacity.

BP proposes to increase the production rates without exceeding the permitted capacity of the Sulfur Unit with the following modifications:

- Change the solvent in the main amine system from DEA to methyl diethanolamine (MDEA) to allow more amine circulation since MDEA is effective at higher concentrations.

- Change the "C" Claus Unit to allow oxygen enrichment up to 28 percent.

- Add oxygen injection to "D" Claus Unit.

H. MODIFY EXISTING VAPOR RECOVERY SYSTEMS

BP's existing vapor recovery system collects vent gases from process units and tanks, which are then treated to remove sulfur before being routed to various flares throughout the Refinery. The vapor recovery system is comprised of multiple compressors and has a combined maximum compression capacity of 355,000 standard cubic feet per hour (SCFH). BP is currently operating below this level because one vapor recovery compressor (the No. 7 unit) permitted at 95,000 SCFH is not functional.

As part of the March 2005 settlement agreement between the SCAQMD and the BP Carson Refinery, BP agreed, as part of the Supplemental Environmental Project (SEP), to increase the capabilities of the existing vapor recovery system to collect and treat vent gases that would otherwise vent to the atmosphere or the flares, with a priority placed on maximizing collection of vent gas streams with high sulfur content. The gases that vent to the Coker Flare were selected for control due to their higher sulfur content, which will maximize the reduction of sulfur emissions. The SEP requires BP to increase the total vapor compression capacity by a minimum of 195,000 SCFH. BP proposes to accomplish part of this obligation by replacing the No. 7 vapor recovery compressor with a new 95,000 to 140,000 SCFH vapor recovery compressor, intercooler, and knockout drum. This will result in a compression capacity in the Vapor Recovery Unit of 400,000 SCFH which is 45,000 SCFH beyond the original rating of 355,000 SCFH.

In addition, the SEP requires BP to invest at least $20 million to achieve the remaining 100,000 SCFH of vapor compression capacity. BP intends to apply the $20 million by proposing the following improvements: (1) install at least 100,000 SCFH of reciprocating compressor capacity for flare gas recovery with exchangers, knockout drums, and a new electrical power supply; (2) install a new water seal on the Coker Flare to allow recovery of flare gas; (3) install a flow meter on the Coker Flare to measure the net flow of gas to the flare; (4) install a tie-in from the compressor discharge to the Coker Gas Plant Amine Treating Unit to remove hydrogen sulfide from the recovered gas; (5) upgrade the existing vapor recovery caustic gas treating system to improve its ability to handle peak loads; (6) add interstage cooling and knock out drums to the existing No. 5 and No. 6 Vapor Recovery Compressor systems to increase the availability of the systems; and (7) add pressure, oxygen, and flow measurement instruments to monitor the operation and performance of the vapor recovery system.

This SEP will reduce emissions from the Refinery by increasing the capability of the Refinery's existing vapor recovery system to collect and treat vent gases and will add the capability to collect and treat gases that previously would vent to the Refinery's flares.

I. INSTALL NEW NORTH AREA FLARE GAS RECOVERY SYSTEM

BP is proposing modifications to the existing North Area Flares to comply with Rule 1118 - Control of Emissions from Refinery Flares. The proposed modifications will recover flare gas from the flares located in the north area of the Refinery (e.g., FCCU, Hydrocracker Unit, FFHDS, and No. 5 flares). To reduce the overall sulfur emissions

from the Refinery, BP proposes to install the following: (1) up to two compressors with a compression capacity between 70,000 and 150,000 SCFH each and the associated coolers and knock out drums; (2) new piping connections from the FCCU, Hydrocracker Unit, FFHDS, and No. 5 flares; (3) water seals for the FCCU and Hydrocracker Unit flares to enable flare gas recovery; (4) a tie-in to the existing amine regeneration system for the removal of hydrogen sulfide; and (5) electrical, controls, and utilities required to operate the system.

J. MODIFY PRESSURE RELIEF DEVICES

BP has been reviewing the compliance of certain pressure relief devices (PRDs) with the SCAQMD permit conditions. The SCAQMD has indicated for some PRDs that currently vent to atmosphere, BP will need to connect these PRDs to a closed system for vapor recovery. Currently, BP will be required to connect a total of 13 PRDs to a closed system in the FCCU, Reformer, Crude, Alkylation, Alky Merox, Supercritical Fractionation and Isomerization Area (SFIA), 52 Vacuum Unit, and Coker Unit. In all cases, the modifications will involve the installation of piping so that in the event of an overpressure situation, the emissions from the PRD will be controlled instead of venting to the atmosphere. BP is currently in negotiations with the SCAQMD on the extent of these requirements so detailed engineering has not been completed on most of these projects. The environmental impacts of this project are expected to be beneficial, resulting in emission decreases by controlling a currently uncontrolled source of emissions.

III. 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.

A. POTENTIALLY SIGNIFICANT IMPACTS WHICH CANNOT BE MITIGATED TO A LEVEL OF INSIGNIFICANCE

The Final EIR identified two potentially significant adverse environmental impacts that cannot be reduced to a level of insignificance: (1) air quality emissions associated with construction activities; and (2) hazards associated with project operation.

1. Construction emissions of carbon monoxide (CO), volatile organic compounds (VOC), and nitrogen oxides (NOx) would exceed SCAQMD significance thresholds during maximum construction activity periods.

Finding: The SCAQMD makes the following findings with respect to this air quality 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 lessen the significant impact to air quality during construction.

Explanation: The construction emissions of CO, VOCs, and NOx are expected to exceed the applicable SCAQMD significance thresholds during peak construction activities (see Final EIR pages 4-1 through 4-22). Twelve mitigation measures to minimize these impacts were imposed on the proposed project and are set forth in this Mitigation, Monitoring and Reporting Plan.

Though these measures will not reduce construction emissions below the SCAQMD significance thresholds, no other feasible mitigation measures or project alternatives have been identified. Further, the construction emission calculations were based on conservative assumptions and will 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 construction. Finally, the localized significance threshold analysis indicates that no significant change in local ambient air quality for nitrogen dioxide (NO_2), CO or PM10 is expected from construction activities associated with the proposed project. Therefore, no localized significant impacts on air quality during construction are expected.

2. Operation impacts associated with modifications to the FCCU, Alky Merox Unit, Alkylation Unit and Hydrocracker Unit 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 proposed 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 the City of Carson Fire Department; 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 FCCU, Alkyl Merox Unit, Alkylation Unit and Hydrocracker Unit (see Final EIR, pages 4-23 through 4-28). The hazard analysis is based on conservative assumptions

that likely overestimate the hazard impacts. Actual impacts are expected to be less.

BP operators must comply with a number of rules and regulations that serve to minimize the potential significant adverse impacts associated with hazards at the facility. However, in addition to these requirements, there are no other feasible mitigation measures that could reduce significant adverse hazard impacts to insignificance.

3. Cumulative construction emissions of CO, VOC, NOx, SOx, and PM10 associated with the BP proposed project and other cumulative projects could result in significant air quality impacts.

Finding: The SCAQMD makes the following findings with respect to this air quality impact: (1) mitigation measures were incorporated into the proposed 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; (3) no other feasible mitigation measures are available to lessen the significant impact to air quality during construction; and (4) feasible mitigation measures have not been identified for other cumulative projects.

Explanation: The cumulative construction emissions of CO, VOC, NOx, SOx and PM10 are expected to exceed the applicable SCAQMD significance thresholds (see Final EIR pages 5-11 through 5-13). Twelve mitigation measures to minimize these impacts were imposed on the proposed BP project and are set forth in this Mitigation, Monitoring and Reporting Plan.

Though these measures will not reduce construction emissions below the SCAQMD significance thresholds, no other feasible mitigation measures or project alternatives have been identified. BP operators do not have control or the authority to control construction emissions from the other non-BP operated projects that were considered in the cumulative impacts analysis. For the cumulative projects listed where the SCAQMD is the lead agency, feasible mitigation measures will be imposed. However, most of the cumulative projects identified have another entity or agency (e.g., the City of Carson) to act as lead agency and implement feasible mitigation measures. The construction emission calculations were based on conservative assumptions, assumed that all related projects were under construction at the same time, and will 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 construction.

4. Cumulative operational emissions of VOC associated with the BP proposed project and other cumulative projects could result in significant air quality impacts.

Finding: The SCAQMD makes the following findings with respect to this air quality impact: (1) mitigation measures were not incorporated into the proposed BP project because the proposed project operational emissions did not exceed the SCAQMD significance thresholds; and (2) feasible mitigation measures have not been identified for the other cumulative projects.

Explanation: The cumulative operational VOC emissions are expected to exceed the applicable SCAQMD significance thresholds (see Final EIR pages 5-13 through 5-15). The emissions from the BP proposed project have been limited to the extent feasible through the use of best available control technology (BACT). BACT, by definition, is the cleanest commercially available control equipment or technique. The use of BACT controls emissions to the greatest extent feasible for new and modified emission sources. In addition, emission offsets were required for new and modified permitted emission sources associated with the BP Project by SCAQMD Regulation XIII and/or Regulation XX. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources. In addition, the fugitive components will be required to be included in an inspection and maintenance program, as required by SCAQMD Rule 1173, to ensure that the equipment is properly maintained. Therefore, additional VOC emission reductions (through mitigation measures) from fugitive components associated with the proposed project equipment are not feasible. Finally, the emission estimates for the BP proposed project were conservative and did not include the expected VOC emission reductions associated with the enhanced vapor recovery modifications or the modifications to the North Area Flare to comply with SCAQMD Rule 1118.

Stationary sources of emissions that require permits for the other cumulative projects will also be subject to BACT requirements, offset requirements, and inspection and maintenance programs, as applicable, though these measures may not reduce cumulative operational VOC emissions below the SCAQMD significance thresholds. No other feasible mitigation measures have been identified.

B. POTENTIALLY SIGNIFICANT IMPACTS WHICH CAN BE MITIGATED TO A LEVEL OF INSIGNIFICANCE

1. Construction traffic from the proposed project is expected to result in a significant adverse impact at the intersections of Wilmington Avenue/223rd Street, Alameda Street/Sepulveda Boulevard, 223rd Street/Alameda Street/Wardlow Access, and the BP Refinery Gate 60/223rd Street, if the work shift ends during the evening peak hours.

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 traffic impacts to less than significance; and (2) such mitigation measures are within the jurisdiction of the SCAQMD.

Explanation: The proposed project could result in significant adverse traffic impacts during the construction phase. A mitigation measure will be imposed that requires BP to avoid starting or ending the shift during the peak traffic hours of 7:00 am to 8:00 am and 4:30 pm to 5:30 pm. The effect of this mitigation measure is that workers will avoid traveling on local streets during peak traffic hours such that the potentially significant adverse traffic impacts will be reduced to less than significant.

C. IMPACTS ASSOCIATED WITH ALTERNATIVES

1. Project alternatives that would reduce the potentially significant impacts are not available.

Finding: The SCAQMD finds that the identified alternatives would not achieve the goals of the proposed project and would not result in 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 6-1 through 6-13).

Alternatives evaluated in the EIR for the proposed project include the No Project Alternative, Compliance Projects Only Alternative, and Alternative Control Strategies for SCAQMD Rule 1105.1 Compliance. No feasible alternatives have been identified that would reduce the proposed project's environmental impacts to less than significant while achieving the objectives of: (1) Complying with Rule 1105.1, Rule 1118 and Rule 1173; (2) Complying with the settlement agreement dated March 2005 between the SCAQMD and BP that required refinery modifications to reduce refinery emissions; (3) Improving the efficiency, availability and performance of vapor recovery systems; (4) Ensuring that there is no increase in the annual average concentration of total reduced sulfur in the Refinery by improving the operational efficiency and optimizing operations of the FCCU, FFHDS Unit, Alky Merox Unit, Alkylation Unit, Hydrocracker Unit, and Sulfur Plant; and (5) Producing additional quantities of low sulfur gasoline, ultra low sulfur diesel, and jet fuel without increasing the crude throughput capacity of the BP Carson Refinery. Consequently, the proposed project is preferred over the alternatives because it will ensure that BP will be able to achieve the primary objectives of the proposed project.

D. STATEMENT OF FINDINGS CONCLUSION

Changes or alterations have been incorporated into the proposed project to mitigate or minimize the potentially significant adverse environmental effects associated with certain impacts, i.e., air quality impacts during construction, and hazards and hazardous material impacts associated with operations. No additional feasible mitigation measures or alternatives to the proposed project, 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 while meeting the objectives of the proposed project.

All feasible mitigation measures identified in the Final EIR have been adopted as set forth in the Mitigation, Monitoring and Reporting Plan. The analysis in the Final EIR also indicates that the alternatives would not reduce to insignificant levels the significant impacts identified for the proposed project.

The proposed project is intended to comply with various SCAQMD rules and regulations, generally reduce air emissions in accordance with a March 2005 Settlement Agreement between BP and the SCAQMD, improve the efficiency, availablity and performance of vapor recovery systems, enhance safety associated with refinery operations, improve and optimize certain refinery operations, and produce additional quantities of low sulfur gasoline, ultra low sulfur diesel and jet fuel. Based on these criteria, the SCAQMD finds that the proposed project achieves the best balance between minimizing potential adverse environmental impacts and achieving the overall 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 proposed project may be found in the SCAQMD's Clerk of the Board's Office located at SCAQMD Headquarters in Diamond Bar, California.

IV. STATEMENT OF OVERRIDING CONSIDERATIONS

If significant adverse impacts of a proposed project remain after incorporating 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 proposed 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), a 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 previously in this attachment, 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 legal requirements and benefits of the proposed project outweigh the potentially significant unavoidable adverse impacts for the following reasons:

1. The proposed project will allow BP to install new equipment and modify existing equipment to comply with SCAQMD Rule 1105.1, Rule 1118 and Rule 1173. Compliance with these SCAQMD rules and regulations is expected to result in a decrease in overall emissions from the BP Refinery following the completion of construction activities.

2. Compliance with SCAQMD Rule 1105.1 will reduce particulate emissions from the FCCU due to the installation of new air pollution control equipment (new ESPs) at the BP Carson Refinery.

3. Compliance with SCAQMD Rule 1118 will reduce emissions from flaring by capturing gas flows to the flare in the flare gas recovery system. This will reduce the combustion of gases from the flare.

4. Pressure relief devices in the Coker Gas Debutanizer Unit will be tied into the flare system improving the safety of the system and reducing potential VOC emissions, in compliance with SCAQMD Rule 1173.

5. In March 2005, the Refinery and the SCAQMD entered into a settlement agreement that required refinery modifications to reduce refinery emissions. The proposed project includes the necessary refinery modifications to comply with terms of the settlement agreement (e.g., additional control of fugitive emissions).

6. Following completion of the proposed project, the BP Refinery will increase its capacity to produce low sulfur gasoline by about 20,000 gallons per day, without an increase in crude throughput. The use of low sulfur gasoline results in lower emissions of sulfur oxide and particulate matter from vehicles that use the fuels.

7. The proposed project will increase the production of ultra low sulfur diesel and jet fuel (less than 10 ppm sulfur) by about 29,000 gallons per day and 121,800 gallons per day, respectively, without increasing the crude throughput.

8. The proposed project will phase out the use of DEA (a toxic air contaminant) and replace it with MDEA, which is not a toxic air contaminant, thus reducing potential toxic air contaminant emissions from the Refinery.

9. Although the proposed project is expected to increase construction emissions in the short term, the proposed project is expected to result in long-term emissions benefit by reducing overall emissions from the refinery's operation. As a result, the proposed project is not expected to hinder progress in attaining all state and federal AAQS.

10. 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. The hazard impacts would only occur in industrial, not residential, areas where safety equipment and emergency response procedures are already in place.

In balancing the benefits of the overall project described above with the proposed project's unavoidable and significant adverse environmental impacts, the SCAQMD finds that the proposed 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 proposed project's potential adverse impacts.

V. MITIGATION, MONITORING AND REPORTING PLAN

When a public agency conducts an environmental review of a proposed project in conjunction with approving a project, the lead agency shall adopt a program for monitoring or reporting on the measures it has imposed to mitigate or avoid significant adverse environmental effects per the requirements of CEQA Guidelines §15097 and Public Resources Code §21081.6. PRC §21081.6 states in part that When making the findings required by §21081(a) or when adopting a ND pursuant to §21080(c)(2):

> "the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. 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 a responsible agency or a public 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."

Enforcement of the mitigation, monitoring and reporting requirements described in this plan is primarily the responsibility of the SCAQMD as the lead agency under CEQA. The mitigation measures discussed herein are primarily the responsibility of the operators of the BP Carson Refinery to implement. To certify compliance, documentation that mitigation measures have been implemented will be maintained by the BP operators to ensure potential environmental impacts are mitigated to the greatest extent feasible.

A. MITIGATION MEASURES

1. Air Quality Impacts and Mitigation Measures

Construction-related emissions of CO, VOCs, and NOx would exceed the applicable SCAQMD significance thresholds for daily construction emissions. Emission sources include worker vehicles, heavy construction equipment, grading activities, and emissions from coating activities. The mitigation measures identified in the following discussion are intended to minimize the emissions associated with these emission sources. No feasible mitigation measures have been identified to reduce 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."

On-Road Mobile Sources:

A-1 Develop a Construction Emission Management Plan for the proposed project. The Plan shall include measures to minimize emissions from vehicles including, but not limited to consolidating truck deliveries, prohibiting truck idling in excess of five minutes, description of truck routing, description of deliveries including hours of delivery, description of entry/exit points, locations of parking, and construction schedule.

Off-Road Mobile Sources:

A-2 Prohibit trucks from idling longer than five minutes at the Refinery.

A-3 Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment to the extent feasible.

A-4 Maintain construction equipment tuned up and with two to four degree retard diesel engine timing.

A-5 Use electric welders instead of gas or diesel welders in portions of the Refinery where electricity is available.

A-6 Use on-site electricity rather than temporary power generators in portions of the Refinery where electricity is available.

A-7 Prior to construction, BP operators will evaluate the feasibility of retrofitting the large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., will be evaluated. Such technologies will be required if they are commercially available and can feasibly be retrofitted onto construction equipment.

A-8 Diesel-powered construction equipment will be fueled with an emulsified diesel fuel or an alternative diesel fuel throughout construction of the proposed project, if commercially available.

A-9 Use low sulfur diesel (as defined in SCAQMD Rule 431.2).[1]

A-10 Suspend use of all construction activities that generate air pollutant emissions during first stage smog alerts.

PM10 Emissions from Grading, Open Storage Piles, and Unpaved Roads:

A-11 Develop a fugitive dust emission control plan. Measures to be included in the plan include, but are not limited to the following: (1) water active construction site three times per day, except during periods of rainfall. Watering construction sites two times per day complies with SCAQMD Rule 403 and provides about a 50 percent emission reduction. Watering construction sites three times per day will reduce PM10 emissions by an additional 18 percent (total control of 68 percent). These control efficiencies were reflected in the project emission calculations so no further emission reduction credit has been taken into account herein; (2) enclose, cover, water twice daily, or apply approved soil binders according to manufacturer's specifications to exposed piles (i.e., gravel, dirt and sand) with a five percent or greater silt content. Implementation of this mitigation measure would reduce PM10 emissions 30 to 74 percent (SCAQMD, 1993); and (3) suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour. The emission reductions associated with this mitigation measure cannot be quantified (SCAQMD, 1993).

Other Mitigation Measures:

AQ-12 BP operators shall investigate measures to reduce the VOC emissions associated with the use of paints for coating the new Refinery equipment. BP operators shall investigate the feasibility of painting new Refinery equipment at the manufacturer's location prior to delivery to the site to minimize the amount of

[1] The use of low sulfur diesel became a requirement on September 1, 2006 under SCAQMD Rule 431.2 and is now considered a rule requirement rather than a mitigation measure.

paint used at the site. BP operators shall also investigate the use of SCAQMD Rule 1113 compliant coatings with a VOC content less than 3.5 pounds per gallon (420 grams per liter), including other industrial maintenance coatings (non-high temperature industrial maintenance coatings) that are limited to 0.83 pounds per gallon (100 grams per liter).

2. Air Quality Mitigation Monitoring and Reporting

Implementing Party: The SCAQMD finds that air quality mitigation measures AQ-1 to AQ-12 during construction will be implemented by BP.

Monitoring Agency: The SCAQMD has made these mitigation measures fully enforceable through a legally binding instrument, Attachment 2 for the BP Safety, Compliance and Optimization Project Declaration of Certification, signed by the BP Refinery Manager and the SCAQMD's Executive Officer. The SCAQMD through its discretionary authority to issue and enforce permits for the proposed project will ensure compliance with these mitigation measures. Mitigation monitoring and reporting will be accomplished as follows:

MMAQ-1: CONSTRUCTION EMISSION MANAGEMENT PLAN

BP operators shall develop and submit a Construction Emission Management Plan to the SCAQMD for approval prior to starting construction activities. Upon approval, BP operators shall train all personnel subject to the requirements set forth in the Construction Emission Management Plan on how to comply with the requirements in the plan, and document that training. The SCAQMD may conduct routine inspections of the site to verify compliance.

The Construction Emission Management Plan shall include all of the following: description of construction traffic control methods such as flag persons, contractor entry/exit gates, et cetera; construction schedule including hours of operation; description of truck routing; and, description of deliveries including hours of delivery.

Traffic Control

Traffic requiring entrance onto the refinery property will be directed toward any one of the multiple entry gates at the refinery, so that congestion, as well as associated air pollution, will be minimized.

Points of entry will be selected to maximize refinery security and reduce traffic-associated emissions. The Receiving Department will consider delivery items, time of delivery, in-plant congested areas, surrounding area traffic, and gate security issues when assigning a gate entry location.

On-site parking will be used to the maximum extent available. In the event that off-site parking is required, construction workers may be requested to park at the adjacent BP owned or leased property. Buses would shuttle workers to and from the project site. No on-street parking (i.e., off the refinery site) will be allowed.

Construction Schedule

In an effort to reduce traffic by construction workers, operators of the BP Carson Refinery have requested its contractors to follow a compressed workweek. Most work will be scheduled to consist of a four-day work week and a 10-hour work day. Most work will be scheduled to begin by 7:00 a.m. and end after 5:30 p.m., Monday through Friday, to further minimize traffic congestion and related emissions. In addition, some work will be scheduled during the night shift, which will begin after 6:00 p.m. and end around 4:30 a.m. Critical path work may require a deviation from the aforementioned workweek and start- and stop-times; however, deviations will be minimized.

During process unit shutdowns, extended work shifts and night shifts, scheduled six to seven days per week, are anticipated. This construction work schedule will continue to minimize the travel time during peak travel periods.

Trip Reduction Plan

No feasible mitigation has been identified for the emissions from on-road vehicle trips. CEQA Guidelines §15364 defines feasible as " . . . capable of being accomplished in a successful manner". No feasible mitigation measures for off-site motor vehicles have been identified. Health and Safety Code §40929 prohibits the air districts and other public agencies from requiring an employee trip reduction program making such mitigation infeasible.

Delivery of Equipment and Materials

BP operators will coordinate the delivery of equipment and materials to avoid peak hour traffic, whenever possible. That is, delivery of construction materials to the site will be scheduled to occur during off-peak periods (i.e., from 8:30 a.m. until 4:00 p.m. Monday through Friday). BP operators will request that equipment and material deliveries be minimized between the hours of 7:00 to 8:00 am and 4:30 p.m. to 5:30 p.m. to reduce traffic in and out of the facility during high traffic peak times. Exceptions will be made for trucks carrying time-critical materials, e.g., concrete delivery and soil hauling (which eliminates the double handling or on-site stock-piling of soil, preventing it from being moved from place to place due to lack of adequate staging area, and subsequent removal at a later time via trucks). Delivery routes and schedules will be developed pursuant to the California Department of Transportation regulations.

It will be necessary to handle a limited amount of equipment as wide or special loads. These deliveries are subject to California Department of Transportation regulations and will be coordinated with local police departments. These trips will be scheduled to avoid peak hour traffic.

MMAQ-2: PROHIBIT TRUCKS FROM IDLING LONGER THAN FIVE MINUTES AT THE REFINERY

BP operators will notify all vendors that during deliveries, truck idling time will be limited to no longer than five minutes. For any delivery that is expected to take longer than five minutes, BP operators will require the truck's operator to shut off the engine. BP operators will notify the vendors of these delivery requirements at the time that the purchase order is issued and again when trucks enter the gates of the refinery. To further ensure that drivers understand the truck idling requirement, signs will be posted at the refinery gates stating idling longer than five minutes is not permitted.

MMAQ-3: USE ELECTRICITY OR ALTERNATE FUELS FOR ON-SITE MOBILE EQUIPMENT INSTEAD OF DIESEL EQUIPMENT TO THE EXTENT FEASIBLE

BP operators shall evaluate the use of electricity and alternate fuels for on-site mobile construction equipment prior to the commencement of construction activities, provided that suitable equipment is available for the proposed project. Equipment vendors will be contacted to determine the commercial availability of electric or alternate-fueled construction equipment. Equipment that will use electricity or alternate fuels will be included in the Construction Emission Management Plan.

The potential equipment that may be considered includes:

- Electric scissor lifts
- Electric golf carts
- Bicycles
- Boom lifts

BP operators limit the number of personal and company vehicles allowed to enter the Carson Refinery beyond the parking lots. This restriction helps minimize on-site emissions and promotes the use of ride sharing and alternate fueled transportation such as bicycles and electric golf carts.

In addition to the other alternative fueled equipment, BP operators and the construction contractors will use electric boom lifts or bi-powered boom lifts when available.

MMAQ-4: MAINTAIN CONSTRUCTION EQUIPMENT, TUNED UP AND WITH TWO TO FOUR DEGREE RETARD DIESEL ENGINE TIMING

BP operators, in cooperation with the construction contractors, will maintain vehicle and equipment maintenance records for the construction portion of the proposed project. All construction vehicles must be maintained in compliance with the manufacturer's recommended maintenance schedule. BP operators will maintain their construction equipment and the construction contractor will be responsible for maintaining their equipment and maintenance records. All maintenance records for the Carson Refinery and the construction contractor will remain on-site for a period of at least two years from completion of construction.

BP operators, the construction contractor, and the equipment vendor will evaluate the practicality of retarding diesel engine timing on off-road construction equipment for the purpose of reducing emissions.

MMAQ-5: USE ELECTRIC WELDERS INSTEAD OF GAS OR DIESEL WELDERS IN PORTIONS OF THE REFINERY WHERE ELECTRICITY IS AVAILABLE.

BP operators and the construction contractor will conduct a survey of the proposed project area to assess whether the existing infrastructure can provide access to electricity, as available, within the Refinery. Construction areas within the Refinery where electricity is not available will be identified on a site plan as part of the Construction Emission Management Plan. The use of gas or diesel welders shall be prohibited in areas of the Refinery that are shown to have access to electricity. BP operators will assess the number of electrical welding receptacles available, and will indicate whether diesel generators or welders are required for the proposed project. BP operators shall include in all construction contracts the requirement that diesel welders are only allowed to operate in the portions of the Refinery as identified on the site plan as not being accessible to electric power. If gas or diesel welders are actually used, BP operators shall maintain welder records that indicate the location where welders are operated for a period of at least two years from completion of construction.

MMAQ-6: USE ON-SITE ELECTRICITY RATHER THAN TEMPORARY POWER GENERATORS IN PORTIONS OF THE REFINERY WHERE ELECTRICITY IS AVAILABLE.

The use of temporary power generators shall be prohibited in areas of the Refinery that have existing infrastructure to provide access to electricity. Construction areas within the Refinery where electricity is not available will be identified on a site plan as part of the Construction Emission Management Plan. The use of temporary power generators within these identified areas of the Refinery will be allowed. The use of temporary power generators outside of these

identified areas shall be prohibited. BP operators shall include in all construction contracts the requirement that the use of temporary power generators is prohibited in certain portions of the Refinery as identified on the site plan. BP operators shall maintain records that indicate the location where the generators are operated, if at all, for a period of at least two years from completion of construction.

MMAQ-7: PRIOR TO USE IN CONSTRUCTION, THE BP OPERATORS WILL EVALUATE THE FEASIBILITY OF RETROFITTING THE LARGE OFF-ROAD CONSTRUCTION EQUIPMENT THAT WILL BE OPERATING FOR SIGNIFICANT PERIODS. RETROFIT TECHNOLOGIES SUCH AS SELECTIVE CATALYTIC REDUCTION, OXIDATION CATALYSTS, AIR ENHANCEMENT TECHNOLOGIES, ETC., WILL BE EVALUATED. SUCH TECHNOLOGIES WILL BE REQUIRED IF THEY ARE COMMERICALLY AVAILABLE AND CAN FEASIBLY BE RETROFITTED ONTO CONSTRUCTION EQUIPMENT.

All construction equipment diesel engines greater than 100 hp 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.

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. BP 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 30 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.

During construction of the proposed project and for two years following completion of construction, BP 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.

MMAQ-8: DIESEL POWERED CONSTRUCTION EQUIPMENT WILL BE FUELED WITH AN EMULSIFIED DIESEL FUEL OR AN ALTERNATIVE DIESEL FUEL THROUGHOUT CONSTRUCTION OF THE PROPOSED PROJECT, IF COMMERICALLY AVAILABLE.

Diesel-powered construction equipment will be fueled with emulsified diesel fuel or other alternative diesel fuel throughout construction of the proposed project, as long as the fuel supplies are commercially available for purchase. The fuel must also meet the ultra low sulfur diesel criteria as defined by SCAQMD Rule 431.2. Contractors will be informed that emulsified diesel or other alternative diesel fuel will be used to fuel the on-site construction equipment as long as it is available for purchase and that the fuel must also qualify as low sulfur diesel. BP operators will work with vendors of the emulsified diesel fuel and alternative diesel fuel to assure that they also qualify as low sulfur diesels.

CARB has established an interim procedure for verifying emission reductions attributable to alternative diesel fuels and has verified the following four alternative diesel fuels: 1) PuriNOx diesel fuel developed by Lubrizol Corporation; 2) Aquazole fuel developed by Total FinaElf; 3) emulsified diesel developed by Clean Fuels Technology; and, 4) O_2Diesel fuel developed by O_2Diesel Inc. PuriNOx fuel has been verified to reduce NOx emissions by 14 percent and particulate emissions by 62.9 percent. Aquazole has been verified to reduce NOx emissions by 16 percent and particulate emissions by 60 percent. Clean Fuels water emulsified diesel fuel has been verified to reduce NOx emissions by 15 percent and particulate emissions by 58 percent. O_2Diesel fuel has been verified to reduce NOx emissions by 1.6 percent and particulate emissions by 20 percent.

The use of alternative diesel fuels is considered to be a feasible mitigation measure, provided that the fuels are commercially available for purchase. PuriNOx has been commercially available in southern California and has been used on a previous construction projects at the BP Carson Refinery. Lubrizol has

indicated that it will no longer manufacture PuriNOx after January 2007; however, PuriNOx could continue to be sold for use in southern California if another company purchases the license. The other manufacturers of emulsified diesel fuels (Clean Fuels and Aquazole) have indicated that these materials are not commercially available in southern California. The manufacturers of Clean Fuels Technology emulsified diesel fuel (Ecoenergy Solutions) indicated that they have plans to make their fuel commercially available by the end of 2006. Currently Aquazole, which is distributed by Total, has no plans to make its fuel available in southern California. O_2Diesel is commercially available as it is distributed by PetroDiamond in the Port of Long Beach. However, for any construction equipment that is fueled with O_2Diesel, the fuel caps must be replaced because the Reid Vapor Pressure (RVP) of O_2Diesel fuel is higher than typical diesel fuel.

Construction for the proposed project is expected to begin in October 2006. Therefore, PuriNOx will be available for the first three months of the construction schedule. In the fourth quarter of 2006, BP operators will determine the availability of PuriNOx or another alternative diesel fuel for the construction period from January 2007 through the end of the project. To consider an alternative to PuriNOx, several possibilities could occur which include: 1) the purchase and use of another similar emulsified diesel fuel; 2) the purchase and use of another alternative, but not emulsified, diesel fuel; or, 3) the use of another technology or fuel that may become available. BP operators will coordinate with the vendors of alternative diesel fuel to verify that the fuel qualifies as low sulfur (i.e., 15 ppm sulfur) diesel pursuant to Rule 431.2.

There are several options available to BP for storage and dispensing of emulsified diesel fuel. BP operators could use an existing fuel storage tank, located at it's Carson Refinery to store and refuel mobile construction equipment for the proposed project. BP operators also may use temporary storage tanks supplied by a contractor who has a "various locations permit" to store emulsified diesel fuel. BP may also use small exempt tanks to store fuel. Finally, BP operators may have the distributor of the emulsified diesel fuel directly refuel most or all of the construction equipment, especially large equipment such as cranes.

Prior to the start of construction for the proposed project, BP operators will verify the availability of alternative diesel fuels and determine that the construction equipment operates properly when fueled with an alternative diesel fuel. Minor modifications to the construction equipment will be made, if necessary. BP operators will establish a contractual arrangement with a supplier to provide sufficient quantities for use during construction of the proposed project of PuriNOx diesel fuel or another alternative diesel fuel, provided that the fuel has received interim verification by the California Air Resources Board. BP operators expect that an alternative diesel fuel will be used on most, if not all, major construction equipment throughout the proposed project. Records on the use of emulsified diesel fuel will be maintained as required by Tables 2, 3, and 4.

MMAQ-9: USE ULTRA LOW SULFUR DIESEL (AS DEFINED IN SCAQMD RULE 431.2).

BP operators will coordinate with the vendors to verify that all diesel fuel used for the proposed project qualifies as ultra low sulfur (i.e., 15 ppm sulfur) diesel pursuant to Rule 431.2.

MMAQ-10: SUSPEND ALL CONSTRUCTION ACTIVITIES THAT GENERATE AIR EMISSIONS DURING FIRST STAGE SMOG ALERTS.

If and when any first stage smog alert or greater occurs, BP operators will record the date and time of each alert, will suspend all construction activities that generate emissions, and will record the date and time when the use of construction equipment and construction activities are suspended. This log shall be maintained on-site for a period of at least two years from completion of construction.

MMAQ-11: DEVELOP A FUGITIVE DUST EMISSION CONTROL PLAN.

BP operators will develop and submit to the SCAQMD for approval a fugitive dust emission control plan prior to beginning construction activities. The plan must include a log that tracks the site watering activities and identifies the time and day when winds exceed 25 mph. The log must include the day, time and location of the active construction sites and unpaved roads that were watered. Watering of active construction sites will be completed three times a day. However, construction sites will not be watered during periods of rainfall. Signs indicating a maximum speed limit of 15 miles per hour shall be posted by BP operators between the truck entrance to the Refinery and the equipment staging areas. The log will be maintained on-site for a period of at least two years from completion of construction.

MMAQ-12: BP OPERATORS SHALL INVESTIGATE MEASURES TO REDUCE THE VOC EMISSIONS ASSOCIATED WITH THE USE OF PAINTS FOR COATING THE NEW OR MODIFIED EQUIPMENT. BP OPERATORS SHALL INVESTIGATE THE FEASIBILITY OF PAINTING NEW EQUIPMENT AT THE MANUFACTURER'S LOCATION PRIOR TO DELIVERY TO THE SITE TO MINIMIZE THE AMOUNT OF PAINT USED AT THE SITE. BP OPERATORS SHALL USE PAINTS WITH VOC CONTENT LESS THAN 3.5 POUNDS PER GALLON.

BP operators shall review the use of coating materials required to protect the new and modified equipment. The VOC content of coatings used for the proposed project will be evaluated and, coatings with a VOC content of less than 3.5

pounds per gallon will be used. BP operators shall coordinate the painting of equipment so it is painted, to the maximum extent feasible, prior to delivery to the site to minimize the amount of paint used at the site. BP shall maintain records on-site on the amount of paint actually used at the site for a period of at least two years from completion of construction.

Other mitigation measures were considered but were rejected because they would not further mitigate the potential significant impacts of the proposed project. These mitigation measures included: 1) provide temporary traffic control during all phases of construction activities (traffic safety hazards have not been identified); 2) implement a shuttle service to and from retail services during lunch hours (most workers eat lunch on-site and lunch trucks visit the construction site); 3) use methanol, natural gas, propane or butane-powered construction equipment (equipment is not CARB-certified or commercially available); 4) pave unpaved roads (most refinery roads are paved).

3. Hazard Impacts and Mitigation Measures

The proposed project could result in significant adverse impacts related to the "worst-case" hazards from the FCCU, Alky Merox, Alkylation Unit and the Hydrocracker Unit. Modifications to the Hydrocracker Unit could exceed the hydrogen sulfide significance threshold. Modifications to the FCCU could exceed the pool/torch fire significance threshold. Modifications to the Alkyl Merox Unit and Alkylation Unit could exceed the significance threshold for a flash fire. The area of impact would be limited to the industrial area immediately surrounding the BP Carson Refinery.

There are a number of rules and regulations with which operators of the BP Carson Refinery has complied, or must comply with that serve to minimize the potential impacts associated with hazards at the refinery. Under federal OSHA, regulations have been promulgated that require the preparation and implementation of a Process Safety Management (PSM) Program (29 CFR Part 1910, Section 119, and Title 8 of the California Code of Regulations, Section 5189). Risk Management Plans (RMPs) are covered under the California Health and Safety Code Section 25534 and 40 CFR Part 68, and Title 1 §112(r)(7), by the Clean Air Act.

A PSM Program that meets the requirements of the regulations and is appropriately implemented is intended to prevent or minimize the consequences of a release involving a toxic, reactive, flammable, or explosive chemical. A PSM review is required as part of the proposed project. The primary components of a PSM include the following:

- Compilation of written process safety information to enable the employer and employees to identify and understand the hazards posed by the process;

- Performance of a process safety analysis to determine and evaluate the hazard of the process being analyzed;

- Development of operating procedures that provide clear instructions for safely conducting activities involved in each process identified for analysis;

- Training in the overview of the process and in the operating procedures is required for facility personnel and contractors. The training should emphasize the specific safety and health hazards, procedures, and safe practices; and

- A pre-start up safety review for new facilities and for modified facilities where a change is made in the process safety information.

An RMP is required for certain chemicals at the Refinery. The RMP consists of four main parts: hazard assessment that includes an off-site consequence analysis, five-year accident history, prevention program, and emergency response program. BP operators will review and revise the existing RMP to include the proposed project (i.e., new and modified refinery units).

4. Hazard Mitigation Monitoring and Reporting

The aforementioned measures are currently in place and will remain in place as part of the proposed project. These control measures are not direct mitigation, however, they would help minimize the potential exposures in the event of a release. No additional feasible mitigation measures have been identified over and above the extensive safety regulations that currently apply to the Refinery. Therefore, no further monitoring measures are required.

5. Transportation/Traffic Impacts and Mitigation Measures

The proposed project has the potential to generate significance adverse transportation and traffic impacts at the intersections of Wilmington Avenue/223rd Street, Alameda Street/Sepulveda Boulevard, 223rd Street/Alameda Street/Wardlow Access, and the BP Refinery Gate 60/223rd Street, if the work shift ends during the evening peak hours. The following mitigation measure is imposed to reduce traffic impacts to less than significant.

T-1 The hours for the construction work shifts shall avoid starting or ending the shift during the peak traffic hours of 7:00 AM to 8:00 AM and 4:30 PM to 5:30 PM. This will avoid workers traveling during the peak traffic hours and eliminate potentially significant traffic impacts.

6. Transportation/Traffic Impacts Mitigation Monitoring and Reporting

Implementing Party: The SCAQMD finds that transportation/traffic mitigation measure T-1 will be implemented by BP operators.

Monitoring Agency: The SCAQMD through its discretionary authority to issue and enforce permits for the proposed project will ensure compliance with these mitigation measures. Monitoring will be accomplished as follows:

MMT-1: RESTRICT WORK HOURS TO AVOID PEAK TRAFFIC CONDITIONS

Operators of the BP Carson Refinery have requested its contractors to follow a compressed workweek. Most work will be scheduled to consist of a four-day work week and a 10-hour work day. Most work will be scheduled to begin by 7:00 a.m. and end after 5:30 p.m., Monday through Friday, to further minimize traffic congestion and related emissions. In addition, some work will be scheduled during the night shift, which will begin after 6:00 p.m. and end around 4:30 a.m. Critical path work may require a deviation from the aforementioned workweek and start- and stop-times; however, deviations will be minimized.

During process unit shutdowns, extended work shifts and night shifts, scheduled six to seven days per week, are anticipated. This work schedule will continue to minimize the travel time during peak travel periods.

The hours for the first construction shift are expected to be 7:00 AM to 5:30 PM and the hours for the second shift are expected to be 6:30 PM to 5:00 AM. These work shifts will generally avoid peak traffic hours. The peak construction period of 850 workers is expected to be brief as the FCCU turnaround (scheduled for February 2008) is only expected to last about one month. About 600 workers are expected to be required for about two to three months prior to the FCCU turnaround and for about two months after the FCCU turnaround. During the rest of the construction period about 475 employees or less will be required. Therefore, the peak construction traffic conditions are expected to occur for a limited time only.

VI. CONCLUSION

During construction of the proposed project and for two years following completion of construction, BP operators will maintain records on-site of applicable compliance activities to demonstrate the steps taken to assure compliance with imposed Mitigation Measures as specified in Table 1. BP operators will be required to submit quarterly reports to the SCAQMD during the construction phase that identifies the construction progress, includes all required logs (including those required in Tables 2, 3, and 4), inspection reports, and monitoring reports, identifies any problems, and provides solutions to problems, as necessary. SCAQMD staff and BP operators will evaluate the effectiveness of this monitoring program during the construction period. If either the monitoring program or the mitigation measures as set forth above are deemed inadequate, the SCAQMD or another responsible agency may require BP operators 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 and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-1/ Schedule truck deliveries of over-sized equipment and materials for non-peak a.m. and p.m. periods (i.e., avoid deliveries between 7:00 a.m. – 8:00 a.m. and 4:30 p.m. – 5:30 p.m. periods), except for time-sensitive materials	BP	Maintain records of the date and time of each delivery of over-sized equipment and materials.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-1/Limit access to and from the construction site.	BP	Submit plot plan to SCAQMD that indicates access points to and from the construction site. Maintain records documenting that all construction contractors and subcontractors have been directed to use only specified access points.	1. SCAQMD 2. SCAQMD 3. Prior to the start of construction
AQ-1/Provide sufficient parking on the refinery site or other local site to accommodate all the construction employees, and do not permit on-street parking	BP	Submit plot plan to SCAQMD that indicates location(s) of construction employee parking and number of parking spaces available. Maintain records that all construction contractors and subcontractors have been directed to park only in designated areas and are not permitted to use on-street parking.	1. SCAQMD 2. SCAQMD 3. Prior to the start of construction

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-1/Schedule delivery of construction materials to the site to occur during off-peak periods (i.e. from 8:30 a.m. until 4:00 p.m.) and/or after 5:30 p.m. and before 7:00 a.m., except for time-sensitive materials.	BP	Maintain records of the date and time of each construction material delivery.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-1/Record number of construction personnel on-site.	BP	Maintain records of number of construction personnel on-site.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-1/Record number of delivery trucks and haul trucks	BP	Maintain records of number of delivery trucks and haul trucks entering the refinery.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-2/Notify vendors that truck operators are prohibited from idling longer than five minutes.	BP	Prepare standard notification letter that explains idling limitation during deliveries and provide copy to all vendors.	1. SCAQMD 2. SCAQMD 3. At time purchase order is issued
AQ-3/Identify on-site mobile construction equipment that will use electricity or alternate fuels.	BP	Maintain records of on-site mobile construction equipment as follows: 1. Equipment ID; 2. Equipment type; 3. Equipment manufacturer and model; 4. Engine horsepower rating 5. Power source/Fuel type.	1. SCAQMD 2. SCAQMD 3. Daily

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-3/Restrict the number of personal and company vehicles entering the Refinery beyond the parking lots.	BP	Maintain records of number of personal entering the refinery. BP will restrict drive in authorization for contractors, to only those with specific permission.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-4/Identify construction equipment that will undergo retarding of diesel engine timing for the purpose of reducing emissions.	BP	Submit to SCAQMD a letter that identifies the construction equipment that will undergo retarding of diesel engine timing as follows: 1. Equipment ID; 2. Equipment type; 3. Equipment manufacturer and model; 4. Engine horsepower rating 5. Power source/Fuel type.	1. SCAQMD 2. SCAQMD 3. Submit letter to SCAQMD prior to start of construction and quarterly thereafter
AQ-4/Schedule periodic maintenance activities for all vehicle and construction equipment, including regular tune-ups and retard diesel engine timing.	BP	Maintain records of maintenance activities for all vehicle and construction equipment.	1. SCAQMD 2. SCAQMD 3. Daily

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-5/Use electric welders where existing infrastructure to provide access to electricity is available.	BP	Submit to SCAQMD a site plan that identifies the construction areas within the refinery where electricity is not available.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction
AQ-5/Identify diesel welders used during construction.	BP	Maintain records of diesel welders used during construction that specify the following: 1. Equipment ID; 2. Welder type; 3. Manufacturer and model number 4. Date, time and duration of operation 5. Location within the refinery where operated 6. Amount of fuel used (applies to non-electric welders)	1. SCAQMD 2. SCAQMD 3. Daily
AQ-6/Use on-site electricity instead of temporary power generators where existing infrastructure to provide access to electricity is available.	BP	Submit to SCAQMD a site plan that identifies the construction areas within the refinery where electricity is not available.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-6/Identify temporary diesel power generators used, the equipment rating, the date, time and duration of operation, and the location within the refinery where operated.	BP	Maintain records of temporary power generators used during construction by identifying each unit as follows: 1. Equipment ID; 2. Generator type; 3. Equipment manufacturer and model; 4. Engine horsepower rating 5. Date, time and duration of operation 6. Type and amount of fuel used 7. Equipment location	1. SCAQMD 2. SCAQMD 3. Daily
AQ-7/Evaluate feasibility of retrofitting large off-road construction equipment. Verify that each diesel engine meets, Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines or that such an engine is not available. Verify that each construction equipment diesel engine that does not meet Tier 2 standards, meets Tier 1 standards or that such engine is not available.	BP	Submit a list to SCAQMD of all large off-road construction equipment that specifies: 1. Equipment ID; 2. Equipment description/ type; 3. Manufacturer and model number; 4. Engine horsepower rating 5. Engine emission certification 6. If not certified to Tier 2 or better, documentation that a California Tier 2 engine is not available. Alternatively, If not Certified to Tier 1, documentation that a Tier 1 certified engine is not available. Retrofit method or reason why the equipment will not be retrofitted.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and quarterly thereafter

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-7/ Equip diesel construction engines 100 hp or above, scheduled to operate one month or greater, that do not meet California Tier 1 or 2 standards with particulate filters.	BP	Submit a list to SCAQMD of all diesel-fueled equipment rated at 100 hp that do not meet California Tier 1 standards, that specifies: 1. Equipment ID; 2. Equipment description/type; 3. Manufacturer and model; 4. Engine horsepower rating 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 quarterly thereafter
AQ-8/Establish contractual arrangement for supply of emulsified diesel fuel during construction	BP	Submit letter to SCAQMD verifying contractual arrangement and any time contractual arrangements change	1. SCAQMD 2. SCAQMD 3. Prior to start of construction

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-8/Purchase emulsified diesel fuel, if commercially available.	BP	Maintain records of emulsified diesel fuel deliveries including date of each delivery, day of the week, delivery time, supplier name, and quantity delivered in accordance with Table 3.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction for initial delivery and for each delivery thereafter
AQ-8/Fuel construction equipment with emulsified diesel fuel, if commercially available.	BP	Maintain records of refueling for each piece of equipment in accordance with Table 4: 1. Equipment ID; 2. Equipment type; 3. Date refueled; and, 4. Quantity of fuel.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-9/Use ultra low sulfur diesel	BP	Maintain records of refueling for each piece of equipment in accordance with Table 4.	1. SCAQMD 2. SCAQMD 3. Daily
AQ-10/Suspend use of construction equipment during first stage smog alert or greater.	BP	Maintain records of date and time of each first stage smog alert or greater.	1. SCAQMD 2. SCAQMD 3. Per first stage smog alert or greater
AQ-11/Develop a fugitive dust emission control plan	BP	Submit fugitive dust emission control plan prior to beginning construction activities.	1. SCAQMD 2. SCAQMD 3. Prior to start of construction and accordingly to Plan

Table 1 (continued)
Mitigation, Monitoring and Reporting Plan for BP Carson Refinery

Mitigation Measure/Implementation Requirement	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
AQ-12/Reduce VOC Emissions from coating activities	BP	Maintain records (e.g., MSDSs, VOC content, and quantity used) of paint used on the project at the Refinery.	1. SCAQMD 2. SCAQMD 3. Daily
T-1/Avoid starting or ending work shifts during peak traffic hours	BP	Maintain records of hours of construction work shifts.	1. SCAQMD 2. SCAQMD 3. Daily

Table 2
BP Carson Refinery
Diesel-Fueled Construction Equipment List

Equipment ID	Type	Manufacturer	Model	Engine Horsepower	Verified for Emulsified Diesel Fuel	Modifications

Table 3
BP Carson Refinery
Emulsified Diesel Fuel Delivery Records

Delivery Date	Day of Week	Delivery Time	Supplier	Quantity Delivered (gallons)

Table 4
BP Carson Refinery
Construction Equipment Emulsified Diesel Fuel Refueling Records

Equipment ID	Type	Refueling Date	Refueling Quantity (gallons)