

ATTACHMENT J

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Attachment 1 to the Governing Board Resolution for:

Final Subsequent Environmental Assessment for Proposed Rule 1109.1 - Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Industries, Proposed Rule 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related Operations, Proposed Amended Rule 1304 – Exemptions, Proposed Amended Rule 2005 – New Source Review for RECLAIM, and Proposed Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries

Findings, Statement of Overriding Considerations, and Mitigation, Monitoring, and Reporting Plan

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Appendix A: November 2015 Attachment 1 to the Governing Board Resolution for Final Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM): Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan

**Attachment 1 to the Governing Board Resolution for:
Final Subsequent Environmental Assessment for Proposed Rule 1109.1 - Emissions
of Oxides of Nitrogen from Petroleum Refineries and Related Industries, Proposed
Rule 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related
Operations, Proposed Amended Rule 1304 – Exemptions, Proposed Amended Rule
2005 – New Source Review for RECLAIM, and Proposed Rescinded Rule 1109 –
Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum
Refineries**

**Findings, Statement of Overriding Considerations, and
Mitigation, Monitoring, and Reporting Plan**

Introduction

California Environmental Quality Act Provisions Regarding Findings

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**Potentially Significant Adverse Impacts That Cannot Be Reduced
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1.0 Introduction

Proposed Rules (PRs) 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations and 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related Operations, Proposed Amended Rules (PARs) 1304 – Exemptions and 2005 – New Source Review for RECLAIM, and the proposed rescission of Rule 1109 are considered a “project” as defined by the California Environmental Quality Act (CEQA) [Public Resources Code Section 21000 et seq.]. Specifically, CEQA requires: 1) the potential adverse environmental impacts of proposed projects to be evaluated; and 2) feasible methods to reduce or avoid any identified significant adverse environmental impacts of these projects to also be evaluated. CEQA Guidelines Section 15364 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

Since the proposed project is comprised of South Coast AQMD-proposed rules, proposed amended rules, and one proposed rescinded rule, the South Coast AQMD has the greatest responsibility for carrying out or approving the project as a whole, which may have a significant effect upon the environment, and is the most appropriate public agency to act as lead agency. [Public Resources Code Section 21067 and CEQA Guidelines Section 15051(b)].¹

The proposed project amends the previous Best Available Retrofit Control Technology (BARCT assessments) conducted for: 1) facilities in the refinery sector that emit nitrogen oxides (NOx) as previously analyzed in the Final Program Environmental Assessment (PEA) for Proposed Amended Regulation XX – Regional Clean Air Incentives Market which was certified on December 4, 2015 (referred to herein as the December 2015 Final PEA for NOx RECLAIM)²; and 2) Control Measure CMB-05 and the entire RECLAIM Transition project in the 2016 Air Quality Management Plan (AQMP) as previously analyzed in the Final Program Environmental Impact Report (EIR) for the 2016 Air Quality Management Plan (AQMP) which was certified on March 3, 2017 (referred to herein as the March 2017 Final Program EIR for the 2016 AQMP)³.

The South Coast AQMD, as Lead Agency for the proposed project, prepared a Subsequent Environmental Assessment (SEA) with significant impacts to conduct an environmental review of new and amended rules and regulations pursuant to CEQA Guidelines Section 15187. The SEA is a substitute CEQA document prepared in lieu of a Subsequent Environmental Impact Report (EIR) with significant impacts [CEQA Guidelines Section 15162], to analyze environmental impacts for the proposed project pursuant to its certified regulatory program (Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l), and South Coast AQMD Rule 110). Pursuant to CEQA Guidelines Sections 15152, 15162, 15168, and 15385, the SEA tiers off of two programmatic CEQA documents: the December 2015 Final PEA for NOx RECLAIM and the March 2017 Final Program EIR for the 2016 AQMP.

¹ CEQA Guidelines refers to California Code of Regulations, Title 14, Section 15000 and following.

² South Coast AQMD, Final Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), SCH No. 2014121018/SCAQMD No. 12052014BAR, certified December 4, 2015. <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects/scaqmd-projects---year-2015>.

³ South Coast AQMD, Final Program Environmental Impact Report for the 2016 Air Quality Management Plan, SCH No. 2016071006, certified March 3, 2017. <http://www.aqmd.gov/home/research/documents-reports/lead-agency-SCAQMD-projects/SCAQMD-projects---year-2017>.

The SEA is a subsequent document to the December 2015 Final PEA for NO_x RECLAIM. Because this is a subsequent document, the baseline is the project analyzed in the December 2015 Final PEA for NO_x RECLAIM. The SEA was prepared because the proposed project is expected to substantially increase the severity of the significant effects that were previously examined in the December 2015 Final PEA for NO_x RECLAIM [CEQA Guidelines Section 15162(a)(3)(B)].

The December 2015 Final PEA for NO_x RECLAIM concluded that the topics of air quality during construction and greenhouse gases (GHGs), hazards and hazardous materials associated with ammonia, and hydrology would have significant adverse impacts and mitigation measures for air quality during construction, and hydrology were adopted. However, no feasible mitigation measures for avoiding or reducing hazards and hazardous materials impacts associated with ammonia were identified. For the significant adverse environmental impacts that were identified for the project analyzed in the December 2015 Final PEA for NO_x RECLAIM and for which mitigation measures were incorporated, the analysis concluded that the December 2015 amendments to the NO_x RECLAIM program would have significant and unavoidable adverse environmental impacts even after mitigation measures were applied. As such, mitigation measures were made a condition of approving the project analyzed in the December 2015 Final PEA for NO_x RECLAIM and a Mitigation Monitoring Plan was adopted. Findings were made and a Statement of Overriding Considerations was adopted by the South Coast AQMD Governing Board. A copy of the Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan previously adopted for the December 2015 Final EA for NO_x RECLAIM⁴ is provided in Appendix A.

The SEA, which includes a project description and analysis of potential adverse environmental impacts that could be generated from the proposed project, concluded to have the same or similar significant effects that were previously examined in the December 2015 Final PEA for NO_x RECLAIM but more severe than what was previously discussed. Specifically, the Final SEA concluded that significant and unavoidable adverse environmental impacts may occur for the following environmental topic areas: 1) air quality during construction and GHGs; 2) hazards and hazardous materials associated with ammonia; and 3) hydrology. Since the proposed project evaluated in the Final SEA would result in more severe significant adverse impacts than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM, an alternatives analysis and mitigation measures were required and have been included in the Final SEA. Essentially the same mitigation measures for air quality during construction and GHGs, and hydrology as adopted for the December 2015 Final PEA for NO_x RECLAIM are included in the Final SEA but the wording has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts. While no feasible mitigation measures for avoiding or reducing hazards and hazardous materials impacts associated with ammonia were identified at the time the December 2015 Final PEA for NO_x RECLAIM was certified, feasible mitigation measures applicable to the use and storage of ammonia have been recently developed. Thus, the Final SEA contains new mitigation measures to address the hazards and hazardous materials impacts associated with the use and storage of ammonia.

⁴ South Coast AQMD, Attachment 1 to the Governing Board Resolution: Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan for Final Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), SCH No. 2014121018/SCAQMD No. 12052014BAR, certified December 4, 2015. <http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2015/regxxfindings.pdf>.

The Draft SEA was released and circulated for a 46-day public review and comment period from September 31, 2021 to October 19, 2021. Five comment letters were received during the comment period and one comment letter was received after the close of the comment period. None of the comment letters identified other potentially significant adverse impacts from the proposed project that should be analyzed and mitigated in the SEA. The comments and responses relative to the Draft SEA are included in Appendix F of the Final SEA.

In addition to incorporating the comment letters and the responses to comments, some modifications have been made to the Draft SEA to make it a Final SEA. South Coast AQMD staff evaluated the modifications made to the proposed project after the release of the Draft SEA for public review and comment and concluded that none of the revisions constitute significant new information, because: 1) no new significant environmental impacts would result from the proposed project; 2) there is no substantial increase in the severity of an environmental impact; 3) no other feasible project alternative or mitigation measure was identified that would clearly lessen the environmental impacts of the project and was considerably different from others previously analyzed, and 4) the Draft SEA did not deprive the public from meaningful review and comment. In addition, revisions to the proposed project and analysis in response to verbal or written comments during the rule development process would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the Draft SEA pursuant to CEQA Guidelines Sections 15073.5 and 15088.5. Therefore, the Draft SEA has been revised to include the aforementioned modifications such that it is now the Final SEA. The Final SEA will be presented to the Governing Board prior to its November 5, 2021 public hearing (see Attachment T of the Governing Board package).

When considering for approval a proposed project that has one or more significant adverse environmental effects, a public agency must make one or more written findings for each significant adverse effect, accompanied by a brief rationale for each finding [Public Resources Code Section 21081 and CEQA Guidelines Sections 15065 and 15091]. The analysis in the Final SEA concluded that the proposed project has the potential to generate, significant adverse environmental impacts which are more severe than what was previously analyzed in the December 2015 Final PEA for NO_x RECLAIM for 1) air quality during construction and GHGs; 2) hazards and hazardous materials associated with ammonia; and 3) hydrology.

For a proposed project with significant adverse environmental impacts, CEQA requires the lead agency to balance the economic, legal, social, technological, or other benefits of a proposed project against its significant unavoidable environmental impacts when determining whether to approve the proposed project. Under CEQA Guidelines Section 15093(a), “If the specific economic, legal, social, technological, or other benefits of a project outweigh the unavoidable significant adverse environmental effects, the adverse environmental effects may be considered ‘acceptable.’” Thus, after adopting findings, the lead agency must also adopt a “Statement of Overriding Considerations” to approve a proposed project with significant adverse environmental effects.

South Coast AQMD’s certified regulatory program does not impose any greater requirements for making written findings for significant environmental effects than is required for an EIR under CEQA. When a lead agency adopts measures to mitigate or avoid significant adverse

environmental effects, a mitigation, monitoring and reporting plan is required pursuant to CEQA Guidelines Section 15097 and Public Resources Code Section 21081.6. The Final SEA identified CEQA mitigation measures within the authority of South Coast AQMD to adopt or implement. Therefore, a Mitigation, Monitoring, and Reporting Plan is included in this document.

2.0 CEQA Provisions Regarding Findings

CEQA generally requires agencies to make certain written findings before approving a proposed project with significant environmental impacts. South Coast AQMD is exempt from some of CEQA's requirements pursuant to its Certified Regulatory Program, but complies with its provisions where required or otherwise appropriate.

Relative to making Findings, CEQA Guidelines Section 15091 provides:

- (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant 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. The possible findings are:
 - 1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
 - 2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
 - 3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.
- (b) The findings required by subsection (a) shall be supported by substantial evidence in the record.
- (c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.
- (d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.
- (e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

- (f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The “changes or alterations” referred to in CEQA Guidelines Section 15091(a)(1) may include a wide variety of measures or actions as set forth in CEQA Guidelines Section 15370, including:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

3.0 Summary of the Proposed Project

The proposed project is designed to transition affected sources (combustion equipment) specific to the petroleum refinery and related industries that emit NO_x and that are operated at facilities subject to South Coast AQMD Regulation XX – RECLAIM to a command-and-control regulatory structure. The decision to transition from the NO_x RECLAIM program to a source-specific command-and-control regulatory structure was approved by the South Coast AQMD Governing Board as Control Measure CMB-05 – Further NO_x Reductions from RECLAIM Assessment of the 2016 AQMP. In accordance with Control Measure CMB-05, the transition of NO_x RECLAIM facilities to a command-and-control regulatory structure is intended to ensure that the applicable equipment will meet BARCT level equivalency as soon as practicable. The potential environmental impacts associated with the 2016 AQMP, including Control Measure CMB-05, were analyzed in the March 2017 Final Program EIR for the 2016 AQMP.

The proposed project amends the previous BARCT assessments conducted for: 1) facilities in the refinery sector as previously analyzed in the December 2015 Final PEA for NO_x RECLAIM; and 2) Control Measure CMB-05 and the entire RECLAIM Transition project in the 2016 Air Quality Management Plan (AQMP) as previously analyzed in the March 2017 Final Program EIR for the 2016 AQMP.

The amendments to the NO_x RECLAIM program that were adopted on December 4, 2015 and which contained the previous BARCT assessment, were developed to reduce emissions from equipment and processes operated at NO_x RECLAIM facilities located throughout the entire South Coast AQMD jurisdiction. The December 2015 Final PEA for NO_x RECLAIM programmatically evaluated the environmental impacts of implementing that BARCT analysis, which was based on projected NO_x emission reductions resulting from reducing NO_x RECLAIM Trading Credit (RTC) allocations by up to 14 tons per day (tpd) from the refinery and non-refinery sectors. At the December 2015 public hearing, however, the South Coast AQMD Governing Board adopted a revised version of the NO_x RECLAIM proposal with a reduced NO_x RTC shave amount of 12 tpd, weighted for BARCT, and a delayed implementation schedule will full implementation by December 31, 2022.

PR 1109.1 was developed primarily to implement: 1) current BARCT which is statutorily required in California Health and Safety Code Section 40406 to consider “environmental, energy, and economic impacts;” and 2) AB 617 which contains an expedited schedule for implementing BARCT at cap-and-trade facilities since industrial source RECLAIM facilities are in the cap-and-trade program and are subject to the requirements of AB 617. Under AB 617, air districts are required to develop by January 1, 2019, an expedited schedule for the implementation of BARCT no later than December 31, 2023, with the highest priority given to older, higher-polluting units that will need retrofit controls installed.

PR 1109.1 proposes to establish BARCT requirements to reduce NO_x emissions while not increasing carbon monoxide (CO) emissions from petroleum refineries and facilities with operations related to petroleum refineries which includes asphalt plants, biofuel plants, hydrogen production plants, facilities that operate petroleum coke calciners, sulfuric acid plants, and sulfur recovery plants. The following combustion equipment categories will be applicable to PR 1109.1: 1) boilers; 2) gas turbines; 3) ground level flares; 4) fluidized catalytic cracking units; 5) petroleum coke calciners; 6) process heaters; 7) sulfur recover units/tail gas treating units; 8) steam methane reformer (SMR) heaters; 9) SMR heaters with gas turbine; 10) sulfuric acid furnaces; and 11) vapor incinerators. To achieve the BARCT NO_x concentration limits under PR 1109.1, installations or modifications of post-combustion NO_x control equipment, including but not limited to selective catalytic reduction (SCR) and ultralow NO_x burner (ULNB) technology, is expected to occur, which will reduce NO_x emissions but may also increase emissions of particulate matter and sulfur oxide (SO_x), which may trigger Best Available Control Technology (BACT).

PR 1109.1 will transition affected equipment operating at 16 facilities: nine petroleum refineries, three small refineries, and four facilities with related operations, that are subject to transition from the NO_x RECLAIM program to a command-and-control regulatory structure. A portion of the equipment and facilities that are subject to PR 1109.1 were previously analyzed in the December 2015 Final PEA for NO_x RECLAIM.

The BARCT NO_x concentration limits in PR 1109.1 are expected to be achieved primarily by installing new or modifying existing post-combustion NO_x control equipment such as selective catalytic reduction (SCR) technology or retrofitting existing combustion equipment with ultra-low NO_x burners (ULNB). For FCCUs and petroleum coke calciners, wet gas scrubber (WGS) technology utilizing a Low Temperature Oxidation Application (LoTOx™ with WGS), or dry gas scrubber (DGS) technology utilizing an UltraCat™ Application (UltraCat™ with DGS) may be selected by facility operators in lieu of SCR technology to achieve the BARCT emission limits. Utilization of these various NO_x emission control technologies is expected to create secondary adverse impacts which are analyzed in this CEQA document.

Although designed to reduce NO_x emissions, installations of new or modifications of existing SCR technology to comply with the BARCT requirements in PR 1109.1 will cause concurrent increases in emissions of PM₁₀ and SO_x from the use of ammonia as a NO_x reduction agent due to the presence of sulfur in the refinery fuel gas. In addition, these increases of co-pollutant emissions may, in turn, require facility operators to reduce the sulfur content in refinery fuel gas in order to comply with existing BACT requirements pursuant to New Source Review (NSR).

When comparing the types of activities and associated environmental impacts with implementing the BARCT standards for the equipment and facilities subject to the December 2015 NOx RECLAIM amendments as previously analyzed in the December 2015 Final PEA for NOx RECLAIM, to the additional equipment and sources that will need to comply with the BARCT requirements in PR 1109.1, the physical activities that facility operators may undertake to comply with the BARCT requirements in PR 1109.1 are expected to be the same and will cause the same type of secondary adverse environmental impacts affecting the same environmental topic areas that were identified and previously analyzed in the December 2015 Final PEA for NOx RECLAIM (e.g., air quality during construction and GHGs, hazards and hazardous materials due to ammonia, and hydrology (water demand) but to an extent that is more severe than the previous.

PR 429.1 proposes new requirements for startup, shutdown, and certain maintenance events, including an exemption from the NOx and CO emission limits in PR 1109.1 during these events. PR 429.1 also proposes notification and recordkeeping requirements for units that will be subject to PR 1109.1.

PAR 1304 and PAR 2005 propose to include a narrow BACT exemption to address these potential emission increases associated with installation of new or the modification of existing post-combustion air pollution control equipment or other equipment modifications to comply with the proposed NOx emission limits in PR 1109.1. Because the proposed adoption of PR 1109.1 will make Rule 1109 outdated and no longer necessary, Rule 1109 is proposed to be rescinded.

Implementation of the proposed project is estimated to reduce NOx emissions by approximately 7 to 8 tpd, while not increasing CO emissions. If the minimum 7 tpd of NOx emission reductions is achieved, a corresponding regionwide net decrease in annual PM2.5 concentration of 0.11 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) is also expected. While reducing emissions of NOx and other contaminants will create an environmental benefit, activities that facility operators may undertake to implement the proposed project may also create secondary potentially significant adverse environmental impacts to air quality during construction and GHGs; hazards and hazardous materials associated with ammonia; and hydrology.

4.0 Potential Significant Adverse Impacts That Cannot be Reduced Below a Significant Level

The Final SEA for the proposed project identified the topics of air quality during construction and GHGs, hazards and hazardous materials associated with ammonia, and hydrology as the areas in which the proposed project may make the significant adverse impacts previously analyzed in the December 2015 Final PEA for NOx RECLAIM more severe. The Final SEA for the proposed project did not identify any new significant impact areas. The analysis in the Final SEA for the proposed project, as with the previous analysis in the December 2015 Final PEA for NOx RECLAIM, is conservative as it makes the significance determinations assuming that almost all construction projects at all facilities will overlap, which is unlikely due to the potential for varying equipment turnaround schedules at the affected facilities. Thus, the analysis in the Final SEA likely overestimates the potentially significant adverse impacts that cannot be reduced below a significant level for the following environmental topic areas.

A. Air Quality Impacts During Construction

Relative to construction emissions, the "worst-case" scenario is when construction activities overlap due to concurrent construction activities occurring at a single facility and at multiple facilities. Specifically, the scenario analyzed in the Final SEA is the simultaneous activities of demolishing existing equipment, site preparation, and constructing new or modifying existing air pollution control equipment, which could occur at a single facility or at more than one facility. The analysis further assumes that the "worst-case" peak day is that in which each construction project is operating construction equipment that generates the greatest emissions.

The South Coast AQMD air quality significance thresholds for construction-related emissions are: 75 pounds per day of VOC; 100 pounds per day of NO_x; 550 pounds per day of CO; 150 pounds per day of SO_x; 150 pounds per day of PM₁₀; and 55 pounds per day of PM_{2.5}.

Based on the aforementioned assumptions for overlapping construction activities at 16 affected refinery facilities, the Final SEA for the proposed project estimated the "worst-case" peak daily mitigated emissions to be: 155 pounds of VOC; 1,062 pounds of NO_x; 4,306 pounds of CO; 8 pounds of oxides of sulfur (SO_x); 183 pounds of particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀); and 60 pounds of particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}).

For comparison, the December 2015 Final PEA for NO_x RECLAIM estimated the "worst-case" peak daily mitigated construction emissions at nine affected refinery facilities to be: 389 pounds of VOC; 1,417 pounds of NO_x; 2,396 pounds of CO; 3 pounds of SO_x; 814 pounds of PM₁₀; and, 405 pounds of PM_{2.5}. For all pollutants, the incremental increase in mitigated construction emissions analyzed in the Final SEA for the proposed project, when added to the mitigated construction emissions presented in the December 2015 Final PEA for NO_x RECLAIM, are more severe than the project analyzed in the December 2015 Final PEA for NO_x RECLAIM, and except for SO_x emissions, exceed the South Coast AQMD air quality significance thresholds for construction.

Thus, the proposed project evaluated in the Final SEA would result in more severe, significant adverse air quality impacts during construction than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM.

As such mitigation measures that focus on the VOC, NO_x, CO, PM₁₀, and PM_{2.5} emissions that may be generated during construction are required to minimize the significant air quality impacts associated with construction activities. Feasible construction-related mitigation measures were identified in the December 2015 Final PEA for NO_x RECLAIM that may continue to be employed for the proposed project evaluated in the Final SEA to reduce emissions from heavy construction equipment and worker travel. See the Mitigation, Monitoring, and Reporting Plan section of this document for the air quality construction mitigation measures that have been applied to the proposed project.

While applying construction mitigation measures may reduce emissions associated with construction activities at the affected facilities to the maximum extent feasible, the proposed

project will neither avoid the significant air quality impacts during construction nor reduce the construction emission impacts to less than significant levels.

While the air quality mitigation measures for construction that are identified in the Mitigation, Monitoring, and Reporting Plan section of this document may reduce construction emissions to the maximum extent feasible, none are mitigation measures that will avoid the significant impacts or reduce the construction air quality impacts to less than significant. Also, no other feasible mitigation measures have been identified to reduce construction air quality emissions to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative air quality impacts during construction, after mitigation is applied.

B. GHG Impacts

With regard to GHG emissions, the proposed project involves mobile sources during construction and operation at 16 affected refinery facilities which generate combustion GHG emissions during construction and operation, as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). However, the proposed project does not affect equipment or operations that have the potential to emit non-combustion GHGs such as sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs).

Installation of new or modification of existing air pollution control equipment to reduce NO_x emissions as part of implementing the proposed project is expected to generate construction-related GHG emissions. In addition, based on the type and size of equipment affected by the proposed project, GHG emissions from the operation of the air pollution control equipment are likely to increase from current levels due to electricity and fuel use. The proposed project will also result in an increase of GHG operational emissions produced from additional truck hauling and deliveries necessary to accommodate the additional solid waste generation and increased use of supplies and chemicals such as catalyst.

For the purposes of addressing the GHG impacts of the proposed project, the overall impacts of CO₂ equivalent (CO₂e) emissions from the proposed project were estimated and evaluated from the earliest possible initial implementation of the proposed project with construction beginning in 2021. Once the proposed project is fully implemented, the potential NO_x emission reductions would continue through the end of the useful life of the equipment. The analysis estimated CO₂e emissions from all sources subject to the proposed project (construction and operation). Since installing new or modifying existing air control equipment requires advanced planning, engineering design, and permitting, the analysis of CO₂e emissions spans from the beginning of the proposed project (e.g., no sooner than 2021) to the end of construction (2033-2034) at full implementation (e.g., construction of new or modified air pollution control equipment will be completed and operational) when the entire 7 to 8 tpd of the NO_x emission reductions will be fully achieved.

Implementing the proposed project is expected to result in an incremental increase of GHG emissions relative to the amount previously analyzed in the December 2015 Final PEA for NO_x RECLAIM from temporary construction activities, operational electricity use, and operational truck trips, which, in total, will contribute to an overall exceedance of the South Coast AQMD's

air quality significance threshold for GHGs (e.g., 10,000 metric tons of CO₂e emissions per year (MTCO₂e/yr)). The Final SEA estimated the “worst-case” incremental GHG emissions increase from the proposed project to be 2,029 MTCO₂e/yr which does not exceed the South Coast AQMD air quality significance threshold for GHGs. For the proposed project, none of the incremental increases in GHG emissions at each of the affected 16 refinery facilities were shown in the Final SEA to individually exceed the GHG industrial significance threshold of 10,000 MTCO₂e/yr before or after mitigation.

For comparison, the December 2015 Final PEA for NO_x RECLAIM estimated the “worst-case” GHG emissions for nine affected refinery facilities from temporary construction activities, operational electricity use, operational truck trips, and operational water conveyance to be 33,517 MTCO₂e/yr which exceeded the South Coast AQMD air quality significance threshold for GHGs. After the certification of the December 2015 Final PEA for NO_x RECLAIM, more precise CO₂e intensity emission factors for the specific utilities which provide electricity to the affected facilities became available. As such, the Final SEA updated the initial GHG estimates for the project analyzed in the December 2015 Final PEA for NO_x RECLAIM by applying the revised CO₂e intensity emission factors accordingly. While the revised GHG emission estimates in the Final SEA reflecting the updated CO₂e intensity emission factors for the project analyzed in December 2015 Final PEA for NO_x RECLAIM resulted in fewer CO₂e emissions overall, at 15,371 MTCO₂e/yr, the updated GHG emission estimates continue to exceed the South Coast AQMD air quality significance threshold for GHGs. However, none of the projected increases in GHG emissions at each of the affected nine facilities as analyzed in the December 2015 Final PEA for NO_x RECLAIM were shown to individually exceed the GHG industrial significance threshold of 10,000 MT CO₂e/yr before or after mitigation.

When adding the incremental GHG emissions analyzed in the Final SEA for the proposed project to the adjusted GHG emissions estimates from the December 2015 Final PEA for NO_x RECLAIM, fewer overall GHG emissions and less severe GHG impacts when compared to the original GHG estimates presented in the December 2015 Final PEA for NO_x RECLAIM are expected, but at levels that will continue to exceed the South Coast AQMD air quality significance threshold of 10,000 MTCO₂e/yr for GHGs. Thus, less severe but significant adverse GHG impacts than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM would remain if the proposed project is implemented. Therefore, the proposed project is considered to have significant and unavoidable adverse GHG impacts.

As such, mitigation measures that focus on GHG emissions that may be generated are required to minimize the significant adverse GHG impacts. Feasible GHG-specific mitigation measures were previously identified in the December 2015 Final PEA for NO_x RECLAIM to reduce GHG emissions associated with conveyance of water needed to operate air pollution control equipment that utilize water. Recycled water projects and the utilization of recycled water are among the most direct ways to reduce GHG from combustion activities associated with conveying water to the affected facilities if water-intensive scrubbers are installed as a result of the proposed project.

However, the proposed project evaluated in the Final SEA did not identify any incremental increases in the use of air pollution control equipment (e.g., scrubbers) that utilize water, thus, no incremental increases in water use such that no corresponding incremental increases in GHG

emissions specific to water conveyance were anticipated for the proposed project. Nonetheless, should any of the affected facilities elect to install the scrubbers previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, the previously identified GHG mitigation measures may continue to be employed for the proposed project evaluated in the Final SEA. See the Mitigation, Monitoring, and Reporting Plan section of this document for the GHG mitigation measures that have been applied to the proposed project.

While the GHG mitigation measures identified in the Mitigation, Monitoring, and Reporting Plan section of this document may reduce GHG emissions associated with water conveyance to the maximum extent feasible, none are mitigation measures that will avoid the significant impact or reduce the GHG impact to less than significant levels. Also, no other feasible mitigation measures have been identified that would either avoid or reduce the other categories of GHG emissions (e.g., from temporary construction activities, operational electricity use, operational truck trips) to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable cumulative GHG impacts, even after mitigation is applied.

C. Hazards and Hazardous Materials Impacts Associated With Ammonia

The Final SEA assumes that some facilities may opt to reduce NO_x emissions by installing air pollution control equipment such as SCRs which require the use of ammonia, a chronic and acutely hazardous material. Further, an increase in the use of ammonia in response to the proposed project may increase the current existing risk setting associated with transportation/deliveries of ammonia (i.e., truck and road accidents), and the use and storage of ammonia (i.e. tank rupture). In particular, the analysis in the Final SEA assumes that as many as 25 additional new SCRs could be installed at seven facilities, while the analysis in the December 2015 Final PEA for NO_x RECLAIM estimated that 83 new SCRs would be installed at nine facilities.

For the 25 new SCRs to be installed, an additional 5 tpd (equivalent to approximately 1,288 gallons per day) of aqueous ammonia (at 19 percent concentration) would be needed to operate the equipment. For comparison, the amount of ammonia projected to be needed in the December 2015 Final PEA for NO_x RECLAIM analysis was approximately 39.5 tpd or 10,284 gallons per day to supply approximately 117 new SCRs (with 83 of the 117 new SCRs for the refinery facilities) (see December 2015 Final PEA for NO_x RECLAIM, Subchapter 4.4 – Hazards and Hazardous Materials, pp. 4.4-10 through 4.4-11). As such, the incremental amount of ammonia that is expected to be needed to implement the proposed project is relatively small when compared to what was previously analyzed in the December 2015 Final PEA for NO_x RECLAIM.

Consistent with the analysis of the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM for the nine refinery facilities, it is also expected that the 16 affected facilities that are subject to the proposed project and analyzed in the Final SEA will receive ammonia from a local ammonia supplier located in the greater Los Angeles area. As with the previously analyzed project, deliveries of aqueous ammonia associated with the proposed project would also be made by tanker truck via public roads. For both the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM and the proposed project analyzed in the Final SEA, the accidental release of ammonia from a delivery and use is a localized event (i.e., the release of ammonia would only affect the receptors that are within the zone of the toxic endpoint). Further, the accidental release from a delivery would also be temporally limited because deliveries are not likely to be

made at the same time in the same area. Based on these limitations, the analysis in both the December 2015 Final PEA for NO_x RECLAIM and the Final SEA assumed that an accidental release would be limited to a single delivery or single facility at a time. In the ammonia transportation release scenario for both of these CEQA documents, the distance to the toxic endpoint from a worst-case delivery truck release was estimated to be 0.4 mile. Since sensitive receptors are expected to be found within 0.4 mile from roadways, the hazards and hazardous materials impacts due to a delivery truck accident were concluded to be potentially significant. Therefore, as with the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, the proposed project was also concluded to have significant adverse hazards and hazardous materials impacts due to ammonia deliveries.

Facilities that choose to install air pollution control devices that use ammonia, such as SCR systems, would need ammonia tanks that range in size from 600 to 11,000 gallons in capacity, with daily usage varying by facility need. However, the ammonia tank rupture scenario as previously analyzed in the December 2015 Final PEA for NO_x RECLAIM and in the analysis in the Final SEA both estimated a toxic endpoint distance of 0.1 mile from a ruptured tank spilling up to 12,100 gallons (110 percent of the maximum sized tank of 11,000 gallons) of aqueous ammonia at a 20% concentration. Facility 10, which was not previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, may install an SCR and new ammonia tank to comply with the NO_x emission limits in PR 1109.1, but this facility has indicated that they intend to utilize an existing SCR equipped with an existing ammonia tank. Since it is speculative to predict or forecast where individual facilities will choose to site their new ammonia tanks, it is not possible to quantify the exact toxic endpoint that will result and therefore, it is not possible to conclusively determine that all sensitive receptors in proximity of an affected facility would not be located within the toxic endpoint distance. Therefore, the Final SEA conservatively considers the environmental consequences regarding hazards impacts from a catastrophic rupture of an ammonia tank as a potentially significant adverse hazards and hazardous materials impact.

For the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, the hazards and hazardous materials analysis concluded significant adverse hazards and hazardous materials impacts due to the routine transport, use and storage of ammonia. At the time the December 2015 Final PEA for NO_x RECLAIM was certified, no feasible mitigation measures for avoiding or reducing hazards and hazardous materials impacts associated with the routine transport, use, and storage of ammonia were identified.

For the project evaluated in the December 2015 Final PEA for NO_x RECLAIM as well as the proposed project evaluated in the Final SEA, no feasible mitigation measures were identified for the transportation of ammonia, over and above the extensive safety regulations that currently apply to delivery trucks that haul ammonia. However, feasible mitigation measures for the use and storage of ammonia were identified for the proposed project evaluated in the Final SEA that would reduce the risk of an offsite consequence due to the catastrophic rupture of an ammonia tank. See the Mitigation, Monitoring, and Reporting Plan section of this document for the ammonia mitigation measures that have been applied to the proposed project.

In general, while the ammonia mitigation measures that are identified in the Mitigation, Monitoring, and Reporting Plan section of this document may reduce the risk of an offsite

consequence at each individual facility by preventing a catastrophic release of ammonia beyond a facility's property line and avoiding the exposure of ammonia to offsite sensitive receptors, the effectiveness of these mitigation measures is site-specific and depends on the proximity of the ammonia tank to property line and the capacity of each ammonia storage tank that is actually installed.

Due to the uncertainty of where each facility may site an ammonia tank and not knowing the size of each ammonia tank to be installed at the time of writing the Final SEA, the analysis of these feasible mitigation measures concluded that the potential risk of an offsite consequence due to the catastrophic rupture of an ammonia tank may remain significant after mitigation is applied. Thus, none of the ammonia mitigation measures will completely avoid the significant hazards and hazardous materials impacts associated with ammonia or reduce these impacts to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative hazards and hazardous materials impacts for the routine transport, use, and storage of ammonia, after mitigation is applied.

D. Hydrology Impacts

Water Demand During Hydrotesting

As with the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, implementation of the proposed project analyzed in the Final SEA may cause potentially significant adverse hydrology (water demand) impacts associated with hydrotesting installed equipment after construction is completed, but prior to bringing the equipment online for operation. During hydrotesting, water is expected to be used to hydrostatically (pressure) test all storage tanks and pipelines to ensure each structure's integrity. Pressure testing or hydrotesting is typically a one-time event unless a leak is found.

The analysis in the Final SEA shows that the potential incremental increase in water use would be approximately 88,000 gallons for multiple facilities concurrently conducting hydrotesting activities and 286,000 gallons for the proposed project. For comparison, the hydrotesting analysis in the December 2015 Final PEA for NO_x RECLAIM concluded that the potential incremental increase in water use would be approximately 319,000 gallons for multiple facilities concurrently conducting hydrotesting activities and 924,000 gallons for the NO_x RECLAIM project. When combining the proposed project analyzed in the Final SEA with the NO_x RECLAIM project analyzed in the December 2015 Final PEA for NO_x RECLAIM, the potential water use from hydrotesting overall is 407,000 gallons needed for multiple facilities concurrently conducting hydrotesting, and 1,210,000 gallons for the combined projects, which is greater than the South Coast AQMD's significance threshold of 262,820 gallons per day of potable water. Thus, the amount of potable water that may be used on a daily basis for hydrotesting activities post-construction but prior to operation is potentially significant. Moreover, the proposed project evaluated in the Final SEA would result in more severe significant adverse water demand impacts associated with hydrotesting than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM.

Feasible mitigation measures specific to hydrotesting water demand were previously identified in the December 2015 Final PEA for NO_x RECLAIM that may continue to be employed for the

proposed project evaluated in the Final SEA to reduce or completely avoid the use of potable water for hydrotesting purposes by substituting the use of recycled water. See the Mitigation, Monitoring, and Reporting Plan section of this document for the hydrotesting mitigation measures that have been applied to the proposed project.

While applying the hydrotesting mitigation measures may reduce the use of potable water associated with hydrotesting the affected equipment to the maximum extent feasible, the proposed project will neither avoid the significant water demand impacts during hydrotesting nor reduce water demand impacts to less than significant levels since not all of the affected facilities may have access to recycled water or other sources of non-potable water such as treated process water (e.g., cooling tower blowdown water, etc.) that is temporarily re-routed or diverted from elsewhere within the facility.

Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative water demand impacts during hydrotesting, after mitigation is applied.

Water Demand During Operation

The proposed project evaluated in the Final SEA did not identify any incremental increases in the use of air pollution control equipment (e.g., scrubbers) that utilize water. Further, the incremental changes evaluated in the Final SEA consist of installing additional new SCRs and associated ammonia storage tanks, modifying additional existing SCRs, replacing combustion equipment, and replacing burners with ULNBs, and none of these technologies utilize water for their operation. For this reason, no incremental increases in operational water demand were anticipated for the proposed project. However, significant adverse water demand impacts during operation were concluded for the previously proposed project analyzed the December 2015 Final PEA for NO_x RECLAIM because scrubber technology was identified as requiring substantial amounts of water for its operation (e.g., 602,814 gallons of water per day). Thus, the analysis in the Final SEA also concluded significant adverse water demand impacts during operation.

Feasible mitigation measures specific to operational water demand were previously identified in the December 2015 Final PEA for NO_x RECLAIM that may continue to be employed for the proposed project evaluated in the Final SEA, should any of the affected facilities elect to install the scrubbers previously analyzed in the December 2015 Final PEA for NO_x RECLAIM. See the Mitigation, Monitoring, and Reporting Plan section of this document for the operational water demand mitigation measures that have been applied to the proposed project.

While the operational water demand mitigation measures identified in the Mitigation, Monitoring, and Reporting Plan section of this document may reduce potable water use associated with water conveyance to the maximum extent feasible, none are mitigation measures that will avoid the significant impact or reduce the operational water demand impact to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative water demand impacts during operation, after mitigation is applied.

5.0 Findings Regarding Potentially Significant Environmental Impacts

The following potentially significant environmental impacts were analyzed in the Final SEA, and the effects of the proposed project were considered. Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a) provide that a public agency shall not approve or carry out a project with significant environmental effects 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. Additionally, the findings must be supported by substantial evidence in the record [CEQA Guidelines Section 15091(b)]. Three potential findings can be made for potentially significant impacts:

Finding 1: Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final SEA [Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1)].

Finding 2: Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency [Public Resources Code Section 21081(a)(2) and CEQA Guidelines Section 15091(a)(2)].

Finding 3: Specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final SEA [Public Resources Code Section 21081(a)(3) and CEQA Guidelines Section 15091(a)(3)].

As identified in the Final SEA and summarized in Section 2.0 of this Attachment, the proposed project's impacts, when added to the impacts analyzed in the December 2015 Final PEA for NOx RECLAIM, has the potential to make the previously significant and unavoidable adverse environmental impacts more severe than the NOx RECLAIM project evaluated in the December 2015 Final PEA for NOx RECLAIM for the environmental topics of: 1) air quality during construction; 2) hazards and hazardous materials due to ammonia; and 3) hydrology specific to water demand for conducting hydrotesting. Also, the proposed project's GHG impacts, when considered with the impacts analyzed in the December 2015 Final PEA for NOx RECLAIM has the potential to make the previously significant and unavoidable adverse environmental impacts less severe than the NOx RECLAIM project evaluated in the December 2015 Final PEA for NOx RECLAIM. Finally, the proposed project would not alter the previously significant and unavoidable adverse environmental impacts previously evaluated in the December 2015 Final PEA for NOx RECLAIM.

Further, based on the analysis in the Final SEA, essentially the same feasible mitigation measures that South Coast AQMD previously adopted for the project analyzed December 2015 Final PEA for NOx RECLAIM for the environmental topics of air quality during construction, GHGs, and hydrology (see Appendix A), also apply to the proposed project because they can reduce the proposed project's potentially significant environmental impacts. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.

In addition, new mitigation measures are contained in the Final SEA relative to hazards and hazardous materials impacts due to the use and storage of ammonia. Moreover, none of the identified feasible mitigation measures are capable of avoiding or reducing the significant adverse impacts to less than significant levels. Thus, Finding 1 is not applicable to the proposed project.

Finally, all of the previously identified feasible CEQA mitigation measures for the environmental topics of air quality during construction, GHGs, and hydrology and the new CEQA mitigation measures for hazards and hazardous materials impacts due to the use and storage of ammonia, which are identified in the Final SEA are within the authority of South Coast AQMD to adopt or implement. Thus, Finding 2 is not applicable to the proposed project.

The Final SEA concluded that the overall project (impacts from the proposed project added to the impacts from the NOx RECLAIM project) will have the potential to generate significant and unavoidable adverse environmental impacts that are more severe than the project previously analyzed in the December 2015 Final PEA for NOx RECLAIM for the same environmental topics of: 1) air quality during construction; 2) hazards and hazardous materials due to ammonia; and 3) hydrology specific to water demand for conducting hydrotesting. Also, the proposed project's GHG impacts, when considered with the impacts analyzed in the December 2015 Final PEA for NOx RECLAIM has the potential to make the previously significant and unavoidable adverse environmental impacts less severe than the NOx RECLAIM project evaluated in the December 2015 Final PEA for NOx RECLAIM. Finally, the proposed project would not alter the previously significant and unavoidable adverse environmental impacts previously evaluated in the December 2015 Final PEA for NOx RECLAIM.

The South Coast AQMD Governing Board, therefore, makes the following findings regarding the proposed project. The findings are supported by substantial evidence in the record as explained in each finding. The findings will be included in the record of project approval and will also be noted in the Notice of Decision. The findings made by the South Coast AQMD Governing Board are based on the following significant adverse impacts identified in the Final SEA for the proposed project and the previous findings made by the South Coast AQMD Governing Board for the project analyzed in the December 2015 Final PEA for NOx RECLAIM, which are incorporated by reference and are included as Appendix A to this document.

A. Potential project-specific and cumulative VOC, CO, NOx, PM10, and PM2.5 emissions during construction exceed the South Coast AQMD's applicable significance air quality thresholds and cannot be mitigated to less than significant levels.

Finding and Explanation:

When compared to the project previously analyzed in the December 2015 Final PEA for NOx RECLAIM, the implementation of the proposed project is anticipated to trigger additional construction activities associated with the installation of new or the modification of existing air pollution control equipment, the retrofit of existing combustion equipment and the replacement of combustion equipment. Construction activities associated with the proposed project would result in incremental increases of VOC, CO NOx, SOx, PM10, and PM2.5 emissions. For all pollutants, the mitigated construction emissions analyzed in the

Final SEA for the proposed project are more severe than the project analyzed in the December 2015 Final PEA for NO_x RECLAIM, and except for SO_x emissions, exceed the South Coast AQMD air quality significance thresholds for construction.

As a result, the proposed project is expected to have significant adverse construction air quality impacts. However, the temporary construction emissions would cease upon completion of the installation of new or the modification of existing air pollution control equipment, the retrofit of existing combustion equipment and the replacement of combustion equipment, as applicable. Once all the modified or new equipment are in place, the proposed project is expected to result in an incremental reduction of NO_x emissions of 7 to 8 tpd per day by 2033-2034, with some of these reductions achieved above and beyond the actual reductions expected from the refinery sector in the December 2015 NO_x RTC shave.

Because there are more severe, significant adverse air quality impacts during construction, the Final SEA describes feasible mitigation measures which are essentially the same mitigation measures identified in the December 2015 Final PEA for NO_x RECLAIM that could minimize these significant adverse impacts. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.

The Governing Board finds that the updated versions of the construction air quality mitigation measures that have been previously identified and adopted for the December 2015 Final PEA for NO_x RECLAIM apply to the proposed project but they would not reduce the significant adverse project-specific or cumulative impacts to air quality associated with construction to less than significant levels. No other feasible mitigation measures have been identified.

B. Potential GHG emissions exceed the South Coast AQMD's applicable significance GHG threshold and cannot be mitigated to less than significant levels.

Finding and Explanation:

When compared to the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, the implementation of the proposed project is anticipated to have incremental increases in GHG emissions associated with additional construction activities pertaining to the installation of new or the modification of existing air pollution control equipment, the retrofit of existing combustion equipment and the replacement of combustion equipment and the operation of this new and/or modified equipment.

For both the project previously analyzed in the December 2015 Final PEA and the proposed project analyzed in the Final SEA, none of the affected facilities individually exceed the South Coast AQMD's industrial GHG significance threshold of 10,000 MT CO₂e/yr, if the proposed project is implemented. However, when all of the GHG emissions for the facilities were considered for the entire project analyzed in the December 2015 Final PEA for NO_x RECLAIM, the analysis indicated that there would be a significant increase in

GHG emissions. Adding the incremental increases of GHG emissions from the proposed project to the previous GHG emission estimates from the December 2015 Final PEA for NO_x RECLAIM results in more severe GHG emission impacts overall, and when considered together, will continue to exceed the South Coast AQMD air quality significance thresholds for GHGs. However, due to the adjustments in the electricity utility emission factors, the total amount of GHGs from the proposed project and the NO_x RECLAIM project combined are less than what was originally estimated for only the NO_x RECLAIM project in the December 2015 Final PEA for NO_x RECLAIM. Thus, the proposed project evaluated in the Final SEA would result in less severe but significant adverse GHG impacts than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM. Because there are significant adverse GHG impacts from the proposed project, the SEA must describe feasible measures that could minimize significant adverse impacts.

Because there are more severe, significant adverse GHG impacts, the Final SEA describes feasible mitigation measures which are essentially the same mitigation measures identified in the December 2015 Final PEA for NO_x RECLAIM that could minimize these significant adverse impacts. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.

The Governing Board finds that the updated versions of the GHG mitigation measures that have been previously identified and adopted for the December 2015 Final PEA for NO_x RECLAIM apply to the proposed project, but they would not reduce the significant adverse GHG emission impacts to less than significant levels. No other feasible GHG mitigation measures have been identified.

C. Potential hazards and hazardous materials impacts due to the transportation, use, and storage of ammonia may significantly increase the risk of an offsite consequence due to a release of ammonia and cannot be mitigated to less than significant levels.

I. Finding and Explanation Regarding Transportation of Ammonia:

For both the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM and the proposed project analyzed in the Final SEA, the hazards and hazardous materials analysis concluded significant adverse hazards and hazardous materials impacts due to the routine transport of ammonia to facilities that may install air pollution control equipment that require the use of ammonia. However, the proposed project evaluated in the Final SEA would result in more severe hazards and hazardous materials impacts due to the routine transport of ammonia to facilities than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM primarily due to more facilities receiving ammonia and more ammonia being transported overall.

For the project evaluated in the December 2015 Final PEA for NO_x RECLAIM as well as the proposed project evaluated in the Final SEA, no feasible mitigation measures were

identified for the transportation of ammonia, over and above the extensive safety regulations that currently apply to delivery trucks that haul ammonia.

Therefore, the Governing Board finds that no feasible mitigation measures have been identified that would reduce the significant adverse hazards and hazardous materials impacts due to the transportation of ammonia.

II. Finding and Explanation Regarding Use and Storage of Ammonia:

For both the project previously analyzed in the December 2015 Final PEA for NOx RECLAIM and the proposed project analyzed in the Final SEA, the hazards and hazardous materials analysis concluded significant adverse hazards and hazardous materials impacts due to the use and storage of ammonia at facilities that may install that may install air pollution control equipment that require the use of ammonia.. At the time the December 2015 Final PEA for NOx RECLAIM was certified, no feasible mitigation measures for avoiding or reducing hazards and hazardous materials impacts associated with the use and storage of ammonia were identified.

However, for the proposed project evaluated in the Final SEA, new feasible mitigation measures for the use and storage of ammonia were identified that would reduce the risk of an offsite consequence at each individual facility by preventing a catastrophic release of ammonia beyond a facility's property line and avoiding the exposure of ammonia to offsite sensitive receptors. The effectiveness of these mitigation measures is site-specific and depends on the proximity of the ammonia tank to property line and the capacity of each ammonia storage tank that is actually installed.

Due to the uncertainty of where each facility may site an ammonia tank and not knowing the size of each ammonia tank to be installed at the time of writing the Final SEA, the analysis of these feasible mitigation measures concluded that the potential risk of an offsite consequence due to the catastrophic rupture of an ammonia tank may remain significant after mitigation is applied. Thus, none of the ammonia mitigation measures will completely avoid the significant hazards and hazardous materials impacts associated with ammonia or reduce these impacts to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative hazards and hazardous materials impacts for the use and storage of ammonia, after mitigation is applied.

Therefore, the Governing Board finds that feasible mitigation measures have been identified for significant adverse hazards and hazardous materials impacts due to the use and storage of ammonia, but these mitigation measure would not be able to reduce the potential impacts to less than significant levels.

D. Potential potable water demand would use a substantial amount of potable water during hydrotesting and operation which cannot be mitigated to less than significant levels.

I. Finding and Explanation Regarding Water Needed for Hydrotesting:

As with the project previously analyzed in the December 2015 Final PEA for NO_x RECLAIM, implementation of the proposed project analyzed in the Final SEA may cause potentially significant adverse hydrology (water demand) impacts associated with hydrotesting installed equipment after construction is completed, but prior to bringing the equipment online for operation. Moreover, the proposed project evaluated in the Final SEA would result in more severe significant adverse water demand impacts associated with hydrotesting than what were previously identified in the December 2015 Final PEA for NO_x RECLAIM.

Feasible mitigation measures specific to hydrotesting water demand were previously identified in the December 2015 Final PEA for NO_x RECLAIM that may continue to be employed for the proposed project evaluated in the Final SEA to reduce or completely avoid the use of potable water for hydrotesting purposes by substituting the use of recycled water.

While applying the hydrotesting mitigation measures may reduce the use of potable water associated with hydrotesting the affected equipment to the maximum extent feasible, the proposed project will neither avoid the significant water demand impacts during hydrotesting nor reduce water demand impacts to less than significant levels since not all of the affected facilities may have access to recycled water or other sources of non-potable water such as treated process water (e.g., cooling tower blowdown water, etc.) that is temporarily re-routed or diverted from elsewhere within the facility. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative water demand impacts during hydrotesting, after mitigation is applied.

Because there are more severe significant adverse hydrology impacts associated with conducting hydrotesting, the Final SEA describes feasible measures which are essentially the same mitigation measures identified in the December 2015 Final PEA for NO_x RECLAIM that could minimize these significant adverse impacts. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.

The Governing Board finds that the updated versions of the hydrotesting mitigation measures that have been previously identified and adopted for the December 2015 Final PEA for NO_x RECLAIM apply to the proposed project, but they would not reduce the significant adverse water demand impacts associated with hydrotesting to less than significant levels. No other feasible hydrotesting mitigation measures have been identified.

II. Finding and Explanation Regarding Water Needed During Operation:

The proposed project evaluated in the Final SEA did not identify any incremental increases in the use of air pollution control equipment (e.g., scrubbers) that utilize water. Further, the incremental changes evaluated in the Final SEA consist of installing additional new SCRs and associated ammonia storage tanks, modifying additional existing SCRs, replacing combustion equipment, and replacing burners with ULNBs, and none of these technologies utilize water for their operation. For this reason, no incremental increases in operational water demand were anticipated for the proposed project. However, significant adverse water demand impacts during operation were concluded for the previously proposed project analyzed in the December 2015 Final PEA for NO_x RECLAIM because scrubber technology was identified as requiring substantial amounts of water for its operation. Thus, the analysis in the Final SEA also concluded significant adverse water demand impacts during operation.

While the proposed project does not increase the severity of the significant operational hydrology (water demand) impacts analyzed in the December 2015 Final PEA for NO_x RECLAIM, should any of the affected facilities elect to install the previously analyzed scrubbers, the previous feasible mitigation measures specific to operational water demand may continue to be employed for the proposed project. Thus, the Final SEA describes feasible measures which are essentially the same mitigation measures identified in the December 2015 Final PEA for NO_x RECLAIM that could minimize these significant adverse impacts. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.

While the operational water demand mitigation measures may reduce potable water use associated with water conveyance to the maximum extent feasible, none are mitigation measures that will avoid the significant impact or reduce the operational water demand impact to less than significant levels. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative potable water demand impacts during operation, after mitigation is applied.

The Governing Board finds that the updated versions of the hydrology mitigation measures for operational demand of potable water that have been previously identified and adopted for the December 2015 Final PEA for NO_x RECLAIM apply to the proposed project, but they would not reduce or avoid the significant adverse operational water demand impacts to less than significant levels for potable water. No other feasible mitigation measures for operational potable water demand have been identified.

5.1 Findings For Alternatives to the Proposed Project

A. Alternative A: No Project

Finding and Explanation:

The Final SEA analyzes a No Project Alternative, referred to as Alternative A, which consists of what would occur if the proposed project is not approved or adopted. Under Alternative A, petroleum refineries and facilities related to petroleum refineries would remain subject to the NOx RECLAIM program (e.g., South Coast AQMD Regulation XX) would not become subject to a command-and-control rule. The NOx RECLAIM program is based on a comprehensive set of rules, requirements, and procedures ensuring affected facilities operate under a mass emission cap for NOx (referred to as annual allocations) subject to periodic reductions or “shave,” to demonstrate equipment operations are equivalent with BARCT. Meeting this shave can be done through the installation and operation of NOx control equipment to reduce NOx emissions or by providing NOx RTCs. The proposed project is seeking to transition these facilities from the mass emission cap and NOx RTC approach allowed by RECLAIM to a command-and-control regulatory structure whereby a NOx concentration limit is applied to each piece of combustion equipment to comply with BARCT requirements.

Under Alternative A, facilities remaining subject to the NOx RECLAIM program would still be subject to the 12 tpd NOx RTC shave by the end of 2022. It is also important to note that Alternative A, by design, would violate the state law adopted pursuant to AB 617 which requires air districts “in nonattainment for one or more air pollutants to adopt an expedited schedule for the implementation of best available retrofit control technology, as specified.” AB 617 applies to each industrial source that, as of January 1, 2017, was subject to a specified market-based compliance mechanism (e.g., CARB’s AB 32 Cap-and-Trade program for GHGs) and gives highest priority to those permitted units that have not modified emissions-related permit conditions for the greatest period of time. Thus, facilities would still need to be evaluated under a BARCT analysis and, depending on the outcome of that analysis, would need to take action to comply. However, the BARCT analysis under Alternative A and the proposed project is expected to be the same with the same determinations and NOx emission limits. The major difference is that under the NOx RECLAIM program, facilities could opt to use NOx RTCs to meet allocation goals without having to make physical modifications such as installing air pollution control technology. Other elements in PR 1109.1 such as averaging times, exemptions, recordkeeping, reporting, and monitoring would also be different under the RECLAIM program. In addition, Action 5 of the Refinery priorities in the AB 617 Community Emissions Reduction Plan (CERP) for the Wilmington, Carson, West Long Beach community specifically contains a directive for South Coast AQMD to adopt PR 1109.1; thus, the No Project alternative would hinder the full implementation of the AB 617 CERP for the Wilmington, Carson, West Long Beach community, as well as implementation of control measure CMB-05 in the 2016 AQMP.

Alternative A is less environmentally beneficial than the proposed project because it would forego: 1) the 7 to 8 tpd of NOx emission reductions by 2033-2034 (while not increasing

CO emissions) with some of these reductions achieved above and beyond the actual reductions expected from the refinery sector in the December 2015 NOx RTC shave; and 2) a corresponding regionwide net decrease in annual PM_{2.5} concentration of 0.11 µg/m³. The No Project alternative is also not capable of meeting the proposed project's basic objective to transition equipment that is currently permitted under the NOx RECLAIM program to a command-and-control regulatory structure. Because Alternative A is not environmentally superior to the proposed project and does not achieve the basic project objective, the No Project Alternative is infeasible [Public Resources Code 21081(a)(3); *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1000-1001 (upholding finding of infeasibility where agency determined alternative failed to achieve project objective)].

B. Alternative B: More Stringent Proposed Project

Finding and Explanation:

The Final SEA analyzes Alternative B, which is more stringent than the proposed project. Alternative B proposes to apply earlier deadlines than what would otherwise be required in PR 1109.1 for small heaters to achieve a NOx concentration of nine ppm within five years as opposed to 10 years, and small boilers to achieve a NOx concentration of five ppm within six months replacing 25% or more burners as opposed to 50%. All other elements, limits, and deadlines would be the same under Alternative B as for the proposed project.

Alternative B would achieve equivalent long-term NOx emission reductions as the proposed project, as follows: 1) 7 to 8 tpd of NOx emission reductions by 2033-2034 (while not increasing CO emissions) with some of these reductions achieved above and beyond the actual reductions expected from the refinery sector in the December 2015 NOx RTC shave; and 2) a corresponding regionwide net decrease in annual PM_{2.5} concentration of 0.11 µg/m³. However, by shortening the compliance timeline, incremental NOx emission reductions 0.37 ton per day from heaters and boilers rated less than 40 MMBTU/hr would be achieved earlier than the proposed project. Of the alternatives analyzed, Alternative B was identified in the Final SEA as the environmentally superior alternative. However, since installing new or modifying existing air control equipment requires advanced planning, engineering design, and permitting, under Alternative B's more compressed implementation timelines, there may be limited resources available since facilities will be competing for the same skilled labor pool, equipment from the same manufacturers, source test companies, etc. In addition, the compressed compliance implementation timelines outlined in Alternative B will lead to more construction activities and greater construction emissions occurring on peak day which will exceed the South Coast AQMD air quality significance thresholds to a larger extent than the proposed project. As such, Alternative B will not avoid or substantially lessen the significant environmental effect as identified in the Final SEA [Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1)].

C. Alternative C: Less Stringent Proposed Project

I. Finding and Explanation:

The Final SEA analyzes Alternative C, which is less stringent than the proposed project. Alternative C proposes to extend the I-Plan option time frames and lower percentage reduction targets in Phases I by half and in Phase II by a lesser amount with 100% reduction target being achieved by the end of Phase III. All other elements, limits, and deadlines would be the same under Alternative C as for the proposed project.

Alternative C would achieve equivalent long-term NO_x emission reductions as the proposed project, as follows: 1) 7 to 8 tpd of NO_x emission reductions by 2033-2034 (while not increasing CO emissions) with some of these reductions achieved above and beyond the actual reductions expected from the refinery sector in the December 2015 NO_x RTC shave; and 2) a corresponding regionwide net decrease in annual PM_{2.5} concentration of 0.11 µg/m³. However, by lengthening the compliance timeline, facilities would presumably delay construction projects and incremental emission reductions would be achieved later. Air quality impacts due to construction on a peak day could decrease, but it would be speculative to estimate how much. As such, the South Coast AQMD Governing Board finds that Alternative C will not avoid or substantially lessen the significant environmental effect as identified in the Final SEA [Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1)].

D. Alternative D: Limited Start-up, Shutdown, and Malfunction

I. Finding and Explanation:

The Final SEA analyzes Alternative D, which would halve allowance time periods for boilers and process heaters with NO_x post-combustion control equipment, SMR heaters, sulfuric acid furnaces, SMR heaters with gas turbines, FCCUs, petroleum coke calciners, and SRU/TG incinerators during start-ups, shutdowns, and malfunctions (SSM), pursuant to the definitions in the PR 429.1, to not be considered when determining compliance with the NO_x emission limits in PR 1109.1.

Alternative D would achieve equivalent long-term NO_x emission reductions as the proposed project, as follows: 1) 7 to 8 tpd of NO_x emission reductions by 2033-2034 (while not increasing CO emissions) with some of these reductions achieved above and beyond the actual reductions expected from the refinery sector in the December 2015 NO_x RTC shave; and 2) a corresponding regionwide net decrease in annual PM_{2.5} concentration of 0.11 µg/m³. While shortening the SSM allowance period reduces unaccounted-for short-term emissions and total emissions could be expected to decrease with the increasing of total compliance time, it would be speculative to quantify the emission benefit. As such, the South Coast AQMD Governing Board finds that Alternative D will not avoid or substantially lessen the significant environmental effect as identified in the Final SEA [Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1)].

5.2 Conclusion of Findings

The Governing Board makes the following findings:

- 1) Essentially the same feasible mitigation measures that were identified to help minimize the potentially significant adverse impacts to the topics of air quality during construction, GHG emissions, and hydrology and that were adopted by the South Coast AQMD Governing Board at its December 4, 2015 public hearing for the project analyzed in the December 2015 Final PEA for NO_x RECLAIM apply to the proposed project analyzed in the Final SEA such that a Mitigation, Monitoring, and Reporting Plan (pursuant to Public Resources Code Section 21081.6) needs to be prepared. However, the wording of these previously adopted mitigation measures has been updated for clarity and consistency with mitigation measures from other, more recently adopted South Coast AQMD rule development projects with similar environmental impacts.
- 2) New feasible mitigation measures were identified in the Final SEA that will help minimize the potentially significant adverse impacts to the topics of hazards and hazardous materials due to the use and storage of ammonia and these new mitigation measures are included in the Mitigation, Monitoring, and Reporting Plan.
- 3) No feasible mitigation measures have been identified in the Final SEA that would help minimize the potentially significant adverse impacts to hazards and hazardous materials due to transportation of ammonia.
- 4) Alternative A, the No Project alternative, is infeasible because it is not environmentally superior to the proposed project, does not achieve all of the project objectives, and it violates AB 617, which is state law [Public Resources Code Section 21081(a)(3) and CEQA Guidelines Section 15091(a)(3)].
- 5) Alternative B, which was identified in the Final SEA as the environmentally superior alternative, and Alternatives C and D will not avoid or substantially lessen the significant environmental effects identified in the Final SEA [Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1)].

CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." [Public Resources Code Section 21061.1].

The Governing Board further finds that the Final SEA considered alternatives pursuant to CEQA Guidelines Section 15126.6, but there is no alternative to the project that would reduce to insignificant levels the significant impacts to the topics of air quality during construction, GHG emissions, hazards and hazardous materials due to deliveries of ammonia, and hydrology that were identified for the proposed project.

The Governing Board further finds that the findings required by CEQA Guidelines Section 15091(a) are supported by substantial evidence in the record.

6.0 Statement of Overriding Considerations

If significant adverse impacts of a proposed project remain after incorporating mitigation measures, or no measures or alternatives to mitigate the adverse impacts are identified, the lead agency must make a determination that the benefits of the project outweigh the unavoidable 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 risks when determining whether to approve the project [CEQA Guidelines Section 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 Section 15093(a)]. Accordingly, a Statement of Overriding Considerations regarding potentially significant adverse impacts to air quality during construction and GHGs, hazards and hazardous materials associated with ammonia, and hydrology that may result from the proposed project has been prepared. This Statement of Overriding Considerations is included as part of the record of the project approval for the proposed project. Pursuant to CEQA Guidelines Section 15093(c), the Statement of Overriding Considerations will also be noted in the Notice of Decision for the proposed project.

Despite the inability to incorporate changes into the proposed project that will mitigate potentially significant adverse impacts to less than significant levels for the topics of air quality during construction and GHGs, hazards and hazardous materials associated with ammonia, and hydrology, the South Coast AQMD Governing Board finds that each and every one of the following benefits and considerations individually outweigh each and every one of the significant unavoidable adverse environmental impacts:

1. The analysis of potential adverse environmental impacts incorporates a “worst-case” approach. This entails the premise that whenever the analysis requires that assumptions be made, those assumptions that result in the greatest adverse impacts are typically chosen. This method likely overestimates the actual environmental impacts from the proposed project.
2. The 2016 AQMP identifies ambient air pollutant levels relative to federal and state ambient air quality standards (AAQS), establishes baseline and future emissions, and develops control measures to ensure attainment of the AAQS. Construction is a continuous activity within South Coast AQMD’s jurisdiction which has been previously addressed in the 2016 AQMP. Thus, any changes in air quality as a result of construction emissions from the proposed project are accounted for in the 2016 AQMP and would not be expected to interfere with the attainment demonstrations.
3. The proposed project supports the implementation of 2016 AQMP Control Measure CMB-05 – Further NO_x Reductions from RECLAIM Assessment which is designed to transition NO_x RECLAIM facilities to a command-and-control regulatory structure and to ensure that the applicable equipment will meet BARCT level equivalency as soon as practicable.
4. The proposed project also supports the previous amendments to the NO_x RECLAIM program as adopted on December 4, 2015 which contain the previous BARCT assessment

and which were developed to reduce emissions from equipment and processes operated at NOx RECLAIM facilities located throughout the entire South Coast AQMD jurisdiction. The previously adopted amendments to the NOx RECLAIM program will remove 12 tpd of NOx RTCs by December 31, 2022.

5. The proposed project conforms with AB 617, which is a state law requiring implementation of BARCT no later than December 31, 2023, with the highest priority given to older, higher-polluting units that will need retrofit controls installed and Action 5 of the Refinery priorities in the AB 617 CERP for the Wilmington, Carson, West Long Beach community which specifically contains a directive for South Coast AQMD to adopt a rule requiring BARCT for refineries, as reflected PR 1109.1.
6. Each of the alternatives was crafted to vary compliance times: whether implementation dates for source-specific NOx emission limits or facility percentage reduction targets, or start-up, shutdown, and malfunction allowances; all alternatives would achieve equivalent long-term NOx emission reductions as the proposed project. Shortening of compliance times could result in incremental emission reductions being achieved sooner, but would set unrealistic requirements for affected facilities. Lengthening of compliance times could be expected to reduce short-term air quality construction impacts, but because there are various possibilities or permutations of how operators would install equipment to achieve actual NOx reductions, ultimately, there is no way quantify this reduction and conclude impacts to be less than significant.
7. Although the proposed project will not incrementally achieve emission reductions the quickest as compared to more stringent alternatives, it is considered to provide the best balance between emission reductions, feasibility, and the adverse environmental impacts due to construction and operation activities while meeting the overall objectives.
8. Implementing the proposed project will result in an overall net reduction of NOx emissions by approximately 7 to 8 tpd, while not increasing CO emissions. If the minimum 7 tpd of NOx emission reductions is achieved for the proposed project overall, a corresponding regionwide net decrease in annual PM2.5 concentration of 0.11 $\mu\text{g}/\text{m}^3$ is also expected. Therefore, cumulative air quality impacts from the proposed project and all other AQMP control measures when considered together, are not expected to be significant because implementation of all AQMP control measures, and in particular, this project, is expected to result in net emission reductions and overall air quality improvement.

The South Coast AQMD Governing Board finds that the above-described considerations outweigh the unavoidable significant effects to the environment as a result of the proposed project.

7.0 Mitigation, Monitoring, and Reporting Plan

When making findings as required by Public Resources Code Section 21081 and CEQA Guidelines Section 15091, the lead agency must 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 Section 21081.6 and CEQA Guidelines Section 15097(a)]. To fulfill the requirements of Public Resources Code

Section 21081.6 and CEQA Guidelines Section 15097, the South Coast AQMD has developed the following Mitigation, Monitoring, and Reporting Plan for anticipated impacts resulting from implementing the proposed project. Each operator of any facility required to comply with the Mitigation Monitoring, and Reporting Plan shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with all of the mitigation measures, as applicable.

The following construction mitigation measures are required for each of the affected facilities whose operators choose to install air pollution control equipment in response to the proposed project. If, at the time when each facility-specific project is proposed, South Coast AQMD staff will conduct a CEQA evaluation of the facility-specific project and determine if the project is covered by the analysis in the Final SEA. If, at the time when each facility-specific project is proposed, that improved emission reduction technologies become available for on- and off-road construction equipment, the construction mitigation measures will be updated accordingly as part of the CEQA evaluation for the facility-specific project. In addition, these mitigation measures will be included in a Mitigation, Monitoring, and Reporting Plan as part of issuing South Coast AQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by South Coast AQMD personnel.

A. Air Quality Impacts During Construction

Impacts Summary: The proposed project makes more severe, the construction air quality impacts previously analyzed under the December 2015 Final PEA for NO_x RECLAIM. Project-specific and cumulative construction-related emissions of VOC, NO_x, CO, PM₁₀, and PM_{2.5} emissions, based on a “worst-case” analysis, would exceed the South Coast AQMD’s regional mass daily significance thresholds for these pollutants. Emission sources include worker vehicles and heavy construction equipment. The following mitigation measures are intended to minimize the emissions associated with these sources during construction activities. No feasible mitigation measures have been identified to reduce emissions to less than significant levels.

Mitigation Measures: The following construction mitigation measures are required for each of the affected facilities whose operators choose to install NO_x control equipment. South Coast AQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in the Final SEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing South Coast AQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by South Coast AQMD personnel.

AQ-1 Develop a Construction Emission Management Plan for each affected facility to minimize emissions from vehicles including, but not limited to: consolidating truck deliveries; scheduling deliveries to avoid peak hour traffic conditions; describing truck routing; describing deliveries including logging delivery times; describing entry/exit points; identifying locations of parking; identifying construction schedule; and prohibiting truck idling in excess of five consecutive minutes or

another time-frame as allowed by the California Code of Regulations, Title 13 Section 2485 - CARB's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. The Construction Emission Management Plan shall be submitted to South Coast AQMD CEQA for approval prior to the start of construction. At a minimum the Construction Emission Management Plan would include the following types of mitigation measures.

- AQ-2 All construction equipment must be tuned and maintained in compliance with the manufacturer's recommended maintenance schedule and specifications that optimize emissions without nullifying engine warranties. All maintenance records for each equipment and their construction contractor(s) should be made available for inspection and remain onsite for a period of at least two years from completion of construction.
- AQ-3 Survey and document the proposed project's construction areas and identify all construction areas that are served by electricity. Onsite electricity, rather than temporary power generators, shall be used in all construction areas that are demonstrated to be served by electricity. This documentation shall be provided as part of the Construction Emissions Management Plan.
- AQ-4 Require construction equipment such as concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, forklifts, excavator, wheel loader, and soil compactors be electric or alternative-fueled (i.e., non-diesel).
- AQ-5 All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 off-road emission standards at a minimum. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards. In the event that any equipment required under this mitigation measure is not available, the project proponent shall provide documentation in the Construction Emissions Management Plan or associated subsequent status reports as information becomes available.
- AQ-6 Suspend use of all construction activities that generate air pollutant emissions during first stage smog alerts.

If, at the time when each facility-specific project is proposed in response to the proposed project, that improved emission reduction technologies become available for on- and off-road construction equipment, as part of the CEQA evaluation for the facility-specific project, the construction mitigation measures will be updated accordingly.

Implementing Parties: The South Coast AQMD's Governing Board finds that implementing the mitigation measures AQ-1 through AQ-6 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The South Coast AQMD's Governing Board finds that, through its discretionary authority to issue and enforce permits for this project, the South Coast AQMD will ensure compliance with mitigation measures AQ-1 through AQ-6. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRAQ-1: Construction Emission Management Plan

Each facility operator shall develop and submit a Construction Emission Management Plan to the South Coast AQMD for approval prior to starting construction activities. Upon approval, each facility operator shall train all personnel subject to the requirements set forth in the Construction Emission Management Plan on how to comply with the requirements in the plan, and document that training. The South Coast AQMD may conduct routine inspections of the site to verify compliance. The Construction Emission Management Plan shall include, at a minimum, the following information:

- A construction schedule of activities for each construction phase that indicates the number of construction workers needed, and the type, fuel source, and number of construction equipment needed for each construction phase;
- A description of truck routing with a priority given to consolidating truck deliveries and scheduling deliveries to avoid peak hour traffic conditions;
- A format or system for logging delivery dates, times, and type of deliveries;
- A description of entry/exit points to the construction site;
- An identification of parking locations at the construction site; and,
- A description of how the prohibition of truck idling in excess of five consecutive minutes or another time-frame as allowed by the CCR Title 13 Section 2485, will be conveyed to truck drivers.

Traffic Control

Traffic requiring entrance onto each facility's property will be directed toward the entry gate or gates, if there are multiple entrances, so that congestion, as well as associated air pollution, will be minimized.

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

On-site parking will be used to the maximum extent available. In the event that off-site parking is required, construction workers may be requested to park at a designated off-site property. Buses or some other type of shuttle may transfer

multiple workers at one time to and from the project site. No on-street parking (i.e., off of each facility's site) will be allowed.

Each facility operator will limit the number of personal and company vehicles allowed to enter each facility beyond the parking lots. This restriction helps minimize onsite emissions and promotes the use of ride sharing and alternate fueled transportation such as bicycles and electric golf carts.

Construction Schedule

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

During process unit shutdowns, extended work shifts and night shifts, scheduled six to seven days per week, may be necessary. Each facility operator will establish in their Construction Emission Management Plan the details of the construction schedule, including operating hours, days, and number of shifts per day. This construction work schedule will need to be designed to minimize the travel time during peak travel periods.

Trip Reduction Plan

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

Delivery of Equipment and Materials

Each facility operator will coordinate the delivery of equipment and materials to avoid peak hour traffic, whenever possible. That is, delivery of construction materials to the site will be scheduled to occur during off-peak periods which are typically from 8:30 a.m. until 4:00 p.m. Monday through Friday. Each facility operator will request that equipment and material deliveries be minimized between the hours of 7:00 a.m. to 8:00 a.m. and 4:30 p.m. to 5:30 p.m. to reduce traffic in and out of each facility during high traffic peak times. Exceptions will be made for trucks carrying time-critical materials, e.g., concrete delivery and soil hauling (which eliminates the double handling or on-site stock-piling of soil, preventing it from being moved from place-to-place due to lack of adequate staging area, and

subsequent removal at a later time via trucks). Delivery routes and schedules will be developed pursuant to the California Department of Transportation regulations.

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

Prohibit Trucks From Idling Longer Than Five Minutes

Each facility operator will notify all vendors that during deliveries, truck idling time will be limited to no longer than five minutes or another time-frame as allowed by the California Code of Regulations, Title 13 Section 2485 - CARB's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. For any delivery that is expected to take longer than five minutes, each facility operator will require the truck's operator to shut off the engine. Each facility operator will notify the vendors of these delivery requirements at the time that the purchase order is issued and again when trucks enter the gates of the facility. To further ensure that drivers understand the truck idling requirement, signs will be posted at each facility entry gates stating idling longer than five minutes is not permitted.

MMRAQ-2: Maintain Construction Equipment, Tuned Up to Manufacturer's Recommended Specifications That Optimize Emissions Without Nullifying Engine Warranties

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

MMRAQ-3: Survey of Construction Areas Where Electricity is Available for Operating Electric On-Site Mobile Equipment

Each facility operator and/or their construction contractor(s) will conduct a survey of the proposed project construction area(s) to assess whether the existing infrastructure can provide access to electricity, as available, within the facility or construction site, in order to operate electric on-site mobile equipment. For example, each facility operator and/or their construction contractor(s) will assess the number of electrical welding receptacles available.

Construction areas within the facility or construction site where electricity is and is not available must be clearly identified on a site plan as part of the Construction Emission Management Plan. The use of non-electric onsite mobile equipment shall be prohibited in areas of the facility that are shown to have access to electricity. The use of electric on-site

mobile equipment within these identified areas of the facility or construction site will be allowed.

Each facility operator shall include in all construction contracts the requirement that the use of non-electric on-site mobile equipment is prohibited in certain portions of the facility as identified on the site plan. Each facility operator shall maintain records that indicate the location within the facility or construction site where all electric and non-electric on-site mobile equipment are operated, if at all, for a period of at least two years from completion of construction.

MMRAQ-4: Use Electricity or Alternate Fuels for On-Site Mobile Equipment Instead of Diesel Equipment to the Extent Feasible

Each facility operator and/or their construction contractor(s) shall evaluate the use of electricity and alternate fuels for on-site mobile construction equipment prior to the commencement of construction activities, provided that suitable equipment is available for the activity. Equipment vendors will be contacted to determine the commercial availability of electric or alternate-fueled construction equipment. Priority should be given to the use of electric on-site mobile construction equipment. If electricity is not available, then use alternative fuels to power on-site mobile construction equipment where feasible. Equipment that will use electricity or alternate fuels will be included in the Construction Emission Management Plan.

The potential equipment that may be considered includes, but is not limited to:

- Electric welders
- Electric scissor lifts
- Electric golf carts
- Bicycles
- Electric or bi-powered boom lifts

MMRAQ-5: All Off-Road Diesel-Powered Construction Equipment Greater Than 50 hp Shall Meet Tier 4 Off-Road Emission Standards and Shall Be Equipped With CARB-Certified Best Available Control Technology (BACT) Emissions Control Devices

Each facility operator shall include in all construction contracts the requirement that all off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 off-road emission standards at a minimum. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. In addition, construction equipment shall incorporate, where feasible, emissions savings technology such as hybrid drives and specific fuel economy standards. In the event that any equipment required under this mitigation measure is not available, the project proponent shall provide documentation in the Construction

Emissions Management Plan or associated subsequent status reports as information becomes available.

MMRAQ-6: Suspend All Construction Activities That Generate Air Emissions During First Stage Smog Alerts

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

B. GHG Impacts

Impacts Summary: The proposed project is expected to decrease the severity of the overall GHG emission impacts that were previously examined under the December 2015 Final PEA for NO_x RECLAIM, but the total projected increase of GHG emissions exceed the South Coast AQMD air quality significance threshold of 10,000 MTCO₂e/yr for GHGs. Therefore, the proposed project is considered to have significant and unavoidable adverse GHG impacts, and the Final SEA contains feasible measures which could minimize the significant adverse impacts. The following mitigation measures are intended to minimize the GHG emissions associated with water conveyance. No feasible mitigation measures have been identified to reduce GHG emissions to a less than significant levels.

Mitigation Measures: The following mitigation measures will apply to any facility whose operator chooses to install NO_x control equipment that utilizes water for its operation. South Coast AQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in the Final SEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing South Coast AQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by South Coast AQMD personnel.

GHG-1: When NO_x control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the NO_x control equipment.

GHG-2: In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to submit a written declaration with the application for a Permit to Construct for the NO_x control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be supplied to the project.

Implementing Parties: The South Coast AQMD's Governing Board finds that implementing mitigation measures GHG-1 through GHG-2 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The South Coast AQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the South Coast AQMD will ensure compliance with mitigation measures GHG-1 through GHG-2. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRGHG-1: Use Recycled Water, If Available, for NOx Control Equipment That Requires Water for Its Operation

At the time of submitting an application for a Permit to Construct for NOx control equipment and water is required for its operation, each facility operator shall submit a copy of a Memorandum of Understanding agreement reached between the facility operator and the recycled water supplier or purveyor that indicates recycled water will be used to supply water to the NOx control equipment. Once the NOx control equipment becomes operational, on a monthly basis, each facility operator will record the amount of recycled water delivered to the NOx control equipment from the recycled water bill. This log shall be maintained on-site for a period of at least two years from initiating operation.

MMRGHG-2: Submit Written Declaration if Recycled Water is Not Available

The facility operator is required to submit a written declaration with the application for a Permit to Construct for the NOx control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

C. Hazards and Hazardous Materials Impacts Due to Use and Storage of Ammonia

Impacts Summary: Installation of new SCRs and associated ammonia storage tanks and the upgrades of existing SCRs as a result of implementing the proposed project will be expected to comply with applicable design codes and regulations, conform to National Fire Protection Association standards, and conform to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection. However, the proposed project is expected to generate significant adverse hazards and hazardous materials impacts for the routine transport, use, and storage of ammonia. However, even though hazards associated with ammonia are significant, it should be noted that the incremental amount of ammonia that is expected to be needed to implement the proposed project is substantially less than what was previously analyzed in the December 2015 Final PEA for NOx RECLAIM. Regarding the handling of fresh and spent catalyst, since SCR catalysts are not hazardous, the proposed project is expected to generate less than significant hazards and hazardous materials impacts since SCR catalysts are not hazardous. To the extent that future projects to install new or modify existing NOx controls conforms with the hazard analysis in the Final SEA, no further hazard analysis may be necessary. However, if site-specific characteristics are involved with future projects that are outside the scope of this analysis, further hazards analysis may be warranted.

Mitigation Measures: The following mitigation measures will apply to any facility whose operator chooses to install a new SCR system and the accompanying ammonia storage tank for combustion equipment subject to NOx emission standards in PR 1109.1. South Coast

AQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in this PEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing South Coast AQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by South Coast AQMD personnel.

- HZ-1: Require the use of aqueous ammonia at concentrations less than 19 percent by weight.
- HZ-2: Install safety devices, including but not limited to: continuous tank level monitors (e.g., high and low level), temperature and pressure monitors, leak monitoring and detection system, alarms, check valves, and emergency block valves.
- HZ-3: Install secondary containment such as dikes and/or berms to capture 110 percent of the storage tank volume in the event of a spill.
- HZ-4: Install a grating-covered trench around the perimeter of the delivery bay to passively contain potential spills from the tanker truck during the transfer of aqueous ammonia from the delivery truck to the storage tank.
- HZ-5: Equip the truck loading/unloading area with an underground gravity drain that flows to a large on-site retention basin to provide sufficient ammonia dilution to minimize the offsite hazards impacts to the maximum extent feasible in the event of an accidental release during transfer of aqueous ammonia.
- HZ-6: Install tertiary containment that is capable of evacuating 110 percent of the storage tank volume from the secondary containment area.

Implementing Parties: The South Coast AQMD's Governing Board finds that implementing mitigation measures HZ-1 through HZ-6 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The South Coast AQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the South Coast AQMD will ensure compliance with mitigation measures HZ-1 through HZ-6. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRHZ-1: Require Use of Aqueous Ammonia at Concentrations Less than 19 Percent by Weight

For any facility seeking to install a new ammonia storage tank for a new SCR to control combustion equipment subject to the NO_x emission standards in PR 1109.1, a permit application will need to be submitted. The South Coast AQMD will issue permit conditions requiring the use of aqueous ammonia no greater than 19 percent by weight.

- MMRHZ-2: Install Safety Devices Including but Not Limited to: Continuous Tank Level Monitors, Temperature and Pressure Monitors, Leak Monitoring and Detection System, Alarms, Check Valves, and Emergency Block Valve**
- MMRHZ-3: Install Secondary Containment to Capture 110 Percent of the Storage Tank Volume**
- MMRHZ-4: Install a Grating-Covered Trench Around the Perimeter of the Delivery Bay**
- MMRHZ-5: Equip the Truck Loading/Unloading Area with an Underground Gravity Drain that Flows to a Large On-Site Retention Basin to Provide Sufficient Ammonia Dilution**
- MMRHZ-6: Install Tertiary Containment that is Capable of Evacuating 110 Percent of the Storage Tank Volume from the Secondary Containment Area**

Each facility operator shall develop and submit a blueprint with locations of secondary containment, tertiary containment, and safety devices around the proposed ammonia storage tank site; and locations of a grating-covered trench and underground gravity drain system for the truck loading/unloading area. The blueprint must be submitted to the South Coast AQMD for approval prior to starting construction activities. Following approval, the South Coast AQMD must be notified of any changes to the construction plans, and the South Coast AQMD may conduct inspections of the site to verify compliance.

D. Water Demand Impacts

Impacts Summary - Hydrotesting: The proposed project makes more severe, the water demand impacts due to hydrotesting previously analyzed under the December 2015 Final PEA for NO_x RECLAIM. Some NO_x control equipment may require the installation of support equipment such as storage tanks, for example, which need to undergo hydrotesting in order to verify the structural integrity prior to operation. Because hydrotesting can utilize a substantial amount of water, significant adverse impacts associated with water demand during hydrotesting are expected from the proposed project post-construction but prior to operation. For any facility that installs NO_x control equipment that also requires the installation of support equipment, such as a storage tank or other equipment, to be installed and hydrotested as part of the proposed project, the use of non-potable water such as recycled water or diverted process water can help substantially reduce the water demand impacts to a less than significant level if facility operators that have access to recycled water or diverted non-potable process water are required to use recycled water or diverted non-potable process water.

Even though the previous water demand analysis in the December 2015 Final PEA for NO_x RECLAIM showed that there was a sufficient supply of both potable and recycled water available at the time the CEQA document was certified, because the project-specific

water demand impacts have been concluded to be significant due to the uncertainty of the ability for some facilities to receive recycled water and in consideration of California's on-going drought, the potential water demand impacts continue to be cumulatively considerable pursuant to CEQA Guidelines Section 15064(h)(1).

Because there are significant adverse water demand impacts from the proposed project post-construction but prior to operation during hydrotesting of support equipment, the SEA must describe feasible measures which could minimize the significant adverse impacts for hydrotesting activities. The following mitigation measures are intended to minimize the amount of potable water used for hydrotesting by requiring either recycled water or other non-potable water as a substitute, but the potable water demand may not necessarily be reduced to less than significant levels and the overall effectiveness of the mitigation measures is dependent upon whether each facility has access to these alternate water sources.

Mitigation Measures for Hydrotesting: The following water demand mitigation measures are required during hydrotesting for any facility that installs NO_x control equipment with support equipment that requires hydrotesting prior to its operation as part of the proposed project. South Coast AQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in this PEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing South Coast AQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by South Coast AQMD personnel.

HWQ-1 When support equipment such as a storage tank or other equipment is installed to support operations of installed NO_x control equipment and hydrotesting is required prior to operation, the facility operator is required to use, in lieu of potable water, recycled water or other non-potable process water temporarily diverted from elsewhere within the facility, if available, to satisfy the water demand for hydrotesting.

HWQ-2 For hydrotesting purposes, in the event that recycled water cannot be delivered to the affected facility and diverted non-potable process water is not used, the facility operator is required to submit two written declarations with each application for a Permit to Construct for the NO_x control equipment and any support equipment such as storage tank or other equipment that requires hydrotesting, one to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project and one from a high-ranking officer at the facility indicating the reason(s) and the supporting evidence that explains why the non-potable process water cannot be diverted to the project from elsewhere within the facility.

Impacts Summary – Operation of NO_x Control Equipment: While the proposed project will be expected to install additional new SCRs and upgrade existing SCRs, and replace existing burners with ULNBs, when compared to the previous analysis the December 2015 Final PEA for NO_x RECLAIM, since SCR and ULNB technology do not

utilize water for their operation, no increases in operational water are anticipated as a result of these changes. Also, while the proposed project may involve the installation of LoTOx™ with WGSs, which utilize water for their operation, these NOx control devices and the associated water use were previously analyzed in the December 2015 Final PEA for NOx RECLAIM. Moreover, the proposed project neither contains any changes to the type of combustion equipment that would utilize LoTOx™ with WGSs nor requires any updates to the amount of water use that will be needed for their operation. Thus, an updated hydrology analysis of scrubber-related impacts was not required for the Final SEA. Since significant adverse water demand impacts during operation were concluded for the previously proposed project analyzed the December 2015 Final PEA for NOx RECLAIM, the analysis in the Final SEA is also concluding significant adverse water demand impacts during operation.

Mitigation Measures for Operations of NOx Control Equipment That Utilizes Water:

The following water demand mitigation measures are required during operation of any WGS or any other type of NOx control equipment that utilizes water for its operation that is installed as part of the proposed project.

HWQ-3 When NOx control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the NOx control equipment.

HWQ-4 In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to submit a written declaration with the application for a Permit to Construct for the NOx control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

Implementing Parties: The South Coast AQMD's Governing Board finds that implementing the mitigation measures HWQ-1 through HWQ-4 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The South Coast AQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the South Coast AQMD will ensure compliance with mitigation measures HWQ-1 through HWQ-4. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRHWQ-1: USE RECYCLED WATER OR OTHER NON-POTABLE PROCESS WATER, IF AVAILABLE, FOR HYDROTESTING

At the time of submitting an application for a Permit to Construct for NOx control equipment and any support equipment such as storage tank or other equipment that requires hydrotesting, each facility operator shall submit one of the following: 1) a copy of a Memorandum of Understanding agreement reached between the facility operator and the recycled water supplier or purveyor that indicates recycled water will be used to supply water to conduct hydrotesting; or, 2) a supplement to the application(s) that describes how other non-potable process water will be diverted for hydrotesting. Once hydrotesting is

complete, each facility operator will record one of the following: 1) the amount of recycled water delivered for hydrotesting from the recycled water bill; or 2) the amount of diverted process water used for hydrotesting. This log shall be maintained on-site for a period of at least two years from conducting hydrotesting.

MMRHWQ-2: SUBMIT WRITTEN DECLARATION IF RECYCLED WATER AND OTHER NON-POTABLE PROCESS WATER IS NOT USED FOR HYDROTESTING

The facility operator is required to submit two written declarations with the application for a Permit to Construct for the NO_x control equipment and any support equipment such as a storage tank or other equipment that requires hydrotesting, one to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project and one from a high-ranking officer at the facility indicating the reason(s) and the supporting evidence that explains why the non-potable process water cannot be diverted to the project from elsewhere within the facility.

MMRHWQ-3: USE RECYCLED WATER, IF AVAILABLE, FOR NOX CONTROL EQUIPMENT THAT REQUIRES WATER FOR ITS OPERATION

At the time of submitting an application for a Permit to Construct for NO_x control equipment that requires water for its operation, each facility operator shall submit a copy of a Memorandum of Understanding agreement reached between the facility operator and the recycled water supplier or purveyor that indicates recycled water will be used to supply water to the NO_x control equipment. Once the NO_x control equipment becomes operational, on a monthly basis, each facility operator will record the amount of recycled water delivered to the NO_x control equipment from the recycled water bill. This log shall be maintained on-site for a period of at least two years from initiating operation.

MMRHWQ-4: SUBMIT WRITTEN DECLARATION IF RECYCLED WATER IS NOT AVAILABLE FOR NOX CONTROL EQUIPMENT THAT REQUIRES WATER FOR ITS OPERATION

The facility operator is required to submit a written declaration with the application for a Permit to Construct for the NO_x control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

7.1 Mitigation, Monitoring and Reporting Plan Conclusion

Based on a “worst-case” analysis, the potential adverse construction air quality impacts, GHG impacts, hazards and hazardous materials impacts due to routine transport, use, and storage of ammonia, and water demand impacts from the adoption and implementation of the proposed project are considered significant and unavoidable. Feasible mitigation measures have been identified for construction air quality impacts, GHG impacts, hazards and hazardous materials impacts due to use and storage of ammonia, and water demand impacts that would reduce these impacts associated with the proposed project; however, the mitigation measures are not sufficient to reduce the impacts to less than significant levels. No feasible mitigation measures have been identified to help minimize the potentially significant adverse impacts to hazards and hazardous materials due to routine transport of ammonia.

Further, none of the alternatives analyzed would reduce the construction air quality impacts, GHG impacts, hazards and hazardous materials impacts due to deliveries of ammonia, and hydrology impacts to less than significant levels. As a result, no other feasible mitigation measures or project alternatives have been identified that would further reduce these impacts while still achieving the overall objectives of the proposed project.

8.0 Record of Proceedings

For purposes of CEQA, including the Findings, Statement of Overriding Considerations, and the Mitigation, Monitoring and Reporting Plan, the Record of Proceedings for the proposed project consists of the following documents and other evidence, at a minimum:

- The Final SEA for the proposed project, including appendices and technical studies included or referenced in the Final SEA, and all other public notices issued by South Coast AQMD for the Final SEA.
- The Draft SEA for the proposed project including appendices and technical studies included or referenced in the Draft SEA, and all other public notices issued by South Coast AQMD for the Draft SEA.
- All written comments submitted by agencies or members of the public during the public review comment period on the Draft SEA.
- All responses to written comments submitted by agencies or members of the public during the public review comment period on the Draft SEA.
- All written and verbal public testimony presented during a noticed public hearing for the proposed project.
- The reports and technical memoranda included or referenced in the Response to Comments.
- All documents, studies, EIRs/EAs, or other materials incorporated by reference and tiered-off in the Draft SEA and Final SEA.
- The Resolution adopted by South Coast AQMD in connection with the proposed project, and all documents incorporated by reference therein, including comments received after the close of the public review and comment period and responses thereto.
- Matters of common knowledge to South Coast AQMD, including but not limited to federal, state, and local laws and regulations.
- Any documents expressly cited in the Findings, Statement of Overriding Considerations, and the Mitigation, Monitoring and Reporting Plan.
- Any other relevant materials required to be in the record of proceedings by Public Resources Code Section 21167.6(e).
- The Notice of Decision, prepared in compliance with Public Resources Code Section 21080.5(d)(2)(E), CEQA Guidelines Section 15252(b), and South Coast AQMD Rule 110(f), if the Governing Board certifies the Final SEA and approves the approved project.

To comply with CEQA Guidelines Section 15091(e), the South Coast AQMD specifies the Deputy Executive Officer of the Planning, Rule Development, and Area Sources Division as the custodian of the administrative record for the proposed project, which includes the documents or other materials which constitute the record of proceedings upon which the South Coast AQMD's actions related to the proposed project is based, and which are located at the South Coast AQMD headquarters, 21865 Copley Drive, Diamond Bar, California 91765. Copies of these documents, which constitute the record of proceedings, are and at all relevant times have been and will be available upon request. This information is provided in accordance with Public Resources Code Section 21081.6 (a)(2) and CEQA Guidelines Section 15091(e).

APPENDIX A

November 2015 Attachment 1 to the Governing Board Resolution for Final Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM): Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Attachment 1 to the Governing Board Resolution for:
Final Program Environmental Assessment for Proposed Amended Regulation XX –
Regional Clean Air Incentives Market (RECLAIM)**

**Findings, Statement of Overriding Considerations, and Mitigation Monitoring
Plan**

**SCAQMD No. 12052014BAR
State Clearinghouse No: 2014121018**

November 2015

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**ATTACHMENT 1 TO THE GOVERNING BOARD RESOLUTION FOR:
FINAL PROGRAM ENVIRONMENTAL ASSESSMENT FOR PROPOSED
AMENDED REGULATION XX – REGIONAL CLEAN AIR INCENTIVES
MARKET (RECLAIM)**

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

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INTRODUCTION

The proposed amendments to Regulation XX - Regional Clean Air Incentives Market (RECLAIM) are considered a “project” as defined by the California Environmental Quality Act (CEQA) (California Public Resources Code §§21000 et seq.). The SCAQMD as Lead Agency for the proposed project, prepared a Notice of Preparation/Initial Study (NOP/IS) which identified environmental topics to be analyzed in a Draft Program Environmental Assessment (PEA). The NOP/IS provided information about the proposed project to other public agencies and interested parties prior to the intended release of the Draft PEA. The NOP/IS was distributed to responsible agencies and interested parties for a 57-day public review and comment period from December 5, 2014 to January 30, 2015. The initial evaluation in the NOP/IS identified the topics of aesthetics; air quality and greenhouse gas emissions; energy; hydrology and water quality; hazards and hazardous materials; solid and hazardous waste; and, transportation and traffic, as potentially being significantly adversely affected by the project. Since the proposed project may have statewide, regional or areawide significance, a CEQA scoping meeting is required and was held for the proposed project pursuant to Public Resources Code §21083.9 (a)(2) on January 8, 2015. Eight comment letters were received from the public regarding the preliminary analysis in the NOP/IS. None of these comment letters identified other potentially significant adverse impacts from the proposed project that should be analyzed in the PEA.

The Draft PEA was released for a 53-day public review and comment period from August 14, 2015 to October 6, 2015 and further analyzed whether or not the potential adverse impacts to the environmental topic areas identified in the NOP/IS are significant. The Draft PEA concluded that only the topics of air quality and greenhouse gases (GHGs), hydrology (water demand), and, hazards and hazardous materials (due to ammonia transportation) would have significant adverse impacts. The Draft PEA included the NOP/IS (in Appendix F), the comment letters received relative to the NOP/IS and responses to individual comments (in Appendix G), and a summary of comments made at the CEQA scoping meeting and responses to individual comments (in Appendix H).

Eight comment letters were received during the public comment period on the analysis presented in the Draft PEA. Responses to these comment letters have been prepared and are included in Appendix I of the Final PEA. The Final PEA, prepared pursuant to CEQA Guidelines §15132, identifies air quality and GHGs, hydrology (water demand), and, hazards and hazardous materials (due to ammonia transportation) as areas that may be adversely affected by the proposed project.

In addition to incorporating the comment letters and the responses to comments, some modifications have been made to the Draft PEA to make it a Final PEA. SCAQMD staff evaluated these modifications and concluded that none of the modifications alter any conclusions reached in the Draft PEA, nor do they constitute significant new information¹ and, therefore, do not require recirculation of the document pursuant to CEQA Guidelines §§15073.5 and 15088.5. The Final PEA will be presented to the Governing Board prior to its December 4, 2015 public hearing.

SUMMARY OF THE PROPOSED PROJECT

To comply with the requirements in Health and Safety Code §40440 by conducting a Best Available Retrofit Control Technology (BARCT) assessment, SCAQMD staff is proposing amendments to the following rules which are part of Regulation XX – Regional Clean Air Incentives Market (RECLAIM): Rule 2001 – Applicability; Rule 2002 – Allocations for Oxides of Nitrogen (NO_x) and Oxides of Sulfur (SO_x); Rule 2005 – New Source Review For RECLAIM; Attachment C from Rule 2011 Appendix A – Protocol for Monitoring, Reporting, and Recordkeeping Oxides of Sulfur (SO_x) Emissions; and, Attachment C from Rule 2012 Appendix A – Protocol for Monitoring, Reporting, and Recordkeeping Oxides of Nitrogen (NO_x) Emissions. The proposed amendments to Regulation XX would reduce emissions from equipment and processes operated at NO_x RECLAIM facilities located throughout the entire SCAQMD jurisdiction. In particular, the environment could be impacted from the proposed project due to facilities installing new, or modifying existing control equipment for the following types of equipment/source categories in the NO_x RECLAIM program: 1) fluid catalytic cracking units; 2) refinery boilers and heaters; 3) refinery gas turbines; 4) sulfur recovery units – tail gas treatment units; 5) non-refinery/non-power plant gas turbines; 6) non-refinery sodium silicate furnaces; 7) non-refinery/non-power plant internal combustion engines; 8) container glass melting furnaces; 9) coke calcining; and, 10) metal heat treating furnaces. For clarity and consistency throughout the regulation, other minor revisions are also proposed.

The proposed project is expected to result in a total of 14 tons per day (tpd) of reduction of NO_x RECLAIM Trading Credits (RTCs) from the current 2015 RTC holdings of 26.5 tpd over a seven-year period from 2016 to 2022. The 14 tpd of NO_x RTC reductions will be reduced from the allocations of 56 facilities plus the investors that, together, hold 90 percent of the NO_x RTC holdings. Investors are included in the refinery sector and treated as one facility. For the remaining 219 facilities that hold 10 percent of the 26.5 tpd of the NO_x RTCs, no NO_x RTC

¹ Pursuant to CEQA Guidelines §§ 15073.5 and 15088.5, circumstances that would require recirculation include, for example, any of the following:

- (1) A new, avoidable significant effect would result from the project or from a new mitigation measure proposed to be implemented, or new mitigation measures or project revisions must be added in order to reduce the effect to insignificance.
- (2) The proposed mitigation measures or project revisions will not reduce the effects to less than significance and new measures or revisions are required.
- (3) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (4) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
- (5) The draft CEQA document was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

shave is proposed because either no new BARCT (not cost effective and/or infeasible) was identified, or gains in emission reductions would be negligible, for the types of equipment and source categories at these facilities. By following this approach, the shave is distributed as follows:

- 66% shave for 9 refineries and investors (treated as one facility)
- 49% shave for 21 electricity generating facilities (EGFs)
- 49% shave for 26 non-major facilities
- 0% shave for 219 remaining facilities

In addition, the overall NO_x RTC reductions of 14 tpd are expected to be achieved incrementally from 2016 to 2022, according to the following implementation schedule:

- 2016 – 4 tons per day
- 2018 – 2 tons per day
- 2019 – 2 tons per day
- 2020 – 2 tons per day
- 2021 – 2 tons per day
- 2022 – 2 tons per day

POTENTIAL SIGNIFICANT ADVERSE IMPACTS THAT CANNOT BE REDUCED BELOW A SIGNIFICANT LEVEL

The Final PEA identified the topics of air quality (during construction) and GHGs (from combined construction and operation activities), hydrology (due to water demand), and, hazards and hazardous materials (due to ammonia transportation) as the only areas that may be significantly adversely affected by the proposed project. Since the release of the Draft PEA for public review and comment, the operators of one refinery have indicated plans to shut down one fluid catalytic cracking unit (FCCU) in 2017. Thus, the projected installation of wet gas scrubber (WGS) technology is expected to only occur at one of the two FCCUs. Further, since the release of the Draft PEA for public review and comment, the number of selective catalytic reduction (SCR) units that may be installed for the refinery boiler and heater source category has been lowered to 73 units, instead of 74. Thus, the analysis in this PEA for the refinery sector is conservative as it overestimates the potentially significant adverse impacts that cannot be reduced below a significant level for the following environmental topics.

Air Quality Impacts During Construction

Relative to construction emissions, the "worst-case" scenario is when construction activities overlap due to concurrent construction activities occurring at a single facility and at multiple facilities. Specifically, the scenario analyzed in the Final PEA is the simultaneous activities of demolishing existing equipment, site preparation, and constructing new or modifying existing air pollution control equipment, which could occur at a single facility or at more than one facility. The analysis further assumes that the "worst-case" day is that in which each construction project is operating construction equipment that generates the greatest emissions.

Based on these assumptions for overlapping construction activities, the “worst-case” emissions were calculated to be: 429 pounds per day of volatile organic compounds (VOC); 1,656 pounds per day of NO_x; 2,745 pounds per day of carbon monoxide (CO); 3 pounds per day of oxides of sulfur (SO_x); 1,758 pounds per day before mitigation and 853 pounds per day after mitigation of particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀), respectively; and, 883 pounds per day before mitigation and 430 pounds per day after mitigation of particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}), respectively. The significance thresholds for construction-related emissions are: 75 pounds per day of VOC; 100 pounds per day of NO_x; 550 pounds per day of CO; 150 pounds per day of SO_x; 150 pounds per day of PM₁₀; and 55 pounds per day of PM_{2.5}. (Estimated construction emissions did not exceed the significance threshold for SO_x.) Because the construction emissions for all of the pollutants except SO_x exceed the applicable significance thresholds for construction, mitigation measures are required.

While the air quality mitigation measures for construction that are identified in the Mitigation Monitoring Plan section of this document may reduce construction emissions to the maximum extent feasible, none are mitigation measures that will avoid the significant impacts or reduce the construction air quality impacts to less than significant. Also, no other feasible mitigation measures have been identified to reduce construction air quality emissions to a level of insignificance. Therefore, the proposed project is considered to have significant adverse unavoidable project-specific and cumulative air quality impacts during construction.

Greenhouse Gas Impacts

With regard to GHG emissions, the proposed project involves combustion processes during both construction and operation, which could generate GHG emissions such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). However, the proposed project does not affect equipment or operations that have the potential to emit non-combustion GHGs such as sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs).

Installation of new or modification of existing NO_x control equipment as part of implementing the proposed project is expected to generate construction-related CO₂ emissions. In addition, based on the type and size of equipment affected by the proposed project, CO₂ emissions from the operation of the NO_x control equipment are likely to increase from current levels due to electricity, fuel and water use. The proposed project will also result in an increase of GHG operational emissions produced from additional truck hauling and deliveries necessary to accommodate the additional solid waste generation and increased use of supplies and chemicals such as catalyst and caustic.

For the purposes of addressing the GHG impacts of the proposed project, the overall impacts of CO₂ equivalent (CO₂e) emissions from the project were estimated and evaluated from the earliest possible initial implementation of the proposed project with construction beginning in 2016. Once the proposed project is fully implemented, the potential NO_x emission reductions would continue through the end of the useful life of the equipment. The analysis estimated CO₂e emissions from all sources subject to the proposed project (construction and operation) from the beginning of the proposed project (2016) to the end of construction (2022). The beginning of the proposed project was assumed to be no sooner than 2016, since installing NO_x

control equipment requires planning and engineering in advance. Full implementation of the proposed project is expected to occur by the end of 2022 when the entire 14 tons per day of the NO_x RTC shave is completed such that any installed or modified NO_x controls could be constructed and operational by this final date. Thus, once construction is complete and the equipment is operational, CO_{2e} emissions will continue to be generated but they will remain constant.

Implementing the proposed project is expected to increase GHG emissions that exceed the SCAQMD's GHG significance threshold for all 11 of the non-refinery facilities and nine refinery facilities, should these facility operators choose to install NO_x control technology in response to the proposed project. This potentially significant adverse impact cannot be mitigated below significance. The SCAQMD's GHG significance threshold for industrial sources is 10,000 metric tons of CO_{2e} emissions per year (MTCO_{2e}/yr). While none of the affected facilities individually exceed the GHG industrial significance threshold of 10,000 MTCO_{2e}/yr, the "worst-case" GHG emissions from the proposed project as a whole were calculated to be 41,785 MTCO_{2e}/yr which exceeds the SCAQMD's GHG significance threshold. Thus, the overall GHG emissions exceed the GHG significance threshold and therefore, the proposed project is considered to have significant adverse GHG impacts.

Recycled water projects and the utilization of recycled water are among the most direct ways to reduce GHG from combustion activities associated with conveying water to the affected facilities if water-intensive scrubbers are installed as a result of the proposed project. Specifically, the energy it would take to treat and convey reclaimed water to a facility (e.g., 1,200 kilowatt-hours per million gallons (kWh/MMgallons)²) is approximately 10 times less than the amount of energy it would take for potable water (e.g., 12,700 kWh/MMgallons³) to be supplied, conveyed and distributed. Thus, for each facility that has access to recycled water and chooses to use recycled water to satisfy the water demands for the proposed project and in turn, mitigate CO_{2e} emissions, less GHG emissions would be generated for the operational water use/conveyance and operational wastewater generation portions of the proposed project. After mitigation, the GHG emissions from the proposed project as a whole were calculated to be 41,100 MTCO_{2e}/yr which still exceeds the SCAQMD's GHG significance threshold.

While the GHG mitigation measures identified in the Mitigation Monitoring Plan section of this document may reduce GHG emissions associated with water conveyance to the maximum extent feasible, none are mitigation measures that will avoid the significant impact or reduce the GHG impact to less than significant. Also, no other feasible mitigation measures have been identified to reduce GHG emissions to a level of insignificance. Therefore, the proposed project is considered to have significant adverse unavoidable cumulative GHG impacts.

² California's Water – Energy Relationship, Table 1-2, Page 9, California Energy Commission, Final Staff Report, CEC-700-2005-011-SF, November 2005. <http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF>

³ California's Water – Energy Relationship, Table 1-3, Page 11, California Energy Commission, Final Staff Report, CEC-700-2005-011-SF, November 2005. <http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF>

Water Demand Impacts

Post-Construction/Pre-Operation Activities: Implementation of the proposed project may cause potentially significant adverse water demand impacts associated with hydrotesting equipment post-construction/pre-operation. Specifically, once construction of control equipment and support equipment is completed, but prior to operation of the control equipment, additional water is expected to be used to hydrostatically (pressure) test all storage tanks and pipelines to ensure each structure's integrity. Pressure testing or hydrotesting is typically a one-time event, unless a leak is found.

The analysis in the Final PEA shows that the potential increase in water use for all 20 facilities conducting hydrotesting activities in one day is approximately 353,724 gallons per day which is greater than the SCAQMD's significance threshold of 262,820 gallons per day of potable water. Thus, the amount of potable water that may be used on a daily basis for hydrotesting activities post-construction but prior to operation is potentially significant. However, water used for pressure testing does not have to be of potable quality, but can be recycled water. Alternately, facility operators may substitute the use of purchased recycled water with non-potable water such as treated process water (e.g., cooling tower blowdown water, etc.) that is temporarily re-routed or diverted from elsewhere within the facility. In addition, water used during hydrotesting can be sent somewhere else within a facility for future re-use. Nonetheless, without being able to predict what type of water each facility will use for hydrotesting purposes, the "worst-case" analysis in the Final PEA assumes that 100 percent of potable water could be utilized for hydrotesting purposes and concludes that hydrotesting could cause significant adverse water demand impacts post-construction but prior to operation.

While the use of recycled water may reduce potable water demand during hydrotesting to the maximum extent feasible, the use of recycled water will not avoid the significant impact or reduce the potable water demand impact post-construction but prior to operation to less than significant. Therefore, the proposed project may cause significant potable water demand impacts during hydrotesting post-construction but prior to operation.

Thus, while the mitigation measures that are identified in the Mitigation Monitoring Plan section of this document may reduce potable water demand associated with hydrotesting activities to the maximum extent feasible, the overall effectiveness of the mitigation measures is dependent upon whether each facility has access to either recycled water or other sources of non-potable water. While feasible mitigation measures have been identified to reduce the potable water demand, the potable water demand may not necessarily be reduced to a level of insignificance because of limitations with access to recycled water or other sources of non-potable water. Thus, the proposed mitigation measures may not fully avoid the significant impact or reduce the potable water demand impact to less than significant. Also, no other feasible mitigation measures have been identified to reduce the potable water demand during hydrotesting to a level of insignificance. Therefore, the proposed project is considered to have significant adverse unavoidable cumulative water demand impacts during hydrotesting.

Operation Activities: Implementation of the proposed project may cause potentially significant adverse water demand impacts associated with operating NOx control equipment. Specifically, of the technologies proposed as BARCT for NOx control, only WGSs utilize water. For this reason, only WGS technology was identified as having the potential to generate potentially significant adverse water demand impacts during operation and WGS technology would be BARCT for equipment at seven of the 20 facilities, and all seven of these facilities belong to the refinery sector (e.g., Refineries 1, 2, 4, 5, 6, 8 and 9).

The analysis in the Draft PEA shows that the potential increase in water use for seven facilities that may operate WGSs is approximately 602,814 gallons per day which is greater than the SCAQMD's significance threshold of 262,820 gallons per day of potable water. However, operators of one refinery have indicated plans to shut down one FCCU in 2017. Thus, the installation of WGS technology along with the corresponding increased water demand and wastewater generation projections that were originally contemplated for one of the two FCCUs (e.g., Refineries 4 and 9) are no longer expected to occur. Thus, the potential increase in operational water demand is expected to be less than what was originally analyzed in the Draft PEA. To protect the identity of the refinery in this document, the revised potential increase in operational water demand has been presented as a range in the Final PEA, from 553,499 to 558,978 gallons per day, instead of 602,814 gallons per day.

Of the seven affected refineries, three (e.g., Refineries 1, 5, and 6) currently access recycled water from the Harbor Refineries Recycled Water Pipeline (HRRWP) which is maintained by the Los Angeles Department of Water and Power (LADWP), in conjunction with the West Basin Municipal Water District (WBMWD). The LADWP/WBMWD currently provides 35 million gallons per day (MMgal/day) of recycled water to its customers, which include Refineries 1, 5, and 6. The WBMWD is also in the process of expanding its Hyperion Pump Station to accommodate a throughput of 70 MMgal/day of source water which would result in about 55 to 60 MMgal/day of saleable recycled water if, and when needed to accommodate any increased need by their customers. Thus, should operators of these three refineries commit to utilizing recycled water in lieu of potable water to satisfy the water demand for the NOx control equipment, then the LADWP/WBMWD would be able to supply the additional water (e.g., 398,767 gallons per day or approximately 71 percent of the projected water demand). If these facilities do not utilize recycled water for the proposed project, SCAQMD staff conducted an analysis of potable water supply and concluded that potable water would be available to supply the projected increased water demand at Refineries 1, 5 and 6 (see Final PEA, Chapter 4, Subchapter 4.5 – Hydrology and Water Quality, pp. 4.5-15 to 4.5-20).

Refineries 4, 8, and 9 are not currently connected to the HRRWP to access recycled water. However, Refinery 4 is in the process of finalizing an agreement with WBMWD to acquire 2,240 acre-feet/year (AF/yr)⁴ of recycled water (equivalent to two MMgal/day) to replace its current potable water use with recycled water by 2018. In addition, Refineries 4, 8, and 9 are currently in talks with the LADWP and WBMWD to negotiate options for replacing as much as 11,100 AF/yr (equivalent to approximately 9.9 MMgal/day) of current potable water use with

⁴ 1 acre-foot = 325,851 gallons

recycled water instead via the HRRWP⁵. Thus, if Refineries 4, 8 and 9 need additional recycled water in response to this proposed project, the LADWP/WBMWD has the capacity to provide additional recycled water as necessary. Again, if these facilities do not obtain access to recycled water for the proposed project, SCAQMD staff conducted an analysis of potable water supply and concluded that potable water would be available to supply the projected increased water demand at Refineries 4, 8 and 9 (see Final PEA, Chapter 4, Subchapter 4.5 – Hydrology and Water Quality, pp. 4.5-15 to 4.5-20).

Refinery 2 is not located near the HRRWP nor any other recycled water pipeline so it is unlikely that Refinery 2 would be able to obtain recycled water should facility operators choose to install a WGS and instead, would need to satisfy the water demand with potable water. According to the LBWD's 2010 UWMP that was prepared in accordance with the California Water Code §10608.20, the potable water delivery projections to their industrial and commercial customers show a long-term projected increase in potable water supply with a slight tapering occurring in years 2030 and 2035 to reflect offsetting by increased deliveries of recycled water to other customers currently being supplied by LBWD with potable water. Based on LBWD's short- and long-term projections for potable water supplies, SCAQMD staff believes that the potential increased water demand of 40,896 gallons per day for Refinery 2 can be accommodated with potable water (see Final PEA, Chapter 4, Subchapter 4.5 – Hydrology and Water Quality, p. 4.5-20).

In addition, it is important to keep in mind that operators of Refinery 2 have two different types of control equipment options available for consideration. As summarized in the PEA (see Tables 1-2 and 1-3 for the petroleum coke calciner source category), the BARCT NO_x levels of 10 ppmv corrected for 3% oxygen can be achieved with either a WGS which uses water, or a DGS, which does not. While the analysis in this subchapter considers the technology with the worst-case impacts to water demand and water quality, for Refinery 2, installing WGS technology is not their only option. Should operators choose to install a DGS, instead of a WGS, then no water would be needed.

Thus, while the amount of water demand that would be needed to operate NO_x control equipment would be 398,767 gallons per day at Refineries 1, 5 and 6 and the amount of water demand at Refineries 2, 4, 8, and 9 would be in the range of 113,836 gallons per day to 160,211 gallons per day, which collectively is greater than the significance threshold of 262,820 gallons per day of potable water but less than the significance threshold of five million gallons per day of total water (e.g., potable, recycled, and groundwater), in consideration that Refineries 1, 5 and 6 have a high potential to use recycled water because of their current access and in light of the negotiations for recycled water at Refineries 4, 8, and 9, potable water only may be needed for a future project occurring at Refinery 2, or not at all if operators of Refinery 2 choose to install a DGS instead of a WGS. In any case, the previous analysis shows that water purveyor would be able to supply potable water to Refinery 2 and to Refineries 1, 4, 5, 6, 8 and 9, if needed. Thus,

⁵ City of Los Angeles, Inter-Departmental Correspondence to City Council From Los Angeles Department of Water and Power and Los Angeles Department of Public Works Bureau of Sanitation, Council File No. 15-0018 Harbor Refineries Pipeline Project/Advanced Water Purification Facility/Water Supply Efforts, April 10, 2015. <https://cityclerk.lacity.org/lacityclerkconnect/index.cfm?fa=ccfi.viewrecord&cfnumber=15-0018>

using an abundance of caution, because the peak daily water demand for the proposed project exceeds the potable water threshold of 262,820 gallons per day and because recycled water is not currently available at Refineries 4, 8 and 9, and no contractual commitments to increase recycled water demand above the existing recycled water baseline for the three refineries that already have access to recycled water (e.g., Refineries 1, 5 and 6) have been finalized, the analysis conservatively assumes that significant adverse impacts associated with water demand are expected from the proposed project during operation.

Thus, while the mitigation measures that are identified in the Mitigation Monitoring Plan section of this document may reduce potable water demand associated with operation activities to the maximum extent feasible, the overall effectiveness of the mitigation measures is dependent upon whether each facility has access to recycled water. While feasible mitigation measures have been identified to reduce the potable water demand, the potable water demand may not necessarily be reduced to a level of insignificance because of limitations with access to recycled water. Thus, the proposed mitigation measures may not fully avoid the significant impact or reduce the potable water demand impact to less than significant. Also, no other feasible mitigation measures have been identified to reduce the operational potable water demand to a level of insignificance. Therefore, the proposed project is considered to have significant adverse unavoidable cumulative water demand impacts during operation.

Hazards and Hazardous Materials Impacts From Delivering Ammonia

The Final PEA assumes that some facilities may opt to reduce NO_x emissions by installing NO_x control equipment such as SCRs and DGSs which requires the use of ammonia, a chronic and acutely hazardous material. Further, an increase in the use of ammonia in response to the proposed project may increase the current existing risk setting associated with deliveries (i.e., truck and road accidents). In particular, the analysis assumes that as many as 117 SCRs could be installed at 20 facilities and one Ultracat DGS could be installed at one facility. The analysis estimates that approximately 39.5 tons per day (equivalent to approximately 10,284 gallons per day) of aqueous ammonia (at 19 percent concentration) would be needed to operate the equipment. It is expected that the affected facilities will receive ammonia from a local ammonia supplier located in the greater Los Angeles area. Deliveries of aqueous ammonia would be made by tanker truck via public roads.

The accidental release of ammonia from a delivery is a localized event (i.e., the release of ammonia would only affect the receptors that are within the zone of the toxic endpoint). The accidental release from a delivery would also be temporally limited in the fact that deliveries are not likely to be made at the same time in the same area. Based on these limitations, the analysis in the Final PEA assumed that an accidental release would be limited to a single delivery or single facility at a time. In the ammonia transportation release scenario, the distance to the toxic endpoint from a worst-case delivery truck release was estimated to be 0.4 miles or 2,112 feet. Since sensitive receptors are expected to be found within 0.4 miles from roadways, the hazards and hazardous materials impacts due to a delivery truck accident were concluded to be potentially significant. Therefore, the proposed project was concluded to have significant adverse hazards and hazardous materials impacts due to ammonia deliveries and mitigation measures are required. However, no feasible mitigation measures have been identified, over and above the extensive safety regulations that currently apply to delivery trucks that haul ammonia.

FINDINGS

Public Resources Code §21081 and CEQA Guidelines §15091 (a) state that no public agency shall approve or carry 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. Additionally, the findings must be supported by substantial evidence in the record (CEQA Guidelines §15091 (b)). As identified in the Final PEA and summarized above, the proposed project has the potential to create significant adverse impacts for the topics of air quality during construction, water demand, and hazardous materials due to deliveries of ammonia. The SCAQMD Governing Board, therefore, makes the following findings regarding the proposed project. The findings are supported by substantial evidence in the record as explained in each finding. The findings will be included in the record of project approval and will also be noted in the Notice of Decision. The findings made by the SCAQMD Governing Board are based on the following significant adverse impacts identified in the Final PEA.

- 1. Potential project-specific and cumulative VOC, CO, NO_x, PM₁₀, and PM_{2.5} emissions during construction exceed the SCAQMD's applicable significance air quality thresholds and cannot be mitigated to insignificance.**

Finding and Explanation:

The implementation of the proposed project is anticipated to trigger construction activities associated with the installation of new or the modification of existing NO_x air pollution control equipment. Construction activities associated with the proposed project would result in emissions of VOC, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}, but only the estimated emissions for SO_x are expected to remain below the SCAQMD's applicable significance air quality thresholds for construction. As a result, the proposed project is expected to have significant adverse construction air quality impacts. However, the temporary construction emissions would cease upon completion of the installation of new or modification of existing air pollution control equipment, as applicable. Once all the modified or new equipment are in place, the proposed project is expected to result in a reduction of NO_x emissions of 14 tons per day by 2023.

The Governing Board finds that mitigation measures have been identified, but they would not reduce to insignificance the significant adverse project-specific or cumulative impacts to air quality associated with construction. No other feasible mitigation measures have been identified. 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, social, and technological factors."

The Governing Board further finds that the Final PEA considered alternatives pursuant to CEQA Guidelines §15126.6, but there is no alternative to the project, other than the No Project Alternative (Alternative 4), that would reduce to insignificant levels the significant project-specific or cumulative construction air quality impacts that were identified for the proposed project. However, the No Project Alternative (Alternative 4) was rejected due to infeasibility. Specifically Alternative 4 was determined to not be a

legally viable alternative because it violates a state law requirement in Health and Safety Code §40440 that regulations mandate the use of BARCT for existing sources.

2. Potential GHG emissions exceed the SCAQMD's applicable significance GHG threshold and cannot be mitigated to insignificance.

Finding and Explanation:

While none of the affected facilities individually exceed the SCAQMD's industrial GHG significance threshold of 10,000 MTCO₂e/yr, if the proposed project is implemented, the analysis indicates that there would be a significant increase in GHG emissions for the project as a whole. Because there are significant adverse GHG impacts from the proposed project, the PEA must describe feasible measures that could minimize significant adverse impacts.

The Governing Board finds that mitigation measures have been identified, but they would not reduce to insignificance the significant adverse GHG emission impacts. No other feasible mitigation measures have been identified. 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, social, and technological factors."

The Governing Board further finds that the Final PEA considered alternatives pursuant to CEQA Guidelines §15126.6, but there is no alternative to the project, other than the No Project Alternative (Alternative 4), that would reduce to insignificant levels the significant GHG impacts that were identified for the proposed project. However, the No Project Alternative (Alternative 4) was rejected due to infeasibility. Specifically Alternative 4 was determined to not be a legally viable alternative because it violates a state law requirement in Health and Safety Code §40440 that regulations mandate the use of BARCT for existing sources.

3. Potential potable water demand would use a substantial amount of potable water and cannot be mitigated to insignificance.

Finding and Explanation:

The Final PEA concluded that the proposed project may cause significant adverse potable water demand impacts during hydrotesting post-construction but prior to operation and during operation of NO_x control equipment. Because there are significant adverse potable water demand impacts from the proposed project, the Final PEA must describe feasible measures that could minimize significant adverse impacts. Mitigation measures have been identified that may be effective in reducing the amount of potable water needed, however, they may not completely avoid or reduce the adverse potable water demand impact to a less than significant level.

The Governing Board finds that mitigation measures have been identified, but they would not reduce to insignificance the significant adverse water demand impacts. No other feasible mitigation measures have been identified. 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, social, and technological factors."

The Governing Board further finds that the Final PEA considered alternatives pursuant to CEQA Guidelines §15126.6, but there is no alternative to the project, other than the No Project Alternative (Alternative 4), that would reduce to insignificant levels the significant water demand impacts that were identified for the proposed project. However, the No Project Alternative (Alternative 4) was rejected due to infeasibility. Specifically Alternative 4 was determined to not be a legally viable alternative because it violates a state law requirement in Health and Safety Code §40440 that regulations mandate the use of BARCT for existing sources.

4. Potential hazards and hazardous materials impacts due to deliveries of ammonia may significantly increase the current existing risk setting associated with truck and road accidents and cannot be mitigated to insignificance.

Finding and Explanation:

The Final PEA concluded that the proposed project may cause significant adverse hazards and hazardous materials impacts during deliveries of ammonia to facilities that may install NO_x emissions control equipment that require the use of ammonia. Because there are significant adverse hazards and hazardous materials impacts from the proposed project, the Final PEA must describe feasible measures that could minimize significant adverse impacts. However, no feasible mitigation measures have been identified, over and above the extensive safety regulations that currently apply to delivery trucks that haul ammonia, that could minimize or reduce the significant hazards and hazardous materials impacts due to deliveries of ammonia.

The Governing Board finds that no feasible mitigation measures have been identified that would reduce to insignificance the significant adverse hazards and hazardous materials impacts due to deliveries of ammonia. 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, social, and technological factors."

The Governing Board further finds that the Final PEA considered alternatives pursuant to CEQA Guidelines §15126.6, but there is no alternative to the project, other than the No Project Alternative (Alternative 4), that would reduce to insignificant levels the significant hazards and hazardous materials impacts due to deliveries of ammonia that were identified for the proposed project. However, the No Project Alternative (Alternative 4) was rejected due to infeasibility. Specifically Alternative 4 was determined to not be a legally viable alternative because it violates a state law requirement in Health and Safety Code §40440 that regulations mandate the use of BARCT for existing sources.

Conclusion of Findings

The Governing Board finds that feasible mitigation measures have been identified to help minimize the potentially significant adverse impacts to the following topics: air quality during construction, GHG emissions, and water demand. The Governing Board also finds that no feasible mitigation measures have been identified to help minimize the potentially significant adverse impacts to hazards and hazardous materials due to deliveries of ammonia. CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code §21061.1).

The Governing Board further finds that the Final PEA considered alternatives pursuant to CEQA Guidelines §15126.6, but there is no alternative to the project, other than the No Project Alternative (Alternative 4), that would reduce to insignificant levels the significant impacts to the topics of air quality during construction, GHG emissions, water demand, and hazards and hazardous materials due to deliveries of ammonia that were identified for the proposed project. However, the No Project Alternative (Alternative 4) was rejected due to infeasibility. Specifically Alternative 4 was determined to not be a legally viable alternative because it violates a state law requirement in Health and Safety Code §40440 that regulations mandate the use of BARCT for existing sources.

The Governing Board further finds that a Mitigation Monitoring Plan (pursuant to Public Resources Code §21081.6) needs to be prepared since feasible mitigation measures were identified for the topics of air quality during construction, GHG emissions, and water demand.

The Governing Board further finds that the findings required by CEQA Guidelines §15091 (a) are supported by substantial evidence in the record. Further, to comply with CEQA Guidelines §15091 (e), the SCAQMD specifies the director of Regulation XX as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of these proposed amendments and the approval of this project is based, and which are located at the SCAQMD headquarters, 21865 Copley Drive, Diamond Bar, California 91765.

STATEMENT OF OVERRIDING CONSIDERATIONS

If significant adverse impacts of a proposed project remain after incorporating mitigation measures, or no measures or alternatives to mitigate the adverse impacts are identified, the lead agency must make a determination that the benefits of the project outweigh the unavoidable 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 risks 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 impacts to air quality during construction, GHGs, water demand, and hazardous materials due to deliveries of ammonia that may result from the proposed project has been prepared. This Statement of Overriding Considerations is included as part of the record of the project approval for the proposed project. Pursuant to CEQA Guidelines

§15093 (c), the Statement of Overriding Considerations will also be noted in the Notice of Decision for the proposed project.

Despite the inability to incorporate changes into the proposed project that will mitigate potentially significant adverse impacts to a level of insignificance for the topics of air quality during construction, GHG emissions, water demand, and, hazards and hazardous materials due to deliveries of ammonia, the SCAQMD's Governing Board finds that the following benefits and considerations outweigh the significant unavoidable adverse environmental impacts:

1. The analysis of potential adverse environmental impacts incorporates a “worst-case” approach. This entails the premise that whenever the analysis requires that assumptions be made, those assumptions that result in the greatest adverse impacts are typically chosen. This method likely overestimates the actual environmental impacts from the proposed project.
2. Each of the alternatives was crafted to show the various possibilities or permutations of how operators of NO_x RECLAIM facilities could achieve actual NO_x reductions, but ultimately, there is no way to predict what each facility operator will do. Further, because of the compliance flexibility inherent in the RECLAIM program, affected operators may choose to reduce NO_x emissions using compliance options that minimize or eliminate significant environmental impacts at their facilities.
3. The 2012 AQMP identifies ambient air pollutant levels relative to federal and state ambient air quality standards (AAQS), establishes baseline and future emissions, and develops control measures to ensure attainment of the AAQS. Construction is a continuous activity in the district and is accounted for in the AQMP. Thus, any changes in air quality as a result of construction emissions from the proposed project are accounted for in the AQMP and would not be expected to interfere with the attainment demonstrations.
4. The proposed project implements 2012 AQMP Control Measure #CMB-01: Further NO_x Reductions from RECLAIM (e.g., at least three to five tons per day by 2023). The proposed project will remove NO_x RTCs by 14 tons per day by 2023. In addition, the proposed project is designed to implement both the Phase I and Phase II reduction commitments described in #CMB-01.
5. Although the proposed project also has the largest amount of adverse environmental impacts overall when compared to the alternatives, it achieves the maximum level of NO_x reductions and corresponding health benefits.
6. Considering the need for expeditious improvement in air quality, the proposed project is preferred over the other alternatives considered because it provides the best balance between reducing NO_x emissions relative to the adverse impacts.
7. Implementing the control measures in the 2012 AQMP will result in an overall net reduction in criteria pollutant emissions. Therefore, cumulative air quality impacts from the proposed project and all other AQMP control measures when considered together, are not expected to

be significant because implementation of all AQMP control measures is expected to result in net emission reductions and overall air quality improvement.

The SCAQMD's Governing Board finds that the above-described considerations outweigh the unavoidable significant effects to the environment as a result of the proposed project.

MITIGATION MONITORING PLAN

When making findings as required by Public Resources Code §21081 and CEQA Guidelines §15091, the lead agency must 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 and CEQA Guidelines §15097 (a)]. To fulfill the requirements of Public Resources Code §21081.6 and CEQA Guidelines §15097, the SCAQMD has developed this mitigation monitoring plan for anticipated impacts resulting from implementing the proposed project. Each operator of any facility required to comply with a mitigation monitoring plan shall keep records onsite of applicable compliance activities to demonstrate the steps taken to assure compliance with all of the mitigation measures, as applicable.

1. Air Quality Impacts During Construction

Impacts Summary: Project-specific and cumulative construction-related emissions of VOC, NO_x, CO, PM₁₀, and PM_{2.5} emissions, based on a “worst-case” analysis, would exceed the SCAQMD's regional mass daily significance thresholds for these pollutants. Emission sources include worker vehicles and heavy construction equipment. The following mitigation measures are intended to minimize the emissions associated with these sources during construction activities. No feasible mitigation measures have been identified to reduce emissions to a level of insignificance.

Mitigation Measures: The following construction mitigation measures are required for each of the affected facilities whose operators choose to install NO_x control equipment. SCAQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in this PEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing SCAQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by SCAQMD personnel.

On-Road Mobile Sources

AQ-1 Develop a Construction Emission Management Plan for each affected facility to minimize emissions from vehicles including, but not limited to: consolidating truck deliveries; scheduling deliveries to avoid peak hour traffic conditions; describing truck routing; describing deliveries including logging delivery times; describing entry/exit points; identifying locations of parking; identifying construction schedule; and prohibiting truck idling in excess of five consecutive minutes or another time-frame as allowed by the California Code of Regulations,

Title 13 §2485 - CARB's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. The Construction Emission Management Plan shall be submitted to SCAQMD CEQA for approval prior to the start of construction. At a minimum the Construction Emission Management Plan would include the following types of mitigation measures.

Off-Road Mobile Sources:

- AQ-2 Maintain construction equipment tuned to manufacturer's recommended specifications that optimize emissions without nullifying engine warranties.
- AQ-3 The project proponent shall survey and document the proposed project's construction areas and identify all construction areas that are served by electricity. This documentation shall be provided as part of the Construction Emissions Management Plan.
- AQ-4 For all construction areas that are demonstrated to be served by electricity, use electricity for on-site mobile equipment instead of diesel equipment to the extent feasible. For example, electric welders should be used in lieu of diesel or gasoline-fueled welders and onsite electricity should be used in lieu of temporary power generators. If electricity is not available, use alternative fuels where feasible.
- AQ-5 All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 off-road emission standards at a minimum. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards. In the event that any equipment required under this mitigation measure is not available, the project proponent shall provide documentation in the Construction Emissions Management Plan or associated subsequent status reports as information becomes available.
- AQ-6 Suspend use of all construction activities that generate air pollutant emissions during first stage smog alerts as defined in SCAQMD Rule 701.

If, at the time when each facility-specific project is proposed in response to the proposed project, that improved emission reduction technologies become available for on- and off-road construction equipment, as part of the CEQA evaluation for the facility-specific project, the construction mitigation measures will be updated accordingly.

Implementing Parties: The SCAQMD's Governing Board finds that implementing the mitigation measures AQ-1 through AQ-6 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The SCAQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the SCAQMD will ensure compliance with mitigation measures AQ-1 through AQ-6. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRAQ-1: Construction Emission Management Plan

Each facility operator shall develop and submit a Construction Emission Management Plan to the SCAQMD for approval prior to starting construction activities. Upon approval, each facility operator shall train all personnel subject to the requirements set forth in the Construction Emission Management Plan on how to comply with the requirements in the plan, and document that training. The SCAQMD may conduct routine inspections of the site to verify compliance. The Construction Emission Management Plan shall include, at a minimum, the following information:

- A construction schedule of activities for each construction phase that indicates the number of construction workers needed, and the type, fuel source, and number of construction equipment needed for each construction phase;
- A description of truck routing with a priority given to consolidating truck deliveries and scheduling deliveries to avoid peak hour traffic conditions;
- A format or system for logging delivery dates, times, and type of deliveries;
- A description of entry/exit points to the construction site;
- An identification of parking locations at the construction site; and,
- A description of how the prohibition of truck idling in excess of five consecutive minutes or another time-frame as allowed by the CCR Title 13 §2485, will be conveyed to truck drivers.

Traffic Control

Traffic requiring entrance onto each facility's property will be directed toward the entry gate or gates, if there are multiple entrances, so that congestion, as well as associated air pollution, will be minimized.

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

On-site parking will be used to the maximum extent available. In the event that off-site parking is required, construction workers may be requested to park at a designated off-site property. Buses or some other type of shuttle may transfer multiple workers at one time to and from the project site. No on-street parking (i.e., off of each facility's site) will be allowed.

Each facility operator will limit the number of personal and company vehicles allowed to enter each facility beyond the parking lots. This restriction helps minimize onsite emissions and promotes the use of ride sharing and alternate fueled transportation such as bicycles and electric golf carts.

Construction Schedule

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

During process unit shutdowns, extended work shifts and night shifts, scheduled six to seven days per week, may be necessary. Each facility operator will establish in their Construction Emission Management Plan the details of the construction schedule, including operating hours, days, and number of shifts per day. This construction work schedule will need to be designed to minimize the travel time during peak travel periods.

Trip Reduction Plan

No feasible mitigation has been identified for the emissions from on-road vehicle trips. CEQA Guidelines §15364 defines feasible as "...capable of being accomplished in a successful manner." No feasible mitigation measures for offsite motor vehicles have been identified. Health and Safety Code §40929

prohibits the air districts and other public agencies from requiring an employee trip reduction program making such mitigation infeasible.

Delivery of Equipment and Materials

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

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

Prohibit Trucks From Idling Longer Than Five Minutes

Each facility operator will notify all vendors that during deliveries, truck idling time will be limited to no longer than five minutes or another time-frame as allowed by the California Code of Regulations, Title 13 §2485 - CARB's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. For any delivery that is expected to take longer than five minutes, each facility operator will require the truck's operator to shut off the engine. Each facility operator will notify the vendors of these delivery requirements at the time that the purchase order is issued and again when trucks enter the gates of the facility. To further ensure that drivers understand the truck idling requirement, signs will be posted at each facility entry gates stating idling longer than five minutes is not permitted.

MMRAQ-2: Maintain Construction Equipment, Tuned Up to Manufacturer's Recommended Specifications That Optimize Emissions Without Nullifying Engine Warranties

Each facility operator, in cooperation with the construction contractors, will maintain vehicle and equipment maintenance records for the construction portion of the proposed project. All construction vehicles must be maintained in compliance with the manufacturer's recommended maintenance schedule. Each facility operator will maintain their construction equipment and the construction contractor will be responsible for maintaining their equipment and maintenance records. All maintenance records for each

facility and their construction contractor(s) will remain on-site for a period of at least two years from completion of construction.

MMRAQ-3: Survey of Construction Areas Where Electricity is Available for Operating Electric On-Site Mobile Equipment

Each facility operator and/or their construction contractor(s) will conduct a survey of the proposed project construction area(s) to assess whether the existing infrastructure can provide access to electricity, as available, within the facility or construction site, in order to operate electric on-site mobile equipment. For example, each facility operator and/or their construction contractor(s) will assess the number of electrical welding receptacles available.

Construction areas within the facility or construction site where electricity is and is not available must be clearly identified on a site plan as part of the Construction Emission Management Plan. The use of non-electric onsite mobile equipment shall be prohibited in areas of the facility that are shown to have access to electricity. The use of electric on-site mobile equipment within these identified areas of the facility or construction site will be allowed.

Each facility operator shall include in all construction contracts the requirement that the use of non-electric on-site mobile equipment is prohibited in certain portions of the facility as identified on the site plan. Each facility operator shall maintain records that indicate the location within the facility or construction site where all electric and non-electric on-site mobile equipment are operated, if at all, for a period of at least two years from completion of construction.

MMRAQ-4: Use Electricity or Alternate Fuels for On-Site Mobile Equipment Instead of Diesel Equipment to the Extent Feasible

Each facility operator and/or their construction contractor(s) shall evaluate the use of electricity and alternate fuels for on-site mobile construction equipment prior to the commencement of construction activities, provided that suitable equipment is available for the activity. Equipment vendors will be contacted to determine the commercial availability of electric or alternate-fueled construction equipment. Priority should be given to the use of electric on-site mobile construction equipment. If electricity is not available, then use alternative fuels to power on-site mobile construction equipment where feasible. Equipment that will use electricity or alternate fuels will be included in the Construction Emission Management Plan.

The potential equipment that may be considered includes, but is not limited to:

- Electric welders
- Electric scissor lifts
- Electric golf carts
- Bicycles
- Electric or bi-powered boom lifts

MMRAQ-5: All Off-Road Diesel-Powered Construction Equipment Greater Than 50 hp Shall Meet Tier 4 Off-Road Emission Standards and Shall Be Equipped With CARB-Certified Best Available Control Technology (BACT) Emissions Control Devices

Each facility operator shall include in all construction contracts the requirement that all off-road diesel-powered construction equipment greater than 50 hp shall meet Tier-4 off-road emission standards at a minimum. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. In addition, construction equipment shall incorporate, where feasible, emissions savings technology such as hybrid drives and specific fuel economy standards. In the event that any equipment required under this mitigation measure is not available, the project proponent shall provide documentation in the Construction Emissions Management Plan or associated subsequent status reports as information becomes available.

MMRAQ-6: Suspend All Construction Activities That Generate Air Emissions During First Stage Smog Alerts

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

2. GHG Impacts

Impact Summary: Based on a “worst-case” analysis, none of the affected facilities individually exceed the industrial GHG significance threshold. However, if the proposed project gets implemented, the analysis indicates that there will be a significant increase in GHG emissions for the project as a whole. Because there are significant adverse GHG impacts from the proposed project, the PEA must describe feasible measures which could minimize the significant adverse impacts. The following mitigation measures are intended to minimize the GHG emissions associated with water conveyance. No feasible mitigation measures have been identified to reduce GHG emissions to a level of insignificance.

Mitigation Measures: The following mitigation measures will apply to any facility whose operator chooses to install NO_x control equipment that utilizes water for its operation. SCAQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in this PEA. In addition, these mitigation measures will be included in a mitigation monitoring plan as part of issuing SCAQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by SCAQMD personnel.

GHG-1: When NO_x control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the NO_x control equipment.

GHG-2: In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to submit a written declaration with the application for a Permit to Construct for the NO_x control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be supplied to the project.

Implementing Parties: The SCAQMD's Governing Board finds that implementing mitigation measures GHG-1 through GHG-2 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The SCAQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the SCAQMD will ensure compliance with mitigation measures GHG-1 through GHG-2. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRGHG-1: Use Recycled Water, If Available, for NO_x Control Equipment That Requires Water for Its Operation

At the time of submitting an application for a Permit to Construct for NO_x control equipment and water is required for its operation, each facility operator shall submit a copy of a Memorandum of Understanding agreement reached between the facility operator and the recycled water supplier or purveyor that indicates recycled water will be used to supply water to the NO_x control equipment. Once the NO_x control equipment becomes operational, on a monthly basis, each facility operator will record the amount of recycled water delivered to the NO_x control equipment from the recycled water bill. This log shall be maintained on-site for a period of at least two years from initiating operation.

MMRGHG-2: Submit Written Declaration if Recycled Water is Not Available

The facility operator is required to submit a written declaration with the application for a Permit to Construct for the NO_x control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

3. Water Demand Impacts

Impacts Summary - Hydrotesting: Some NO_x control equipment may also require the installation of support equipment such as storage tanks, for example, which need to undergo hydrotesting in order to verify the structural integrity prior to operation. Because hydrotesting can utilize a substantial amount of water, significant adverse impacts associated with water demand during hydrotesting are expected from the proposed project post-construction but prior to operation. For example, for any facility

that installs NO_x control equipment that also requires the installation of support equipment, such as a storage tank or other equipment, to be installed and hydrotested as part of the proposed project, the use of non-potable water such as recycled water or diverted process water can help substantially reduce the water demand impacts to a less than significant level if facility operators that have access to recycled water or diverted non-potable process water are required to use recycled water or diverted non-potable process water.

The water demand analysis during hydrotesting shows that the potential increase in potable water use cannot be fully supplied entirely with recycled water because recycled water is not currently delivered to all of the affected facilities. While there are ongoing negotiations to connect some of the affected facilities to recycled water at a future date, there are currently no contractual commitments in place to bring recycled water to these facilities. Further, for the facilities that currently have access to recycled water, there are currently no contractual commitments in place with the recycled water purveyors to provide an increased amount of recycled water deliveries above the existing baseline, even though there is plenty of recycled water supply available, to accommodate the increased demand for hydrotesting water that may result from the proposed project. Also, the potential increase in potable water use for hydrotesting cannot be fully supplied entirely by other non-potable water such as diverted process water because not all of the facilities have on-site sources of process water that can be diverted for hydrotesting purposes. Thus, some potable water may still be required to conduct hydrotesting.

In conclusion, because potable water may still be needed in the event that recycled water or other non-potable process water may not be available to all of the affected facilities, the analysis conservatively assumes that the water demand impacts during hydrotesting could remain significant after mitigation.

Because there are significant adverse water demand impacts from the proposed project post-construction but prior to operation during hydrotesting of support equipment, the PEA must describe feasible measures which could minimize the significant adverse impacts for hydrotesting activities. The following mitigation measures are intended to minimize the amount of potable water used for hydrotesting by requiring either recycled water or other non-potable water as a substitute, but the overall effectiveness of the mitigation measures is dependent upon whether each facility has access to these alternate water sources. While the following feasible mitigation measures have been identified to reduce the potable water demand, the potable water demand may not necessarily be reduced to a level of insignificance because of the aforementioned limitations with access to either recycled water or other non-potable water.

Mitigation Measures for Hydrotesting: The following water demand mitigation measures are required during hydrotesting for any facility that installs NO_x control equipment with support equipment that requires hydrotesting prior to its operation as part of the proposed project. SCAQMD staff will conduct a CEQA evaluation of each facility-specific project proposed in response to the proposed project and determine if the project is covered by the analysis in this PEA. In addition, these mitigation measures will

be included in a mitigation monitoring plan as part of issuing SCAQMD permits to construct for the facility-specific project. The mitigation measures will be enforceable by SCAQMD personnel.

HWQ-1 When support equipment such as a storage tank is installed to support operations of installed NO_x control equipment and hydrotesting is required prior to operation, the facility operator is required to use, in lieu of potable water, recycled water or other non-potable process water temporarily diverted from elsewhere within the facility, if available, to satisfy the water demand for hydrotesting.

HWQ-2 For hydrotesting purposes, in the event that recycled water cannot be delivered to the affected facility and diverted non-potable process water is not used, the facility operator is required to submit two written declarations with the application for a Permit to Construct for the NO_x control equipment and any support equipment such as a storage tank or other equipment that requires hydrotesting, one to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project and one from a high-ranking officer at the facility indicating the reason(s) and the supporting evidence that explains why the non-potable process water cannot be diverted to the project from elsewhere within the facility.

Impacts Summary – Operation of Air Pollution Control Equipment: Of the technologies proposed as BARCT for NO_x control, only wet gas scrubber (WGS) technology utilizes water as part of their day-to-day operations and the amount of water needed on a daily basis is substantial and exceeds the significance threshold for potable water. Thus, significant adverse impacts associated with water demand during operation of WGSs are also expected from the proposed project. However, for any facility that installs NO_x control equipment that also requires water for its operation, the use of recycled water can help substantially reduce the water demand impacts to a less than significant level if facility operators that have access to recycled water are required to use recycled water instead of potable water. SCAQMD staff has verified that the water supply projections made by the water purveyors that provide water to the affected sources will be able to supply either potable water or recycled water, as applicable, to satisfy the potential water demand needs of the proposed project. However, the water demand analysis during operation shows that the potential increase in potable water use cannot be fully replaced with all recycled water because recycled water is not currently delivered to all of the affected facilities. While there are ongoing negotiations to connect some of the affected facilities to recycled water at a future date, there are currently no contractual commitments in place to bring recycled water to these facilities. Further, for the facilities that currently have access to recycled water, there are currently no contractual commitments in place with the recycled water purveyors to provide an increased amount of recycled water deliveries above the existing baseline. Thus, some potable water may still be required to operate air pollution control equipment.

In conclusion, because potable water may still be needed in the event that recycled water may not be available to all of the affected facilities, the analysis conservatively assumes that the water demand impacts during operation could remain significant after mitigation.

Because there are significant adverse water demand impacts from the proposed project during operation, the PEA must describe feasible measures which could minimize the significant adverse water demand impacts during operation. The following mitigation measures are intended to minimize the amount of potable water used for operating air pollution control equipment by requiring recycled water, but the overall effectiveness of the mitigation measures is dependent upon whether each facility has access to recycled water, even if plenty of recycled water is available. While the following feasible mitigation measures have been identified to reduce the potable water demand, the potable water demand may not necessarily be reduced to a level of insignificance because of the aforementioned limitations with access to recycled water.

Mitigation Measures for Operations of NO_x Control Equipment That Utilizes Water: The following water demand mitigation measures are required during operation of any WGS or any other type of NO_x control equipment that utilizes water for its operation that is installed as part of the proposed project.

HWQ-3 When NO_x control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the NO_x control equipment.

HWQ-4 In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to submit a written declaration with the application for a Permit to Construct for the NO_x control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

Implementing Parties: The SCAQMD's Governing Board finds that implementing the mitigation measures HWQ-1 through HWQ-4 is the responsibility of the owner, operator, or agent of each affected facility who submits a permit application to comply with the proposed project.

Monitoring Agency: The SCAQMD's Governing Board finds that through its discretionary authority to issue and enforce permits for this project, the SCAQMD will ensure compliance with mitigation measures HWQ-1 through HWQ-4. Mitigation monitoring and reporting (MMR) will be accomplished as follows:

MMRHWQ-1: USE RECYCLED WATER OR OTHER NON-POTABLE PROCESS WATER, IF AVAILABLE, FOR HYDROTESTING

At the time of submitting an application for a Permit to Construct for NO_x control equipment and any support equipment such as storage tank or other equipment that requires hydrotesting, each facility operator shall submit one of the following: 1) a copy of a Memorandum of Understanding agreement reached between the facility operator and

the recycled water supplier or purveyor that indicates recycled water will be used to supply water to conduct hydrotesting; or, 2) a supplement to the application(s) that describes how other non-potable process water will be diverted for hydrotesting. Once hydrotesting is complete, each facility operator will record one of the following: 1) the amount of recycled water delivered for hydrotesting from the recycled water bill; or 2) the amount of diverted process water used for hydrotesting. This log shall be maintained on-site for a period of at least two years from conducting hydrotesting.

MMRHWQ-2: SUBMIT WRITTEN DECLARATION IF RECYCLED WATER AND OTHER NON-POTABLE PROCESS WATER IS NOT USED FOR HYDROTESTING

The facility operator is required to submit two written declarations with the application for a Permit to Construct for the NOx control equipment and any support equipment such as a storage tank or other equipment that requires hydrotesting, one to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project and one from a high-ranking officer at the facility indicating the reason(s) and the supporting evidence that explains why the non-potable process water cannot be diverted to the project from elsewhere within the facility.

MMRHWQ-3: USE RECYCLED WATER, IF AVAILABLE, FOR NOX CONTROL EQUIPMENT THAT REQUIRES WATER FOR ITS OPERATION

At the time of submitting an application for a Permit to Construct for NOx control equipment that requires water for its operation, each facility operator shall submit a copy of a Memorandum of Understanding agreement reached between the facility operator and the recycled water supplier or purveyor that indicates recycled water will be used to supply water to the NOx control equipment. Once the NOx control equipment becomes operational, on a monthly basis, each facility operator will record the amount of recycled water delivered to the NOx control equipment from the recycled water bill. This log shall be maintained on-site for a period of at least two years from initiating operation.

MMRHWQ-4: SUBMIT WRITTEN DECLARATION IF RECYCLED WATER IS NOT AVAILABLE FOR NOX CONTROL EQUIPMENT THAT REQUIRES WATER FOR ITS OPERATION

The facility operator is required to submit a written declaration with the application for a Permit to Construct for the NOx control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be delivered to the project.

CONCLUSION

Based on a “worst-case” analysis, the potential adverse construction air quality impacts, GHG impacts, water demand impacts, and hazards and hazardous materials impacts due to deliveries of ammonia from the adoption and implementation of the proposed project are considered significant and unavoidable. Feasible mitigation measures have been identified for construction air quality impacts, GHG impacts, and water demand impacts that would reduce these impacts associated with the proposed project; however, the mitigation

measures are not sufficient to reduce the impacts to insignificance. No feasible mitigation measures have been identified to help minimize the potentially significant adverse impacts to hazards and hazardous materials due to deliveries of ammonia.

Further, none of the alternatives analyzed would reduce the construction air quality impacts, GHG impacts, water demand impacts, and hazards and hazardous materials impacts due to deliveries of ammonia to less than significant. As a result, no other feasible mitigation measures or project alternatives have been identified that would further reduce these impacts while still achieving the overall objectives of the proposed project.