CHAPTER 1

INTRODUCTION AND EXECUTIVE SUMMARY

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

ConocoPhillips Los Angeles Refinery (Refinery) is proposing projects that will reduce particulate matter less than 10 microns in diameter (PM10) and nitrogen oxide (NOx) emissions at its existing Wilmington and Carson Plants. The projects include modifications to Refinery units at both the Wilmington and Carson Plants. Modifications to the Wilmington Plant include the installation of a wet gas scrubber (WGS) and wet electrostatic precipitator (WESP) to comply with South Coast Air Quality Management District (SCAQMD) Rule 1105.1 – Reduction of PM10 and Ammonia Emissions from Fluid Catalytic Cracking Units (FCCUs), and a selective catalytic reduction unit on Boiler 7 to comply with the NOx reduction requirements of SCAQMD Regulation XX - Regional Clean Air Incentives Market (RECLAIM). The Refinery also plans to install a new selective catalytic reduction on Boiler 11 at its Carson Plant to comply with RECLAIM requirements. The proposed projects will not increase or decrease the Refinery crude throughput capabilities.

1.2 AGENCY AUTHORITY

California Environmental Quality Act (CEQA) Guidelines §15121(a) states the purpose of an Environmental Impact Report (EIR) is to serve as an informational document that "will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." CEQA, Public Resources Code, §21000 et seq., requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid, or eliminate significant adverse impacts of these projects be identified and implemented.

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (Public Resources Code §21067). The proposed project requires discretionary approval from the SCAQMD for air quality permits associated with modifications to existing and new stationary source equipment and, therefore, it is subject to the requirements of CEQA (Public Resources Code §21000 et seq.). SCAQMD has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines §15051[b]).

To fulfill the purpose and intent of CEQA, the SCAQMD staff prepared, and released for a 30-day public review and comment period, a Notice of Preparation and Initial Study (NOP/IS) to address the potential adverse environmental impacts associated with the Refinery's environmental compliance projects. The NOP/IS identified aesthetics, air quality, hydrology/water quality and transportation/traffic as areas that might be adversely affected by the proposed projects. There were two comment letters received on

the NOP/IS. The comment letters and responses to the comment letters are included in Appendix A.

1.3 PROJECT BACKGROUND

1.3.1 RULE 1105.1 BACKGROUND

On November 7, 2003, the SCAQMD adopted Rule 1105.1 – Reduction of PM10 and Ammonia Emissions from Fluid Catalytic Cracking Units. As part of the rule development process, the SCAQMD prepared a Final Environmental Assessment (EA) pursuant to its certified regulatory program (California Public Resources Code [PRC] §21080.5). California Public Resources Code §21080.5 allows public agencies with certified regulatory programs to prepare written CEQA environmental analyses in documents other than EIR or Negative Declaration (ND) documents. The SCAQMD 2003 Final EA for Rule 1105.1 was prepared pursuant to CEQA Guidelines §15252 because it was a substitute document for an EIR and pursuant to CEQA Guidelines §15187 because the analysis constituted the environmental review of a new rule.

As discussed in the SCAQMD 2003 Final EA, the implementation of Rule 1105.1 "will produce a 0.5 ton per day reduction in filterable PM10, and 1.5 tons per day reduction of condensable PM10 (or 1.5 tons per day of ammonia) by limiting the amount of ammonia slip to 10 parts per million by volume (ppmv) as corrected for three percent oxygen." (SCAQMD 2003 Final EA, page 1-7).

The SCAQMD 2003 Final EA for Rule 1105.1 also evaluated construction-related air quality impacts from installing pollution control equipment to comply with the rule. The analysis assumed that affected refineries in the Basin would choose to either demolish their existing ESP equipment and install new equipment or clean the plates on the existing ESP equipment and rebuild them. The analysis also assumed that five of the six refineries in the Basin would have to comply with Rule 1105.1 between the time of rule adoption and December 31, 2008 (one of the six refineries was currently operating in compliance with the emission standards outlined in the rule). Due to planning and permitting requirements, peak construction was assumed to occur over a 48-month period as worst case and two ESPs would be installed or rebuilt at any one time. The SCAQMD 2003 Final EA for Rule 1105.1 concluded that construction-related air quality impacts would be significant. The 2003 Final EA can be obtained by contacting the SCAQMD's Public Information Center at (909) 396-2039 or by accessing the following website at http://www.aqmd.gov/ceqa/documents/2003/aqmd/finalEA/FEA_1105.doc

Subsequent to the adoption of Rule 1105.1 and certification of the SCAQMD 2003 Final EA, the Western States Petroleum Association (WSPA) filed a lawsuit against the SCAQMD challenging the certification of the 2003 Final EA and approval of Rule 1105.1 (WSPA vs. SCAQMD et al, Superior Court of California, County of Los Angeles, Case No. BS087190). The lawsuit asserted, among other things, that emission reductions to be achieved from implementing Rule 1105.1 were technically not feasible,

implementation of Rule 1105.1 would not be cost effective, and that the CEQA document failed to consider all environmental impacts of available emissions control technologies to comply with the emission limits. The judge found that all the contentions made by WSPA were without merit. WSPA appealed this judgment (WSPA vs. SCAQMD et al., Court of Appeal of the State of California, Second Appellate District, Division Seven, Case No. B181303), and the court again concluded that WSPA's arguments were without merit. Further, the court concluded that the SCAQMD met its obligation under CEQA to conduct an EA of Rule 1105.1. Therefore, in accordance with California Public Resources Code §21167.3(b), the SCAQMD 2003 Final EA for Rule 1105.1 was determined to meet all relevant requirements of CEQA (WSPA v. SCAQMD, et al (2006) 136 Cal. App. 4th 1012).

Although the SCAQMD shall utilize the Final EA in its review of the WGS project pursuant to PRC §21159.2(a), there is a need to evaluate the cumulative impacts of construction activities required to comply with Rule 1105.1 at four refineries, rather than two, as well as the cumulative impacts of any other projects at or in the vicinity of the refineries not previously considered in the Final EA (PRC §21159.2(b)). There is also the need to evaluate the impacts associated with the WGS technology, which was not evaluated in detail in the 2003 Final EA, e.g., aesthetic, water demand, and wastewater impacts.

1.3.2 REGULATION XX BACKGROUND

The Final 2003 Air Quality Management Plan (AQMP) demonstrated that substantial NOx and volatile organic compounds (VOC) emission reductions are necessary to attain the state and federal ambient air quality standards. The 2003 AQMP included control measure 2003 CMB-10, which seeks additional NOx emission reductions from NOx RECLAIM facilities. CMB-10 identified a series of control approaches to achieve additional NOx emission reductions from affected facilities. In order to implement CMB-10, the SCAQMD proposed amendments to Regulation XX – RECLAIM, which were adopted by the SCAQMD Governing Board in January 2005. The SCAQMD prepared a Final EA (2004 Final EA) for proposed amendments to Regulation XX – RECLAIM (SCAQMD, 2004). CMB-10 and the 2004 Final EA assumed that refinery heaters, boilers and FCCUs would use SCRs to comply with the amendments to Regulation XX.

The 2004 Final EA included a comprehensive project description, a description of the existing setting that could be adversely affect by the proposed project, analysis of the potential adverse environmental impacts (air quality and hazards/hazardous materials), cumulative impacts, mitigation measures, project alternatives and all other relevant topics required by CEQA. The 2004 Final EA analyzed facility-specific impacts as well as impacts from the rule as a whole. It was concluded in the 2004 Final EA that implementation of the amendments to Regulation XX would result in potential significant adverse impacts to air quality during construction for the installation of new air pollution control devices. The only other environmental topic area required to be evaluated in the 2004 Final EA, hazards/hazardous materials impacts, was concluded to be less than

significant. Although mitigation measures to reduce construction emissions were incorporated into the 2004 Final EA, construction air quality impacts would not be reduced to less than significant. As a result, a Statement of Findings and a Statement of Overriding Considerations for the implementation of Regulation XX were also adopted. The 2004 Final EA was certified by the SCAQMD Governing Board on January 7, 2005. The 2004 Final EA, which includes comment letters relative to the Draft EA and their responses (which are archived in Appendix E of that document), the NOP/IS (which is archived in Appendix C of that document), and comment letters relative to the NOP/IS and their responses (which are archived in Appendix D of that document) can be obtained by contacting the SCAQMD's Public Information Center at (909) 396-2039 or by visiting following website at:
http://www.aqmd.gov/ceqa/documents/2005/aqmd/finalEA/FEA_RegXX.doc.

To comply with the amendments to Regulation XX, the 2004 Final EA assumed that additional SCR units would be required on refinery heaters, boilers and FCCUs at refineries in the Basin. Construction emissions in the 2004 Final EA assumed that the refinery operators would be constructing SCR units during a three-year period beginning January 1, 2007, and ending December 31, 2009, because of the requirement to comply with the Regulation XX amendments by 2010. The 2004 Final EA made a conservative assumption that up to 16 SCR projects could be under construction at any one time. Therefore, although the SCAQMD shall utilize the 2004 Final EA in its review of the SCR project pursuant to PRC § 21159.2(a), there is a need to evaluate the cumulative impacts of construction activities required to comply with Regulation XX, and Rule 1105.1, as well as the cumulative impacts of any other projects at the refineries not previously considered in the 2004 Final EA (PRC § 21159.2(b)).

1.4 SCOPE AND CONTENT

The scope of the EIR covers projects at both the ConocoPhillips Carson and Wilmington Plants because the NOx reduction projects at both plants are being implemented for the same reason, to comply with Regulation XX NOx reduction requirements. In addition, construction of the SCRs for Boiler 7 and Boiler 11, and the WGS/WESP are expected to occur concurrently. Therefore, the construction impacts for these proposed projects overlap.

The NOP/IS for the proposed projects was circulated for a 30-day comment period beginning on November 30, 2006 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 environmental topics identified in the NOP/IS as potentially significant that are addressed in this document include:

- Aesthetics
- Air Quality

- Hydrology/Water Quality
- Transportation/Traffic

The NOP/IS concluded that the proposed projects would not create significant adverse environmental impacts beyond the scope of the analysis in the SCAQMD 2003 Final EA for Rule 1105.1 and 2004 Final EA for Regulation XX to the following environmental areas: agricultural resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, and solid and hazardous waste. As a result, these environmental topic areas will not be further analyzed in this EIR.

The Alternatives chapter of the Final ~~Draft~~ EIR (see Chapter 6) was prepared in accordance with §15126.6 of the CEQA Guidelines and describes a range of reasonable alternatives that could feasibly attain the basic objectives of the proposed projects or are capable of eliminating or reducing any significant adverse environmental effects associated with the proposed project.

1.5 RESPONSIBLE AGENCIES

CEQA Guidelines §15381 defines a "responsible agency" as "a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, responsible agencies include all public agencies other than the lead agency that have discretionary approval authority over the project."

The agencies that have discretionary authority over the proposed projects include the SCAQMD and the Los Angeles City Sanitation Bureau. There are public agencies that may have ministerial permitting authority for certain actions associated with the proposed modifications at the ConocoPhillips Los Angeles Refinery's Wilmington and Carson Plants. These agencies, along with the public in general, were given an opportunity to review and comment on the NOP/IS, and also given an opportunity to review and comment on this Final ~~Draft~~ EIR. See Chapter 2, Table 2-1 for a list of both discretionary and ministerial permits and approvals that may be required to support the proposed projects.

1.6 INTENDED USES OF THE EIR

The EIR is intended to be a decision-making tool that provides full disclosure of the environmental consequences associated with implementing the proposed project. Additionally, CEQA Guidelines §15124(d)(1) requires a public agency to identify the following:

- A list of the agencies that are expected to use the EIR in their decision-making;

- A list of permits and other approvals required to implement the project; and

- A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies.

To the extent that local public agencies, such as cities, county planning commissions, etc., are responsible for making land use and planning decisions related to the proposed project, they could rely on this EIR during their decision-making process. The proposed project will require building permits from the cities of Los Angeles and Carson. In addition, modifications to the wastewater discharge permit may also be required from the Los Angeles Bureau of Sanitation.

1.7 AREAS OF CONTROVERSY

In accordance with CEQA Guidelines §15123(b)(2), the areas of controversy known to the lead agency, including issues raised by agencies and the public, shall be identified in the CEQA document. After public notification and review of the NOP/IS, the SCAQMD received two comment letters. One of the letters was supportive of the proposed projects, while the other provided information on cultural resources in the area of the proposed projects and reminders of the CEQA requirements with regards to cultural impacts. Consequently, there are no areas of controversy known to the lead agency.

1.8 EXECUTIVE SUMMARY – CHAPTER 2: PROJECT DESCRIPTION

1.8.1 PROJECT LOCATION, LAND USE AND ZONING

The proposed project will occur at the ConocoPhillips Los Angeles Refinery, which is made up of the Wilmington Plant and the Carson Plant. The Wilmington Plant is located at 1660 West Anaheim Street, Wilmington, California, while the Carson Plant is located at 1520 East Sepulveda Boulevard, Carson, California. The proposed modifications are entirely within the confines of the existing facilities.

The eastern part of the Wilmington Plant borders a residential area, a roofing materials plant, and a portion of the Harbor 110 Freeway. The northern portion of the site borders Harbor Lake Park, Harbor College, Harbor Golf Course, and a small residential area. The western part of the site borders Gaffey Street including a firing range, vacant fields, recreational fields, and a U.S. Navy fuel storage facility. Finally, the southern portion of the site shares a border with a warehouse facility.

The Carson Plant is bounded on the north by Sepulveda Boulevard, on the west by Wilmington Avenue; on the south by a branch of the Atchison, Topeka and Santa Fe Railroad; and on the east by Alameda Boulevard. Property to the north of the Carson Plant is occupied by the BP Carson Refinery. The western boundary of the plant borders

a shipping and container storage facility. Property across Wilmington Boulevard includes a residential neighborhood to the northwest and commercial uses to the southwest. Land uses to the south of the Carson Plant are heavy industrial. Land south of Lomita Avenue is dominated by port-related activities. Land east of Alameda Street is occupied by a storage tank farm and the Shell Refinery.

1.8.2 EXISTING REFINERY OPERATIONS

Crude oil and distillates and other raw materials are delivered to the Refinery by pipelines, ships, and trains. Crude oil is processed in the crude unit where it is heated and distilled into various hydrocarbon components, which are further processed in downstream Refinery units. The major Refinery products include unleaded gasoline, diesel, and jet fuels. Elemental sulfur and petroleum coke are produced as co-products of the refining process. Major processing units at the Refinery include the crude unit, vacuum flasher, coker unit, hydrotreating units, reforming units, fluid catalytic cracking unit, alkylation unit, sulfur recovery units, hydrocracking unit, hydrogen plant, acid plant and the cogeneration unit.

1.8.3 PROPOSED PROJECTS

The proposed projects involve Refinery modifications to both the Wilmington and Carson Plants. All components of the proposed projects are associated with compliance with air quality rules and regulations for the existing Refinery. The proposed projects' components represent three independent distinct emission reduction projects. Due to the similar approval processes (e.g., rule compliance, permit evaluation, etc.) for the three projects, and because the timing of the projects will be similar, the three projects' are being evaluated in a single CEQA document. In addition, because the construction schedules completely or partially overlap the projects, making a single EIR appropriate.

1.8.4 WILMINGTON PLANT MODIFICATIONS

1.8.4.1 Wet Gas Scrubber

In November 2003, the SCAQMD adopted Rule 1105.1 – PM10 and Ammonia Emissions from FCCUs, which regulates particulate matter less than 10 microns in diameter (PM10) and ammonia flue gas emissions from FCCUs. According to Rule 1105.1, operators of the affected FCCUs will need to apply one of the following PM10 emission limits:

- 0.005 grains of PM10 per dry standard cubic foot (SCF) in the flue gas, corrected to three percent oxygen; or
- 3.6 pounds of PM10 per hour; or
- 2.8 pounds of PM10 per 1,000 barrels of fresh feed.

There are two leading technology options for FCCU flue gas particulate emission control: WGS and Dry ESP. ConocoPhillips has selected a WGS with a WESP as the best technology to meet the project objectives. WGSs require no ammonia use, can control sulfur oxides (SOx) emissions, a precursor to PM2.5 and PM10, and can effectively control particulates during transient conditions like start-ups and shut downs.

The WGS will generate a liquid discharge containing captured pollutants. The liquid will be treated at a new Purge Treatment Unit (PTU) to separate the liquid from the solids, prior to treatment in the existing refinery wastewater treatment system and discharge to the sewage system. The estimated liquid discharge from the PTU is about 70 gallons per minute.

The WESP is built in the WGS stack and provides a final polishing stage for the flue gas. Particulates captured in the WESP are washed down into the WGS liquid level.

1.8.4.2 Boiler 7 SCR Unit

ConocoPhillips is proposing to install an SCR Unit on the existing Boiler 7 at the Wilmington Plant to reduce NOx emissions from the Boiler. Additional NOx emission reductions will assist the Wilmington Plant in meeting the declining NOx RECLAIM yearly allocation levels as required under Regulation XX. SCR is considered to be Best Available Control Technology (BACT) for the control of NOx from combustion sources. The aqueous ammonia to be used in the SCR will consist of 19 percent ammonia. The NOx concentration from the SCR is expected to be approximately 10 parts per million.

The ammonia will be supplied by installing a new 12,000-gallon pressurized storage tank for 19 percent aqueous ammonia. Aqueous ammonia will be supplied from a local vendor in the Los Angeles area and delivered by truck to the Wilmington Plant for storage and use.

1.8.5 CARSON PLANT MODIFICATIONS

1.8.5.1 Boiler 11 SCR Unit

ConocoPhillips is proposing to install new low NOx burners and an SCR Unit on Boiler 11 at the Carson Plant to reduce NOx emissions from the Boiler. Additional NOx emission reductions assist the Carson Plant in meeting the declining NOx RECLAIM yearly allocation levels as required under Regulation XX. The aqueous ammonia to be used in the SCR will consist of 19 percent ammonia to be supplied from an existing 10,000 gallon pressurized ammonia storage tank. Aqueous ammonia will be supplied from a local vendor in the Los Angeles area and delivered by truck to the Carson Plant for storage and use. The NOx concentration from the SCR is expected to be approximately 10 parts per million.

1.8.6 OPERATIONS

The permanent work force at the Refinery is not expected to increase as a result of the proposed projects. The proposed projects are expected to incrementally increase traffic by about one truck per day associated with the delivery or transport of additional materials including caustic (sodium hydroxide) and ammonia.

1.8.7 PERMITS AND APPROVALS

The Refinery has numerous environmental permits from a variety of federal, state, and local agencies. The proposed project may require new permits or modifications to existing permits (e.g., air permits and building permits).

1.9 EXECUTIVE SUMMARY – CHAPTER 3: EXISTING ENVIRONMENTAL SETTING

Chapter 3 presents the existing environmental setting for the proposed projects and compares it to the potential impacts that have been previously evaluated in the SCAQMD 2003 Final EA. This EIR focuses only on the environmental topics identified in the NOP/IS that could be significantly adversely affected by the proposed projects. The reader is referred to the NOP/IS (see Appendix A) for discussion of environmental topics not considered in this EIR, and the rationale for exclusion of each environmental topic.

1.9.1 AESTHETICS

The NOP/IS determined that the aesthetic impacts of the proposed project at the ConocoPhillips Carson Plant were less than significant. However, the aesthetic impacts associated with the installation of the WGS at the Wilmington Plant were determined to be potentially significant and are evaluated in this EIR.

The Wilmington Plant is located on the eastern side of the Palos Verdes Peninsula, with the slope of the surrounding topography rising from east to west. To the west of the facility, residential areas located on the hillsides above the facility have unobstructed views overlooking the Wilmington Plant, port areas, and other portions of the Wilmington and Long Beach areas. The Wilmington Plant is made up of equipment that includes numerous above ground storage tanks, columns, and stacks up to approximately 200 feet in height used in the refining process. The Wilmington Plant property has a land use designated as M3 (heavy industrial) zoning.

1.9.2 AIR QUALITY

The ConocoPhillips Los Angeles Refinery is located within the SCAQMD jurisdiction (referred to hereafter as the District). The District consists of the four-county South Coast Air Basin (Basin), that includes Orange, and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, the Riverside County portions of the

Salton Sea Air Basin (SSAB), and the Mojave Desert Air Basin (MDAB). The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east.

The air pollution problem within the Basin is attributed to the combination of emissions from the second largest urban area in the nation, and especially adverse meteorological conditions relative to air quality. The Basin is currently designated "severe-17" non-attainment for the federal eight-hour ozone ambient air quality standard, and has until 2021 to achieve the national standard. The 2007 AQMP contains a "bump up" request to designate the Basin to extreme non-attainment which would shift the attainment date to 2024. For PM10, the Basin is designated "serious" non-attainment, and was required to meet the national standard by 2006. The Basin is also in non-attainment for PM2.5, and has until 2010 to achieve the national standard, but will be filing for a five-year extension to 2015 to meet federal standards. For nitrogen dioxide (NOx), the Basin is in attainment. The Basin has met the federal standards and the SCAQMD has applied for reclassification for CO, but has not been officially re-designated in attainment.

The sources of air contaminants in the Basin vary by pollutant but generally include on-road mobile sources (e.g., automobiles, trucks and buses), other off-road mobile sources (e.g., airplanes, ships, trains, construction equipment, etc.), residential/commercial sources, and industrial/manufacturing sources. Mobile sources are responsible for a large portion of the total Basin emissions of several pollutants.

1.9.3 HYDROLOGY/WATER QUALITY

Hydrology impacts could occur with an increase in wastewater discharge from the operation of the WGS, WESP and PTU at the Wilmington Plant. The Wilmington Plant is located near the Dominguez Channel and Los Angeles River. Sediments and contaminants are transported into the Los Angeles-Long Beach Harbor complex with the flows from the Los Angeles River and, to a lesser degree, the Dominguez Channel. Permitted discharges from industrial sources are a substantial percentage of the persistent flows in the Dominguez Channel.

Water quality objectives and beneficial uses for the Dominguez Channel tidal prism have been established by the Regional Water Quality Control Board (RWQCB), Los Angeles Region, in the Water Quality Control Plan for the Los Angeles River Basin. The Wilmington Plant is located approximately two miles west of the Dominguez Channel, less than a quarter mile from the west basin of the Los Angeles Main Channel, and approximately 4.3 miles west of the Los Angeles River.

1.9.4 TRANSPORTATION/TRAFFIC

The Carson Plant is located approximately one mile west of the Long Beach Interstate 710 Freeway and approximately two and one half miles east of the Harbor Interstate 110 Freeway. The Carson Plant is bounded on the north by Sepulveda Boulevard, on the west

by Wilmington Avenue; on the south by a branch of the Atchison, Topeka and Santa Fe Railroad; and on the east by Alameda Boulevard.

Peak hour LOS analyses were developed for intersections in the vicinity of the Carson Plant. The LOS analysis indicates typical urban traffic conditions in the area surrounding the Refinery, with all intersections operating at Levels A to C during morning and evening peak hours.

The ConocoPhillips Wilmington Plant is located approximately one-quarter mile west of the Harbor 110 Freeway. The Wilmington Plant currently employs about 425 full-time employees. The predominate route used to reach the site is from the Harbor 110 Freeway at Anaheim Street. The Harbor 110 Freeway is a north-south freeway that carries about 84,000 vehicles per day in the vicinity of Anaheim Street. Anaheim Street is an east-west, four lane divided roadway that carries about 20,000 to 24,000 vehicles per day. Gaffey Street is a north-south, four lane divided roadway that carries about 24,000 vehicles per day. Figueroa Street is a north-south two to four lane divided roadway that parallels the eastside of the Harbor 110 Freeway.

Peak hour LOS analyses were developed for intersections in the vicinity of the Wilmington Plant. The LOS analysis indicates typical urban traffic conditions in the area surrounding the Refinery, with all intersections operating at Levels A to D during morning and evening peak hours. Two intersections are estimated to operate at LOS D during the A.M. peak hour in 2007 including Figueroa Street and I Street./I-110 on-ramp and Gaffey –Palos Verdes Drive – Vermont – Anaheim Street). All other intersections operate at LOS A to C.

In addition to the freeway system, railroad facilities service the Refinery, providing an alternative mode of transportation for the distribution of goods and materials. The area is served by the Union Pacific, and Atchison, Topeka and Santa Fe railroads.

1.10 EXECUTIVE SUMMARY – CHAPTER 4: IMPACTS AND MITIGATION MEASURES

Chapter 4 assesses the potential environmental impacts of the construction and operation of the ConocoPhillips Los Angeles Refinery PM10 and NOx Reduction Projects. This chapter evaluates those impacts that are considered potentially significant under the requirements of CEQA, as determined by the NOP/IS (see Appendix A). Specifically, an impact is considered significant under CEQA if it leads to a "substantial, or potentially substantial, adverse change in the environment".

1.10.1 AESTHETICS

1.10.1.1 Construction Impacts

Construction activities are expected to require cranes, which will temporarily change the skyline of the plants. The cranes for the proposed project are expected to be similar to those routinely used at the plants. Therefore, the proposed project will not be discernable from routine operations at the plants and will not affect the visual continuity of the surrounding area.

Construction activities are not anticipated to require additional lighting because they are scheduled to take place during daylight hours. However, if the construction schedule requires nighttime activities, temporary lighting may be required. Since the equipment associated with the proposed projects will be completely located within the boundaries of the existing Wilmington and Carson Plants, additional temporary lighting is not expected to be distinguishable from the existing permanent night lighting.

1.10.1.2 Operational Impacts

The proposed projects include the addition of two SCRs, a WGS and a purge treatment unit for the FCCU. The SCRs will have exhaust stacks of similar design as the existing exhaust stacks for Boilers 7 and 11, and are not expected to be discernable from existing equipment. The WGS will be replacing the existing FCCU exhaust stack. The WGS will be located in the vicinity of the existing FCCU exhaust stack, and will be approximately 50 feet taller. The WGS will create a steam plume.

The Wilmington Plant is located adjacent to the Port of Los Angeles and near the Port of Long Beach. The industrial nature of the Ports is such that facilities in the Port routinely generate steam plumes (i.e., the Harbor Cogen, the Long Beach SERRF facility, and the BP Coke Calciner).

There are no scenic highways or corridors in the vicinity of the Plants. Therefore, the proposed projects are not expected to block views from scenic highways or corridors. While the steam plume from the WGS will be visible, it is not expected to adversely affect the visual continuity of the surrounding area and none of the significance criteria are expected to be exceeded. The proposed projects' components will be located within existing industrial facilities, which are already lighted at night for nighttime operations, so no overall increase in lighting associated with the proposed project is expected at the ConocoPhillips Los Angeles Refinery. Therefore, no significant impacts to light and glare are anticipated from the proposed projects.

1.10.1.3 Mitigation Measures

No mitigation measures are required for the construction or operation phases of the proposed projects because after full consideration in this EIR all aesthetic impacts were determined to be less than significant.

1.10.1.4 Level of Significance after Mitigation

The aesthetics impacts of the proposed projects are considered to be less than significant because no CEQA significance thresholds would be exceeded.

1.10.2 AIR QUALITY

1.10.2.1 Construction Impacts

Construction emissions are expected from the following equipment and processes:

Construction Equipment (dump trucks, backhoes, graders, etc.)
Vehicle Emissions, including Delivery Trucks and Worker Trips
Fugitive Dust Associated with Site Construction Activities
Fugitive Dust Associated with Travel on Paved Roads

Construction emissions were calculated for different phases of construction activities. Construction activities vary for the various portions of the proposed project, but construction activities overlap for some portions of the projects. Based on the air quality analysis, the emissions from the construction phase of the Refinery's proposed projects will exceed the significance thresholds for NOx. Emissions of CO, VOC, SOx, and PM10 are expected to be below the SCAQMD CEQA significance threshold. Therefore, the air quality impacts associated with construction activities are considered significant for NOx and less than significant for CO, VOC, SOx and PM10.

The SCAQMD has developed Localized Significant Threshold (LST) Methodology to evaluate the potential localized impacts of criteria pollutants from construction activities (SCAQMD, 2003c). In all cases, the construction emissions were below the localized significance thresholds. Therefore, no significant localized air quality impacts are expected.

1.10.2.2 Operational Emissions

Operational emissions are generated from either stationary sources or off-site sources. Stationary sources from the proposed project include the WGS, WESP, PTU, and the SCRs, which are the stationary sources that provide emission reductions and do not generate emission increases with the exception of ammonia emissions from the SCR units. The only operational emission increases associated with the proposed projects are associated with the increase in off-site sources, such as truck trips to deliver additional aqueous ammonia for the new SCR's and additional caustic for the WGS. The maximum operational emission increase assumes that a maximum of two truck deliveries of aqueous ammonia and/or caustic occur each day, one to the Wilmington Plant and one to the Carson Plant. The operational emissions from the proposed projects is not expected to exceed the SCAQMD significance thresholds for any pollutant. Therefore, the air

quality impacts associated with operation of the proposed projects are less than significant.

It should be noted that the proposed projects are expected to provide emission benefits associated with the following:

- The WGS is expected to reduce PM10 emissions by about 200 lbs/day and eliminate ammonia emissions.

- The WGS is expected to reduce SOx emissions by approximately 1,3000 to 1,600 lbs/day, based on the difference between historical emissions as reported for RECLAIM and projected SOx emissions of about 10 to 20 ppm with the WGS.

- It is expected that NOx emissions will decrease by 160 to 370 lbs/day for Boiler 7 and 290 to 545 lbs/day for Boiler 11, depending on firing rate. The estimated reductions are based on the difference between historical emissions as reported for RECLAIM and projected NOx emissions of about 10 ppm with the SCR's.

Therefore, following completion of the construction phase, the proposed projects are expected to provide an overall beneficial impact on air quality.

1.10.2.3 Toxic Air Contaminants

A health risk assessment screening was performed to determine if emissions of toxic air contaminants generated by the proposed projects would exceed the SCAQMD thresholds of significance. The proposed project will increase the use of ammonia at the Wilmington and Carson Plants and potentially generate ammonia emissions through ammonia slip from the new SCR units being installed on Boilers 7 and 11. Ammonia is a regulated toxic air contaminant under SCAQMD Rule 1401, New Source Review for Toxic Air Contaminants. A Tier 1 screening health risk assessment was prepared for the proposed emissions increase for both the new SCR units using the SCAQMD Rule 1401 Risk Assessment Procedures (Version 7.0).

For both Boilers 7 and 11, the estimated hourly and annual ammonia emission rates are below the hourly and annual screening thresholds, respectively, for ammonia; therefore, the ammonia emissions from the proposed projects are expected to be less than the acute hazard and chronic index significance threshold of 1.0. Therefore, no significant adverse acute or chronic health impacts are expected due to exposure to ammonia from the new SCR units.

1.10.2.4 Mitigation Measures

Mitigation measures are required for the construction phase to reduce NOx emissions and were imposed on the proposed project that include developing a Construction Traffic Emission Management Plan, suspending operations during first stage smog alerts, using

electricity or alternative fuels, maintaining construction equipment, and evaluating the feasibility of retrofitting large off-road construction equipment that will be operating for significant periods. No mitigation measures are required for the operation phase of the proposed project because, after full consideration in this EIR, operational air quality impacts were determined to be less than significant.

1.10.2.4 Level of Significance after Mitigation

The air quality impacts of the proposed projects are expected to remain significant for NOx emissions during construction activities. The other air quality impacts of the proposed projects are considered to be less than significant because no other CEQA significance thresholds would be exceeded.

1.10.3 HYDROLOGY/WATER QUALITY

1.10.3.1 Construction Impacts

No significant increase in wastewater generation is expected due to the construction phase of the proposed projects. Wastewater resulting from hydrostatic testing or start up of the WGS will be routed to the existing process wastewater treatment systems and recycled or discharged after treatment along with the process wastewater. The volume of wastewater that will be treated can be accommodated within the capacity of the refinery's wastewater treatment systems.

Because the area to be disturbed in construction of the proposed project is less than one acre, a NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Storm Water Construction Permit) is not required. Storm water discharges are expected to be approximately the same as the current discharges; therefore, no significant adverse impacts are expected from storm water discharges during construction.

1.10.3.2 Operational Impacts

Wastewater Discharges: Process wastewater streams from the Wilmington Plant are treated in the Oil Recovery Unit (ORU) before discharge to the sewer under a permit from the LACBS. The NOP/IS indicated that the WGS would result in an estimated increase in wastewater discharged at the Wilmington Plant of about 259,200 gallons per day (about 180 gallons per minute). Additional engineering of the WGS has occurred such that the estimated wastewater discharge from the equipment is expected to be about 70 gallons per minute (about 100,800 gallons per day). The increase in wastewater discharge represents about a four percent increase in wastewater discharge over current operating conditions. The on-site ConocoPhillips wastewater treatment equipment can handle the increase.

The potential impacts of the increase in wastewater have been reviewed with the LACBS. ConocoPhillips' wastewater discharge permit does not contain a maximum limit on the flow, but references the average flow rate. Modifications to the wastewater discharge

permit will be required to add the WGS discharge to the drawing showing sources of wastewater and possibly providing drawings that show the oxidation system for the WGS for sulfide control. The LACBS has indicated that the 70 gallons per minute increase in wastewater is within the range of the wastewater flows typically sent to the LACBS and they do not expect significant adverse impacts to the wastewater treatment system (personal communication, Nicanor Tolentino, LACBS).

The LACBS permit requires monthly sampling for regulated contaminants. The ability to comply with existing permit limits for regulated contaminants is not expected to change as a result of the additional WGS discharge. As a result, significant adverse impacts associated with wastewater discharges at the refinery are not expected.

Storm Water Quality: The existing Storm Water Pollution Prevention Plan will be updated to reflect operational modifications to the Plant and include additional Best Management Practices, if required. Accordingly, since stormwater discharge or runoff to local storm water systems does not occur, no significant adverse storm water quality impacts are expected to result from the operation of the proposed projects.

Groundwater Quality: The proposed new equipment will be constructed on concrete pads or asphalt, which will allow materials to be contained and recovered in the event of equipment leaks. The new caustic tank will have a double wall design for containment. Therefore, the proposed projects are not expected to cause significant adverse impacts to groundwater quality.

1.10.3.3 Mitigation Measure

No significant adverse impacts associated with hydrology and water quality from the proposed projects are expected during construction or operational phases, so no mitigation measures are required.

1.10.3.4 Level of Significance after Mitigation

The hydrology and water quality impacts of the proposed projects are considered to be less than significant because no CEQA significance thresholds would be exceeded.

1.10.4 TRANSPORTATION/TRAFFIC

The construction of modifications at the Refinery will create additional traffic from travel by construction workers and transportation of materials and equipment to and from both the Wilmington and Carson Plants. Traffic impacts were evaluated based on the potential peak labor force at each location.

1.10.4.1 Construction Impacts

Carson Plant: The traffic analysis makes worst-case assumptions regarding traffic flow during construction activities in order to provide a worst-case traffic analysis. The Level

of Service (LOS) analysis assumes 30 construction workers will be commuting to the Refinery and three delivery trucks are expected during peak construction activities. The traffic analysis assumes that all construction personnel and delivery trucks would enter the construction parking lot from Sepulveda Boulevard. Parking for all construction workers will be provided onsite.

The traffic analysis predicted the LOS and volume to capacity ratios due to peak construction activities for the proposed projects at the Carson Plant. The results of the traffic analysis indicated that no intersections are expected to show a change in LOS and all intersections are expected to continue to operate at existing conditions (all intersections operating at LOS A, with the exception of Alameda Connector at 223rd Street which operates at LOS C. Therefore, the traffic impacts from the proposed projects on traffic in the vicinity of the Carson Plant are less than significant (see Appendix D).

Wilmington Plant: The traffic analysis makes worst-case assumptions regarding traffic flow during construction activities in order to provide a worst-case traffic analysis. The LOS analysis assumes 100 construction workers will be commuting to the Refinery and eight delivery trucks per day are expected during peak construction activities. The traffic analysis assumes that all construction personnel and delivery trucks would enter the construction parking lot from Anaheim Street. Parking for all construction workers will be provided onsite.

The predicted LOS analysis and volume to capacity ratios due to peak construction activities for the proposed projects at the Wilmington Plant indicates that the LOS is expected to remain unchanged at all intersections except the intersection of Figueroa Street and "I" Street/I-110 Freeway onramp. This intersection is expected to change from LOS A to LOS B. Therefore, the proposed projects' impacts on traffic in the vicinity of the Wilmington Plant are less than significant (see Appendix D).

1.10.4.2 Operational Impacts

The proposed projects are not expected to increase the number of permanent employees at either the Refinery's Carson or Wilmington Plants resulting in no increase in worker traffic. The proposed projects will result in a maximum increase in truck traffic of about one additional truck trip per day traveling to/from the Carson and the Wilmington Plant providing a total project impact of two truck deliveries per day. Since these would mainly consist of material deliveries, they would be spread throughout the workday with few deliveries occurring during the peak hour. Trucks are expected to take different routes as the plants are in different locations. Therefore, their contribution to overall traffic impacts would be negligible. Therefore, no significant impacts to traffic during operation of the proposed projects are expected at either the Wilmington or Carson Plants.

The operational phase is not expected to result in an increase or decrease in marine vessel or rail traffic.

1.10.4.3 Mitigation Measure

No significant adverse impacts associated with transportation and traffic from the proposed projects are expected during construction or operational phases, so no mitigation measures are required.

1.10.4.4 Level of Significance after Mitigation

The transportation and traffic impacts of the proposed projects are considered to be less than significant because no CEQA significance thresholds would be exceeded.

1.11 EXECUTIVE SUMMARY – CHAPTER 5: CUMULATIVE IMPACTS

CEQA Guidelines §15130(a) requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in §15065(a)(3). There are a number of projects proposed for development in the vicinity of the Carson and Wilmington Plants which may contribute cumulative impacts to those generated by the proposed PM10 and NOx Reduction Project. These include other refinery and industrial projects, the Alameda Corridor Transportation Authority projects, as well as projects planned in the Cities of Carson and Wilmington. See Chapter 5, subsection 5.2 for a complete list of these other projects.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Some of the resources affected by the proposed ConocoPhillips Refinery project would primarily occur during the construction phase, e.g., traffic. Other impacts would primarily occur during the operational phase, e.g., wastewater generation. Still other impacts would occur during both phases, e.g., air quality.

1.11.1 AESTHETICS

1.11.1.1 Construction Impacts/Operational Impacts

Proposed construction at the ConocoPhillips Carson plant includes a WGS with a WESP. The new WGS/WESP will emit flue gas from a stack approximately 200 feet above grade and will emit a visible steam (water vapor) plume. The stack and subsequent plume have the potential to generate aesthetic impacts at the site. The WGS will be located within the existing refinery facility blending with the currently existing equipment onsite. The aesthetic impacts of the proposed projects were considered less than significant because they would occur within an industrial area and be surrounded by existing industrial development. Other projects at the ConocoPhillips Los Angeles Refinery will occur within the confines of the existing refinery, consisting of structures that will either not be noticeable to the surrounding community (e.g., new compressors associated with the Rule 1118 project), or would blend in with the existing industrial environment (e.g., removal

and construction of new Tank 2625). The aesthetic impacts of the ConocoPhillips proposed projects are less than significant, thus, not cumulatively considerable. As a result, cumulative aesthetic impacts are not considered cumulatively significant.

Implementation of the various projects and regional growth in general could result in direct and indirect visual impacts. The extensive development proposed in the ports that include new terminals, additional land, new transportation corridors and new bridges could impact views throughout the harbor area. Other smaller projects may result in individually minor visual impacts locally. Local land use agencies would usually apply development standards and guidelines to maintain compatibility with surrounding areas.

It should be noted that the Ports Clean Air Action Plan seeks to reduce diesel particulate matter emissions from port-related facilities by 47 percent within the next five years. Reducing diesel particulate matter would be expected to provide beneficial aesthetic impacts by removing visible soot and, thus, enhancing views.

1.11.1.2 Mitigation Measures

Mitigation measures for aesthetic impacts would be the responsibility of local land use agencies and would vary by agency and type of project. Mitigation measures for aesthetics have been imposed on certain port projects (Port of Los Angeles, 2006) and include landscaping requirements, use of low-profile cranes, appropriate paint colors on new equipment, removal of billboards, etc.

1.11.1.3 Level of Significance after Mitigation

The aesthetic impacts of the ConocoPhillips proposed projects are less than significant and, thus, not cumulatively considerable. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

1.11.2 AIR QUALITY

1.11.2.1 Construction Impacts

Chapter 5 includes the available cumulative construction emissions data for the concurrent projects and for the proposed projects. The projects identified in Chapter 5 have the potential for construction activities that overlap with the construction activities for the proposed ConocoPhillips projects. On a cumulative basis, construction emissions would exceed the thresholds established by the SCAQMD assuming they occur at the same time. Therefore, the cumulative air quality construction impacts are still considered significant, as they were in the 2003 Final EA prepared for Rule 1105.1. Mitigation measures to reduce air emissions associated with construction activities are necessary primarily to control emissions from heavy construction equipment and worker travel.

There will be construction emissions associated with other projects in the area including the Alameda Corridor projects (e.g., modifications to SR-47 Port Access Expressway), but sufficient information does not exist to estimate these emissions. Therefore, additional unquantifiable adverse air quality impacts may occur due to construction activities from these other projects.

1.11.2.2 Operational Impacts

The ConocoPhillips proposed projects operational emissions are within the scope of the analysis in the SCAQMD 2003 Final EA for Rule 1105.1 and are therefore not significant. The ConocoPhillips proposed projects' operational project emissions were less than significant. As a result the proposed projects' contribution to significant adverse cumulative operational impacts is not considered to be cumulatively considerable as defined in CEQA Guidelines §§15065(c) and 15130(a)(3) and, therefore, is not significant. If fact, the ConocoPhillips proposed projects are expected to provide large emission reductions and, thus, beneficial air quality impacts associated with operational emissions.

Air quality impacts associated with other cumulative projects are expected to be less than the SCAQMD mass daily emissions thresholds for SOx and PM10. On a cumulative basis, the emissions of CO, VOCs and NOx are expected to exceed the SCAQMD mass emission thresholds. Cumulative air quality impacts of CO, VOCs and NOx from other projects identified in Chapter 5 are considered to be significant. However, per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

There will be emissions associated with other projects in the area including the Chemoil Project, BP IST storage tank project, and Alameda Corridor projects (e.g., modifications to SR-47 Port Access Expressway), but sufficient information does not exist to estimate these emissions. During operation, some of the projects are expected to reduce overall air pollutant emissions, specifically the SCAQMD Rule 1105.1 and 1118 compliance projects. In addition, implementation of the Ports Clean Air Action Plan is expected to result in large emission reductions. The ACTA Corridor and related transportation improvement projects are expected to reduce port-related transportation emissions by improving transportation efficiency, and by reducing congestion and the related air emissions. Therefore, additional air quality benefits may occur due to the transportation-related projects.

1.11.2.3 Toxic Air Contaminants

The proposed projects' impacts on health effects associated with exposure to toxic air contaminants is expected to be below the CEQA significance thresholds. As a result, the proposed projects' contribution to any significant adverse cumulative TAC impacts is not considered to be cumulatively considerable, and, therefore, is not significant.

The impacts from toxic air contaminants are localized impacts. A number of the proposed projects in the Carson area are expected to result in overall emission decreases, including decreases in toxic air contaminants, e.g, Rule 1105.1 compliance projects and Rule 1118 compliance projects. Most of the cumulative projects that may result in emission increases are located over one mile from the ConocoPhillips Refinery and toxic air contaminant emissions are not expected to overlap due to distance from the Refinery and dispersion from the sources which dilutes emission impacts. Cumulative impacts of toxic air contaminants on health are expected to be less than significant.

1.11.2.4 Mitigation Measures

During construction, the mitigation measures developed by the SCAQMD in their 2003 Final EA for Rule 1105.1 will be imposed upon the proposed projects and other projects occurring at the same time (see section 4.3.3 for list of mitigation measures imposed for the proposed projects).

The mitigation measures to minimize emissions associated with operation of the related projects include the use of BACT for all new emission sources and modifications to existing sources. The use of BACT would control localized emissions. A BACT review will be completed during the SCAQMD permit approval process for all new/modified sources.

It should be noted that the ports are working on measures to minimize port-related emissions that could provide emission reductions or minimize future emissions. Further, the ACTA Corridor and related transportation improvement projects are expected to reduce port-related transportation emissions by improving transportation efficiency, and by reducing congestion and the related air emissions.

1.11.2.5 Level of Significance after Mitigation

The cumulative adverse air quality impacts due to construction activities associated with the ConocoPhillips proposed projects are expected to exceed the SCAQMD significance threshold for NOx emissions and are considered to be cumulatively considerable.

The cumulative air quality impacts associated with the ConocoPhillips proposed projects due to operational activities are primarily beneficial (i.e., produce emission reductions) or are substantially less than the SCAQMD significance thresholds and, therefore, are not significant and not considered to be cumulatively considerable. As a result, operational project-specific air quality impacts do not contribute to significant adverse cumulative air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

1.11.3 HYDROLOGY/WATER QUALITY

The proposed projects are anticipated to increase wastewater discharge from the Wilmington Plant by about 100,800 gallons per day (about 70 gallons per minute) associated with the WGS and Purge Treatment Unit. The on-site ConocoPhillips wastewater treatment equipment can handle the increase because it is within the range of wastewater typically handled by the Refinery (1,800 gallons per minute) and the maximum wastewater discharges (over 5,000 gallons per minute). None of the other cumulative projects at the ConocoPhillips Los Angeles Refinery are expected to require additional water or generate additional wastewater. The hydrology/water quality impacts of the ConocoPhillips proposed projects are less than significant and, thus, not cumulatively considerable.

The other cumulative refinery and industrial projects are largely compliance projects or projects that do not require a substantial increase in water demand or wastewater discharge. Projects such related to the ACTA projects and other port transportation projects are not expected to generate additional wastewater. Finally, the terminal development projects at the ports are not expected to require substantial increases in water demand or wastewater discharges. Therefore, the proposed project and the cumulative projects are not expected to produce significant adverse cumulative impacts to water demand.

1.11.3.1 Mitigation Measures

No significant adverse cumulative hydrology and water quality impacts have been identified so no mitigation measures are required.

1.11.3.2 Level of Significance after Mitigation

The hydrology/water quality impacts associated with the ConocoPhillips proposed projects are less than significant and, thus, not considered to be cumulatively considerable. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

1.11.4 TRANSPORTATION/TRAFFIC

1.11.4.1 Construction Impacts

Traffic impacts associated with the construction of the ConocoPhillips proposed project is expected to be less than significant. The proposed projects' contribution to cumulative impacts on traffic during the construction phase would not be considered cumulatively considerable.

There could be cumulative construction traffic impacts associated with other industrial construction projects in the area taking place at the same time that do not avoid peak traffic hours.

1.11.4.2 Operational Impacts

Carson Plant

Cumulative traffic impacts were calculated assuming an ambient traffic growth rate of one percent per year from year 2005 to year 2025 and no changes in existing intersection geometrics. The cumulative traffic impacts are expected to be significant for one intersection in the area (Alameda Connector and 223rd Street).

Wilmington Plant

Cumulative traffic impacts were calculated assuming an ambient traffic growth rate of one percent per year from year 2005 to year 2025 and no changes in existing intersection geometrics. The cumulative traffic impacts are expected to be significant at three intersections in the area (Figueroa Place and Anaheim Street, Figueroa Place and I Street/I-110 off-ramp, and, Gaffey Street - Palos Verdes Drive – Vermont Avenue - Anaheim Street).

1.11.4.3 Mitigation Measures

The ConocoPhillips proposed projects construction traffic impacts are expected to be less than significant. The increase in traffic associated with operation of the proposed projects is limited to one truck trip per day to the Carson and Wilmington Plants and, therefore, is less than significant and no mitigation will be required.

On a cumulative basis, traffic increases unrelated to the proposed project, but, related to general population growth, will need mitigation measures to be developed as new projects that generate traffic are proposed and as part of the City of Carson's and the City of Los Angeles' General Plan process.

1.11.4.4 Level of Significance after Mitigation

The proposed project is not expected to result in significant traffic during either the construction or operational phases. As a result, project-specific traffic impacts do not contribute to significant adverse cumulative traffic impacts and are not cumulative considerable. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

1.12 EXECUTIVE SUMMARY – CHAPTER 6: ALTERNATIVES

This EIR identifies and compares the relative merits of a range of reasonable alternatives to the proposed projects as required by the CEQA Guidelines. According to the CEQA Guidelines, alternatives should include realistic measures to attain the basic objectives of the proposed projects and provide a means for evaluating the comparative merits of each alternative. In addition, though the range of alternatives must be sufficient to permit a reasoned choice, they need not include every conceivable project alternative [CEQA Guidelines, §15126.6(a)]. The key issue is whether the selection and discussion of alternatives foster informed decision-making and public participation.

Alternatives to the proposed project include Alternative 1 - No Project Alternative, Alternative 2 – Alternative Technologies for Particulate Matter Reduction, and Alternative 3 – Alternative Methodology for NOx Emission Reductions. Based on the analysis in this EIR, no feasible alternatives were identified that would reduce or eliminate the potentially significant adverse cumulative construction air quality impacts related to the proposed projects and still achieve the objectives of the proposed projects.

Alternative 1 would prevent ConocoPhillips from complying with SCAQMD Rule 1105.1, and make compliance with Regulation XX more difficult.

Alternative 2 would not build the WGS or WESP, but would install a new dry ESP instead. The impacts would be similar to that of the proposed projects for air quality and traffic, but would result in reduced aesthetic and water/hydrology impacts. Alternative 2 would not provide the added air quality benefits associated with additional reduced emissions of ammonia and sulfur oxides associated with the installation of the WGs. The environmental impacts associated with Alternative 2 are expected to be the same as the proposed project, i.e., significant for air quality during construction activities and less than significant for aesthetics, air quality during operation of the proposed projects, hydrology/water quality, and transportation/traffic.

Alternative 3 would not allow the Refinery to meet the project objective of complying with Regulation XX by reducing NOx emissions onsite, rather than relying on the purchase of RECLAIM Trading Credits (RTCs). Alternative 3 would have similar impacts to the proposed projects for water and hydrology, and would result in less than significant impacts to air quality during construction activities as the proposed projects. Alternative 3 would result in slightly reduced air quality impacts because there would be no ammonia emissions associated with the proposed new SCR's. However, the proposed projects are not expected to result in significant adverse impacts to any environmental resource. Although Alternative 3 would allow the Refinery to meet the project objective of complying with Regulation XX by reducing regional NOx emissions, by purchasing RTCs, local air quality benefits would not be realized because NOx emissions reductions would not occur onsite. Therefore, the proposed projects are preferred because they would attain all project objectives and not result in any significant adverse environmental impacts.

1.13 EXECUTIVE SUMMARY – CHAPTER 7: REFERENCES

Information on references cited, organizations and persons consulted, and the list of EIR preparers is presented in Chapter 7.

1.14 EXECUTIVE SUMMARY – CHAPTER 8: ACRONYMS AND GLOSSARY

Information on acronyms used and definitions of technical terms are presented in Chapter 8.