

# 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  
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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)**

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**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 information<sup>1</sup> 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<sub>x</sub>) and Oxides of Sulfur (SO<sub>x</sub>); Rule 2005 – New Source Review For RECLAIM; Attachment C from Rule 2011 Appendix A – Protocol for Monitoring, Reporting, and Recordkeeping Oxides of Sulfur (SO<sub>x</sub>) Emissions; and, Attachment C from Rule 2012 Appendix A – Protocol for Monitoring, Reporting, and Recordkeeping Oxides of Nitrogen (NO<sub>x</sub>) Emissions. The proposed amendments to Regulation XX would reduce emissions from equipment and processes operated at NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> RTC reductions will be reduced from the allocations of 56 facilities plus the investors that, together, hold 90 percent of the NO<sub>x</sub> 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<sub>x</sub> RTCs, no NO<sub>x</sub> RTC

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<sup>1</sup> 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<sub>x</sub> 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<sub>x</sub>; 2,745 pounds per day of carbon monoxide (CO); 3 pounds per day of oxides of sulfur (SO<sub>x</sub>); 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 (PM<sub>10</sub>), 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<sub>2.5</sub>), respectively. The significance thresholds for construction-related emissions are: 75 pounds per day of VOC; 100 pounds per day of NO<sub>x</sub>; 550 pounds per day of CO; 150 pounds per day of SO<sub>x</sub>; 150 pounds per day of PM<sub>10</sub>; and 55 pounds per day of PM<sub>2.5</sub>. (Estimated construction emissions did not exceed the significance threshold for SO<sub>x</sub>.) Because the construction emissions for all of the pollutants except SO<sub>x</sub> 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). However, the proposed project does not affect equipment or operations that have the potential to emit non-combustion GHGs such as sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs).

Installation of new or modification of existing NO<sub>x</sub> control equipment as part of implementing the proposed project is expected to generate construction-related CO<sub>2</sub> emissions. In addition, based on the type and size of equipment affected by the proposed project, CO<sub>2</sub> emissions from the operation of the NO<sub>x</sub> 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 CO<sub>2</sub> equivalent (CO<sub>2</sub>e) 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<sub>x</sub> emission reductions would continue through the end of the useful life of the equipment. The analysis estimated CO<sub>2</sub>e 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<sub>x</sub>



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<sub>x</sub> RTC shave is completed such that any installed or modified NO<sub>x</sub> controls could be constructed and operational by this final date. Thus, once construction is complete and the equipment is operational, CO<sub>2e</sub> 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<sub>x</sub> 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<sub>2e</sub> emissions per year (MTCO<sub>2e</sub>/yr). While none of the affected facilities individually exceed the GHG industrial significance threshold of 10,000 MTCO<sub>2e</sub>/yr, the "worst-case" GHG emissions from the proposed project as a whole were calculated to be 41,785 MTCO<sub>2e</sub>/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)<sup>2</sup>) is approximately 10 times less than the amount of energy it would take for potable water (e.g., 12,700 kWh/MMgallons<sup>3</sup>) 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<sub>2e</sub> 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<sub>2e</sub>/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.

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<sup>2</sup> 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>

<sup>3</sup> 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>

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**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)<sup>4</sup> 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

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<sup>4</sup> 1 acre-foot = 325,851 gallons

recycled water instead via the HRRWP<sup>5</sup>. 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<sub>x</sub> 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<sub>x</sub> 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,

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<sup>5</sup> 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 NOx emissions by installing NOx 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<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> 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<sub>x</sub> air pollution control equipment. Construction activities associated with the proposed project would result in emissions of VOC, CO, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, but only the estimated emissions for SO<sub>x</sub> 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<sub>x</sub> 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 MTCO<sub>2</sub>e/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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> RECLAIM facilities could achieve actual NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Reductions from RECLAIM (e.g., at least three to five tons per day by 2023). The proposed project will remove NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> 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<sub>x</sub> 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,

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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



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**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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Control Equipment That Requires Water for Its Operation**

At the time of submitting an application for a Permit to Construct for NO<sub>x</sub> 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<sub>x</sub> control equipment. Once the NO<sub>x</sub> control equipment becomes operational, on a monthly basis, each facility operator will record the amount of recycled water delivered to the NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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 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 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 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 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.