

December 2004

SCH No. 20030536

ULTRAMAR INC. - VALERO WILMINGTON REFINERY

Attachment I: Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring 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

CEQA and Socioeconomic Analyses

Susan Nakamura

Submitted to: **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

Prepared by:

ENVIRONMENTAL AUDIT, INC.

Reviewed By: Steve Smith, Ph.D. - Program Supervisor
Frances Keeler - Senior Deputy District Counsel
James Koizumi - Air Quality Specialist

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

WILLIAM S. CRAYCRAFT
Councilmember, City of Mission Viejo
Cities Representative, Orange County

BEATRICE J. S. LAPISTO – KIRTLEY
Mayor Pro Tem, City of Bradbury
Cities Representative, Los Angeles County, Eastern Region

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

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

BILL POSTMUS
Supervisor, First District
San Bernardino County Representative

JAMES W. 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 WALLERSTEIN, D. Env.

TABLE OF CONTENTS

ULTRAMAR ALKYLATION IMPROVEMENT PROJECT

ATTACHMENT 1: Statement of Findings, Statement of Overriding Considerations and Mitigation Monitoring Program

	Page No.
I. INTRODUCTION	1
II. SUMMARY OF THE PROPOSED PROJECT.....	3
III. STATEMENT OF FINDINGS	5
IV. STATEMENT OF OVERRIDING CONSIDERATIONS	8
V. MITIGATION MONITORING PLAN	11
VI. CONCLUSION.....	19

I. INTRODUCTION

The Ultramar Inc. - Valero Wilmington Refinery (Refinery) is proposing modifications to its existing Wilmington Refinery to eliminate the storage and use of concentrated hydrofluoric acid (HF) and make improvements to the Alkylation Unit. The Alkylation Unit at the Refinery uses concentrated HF as a catalyst for the production of alkylate, a high octane blend stock highly important to the production of California's Phase 3 Reformulated Gasoline (RFG 3). HF is an acutely hazardous material and can volatilize in the event of an accidental release and is a toxic air contaminant. On February 12, 2003, the Refinery and the South Coast Air Quality Management District (SCAQMD) entered into a Memorandum of Understanding (the MOU) requiring termination of the transport, storage and use of concentrated hydrofluoric acid at the Refinery by using a modified HF process.

Incorporation of the modified HF process requires substantial improvements to the Alkylation Unit and related units and systems of the Refinery. The MOU recognizes that these improvements must be viewed in light of the objectives of both the California RFG 3 requirements and the Governor's executive order eliminating methyl tertiary butyl ether (MTBE) as an oxygenate and octane enhancer in California reformulated gasoline. Both these actions can result in the loss of gasoline production unless other modifications are made to make up this loss in gasoline production. The Refinery will incorporate alkylation efficiency improvements and design capacity enhancements to help offset any such losses. Although the proposed project increases alkylate production capacity, the improvements will not increase annual crude oil throughput of the Refinery.

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 Alkylation Improvement Project were released for public review on September 17, 2003. 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 potentially significant adverse impacts and were analyzed in the EIR include air quality, hazards and hazardous material, hydrology and water quality, noise, and transportation/traffic.

The Draft EIR for the proposed Alkylation Improvement Project was released for a 45-day public review and comment period beginning on April 1, 2004. The comment period ended on May 18, 2004. 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 E of the Final EIR. The project description in the Final EIR was modified from that in the Draft EIR due to some

changes proposed by the applicant. The proposed project changes were evaluated and minor modifications have been made to the Draft EIR such that it is now a Final EIR. 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. The Final EIR concluded that there would be no significant adverse impacts on aesthetics, agriculture resources, biological resources, cultural resources, energy, geology/soils, land use/planning, mineral resources, population/housing, public services, recreation, and solid/hazardous waste. The environmental disciplines that were determined to have potentially significant impacts, and were further analyzed in the EIR, included air quality, hydrology and water 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 hydrology and water quality, noise and transportation and traffic were determined not to be significant. Accordingly, a Statement of Findings and Overriding Considerations is required for the potentially significant adverse air quality and hazards and hazardous materials impacts per CEQA Guidelines §15091 and §15093.

The Final EIR includes the NOP/IS (September 16, 2003), the Draft Environmental Impact Report (April, 2003), and a Health Risk Assessment (Volume II) (April, 2003). The Final EIR includes a project description, the environmental setting, environmental impacts and mitigation measures, cumulative impacts, project alternatives, a hazards analysis (Appendix C of the Final EIR), a traffic analysis (Appendix D of the Final EIR) and responses to comments (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 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 the Statement of Findings, Statement of Overriding Considerations and, pursuant to CEQA Guidelines §15097, a Mitigation Monitoring Plan.

II. SUMMARY OF THE PROPOSED PROJECT

The proposed project involves changes to the Alkylation Unit at the Ultramar Inc. - Valero Wilmington Refinery to eliminate the use of concentrated HF as a catalyst for the production of alkylate, a high octane blend stock, highly important to the production of state and federally mandated reformulated gasoline. HF is an acutely hazardous material and can volatilize in the event of an accidental release and is a toxic air contaminant. The hazards and health impacts associated with the use of HF have been well documented. Due to the high vapor pressure and low boiling point of HF, a release of liquid HF into the atmosphere will volatilize into the gas phase at typical ambient temperatures and pressures. A newly released cloud of HF has a vapor density approximately twice that of air and tends to spread as a ground-hugging cloud. Thus, an accidental release of HF would create a dense plume that would move in a passive mode with the prevailing winds in both direction and speed. An accidental release of HF could migrate off the Refinery property and expose individuals in the surrounding community.

On February 12, 2003, the Refinery and the SCAQMD entered into a MOU requiring the termination of the transport, storage and use of concentrated HF at the Refinery. The Refinery agreed to adopt a modified alkylation process that eliminates the use of concentrated HF catalyst and substituting it with the proprietary Reduced Volatility Alkylation Process (ReVAP). ReVAP incorporates a suppressant in the HF that reduces volatility in the event of an accidental release with a concurrent reduction in safety risks (i.e., distance that the HF could travel and number of persons exposed) in the surrounding area. Use of this modified process meets the SCAQMD's objectives with respect to elimination of concentrated HF.

Incorporation of ReVAP requires substantial improvements to the Alkylation Unit and related units and systems at the Refinery. The MOU recognizes that these improvements must be viewed in light of the objectives of both the California's RFG 3 requirements and the Governor's executive order directing elimination of MTBE as an oxygenate and octane enhancer in California gasoline. Both these actions can result in the loss of gasoline production. The Refinery will incorporate alkylation efficiency improvements and design capacity enhancements to help offset any such losses. Although the proposed project will increase alkylate production capacity, the improvements will not increase annual crude throughput of the refinery.

The MOU establishes a schedule for the project with enforceable deadlines. The MOU establishes a target date of December 31, 2005 for commencing operation of the modified Alkylation Unit. Additional detail describing the modifications comprising the proposed project is included in the following paragraphs.

Alkylation Unit: The existing Alkylation Unit will be modified to incorporate the ReVAP process, and enhance the alkylate production capacity to 20,000 barrels per day (bpd).

Butamer Unit: In order to provide sufficient isobutane for enhanced alkylate, the Refinery proposes to upgrade the capacity of the Butamer Unit to a capacity of 17,000 barrels per day. To accomplish this will require a combination of new components and debottlenecking of the Deisobutanizer column and related equipment.

LPG Merox Treating Unit: The LPG Butane Merox Unit capacity must be increased from a nominal capacity of 6,500 barrels per day of field butanes to treat 10,000 barrels per day. The only modification required is replacement of the existing caustic pre-wash drum with a new larger vessel.

Light Ends Recovery Units: Minor modifications to this unit will allow more butane to be desulfurized in the Naphtha Hydrotreater for feed to the Butamer Unit.

Naphtha Hydrotreater Unit: Minor modifications to this unit will be made to provide sufficient LPG feed for the modified alkylation process.

Fuel Gas Treating System: The Refinery will install a new fuel gas treating system to reduce the sulfur content of the additional fuel gas to be consumed as a result of the Alkylation Unit improvements.

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

- A new 245 million British thermal units per hour (mmBtu/hr) Steam Boiler, with selective catalytic reduction for air pollution control,
- A new 350 mmBtu/hr Hot Oil Heater, with selective catalytic reduction for air pollution control,
- Modification to Existing Heater 56-H-2 to provide additional process heat,
- Modifications to the exiting vapor recovery system to add additional components to the system.
- A new Cooling Tower,
- A new Emergency Flare,
- A new 5,000 barrel Butane Storage Sphere, and

- A new 4,000 barrel Propane Storage Bullet.
- A new ammonia tank to store aqueous ammonia in support of the new selective catalytic reduction units.

Finally, three existing storage tanks located immediately north of the Alkylation Unit and Butamer Unit will be removed to accommodate the improvements to the Alkylation Unit.

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 three potentially significant adverse environmental impacts that cannot be reduced to a level of insignificance: (1) air quality emissions associated with construction activities; (2) air quality emissions associated with project operation; and (3) hazards associated with project operation.

1. **Construction emissions of carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NOx), and particulate matter less than 10 microns in diameter (PM10) 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 lessen the significant impact to air quality during construction.

Explanation: The construction emissions of CO, VOCs, NOx, and PM10 are expected to exceed the applicable SCAQMD significance thresholds during peak construction activities (see Final EIR pages 4-4 through 4-9). Fourteen mitigation measures to

minimize these impacts were imposed on the proposed project and are set forth in the attached Mitigation Monitoring Plan.

Though 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 very 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 one-year construction phase (actually the peak construction phase).

2. **Operation emissions of VOCs (primarily from fugitive emission sources, e.g., pumps, valves, and flanges) and PM10 (primarily from new and modified combustion sources) would exceed SCAQMD significance thresholds.**

Finding: The SCAQMD finds that no feasible mitigation measures or project alternatives have been identified to lessen or minimize the potentially significant adverse operational air quality impacts associated with the proposed project.

Explanation: Operation emissions of VOCs and PM10 are expected to exceed the applicable SCAQMD significance thresholds (see Final EIR pages 4-9 through 4-13). The proposed project requires the installation of equipment (e.g., valves, flanges, and pumps) which is a large source of fugitive VOC emissions from the proposed project. VOC emissions from fugitive components are controlled through the use of best available control technology (BACT). BACT, by definition, is the cleanest commercially available control equipment. The use of BACT controls emissions to the greatest extent feasible for the new and modified emission sources. In addition, the fugitive components will be required to be included in an inspection and maintenance program 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.

The major source of PM10 emissions and another source of VOC emissions are new and modified combustion sources, i.e., new and modified heaters and boilers. BACT for PM10 control from heaters and boilers is the use of natural gas or refinery fuel gas. The Refinery will use natural gas or refinery fuel gas in the new/modified heaters and boilers. No other feasible control measures have been identified.

3. **Operation impacts associated with modifications to the Light Ends Recovery Units, the Naphtha Hydrotreater, the Merox Unit Light Ends Recovery Unit, the Butamer Unit and the new propane and butane storage tanks at the Refinery 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 the City of Los Angeles 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 Light Ends Recovery Units, the Naphtha Hydrotreater, the Merox Unit Light Ends Recovery Unit, the Butamer Unit and the new propane and butane storage tanks (see Final EIR, pages 4-26 through 4-35).

There are a number of rules and regulations that Ultramar has or must comply with that serve to minimize the potential significant adverse impacts associated with hazards at the facility. No other feasible mitigation measures were identified for the proposed project that could reduce significant adverse hazard impacts to insignificance.

C. 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 two 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 6-10).

Alternatives evaluated in this EIR included the No Project Alternative and the No Increase in Alkylation Capacity. 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 eliminating the use, storage and transport of concentrated HF and providing efficiency improvements and design capacity enhancements to help offset losses associated with the installation of the modified HF process. Consequently, the proposed project is considered the preferred project to ensure that Ultramar will be able to achieve all the objectives of the proposed project, including elimination of the use, storage, and transport of concentrated HF.

D. 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 operation, 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 program. The analysis also indicated that the alternatives would not reduce to insignificant levels the significant impacts identified for the proposed project.

The Refinery proposed project is intended to eliminate the transport, storage and use of concentrated HF and make improvements to the Alkylation Unit to continue to make fuels in compliance with CARB's RFG3 requirements. The need for cleaner burning fuels was identified in the 1990 federal Clean Air Act Amendments and the California Clean Air Act. Both the U.S. EPA and CARB have developed and mandated use of reformulated fuels with detailed specifications in severe non-attainment areas, such as the Basin, to reduce mobile source emissions. Based on these requirements, 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.

IV. 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

ATTACHMENT 1: STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING CONSIDERATIONS, AND MITIGATION MONITORING PLAN

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 legal requirements and benefits of the project outweigh the potentially significant unavoidable adverse impacts for the following reasons:

1. The proposed project involves changes to the Alkylation Unit at the Refinery to eliminate the use of concentrated HF as a catalyst for the production of alkylate, a high octane blend stock highly important to the production of state and federally mandated reformulated gasoline. HF can volatilize in the event of an accidental release and is a toxic air contaminant. The hazards and health impacts associated with the use of HF have been well documented. Due to the high vapor pressure and low boiling point of HF, a release of liquid HF into the atmosphere will volatilize into the gas phase at typical ambient temperatures and pressures. A newly released cloud of HF has a vapor density approximately twice that of air and tends to spread as a ground-hugging cloud. Thus, an accidental release of HF would create a dense plume that would move in a passive mode with the prevailing winds in both direction and speed. An accidental release of HF could migrate off the Refinery property and expose individuals in the surrounding community. The proposed project will substantially reduce the potential hazard impacts associated with an accidental release of HF.
2. The SCAQMD approved Environmental Justice Program Enhancements for FY 2002-03 that included the elimination of the transport, storage and use of concentrated HF at the Ultramar Inc. Valero Wilmington Refinery and a related reduction in the potential consequences in the event of a HF release. The proposed project would implement Environmental Justice Enhancement I-1.
3. On February 12, 2003, the Refinery and the SCAQMD entered into a MOU requiring the termination of the transport, storage and use of concentrated hydrofluoric acid at the Wilmington Refinery. The Refinery agreed to adopt a modified alkylation process that eliminates the use of concentrated HF catalyst and substituting it with the proprietary Reduced Volatility Alkylation Process (ReVAP). ReVAP incorporates a suppressant in the HF that reduces volatility in the event of an accidental release with a concurrent reduction in safety risks (i.e., distance that the HF could travel and number of persons exposed) in the surrounding area. Use of this modified process meets the SCAQMD's Environmental Justice Program enhancement objectives with respect to elimination of concentrated HF.

4. The use of modified HF will reduce the volatility of HF and, thus, the distance that a release of HF could travel. Modifications to the Alkylation Unit are expected to result in a reduction in the maximum hazard distance reducing the potential hazards associated with the Alkylation Unit.
5. Following completion of the proposed project, modified HF with the additive added, will be transported to the Refinery and anhydrous HF will no longer be transported to the Refinery. This will not prevent an accidental release of the HF/additive mixture, but it will reduce the amount of HF that could enter the atmosphere in the event of an accidental release during transport, providing a beneficial impact.
6. The California Air Resources Board approved RFG 3 gasoline regulations that required the elimination of MTBE from gasoline products while meeting the specifications of the RFG 3 requirements that limited the vapor pressure and benzene content of gasoline, among others. CARB estimates that mobile source emission reductions from the use of the RFG 3 reformulated fuels will produce regional air quality benefits. CARB estimates that the use of Phase 3 reformulated gasoline will result in emission decreases of about 19 tons per day of NO_x by 2005 and about a seven percent reduction in potency-weighted toxic emissions over the current fuel. These projected mobile source emission reductions will produce air quality and human health benefits.
7. The proposed project will incorporate alkylation efficiency improvements and design capacity enhancements to help offset losses associated with the installation of the ReVAP process and RFG 3 requirements including the elimination of MTBE.
8. 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. Both increased construction and operation 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.
9. 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 and operation 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 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.

V. MITIGATION MONITORING PLAN

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 alkylolation improvement 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.

General Mitigation Monitoring and Reporting

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

The environmental resources that were identified in the Final EIR as having significant or potentially significant adverse impacts are identified below. The Final EIR concluded that no significant adverse impacts on aesthetics, agriculture resources, biological resources, cultural resources, energy, geology/soils, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, solid/hazardous waste, and transportation/circulation. The Final EIR concluded that significant adverse impacts to air quality and hazards would be expected.

A. DETERMINATION OF ENVIRONMENTAL IMPACTS

AIR QUALITY IMPACTS

Air Quality Construction Phase Impacts

Construction-related emissions of CO, VOCs, NOx, 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. No feasible mitigation measures have been identified to reduce emissions from on-road trips. Additionally, 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."

Air Quality Construction Phase Mitigation Measures

Based on emission estimates from the construction phase, the significance thresholds for construction air quality impacts provided in Chapter 4 of the Final EIR will be exceeded. Therefore, the following mitigation measures to reduce construction-related emissions shall be implemented.

- A-1 Develop a Construction Emission Management Plan for the proposed project. The Plan shall include measures to minimize exhaust emissions from vehicles including, but not limited to: scheduling truck deliveries to avoid peak hour

**ATTACHMENT 1: STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING
CONSIDERATIONS, AND MITIGATION MONITORING PLAN**

traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of five minutes.

- A-2 Prohibit trucks from idling longer than five minutes at the Ultramar site.
- 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 with two to four degree retard diesel engine timing.
- A-5 Use electric welders to avoid emissions from 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 use in construction, the project applicant 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 Prior to construction, the project applicant will evaluate the feasibility of using alternative fuels in large off-road construction equipment that will be operating for significant periods. Alternative fuels can include fuel additives or modified fuels, e.g., PuriNOx, that have been demonstrated by CARB to result in emission reductions. PuriNOx fuel is comprised of the PuriNOx additive package, purified water and diesel fuel. These components are mixed in a blending unit to produce a finished fuel. The water content promotes an atomization of the mixture during fuel injection and improves combustion, while lowering combustion temperatures, reducing NOx emissions.

Water emulsion diesel fuels (e.g., PuriNOx) have a much lower energy content than regular diesel fuels which typically translates into a significant loss in fuel economy. This is offset slightly by an increase in thermal efficiency. Lubrizol, the manufacturer of PuriNOx, indicates that its product, containing 20 percent water emulsions, results in a 13 percent reduction in fuel economy. Lubrizol also warns of a power loss when operating with its fuel stating that the equipment should be tolerant of up to a 20 percent loss in power.

Emulsion-based diesel products do not meet ASTM D-975 specifications for diesel fuel due to their water content. Most manufacturers of diesel engines specify use of a ASTM D-975 compliant fuel in their engine applications. A potential user of an emulsion-based diesel fuel should confirm the suitability of the fuel for use in their specific engine application and ensure that such use would not void any aspect of the engine warrantee.

PuriNOx can be used in direct injection heavy-duty compression ignition engines, including construction equipment. Lubrizol representatives indicate that a large-scale batch blending unit has been installed in southern California. The blending unit is estimated to have a throughput of 20 million gallons per year. PuriNOx is estimated to result in a 14 percent reduction in NOx and a 63 percent reduction in particulate matter in off-road engines.

The use of PuriNOx is considered to be a feasible mitigation measure when it becomes commercially available. It is recommended that PuriNOx should be used in construction equipment, if the engine manufacturer indicates that the use of the fuel is compatible with the engine so that the engine warrantee is not voided.

- A-9 Use low sulfur diesel (as defined in SCAQMD Rule 431.2) where feasible.
- A-10 Use CARB certified construction equipment for all construction equipment that requires CARB certification.
- A-11 Suspend use of all construction equipment during first stage or greater smog alerts.
- A-12 The engine size of construction equipment shall be the minimum practical size.
- A-13 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 sites 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); (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); (3) suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. The emission reductions associated with this mitigation measure cannot be quantified (SCAQMD, 1993); (4) apply water three times daily, except during periods of rainfall, to all unpaved road surfaces. This mitigation measure would reduce

PM10 emissions by a minimum of 45 percent (SCAQMD, 1993); and (5) limit traffic speeds on unpaved roads to 15 mph or less. The emission benefits of this mitigation measure are estimated to be 40 to 70 percent (SCAQMD, 1993). With the exception of watering the site three times, these control efficiencies were reflected in the project emission calculations so no further emission reduction credit has been taken into account herein.

- A-14 Ultramar shall investigate measures to reduce the VOC emissions associated with the use of paints for coating the new storage tanks. Ultramar shall require that the painting of storage tanks be completed prior to delivery to the site to minimize the amount of paint used at the site. Under this mitigation measure paint use is expected to be limited to about 10 gallons per day. Ultramar shall also investigate the use of paints with VOC contents less than 2.1 lbs/gallon.

Mitigation Monitoring (MM) and Reporting

Implementing Party: The SCAQMD finds that the air quality mitigation measures during construction will be implemented by Ultramar.

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

- MMA-1 Ultramar shall develop and submit a Construction Emission Management Plan to the SCAQMD for approval. The Construction Emission Management Plan shall include the following: description of construction traffic control methods such as flag persons, contractor entry/exit gates, etc.; construction schedule including hours of operation; description of truck routing; and description of deliveries, including hours of delivery.

The plan shall be submitted to the SCAQMD prior to beginning construction activities. Upon approval, Ultramar shall certify that all personnel subject to the requirements set forth in the Construction Emission Management Plan comply with the requirements of the Plan. The SCAQMD may conduct routine inspections of the site to verify compliance.

- MMA-2 Ultramar shall instruct individuals that accept delivery of materials of the requirement to limit truck idling to no longer than five minutes. The Ultramar employees will evaluate the expected delivery time and if the delivery is expected to take longer than five minutes, the truck's operator will be asked to shut off the engine.

- MMA-3 Ultramar shall evaluate the use of electricity and alternate fuels for on-site mobile construction equipment prior to the commencement of construction activities. The type of equipment that will use electricity or alternate fuels will be included in the Construction Emission Management Plan.
- MMA-4 Ultramar shall maintain or cause to be maintained maintenance records for the construction equipment. All construction vehicles must be maintained in compliance with the manufacturer's recommended maintenance schedule.
- MMA-5 The use of gas or diesel welders shall be prohibited in areas of the Refinery that have 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 gas or diesel welders within these identified areas will be allowed. The use of gas or diesel welders outside of these identified areas shall be prohibited. Ultramar shall include in all construction contracts the requirement that diesel welders are prohibited in certain portions of the Refinery as identified on the site plan. Ultramar shall maintain records on where the diesel welders are actually used.
- MMA-6 The use of temporary power generators shall be prohibited in areas of the Refinery that have 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 will be allowed. The use of temporary power generators outside of these identified areas shall be prohibited. Ultramar 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. Ultramar shall maintain records on where the generators are actually used.
- MMA-7 Ultramar shall supply the SCAQMD with a report prior to commencement of construction activities that documents Ultramar's evaluation of the availability of retrofit technologies for large construction equipment. A copy of this report shall be maintained on-site along with other recordkeeping required by this Mitigation Monitoring Plan.
- MMA-8 Ultramar shall supply the SCAQMD with a report prior to commencement of construction activities that documents Ultramar's evaluation of the availability of PuriNOx for large construction equipment. The report will identify if PuriNOx is commercially available and, if so, identify equipment that it will be used in and any equipment that it will not be used in (i.e., equipment with engines that the warrantee would be void if PuriNOx was used). A copy of this report shall be maintained on-site along with other recordkeeping required by this Mitigation Monitoring Plan.

**ATTACHMENT 1: STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING
CONSIDERATIONS, AND MITIGATION MONITORING PLAN**

- MMA-9 Ultramar shall supply the SCAQMD with a report prior to commencement of construction activities that documents Ultramar's evaluation of the availability low sulfur diesel fuel. A copy of this report shall be maintained on-site along with other recordkeeping required by this Mitigation Monitoring Plan.
- MMA-10 Ultramar shall review the construction equipment with its contractor. A report shall be developed that lists the off-road heavy-duty construction equipment that is expected to be used, identifies the equipment that requires CARB certification and demonstrates that the certified equipment will be used.
- MMA-11 Ultramar shall maintain a log that contains the days when first stage or greater smog alerts occur and the time that construction activities were suspended.
- MMA-12 Ultramar shall review the construction equipment that is expected to be used with its contractor. Appropriate equipment shall be selected that minimizes the engine size of the equipment. Ultramar shall maintain a list of the heavy-duty construction equipment that is used on-site and the applicable engine size.
- MMA-13 Ultramar shall 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 covered or 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 that post a maximum speed limit of 15 mph shall be placed between the truck entrance to the Refinery and the equipment staging areas.
- MMA-14 Ultramar shall review the use of coating materials required to protect the new storage tanks. The VOC content of coatings used for the proposed project will be evaluated and, coatings with a VOC content of less than 2.1 lbs/gallon will be used, if the coatings are available and equally effective. Ultramar 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. Ultramar shall maintain records on the amount of paint actually used at the site.

Air Quality Operational Phase Impacts

Operation emissions of VOCs and PM10 from stationary sources, are expected to exceed the SCAQMD significance thresholds and be significant.

Air Quality Operational Phase Mitigation Measures

No feasible mitigation measures were identified that would minimize or eliminate VOC emissions from fugitive components (e.g., valves, flanges, and pumps) or combustion sources (e.g., heaters and boilers). VOC emissions from fugitive components and combustion emissions from heaters and boilers are controlled through the use of BACT. BACT by definition, is the cleanest commercially available control equipment. The use of BACT controls emissions to the greatest extent feasible. In addition, the fugitive components will be required to be included in an inspection and maintenance program to ensure that the equipment is properly maintained. The use of BACT and the inspection and maintenance program will be enforced through SCAQMD permit conditions. No other feasible mitigation measures were identified to minimize or eliminate the potentially significant emissions from new and modified sources at the Refinery. No monitoring activities are required for air quality impacts related to the operational phase of the proposed project since no feasible mitigation measures were identified.

Mitigation Monitoring and Reporting

No feasible mitigation measures were identified to minimize or eliminate the significant emissions related to the proposed project. BACT will be required for stationary source equipment, which by definition, is the lowest achievable emission rate. Therefore, no monitoring activities are required for air quality impacts related to the operational phase of the proposed project.

HAZARD IMPACTS

Hazard Impacts

The proposed project could result in significant adverse impacts related to the “worst-case” hazards in the Naphtha Hydrotreater, the Light Ends Recovery Units, the Merox Unit, the Butamer Unit, the Butane Storage Sphere, and the Propane Storage Sphere. “Worst-case” releases of hydrogen sulfide from the Light Ends Recovery Units, and the Naphtha Hydrotreater could exceed the threshold level for hydrogen sulfide exposure. A “worst-case” release from the Merox Unit could exceed the lower flammable level (LFL) due to a release of LPG from the caustic pre-wash vessel. A “worst-case” release from the butane and propane spheres could exceed the LFL, the explosion overpressure and the thermal radiation thresholds. The area of impact would be limited to the industrial area immediately surrounding the Refinery.

Hazard Impacts Mitigation Measures

There are a number of rules and regulations that Ultramar has been or must comply with that serve to minimize the potential impacts associated with hazards at the facility. 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 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. Ultramar is responsible for preparing the PSM review and OSHA has inspection authority under the PSM requirements.

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. The Refinery's existing RMP will need to be reviewed and revised to include the proposed project modifications, including the modifications to the Alkylation Unit, Naphtha Hydrotreater, the Light Ends Recovery Unit No. 2, the Merox Unit, the Butamer Unit, the Butane Storage Sphere, and the Propane Storage Sphere. The revised RMP will be submitted to the Los Angeles City Fire Department for review and approval.

Mitigation Monitoring and Reporting

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.

VI. CONCLUSION

Ultramar will be required to submit quarterly reports to the SCAQMD during the construction phase that identifies the construction progress, includes all required logs, inspection reports, and monitoring reports, identifies any problems, and provides solutions to problems, as necessary. The SCAQMD and Ultramar will evaluate the effectiveness of this monitoring program during both the construction period and operation. If either the monitoring program or the mitigation measures as set forth above are deemed inadequate, the SCAQMD or another responsible agency may require Ultramar to employ additional or modified monitoring measures and/or measures to effectively mitigate identified significant adverse impacts to the levels identified in the EIR.