

**Air Products and Chemicals, Inc.  
Hydrogen Liquefaction Project**

**Initial Study/Mitigated Negative  
Declaration**

**Submitted to:**

City of Carson

Community Development Department, Planning Division  
701 East Carson Street  
Carson, California 90745

**Prepared by:**

MRS Environmental  
1306 Santa Barbara St  
Santa Barbara, CA 93101

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# 1 INTRODUCTION

## 1.1 Project Overview

Air Products and Chemicals, Inc. (Air Products) is proposing to install a 10-metric ton (MT) per day hydrogen liquefaction (LHY) unit (LHY Project or Project) at its existing Carson Hydrogen Plant located at 23320 South Alameda Street in Carson, California. The LHY Project would increase onsite storage of hydrogen by 70,000 pounds and would result in, on average, four additional tanker truck trips per day to the site (five maximum). The Project would not increase production capacity of hydrogen from the Carson Hydrogen Plant but instead will be directing a small fraction of current hydrogen production for liquefaction and transport to various industrial sites (i.e., “big box” shipping warehouses, Long Beach Gasifier/Transfill, etc.) in Southern California.

The Project is subject to analysis pursuant to the California Environmental Quality Act (CEQA). In accordance with CEQA Guidelines Section 15367, the City is the lead agency with principal responsibility for considering the Project for approval (14 CCR 15000 et seq.).

## 1.2 California Environmental Quality Act Compliance

CEQA, a statewide environmental law contained in California Public Resources Code (PRC) Sections 21000–21177, applies to most public agency decisions to carry out, authorize, or approve actions that have the potential to adversely affect the environment (PRC Section 21000 et seq.). The overarching goal of CEQA is to protect the physical environment. To achieve that goal, CEQA requires that public agencies identify the environmental consequences of their discretionary actions and consider alternatives and mitigation measures that could avoid or reduce significant adverse impacts when avoidance or reduction is feasible. It also gives other public agencies and the public an opportunity to comment on the Project. If significant adverse impacts cannot be avoided, reduced, or mitigated to below a level of significance, the public agency is required to prepare an environmental impact report (EIR) and balance the Project’s environmental concerns with other goals and benefits in a statement of overriding considerations.

An initial study (IS) has been prepared by the City as the lead agency, in accordance with the CEQA Guidelines, to evaluate potential environmental effects and to determine whether an environmental impact report (EIR), a negative declaration, or a mitigated negative declaration (MND) should be prepared for the proposed Project. Per Section 15070(b) of the CEQA Guidelines, an MND is prepared for a Project when an IS has identified potentially significant effects on the environment, but (1) revisions in the Project plans or proposals made by, or agreed to by, the applicant before the proposed MND is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the Project, as revised, may have a significant effect on the environment.

The Project site is located on a property that was previously analyzed in the Air Products and Chemicals, Inc. Hydrogen Facility and Specialty Gas Facility EIR (Environmental Audit, Inc. 1998). The Air Products Hydrogen Facility and Specialty Gas Facility EIR identified the potential impacts of implementation of the original Hydrogen



Facility and Specialty Gas Facility. The City has determined that a subsequent MND that tiers off the Air Products Hydrogen Facility and Specialty Gas Facility EIR shall be prepared to identify new specific effects associated with the Carson Hydrogen Liquefaction Project. As such, this subsequent MND has been prepared for the proposed Project to analyze the potential impacts associated with the proposed hydrogen liquefaction Project.

### **1.3 Preparation and Processing of this Initial Study/Mitigated Negative Declaration**

The City's Community Development Department, Planning Division, directed and supervised preparation of this Initial Study/Mitigated Negative Declaration (IS/MND). Although prepared with assistance from the consulting firm MRS Environmental, Inc., the content contained, and the conclusions drawn within this IS/MND reflect the independent judgment of the City.

### **1.4 Initial Study Checklist**

MRS Environmental, Inc., under the City's guidance, prepared the Project's Environmental Checklist (i.e., Initial Study) per CEQA Guidelines Sections 15063–15065. The CEQA Guidelines include a suggested checklist to indicate whether a Project would have an adverse impact on the environment. The checklist is found in Section 3, Initial Study, of this document. Following the Environmental Checklist, Sections 3.1 through 3.21 include an explanation and discussion of each significance determination made in the checklist for the Project.

For this IS/MND, one of the following four responses is possible for each environmental issue area:

1. Potentially Significant Impact
2. Less-Than-Significant Impact with Mitigation Incorporated
3. Less-Than-Significant Impact
4. No Impact

The checklist and accompanying explanation of checklist responses provide the information and analysis necessary to assess relative environmental impacts of the Project. In doing so, the City will determine the extent of additional environmental review, if any, for the Project.

### **1.5 Existing Documents Incorporated by Reference**

CEQA Guidelines Sections 15150 and 15168(d)(2) permit and encourage an environmental document to incorporate by reference other documents that provide relevant data. The City of Carson General Plan (City of Carson 2004), the City of Carson General Plan EIR (City of Carson 2002), the Air Products and Chemicals, Inc. Hydrogen Facility and Specialty Gas Facility EIR (Environmental Audit, Inc. 1998), and the City of Carson Municipal Code (City of Carson 2019), which are all herein incorporated by reference pursuant to CEQA Guidelines Section 15150, are available for review at the following location:

City of Carson  
701 East Carson Street  
Carson, California 90749

## **1.6 Point of Contact**

The City of Carson is the lead agency for this environmental document. Any questions about preparation of this IS/MND, its assumptions, or its conclusions should be referred to the following:

Name: Max Castillo  
City of Carson  
Community Development Department, Planning Division  
701 East Carson Street  
Carson, California 90745  
Phone: (310) 952-1700 x1317  
Email: mcastillo@carson.ca.us

The point of contact for the applicant is as follows:

Jim Reebel  
Air Products and Chemicals, Inc.  
23300 S. Alameda Street  
Carson, CA 90810  
Phone: 714-642-4252

## **2 PROJECT DESCRIPTION**

### **2.1 Project Location**

The Carson Hydrogen Liquefaction Project (the Project) will be constructed on approximately 35,800 square feet of land in the northwest corner and entirely within the property lines of the existing Air Products Hydrogen Production Facility (the Facility) at 23320 S. Alameda Street, Carson, CA 90810. This plot of land was the site of the former Air Products and Chemicals Inc. liquid hydrogen production equipment that was decommissioned and demolished in the 1970s.

### **2.2 Environmental Setting**

#### **City of Carson**

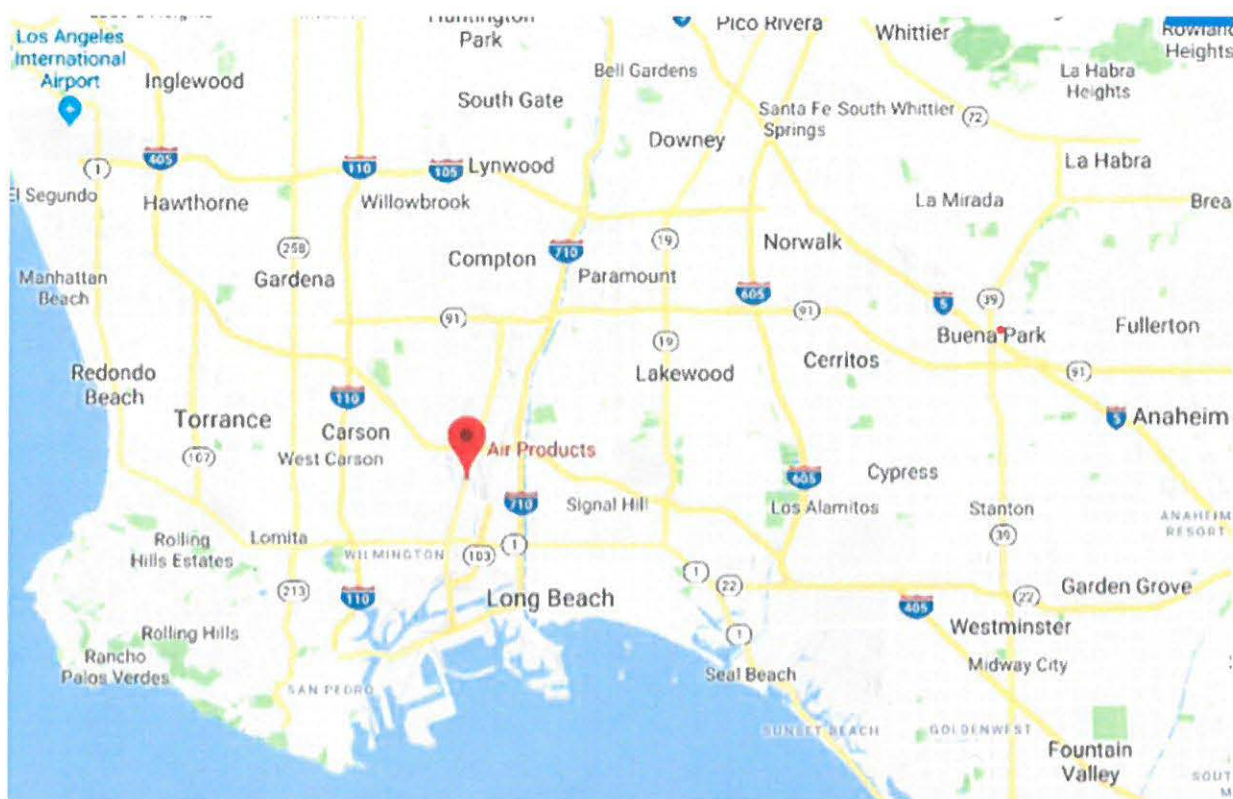
The City is approximately 19 square miles in the South Bay region of Los Angeles County. Generally, the City is an urban community with a broad mix of land uses, including housing, commercial, office, industrial park, open space, and public serving uses. The City is primarily built out and flat, with most elevations ranging from 20 to 40 feet. The Northwest and Southeast portions of the City are generally industrial uses. Residential uses are generally located on the southwest and northeast parts of the City. Commercial uses are concentrated along I-405.

Carson is surrounded by the City of Los Angeles to the northwest, south, and southeast. The City of Compton is adjacent to the northeast, and the City of Long Beach is adjacent to the east. The City of Carson is also close to the Ports of Los Angeles and Long Beach, approximately 2 to 3 miles to the south. There are four freeways that provide direct access to Carson: Interstate (I-) 405 (San Diego Freeway), which bisects the City in an east/west direction; I-710 (Long Beach Freeway), which forms a portion of the eastern portion of Carson; State Route 91 (Redondo Beach/Artesia Freeway) in the northern portion of the City, and I-110 (Harbor Freeway), which forms much of the western border of the City (City of Carson 2002).

#### **Existing Project Site**

The Carson Hydrogen Liquefaction Project would be constructed on approximately 35,800 square feet of land in the northwest corner and entirely within the property lines of the existing Air Products Hydrogen Production Facility (the Facility) at 23320 S. Alameda Street, Carson, CA 90810. This portion of the Facility, where the Project is proposed was the site of the former Air Products and Chemicals, Inc. liquid hydrogen production equipment that was decommissioned and demolished in the 1970s. The concrete foundation slab from that decommissioned equipment remains in place. Since the development of the site over 50 years ago, there has been extensive excavation and industrial development. Therefore, there are no significant plant, animal, cultural, historical, or scenic aspects as the Project site exists now.

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### Figure 1: Regional Location



**Figure 2: Aerial View of the Project Site**





**Figure 3: Aerial View of the Project Site**

### **Surrounding Land Uses**

As seen in Figure 4, the proposed Project site location is within a large heavy manufacturing zone area of the City of Carson, CA. The Project site is also located within a designated design overlay. The Project site is located entirely within the existing Air Products Hydrogen Production Facility (the Facility). The Facility and the Project site are bounded by S. Alameda Street and a railroad to the West, by Tesoro SRP, an oil refinery, to the North, the Dominguez Channel to the East, and by Lovco Recycle Site, a recycling center, to the South. The vicinity of the Project site is located in an unindustrialized, previously disturbed, heavy manufacturing zone area, with little or no significant plant, animal, cultural, historical, or scenic resources.

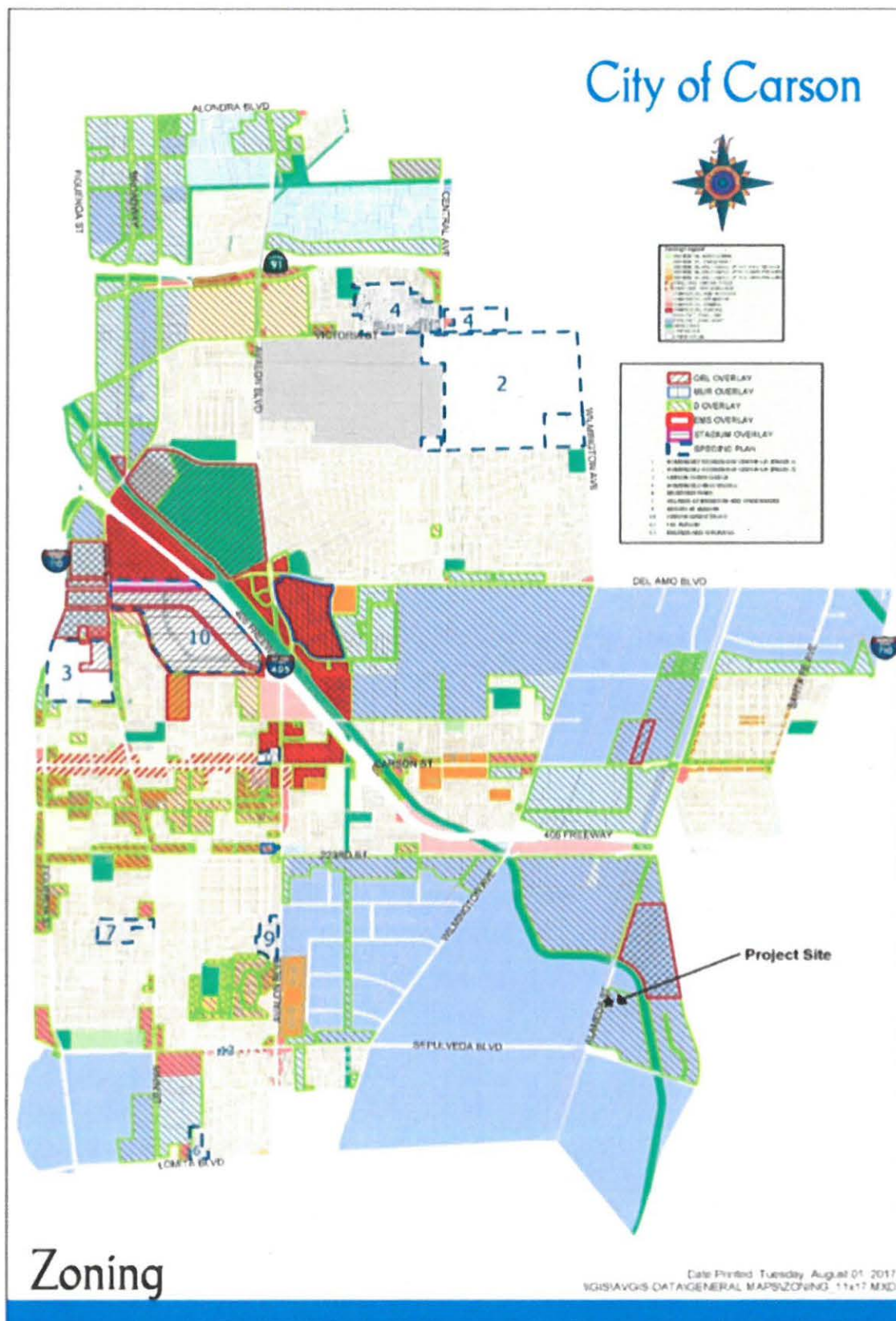


Figure 4: Zoning Map of the City of Carson



## 2.3 Proposed Project

Air Products and Chemicals, Inc. (Air Products) is proposing to install a 10-metric ton (MT) per day hydrogen liquefaction (LHY) unit (LHY Project or Project) at its existing Carson Hydrogen Plant located at 23320 South Alameda Street in Carson, California. The Project would convert approximately four percent of the existing plant's gaseous hydrogen output to produce an average of ten MT per day of liquid hydrogen (LH<sub>2</sub>). The LHY Project would increase onsite storage of hydrogen by 70,000 pounds (120,000 gallons) and would result in, on average, four additional tanker truck trips per day to the site (five maximum). The Project would not increase production capacity of hydrogen from the Carson Hydrogen Plant as there is excess production capacity under current environmental permits (i.e., firing rate basis, potential-to-emit, wastewater capacity units, etc.) which will be utilized as feedstock to the proposed LHY plant. An average of four million standard cubic feet per day (MMSFCD) of hydrogen would be redirected for liquefaction. The Carson Hydrogen Plant is currently permitted for a maximum production rate of 101 MMSFCD of gaseous hydrogen. The LHY Project would support California's growing hydrogen economy by supplying the liquid hydrogen product to various industrial sites (i.e., "big box" shipping warehouses, Long Beach Gasifier/Transfill, etc.) and hydrogen fuel stations generally in Southern California.

Air Products expects to see strong growth of merchant LHY in the coming years, primarily from fleet fueling for vehicles, hydrogen fuel cells for warehouse forklifts, and growth in the base industrial market. The automotive fuel cell market has seen growth as new car adoption rates increase and are projected to increase significantly over the next several years by auto suppliers. Air Products supplies the merchant hydrogen market in Oregon, California and Arizona from Sacramento, California. Currently, Air Products in Sacramento, CA and Linde (formerly Praxair) in Ontario, CA are the only two LHY sources in California. Demand is outpacing supply, and by adding capacity in Carson, Air Products will be able to serve this growing demand in the West without having to transport product across the country from the next closest LHY source currently on-stream in New Orleans, LA. The Carson LHY unit would thereby potentially reduce/eliminate existing long-haul trucking distances from Sacramento and/or New Orleans and, in-turn, reduce air emissions and any on-road transportation hazards potential from those deliveries. The City of Carson Municipal Code requires designated truck routes for commercial vehicles with a maximum gross weight in excess of six thousand (6,000) pounds; these existing routes presented in Section 3260.2 of the Carson Municipal Code would help mitigate the impact of increased truck emissions and hazards to residential areas within the City of Carson. Existing gaseous hydrogen pipeline customers would not be displaced as a result of this Project. The existing gaseous hydrogen pipeline provides an efficient, economies-of-scale solution for large hydrogen customers who have grown past volume points that could be effectively served by refinery-based steam methane reforming units and/or hauled-in LHY; therefore, they would not be potential customers of LHY product sourced out of this proposed unit.

The proposed Project is the installation of a cryogenic liquefier that takes a stream of pressurized ambient temperature hydrogen and liquefies it in a storage tank for export via tanker trucks. The proposed liquefier would have feed pre-treatment, heat exchangers, catalyst vessels, and compression equipment for providing refrigeration duty along with other process vessels (aftercoolers, oil removal and separators). The vessels and equipment work together to produce a continuous product stream of liquid hydrogen. Operation of the proposed Project would

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require five employees, where one employee works per shift.

There is no onsite storage associated with current gaseous hydrogen production, although there are flammable gases (i.e., natural gas, in-process gases, hydrogen) present in plant process piping and vessels which are covered under existing RMP/CALARP program compliance (as well as CUPA HMBP).

The new liquefaction unit would utilize two (2) 60,000-gallon, horizontal liquid hydrogen storage vessels (T881A/B). Air Products has selected Chart Industries to supply the new storage vessels; Chart is a recognized global brand for the design and manufacture of highly engineered cryogenic equipment used from the beginning to the end in the liquid gas supply chain. Design information is included below:

General

- Vessel Count: Two (2)
- Orientation: Horizontal
- Volume: 60,000 gallons
- Length: 99' 2"
- Width: 12' 6"
- Empty Weight: ~142,900 lbs
- Full Weight (LHY): ~178,700 lbs
- Grounded: Both Ends
- Code Class: Section VIII, Division 1

Inner Shell

- MAWP: 75 PSIG
- Design Temperature: -423°F to 100°F
- Inner Shell Material: Stainless Steel

Outer Shell

- MAWP: Full Vacuum
- Design Temperature: Ambient
- Outer Shell Material: Carbon Steel

Implementation of the proposed Project would increase the need for truck activity, material input, and employees. The Project would produce and store liquid hydrogen at the Carson Hydrogen Plant where currently only gaseous hydrogen is produced. There would be an increase in the wastewater and hazardous waste generated. The Project would increase the need for utilities such as electricity. A detailed summary of the increases from existing baseline activities from the proposed Project is presented in Table 1.



**Table 1: Summary of Proposed Project Operations**

<b>Parameter</b>	<b>Baseline Operations</b>	<b>Proposed Project Operations (Changes)</b>
<b>Operations Inputs</b>		
Truck Activity	Chemicals (NH3, LIN, BFW/CT/RO Chemicals) Delivery (2 per week), Fed-Ex/UPS/WM/Other (2 per day)	Chemicals (LIN) Delivery (1 per week)
Trucks per day	See Above	See Above
Type of truck	T6 instate heavy - DSL (LIN), Unknown (Other Chemicals and Misc.)	T6 instate heavy - DSL (LIN)
Ave hauling distance	<50 miles	<50 miles
Train Activity (if any)	N/A	N/A
Ave Daily	N/A	N/A
Ave Monthly	N/A	N/A
Other input materials (NH3, N2, etc.)	Aqueous NH3, LIN, BFW Treatment Chemicals, CT Treatment Chemicals, RO Treatment Chemicals, Misc. Catalysts/Adsorbents, Lubricating/Hydraulic Oils	CT Treatment Chemicals, Catalysts/ Adsorbents, Lubricating/Hydraulic Oils including: 2,840 kg iron oxide catalyst 10,000 kg activated carbon 2,000 kg silica gel 8,000 scfh vaporized LIN 65 gpm CW make-up 3.5 gpd 98% sulfuric acid 1.0 gpd Gengard GN8330 0.4 gpd Flogard MS6206 10.8 BIOMATE MNC2881
Number of Employees (Total)	17	5
<b>Operations Outputs</b>		
Hydrogen Production	101 MMSCFD Gas, 0 MTD Liquid	101 MMSCFD Gas, 10 MTD Liquid
Hydrogen Storage	0 MMSCF Gas, 0 Gals Liquid	0 MMSCF, 120,000 Gals Liquid
Other by-products or waste streams for re-use or disposal	PSA Purge Gas, Process Condensate, Export Steam, Generated Power (Steam Turbine), Wastewater, Misc. Hazardous Waste	Wastewater, Misc. Hazardous Waste
Truck Activity	0	LHY Product Loading/Delivery/Return
Trucks per day	0	4 Ave; 5 max
Type of truck	----	T6 CAIRP heavy - DSL
Avg hauling distance (miles)	0	500
Train Activity	N/A	N/A
Ave Daily	N/A	N/A
Ave Monthly	N/A	N/A
<b>Fuel Source/Utilities</b>		
Natural Gas Generation / Consumption (therms per year)	0 (Generation), 140,440,931 (Consumption)	N/A
Electricity Generation/ Consumption (kWh per year)	6,942,576 (Generation), 96,238,153 (Consumption)	2,482,000
Water (GPY) - Potable/Plant Water	286,892,734	TBD (Only 2700 GPM CT Makeup Water)
Method of water supply	California Water Services Co. (City Water)	California Water Services Co. (City Water)

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Wastewater (GPD) - Average/Maximum	138,617 (Average), 250,000 (Max)	28,800 (Average and Max)
Method of sewage disposal	LACSD Industrial WW Permit	LACSD Industrial WW Permit
Number of Employees - Total/Per Shift	1 (day), 1 (night)	1 (day), 1 (night)

From Air Products Application.

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The proposed Project would be designed and implemented to make use of the existing Storm Water Pollution Prevention Plan (SWPPP) and site storm water flow pattern. To prevent pollutants from contaminating storm water, all oil containing equipment would be held within containment dike(s) that will be drained/pumped (following a storm event) to the existing oily water sumps and fed through an existing oily water separator. Also, any chemicals storage would be held within secondary containment such as a concrete dike or containment tubs with plugged/closed/no drains. Storm water not falling within these containment areas would gravity drain into the existing normal storm water collection/conveyance system.

The proposed Project would not substantially increase the amount of pavement with the new concrete foundations nor would it change the storm water management system. A drain or two would potentially be relocated. These details would be included in an updated SWPPP.

## 2.4 Construction and Phasing

The LHY Project will be constructed on an approximately 35,800 square foot area in the northwest corner and entirely within the property lines of the existing Air Products Hydrogen Production Facility at 23320 South Alameda Street in Carson, CA. The concrete foundation slab from the previous, decommissioned facility remains in place. Construction is expected to occur in the following phases:

- 1) Site Demolition and Preparation Phase: removal of existing concrete foundation slab and miscellaneous underground electrical conduits and fixtures and excavation of approximately three feet of soil to establish the required elevations for the following phases of construction over two months.
- 2) Piling Phase: installation of piles to provide support for equipment foundations over a two-month period.
- 3) Civil/Undergrounds Phase: installation of underground piping, an electrical conduit bank, poured concrete foundations, aboveground drainage systems, protective firewalls, and an electrical grounding system over three months with one month of overlap with the piling phase and includes installing two tanker truck scales along the north road.
- 4) Mechanical Construction Phase: Over four months commencing upon the completion of the Civil/Undergrounds Phase, major activities include the setting and assembly of process and utility equipment, the setting of the electrical building and transformers, structural steel erection for pipe ways, and piping erection.
- 5) Electrical and Instrumentation Phase: Over approximately three months, overlapping by one month with the end of the Mechanical Construction Phase, this phase includes the installation of cable trays on pipe racks, pulling and termination of power cables to the power distribution center and transformers, pulling

and termination of instrument cabling to the distributed control system cabinets, installation of communication cables, installation of instrument and analytical system tubing, mounting and installation of field instruments, and installation of heat tracing.

- 6) Commissioning Phase: start-up and testing of the new facility over a two-and-a-half-month period. Additional construction activities could include final site grading, fencing and gate modifications, painting, and cleanup.

## 2.5 Project Approvals

Air Products anticipates that the LHY Project would include the following permits and approvals:

**City of Carson:** Air products has applied for a Conditional Use Permit (CUP) (Modification No. 1 to CUP No. 458-97) and a California Environmental Quality Act (CEQA) assessment (Initial Study Checklist followed by a determination by the CEQA Lead Agency (anticipate the City of Carson)). Actions necessary to fully develop the Project as proposed include:

- Certification of the CEQA Document; and
- Approve Conditional Use Permit Modification No. 1 to CUP No. 458-97

**South Coast Air Quality Management District (SCAQMD):** Air Products will apply to the SCAQMD for an Authority to Construct (ATC) permit as a facility that will generate regulated airborne emissions; SCAQMD will authorize construction of new equipment for the facility. Air Products already holds a Permit to Operate (PTO) for the existing facility. The existing PTO authorizes the facility to operate as a regulated emissions source. The existing PTO will be modified to reflect anticipated emissions from the updated facility, in accordance with emissions thresholds set in the ATC for the new equipment. Air Products is planning, per SCAQMD requirements/direction, to submit a flare modification application (as required) and revised flare plan for use of the existing site clean service flare to control CO emissions (as Best Available Control Technology) from the H<sub>2</sub> feed gas absorbers' periodic regeneration process. In parallel Air Products will also be submitting a permit-to-construct application and a revised/new flare plan to SCAQMD for a new, dedicated clean service flare to serve as the permanent, long-term solution that will address safety/operability concerns during future SMR outages. The change in facility emissions as a result of flare usage for managing the regenerative vent stream is accounted for in the proposed Project operational emissions estimates provided in a separate technical memo. Air Products must also comply with all applicable SCAQMD rules and regulations including (but not limited to) those listed below.

- Rule 201: Permit to Construct
- Rule 203: Permit to Operate
- Rule 212: Standards for Approving Permits
- Rule 301: Permitting and Associated Fees
- Rule 401: Visible Emissions
- Rule 402: Nuisance

- Rule 404: Particulate Emissions
- Rule 407: Liquid and Gaseous Air Contaminants
- Rule 1118: Control of Emissions from Refinery Flares
- Rule 1166: Volatile Organic Compound Emissions from Decontamination of Soil
- Rule 1303: New Source Review Requirements
- Rule 1401: New Source Review of Toxic Air Contaminants
- Rule 1403: Asbestos Emissions from Demolition/Renovation Activities
- Rule 1402: Control of Toxic Air Contaminants from Existing Sources
- Regulation XX: Regional Clean Air Incentive Market (RECLAIM) including key rules (Rule 2005: NSR for RECLAIM)
- Regulation XXX: Title V Permits

**Los Angeles County Fire Department, Hazardous Materials Division:** Air Products will review and, if appropriate, update its existing CUPA Hazardous Materials Business Plan, Emergency Action Plan, and SPCC Plan.

**Los Angeles Regional Water Quality Control Board:** Air Products will update its NOI and SWPPP under its Industrial General Storm Water Permit previously approved for the site with the Regional Water Quality Control Board (Required for the Construction Storm Water Permit – if construction activities will disturb 1+ acres)

**California Air Resources Board (CARB):** Air Products will update the monitoring plan for the mandatory reporting regulation under AB 32 for greenhouse gases (GHG).

**Los Angeles County Sanitation District (LACSD):** Air Products has an existing wastewater discharge permit with LACSD and expects to be within their existing permitted discharge limits.

**California Accidental Release Program (CalARP) and Federal Risk Management Program (RMP):** Air Products has an existing CalARP/RMP plan and expects to be required to add an amendment to the plan. Additionally, both an off-site consequence analysis document addressing a worst-case, accidental on-site release scenario as well as an informational document on design considerations, procedures/processes and training to ensure safe LHY transport/delivery have been provided in the application package.

### 3 INITIAL STUDY CHECKLIST

**1. Project title:**

Carson Hydrogen Liquefaction Project

**2. Lead agency name and address:**

City of Carson  
Community Development Department, Planning Division  
701 East Carson Street  
Carson, California 90745

**3. Contact person and phone number:**

Name: Max Castillo, Assistant Planner  
Phone: (310) 952-1700 x1317  
Email: mcastillo@carson.ca.us

**4. Project location:**

The Project will be constructed on approximately 35,800 square feet of land in the northwest corner and entirely within the property lines of the existing Air Products Hydrogen Production Facility at 23320 S. Alameda Street, Carson, CA 90810. This portion of the Facility where the Project would take place was the site of the former Air Products and Chemicals Inc. liquid hydrogen production equipment that was decommissioned and demolished in the 1970s.

**5. Project sponsor's name and address:**

Jim Reebe  
Air Products and Chemicals, Inc.  
23300 S. Alameda Street  
Carson, CA 90810

**6. General plan designation:** Heavy Industrial

**7. Zoning:** Manufacturing, Heavy and Design Overlay

**8. Description of Project:**

See Section 2.3, Proposed Project, for additional details.

**9. Surrounding Land Uses and Setting:**

See Section 2.2, Environmental Setting, for details on the surrounding land uses and setting.

**10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement.)**

See Section 2.5, Project Approvals, for details.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City has provided notice of the Project application to California Native American tribes that have requested such notice. The notification period was from December 3, 2019 to January 1, 2020 for registered tribe members to initiate consultation under AB 52, as appropriate. Consultation was requested by the Gabrieleno Band of Mission Indians – Kizh Nation; consultation is scheduled to occur on March 4, 2020.

## Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

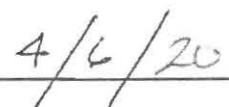
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Aesthetics                               | <input type="checkbox"/> Agriculture and Forestry Resources    | <input checked="" type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources                     | <input checked="" type="checkbox"/> Cultural Resources         | <input checked="" type="checkbox"/> Energy                             |
| <input checked="" type="checkbox"/> Geology and Soils             | <input type="checkbox"/> Greenhouse Gas Emissions              | <input checked="" type="checkbox"/> Hazards and Hazardous Materials    |
| <input checked="" type="checkbox"/> Hydrology and Water Quality   | <input type="checkbox"/> Land Use and Planning                 | <input type="checkbox"/> Mineral Resources                             |
| <input checked="" type="checkbox"/> Noise                         | <input type="checkbox"/> Population and Housing                | <input checked="" type="checkbox"/> Public Services                    |
| <input type="checkbox"/> Recreation                               | <input checked="" type="checkbox"/> Transportation and Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources          |
| <input checked="" type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire                              | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

**Determination:**

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date



## Evaluation of Environmental Impacts:

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on- site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analyses Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance



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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
<b>I. AESTHETICS.</b> Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>II. AGRICULTURE AND FORESTRY RESOURCES.</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>III. AIR QUALITY.</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>IV. BIOLOGICAL RESOURCES.</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>V. CULTURAL RESOURCES.</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VI. ENERGY.</b> Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>VII. GEOLOGY AND SOILS.</b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VIII. GREENHOUSE GAS EMISSIONS.</b> Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>IX. HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>X. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would				
i) result in a substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XI. LAND USE AND PLANNING.</b> Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XII. MINERAL RESOURCES.</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XIII. NOISE.</b> Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
<b>XIV. POPULATION AND HOUSING.</b> Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XV. PUBLIC SERVICES.</b> Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVI. RECREATION.</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVII. TRANSPORTATION.</b> Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVIII. TRIBAL CULTURAL RESOURCES.</b>				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XIX. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XX. WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3.1 Aesthetics

**a) *Would the project have a substantial adverse effect on a scenic vista?***

**No Impact.** Scenic vistas and other important visual resources are typically associated with natural landforms such as mountains, foothills, ridgelines, and coastlines. The City of Carson's General Plan Open Space and Conservation Element categorizes the City's open space as either Recreational Open Space, such as parks and public golf courses, or General Open Space, which consists of utility transmission corridors, drainage and flood facilities, and the Goodyear Blimp Base Airport (City of Carson 2004).

The proposed Project is not located within any designated scenic vistas. The Project site is located in a heavy industrial area surrounded by other industrial land uses zoned for heavy manufacturing and away from any substantial open space areas. Construction of the proposed Project would occur entirely within the site of an existing hydrogen production facility. Therefore, no impacts associated with scenic vistas would occur.

**b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

**No Impact.** Construction of the LHY Project would occur entirely within the site of the existing hydrogen facility; therefore, no scenic resources such as trees, rock outcroppings, or historic buildings would be damaged by the Project. No natural scenic features occur within the Project site boundaries, and there are no officially designated scenic highways in the City of Carson. Therefore, no impacts associated with state scenic highways or scenic resources would occur.

**c) *Would the project, in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area,***

*would the project conflict with applicable zoning and other regulations governing scenic quality?*

**Less Than Significant Impact.** The proposed LHY Project would not conflict with applicable zoning and other regulations. The area is zoned for heavy manufacturing use and the proposed Project would be consistent with that zoning as the Project site would be located entirely within the existing hydrogen facility. Similarly, the Project is not expected to degrade the visual character of the area due to the industrial land designation of the Project site and surrounding land uses. The hydrogen liquefaction unit would be consistent with the overall industrial nature of the area. Therefore, impacts to the visual character of the site and its surroundings are anticipated to be less than significant.

- d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**Less Than Significant Impact.** Additional lighting required for operation and security of the proposed Project would be visible to the surrounding industrial area, but it is not expected to be discernible to residents due to their location with respect to the existing Hydrogen Plant. The proposed Project site is located approximately 0.6 mile west of the closest residential area. The additional lighting at the hydrogen facility for the LHY Project would be similar to the lighting required for operation and security at the adjacent industrial properties. The City zoning requirements (Section 9147.1) regulate exterior lighting so that “All lighting of buildings, landscaping, parking lots and similar facilities shall be directed away from adjoining and nearby residential property. Such lighting shall be arranged and controlled so as not to create a nuisance or hazard to traffic or to the living environment.” Therefore, impacts associated with substantial light or glare are anticipated to be less than significant.

## 3.2 Agriculture and Forestry Resources

- a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?*

**No Impact.** The Project site is located in heavy industrial area. According to the California Department of Conservation’s California Important Farmland Finder, most of Los Angeles County is not mapped under the Farmland Mapping and Monitoring Program, and, thus, does not contain Prime Farmland, Unique Farmland, or Farmland of State Importance (collectively “Important Farmland”) (DOC 2017). Therefore, no impacts associated with conversion of Important Farmland would occur.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**No Impact.** According the California Department of Conservation’s Williamson Act Parcel map for Los Angeles County, the Project site is not located on or adjacent to any lands under Williamson Act contract. The Los Angeles County Williamson Act 2015/2016 Map designates the Project site and

surrounding land as non-Williamson Act Land (DOC 2016). In addition, the Project site and surrounding area are not zoned for agricultural uses, but for industrial uses (City of Carson 2004). As such, implementation of the Project would not conflict with existing zoning for agricultural use or land under a Williamson Act contract. Therefore, no impacts associated with agricultural zoning or Williamson Act contracts would occur.

- c) ***Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?***

**No Impact.** The Project site is located within a highly industrial part of the City. According to the City's Zoning Map, the Project site is not located on or adjacent to forestland, timberland, or timberland zoned Timberland Production (City of Carson 2004). Therefore, no impacts associated with forestland or timberland would occur.

- d) ***Would the project result in the loss of forest land or conversion of forest land to non-forest use?***

**No Impact.** The Project site is located in a heavy manufacturing area. The Project site is not located on or adjacent to forestland. No private timberlands or public lands with forests are located in the City. Therefore, no impact associated with the loss or conversion of forestland would occur.

- e) ***Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?***

**No Impact.** The Project site is not located on or adjacent to any parcels identified as Important Farmland or forestland. In addition, the Project would not involve changes to the existing environment that would result in the indirect conversion of Important Farmland or forestland located away from the Project site. Therefore, no impacts associated with the conversion of Farmland or forestland would occur.

### 3.3 Air Quality

- a) ***Would the project conflict with or obstruct implementation of the applicable air quality plan?***

**No Impact.** The proposed Project is consistent with the local General Plans and is consistent with the Air Quality Management Plans. Existing emissions from the industrial facilities are included in the AQMP. The AQMP identifies air emission reductions from existing sources and air pollution control measures that are necessary in order to comply with the state and federal ambient air quality standards (SCAQMD, 1993). New emission sources associated with the hydrogen liquefaction unit are required to comply with the SCAQMD's New Source Review regulations which include the use of BACT and the requirement that all new emissions be offset. The control strategies in the AQMP are based on

projections from the local General Plans from various cities in Southern California (including the City of Carson). Projects which are consistent with the local General Plans are consistent with the air quality related regional plans (SCAQMD, 1993). Therefore, the proposed Project is considered to be consistent with the air quality related regional plans since it is consistent with the City of Carson's General Plan. Therefore, the Project would not conflict with or obstruct implementation of the applicable air quality plan, and no significant impacts are expected.

- b) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

#### **Construction Emissions**

***Less Than Significant Impact with Mitigation Incorporated.*** The total construction emissions estimates presented below in Table 2 include emissions from the following phases listed in the construction plans document: Site Demolition and Preparation Phase, Piling Phase, Civil/Undergrounds Phase, Mechanical Construction Phase, Electrical and Instrumentation Phase, and Commissioning Phase (only including the construction aspects occurring during the phase, not operation of the equipment). The construction timeline entered into the model matches the one described in the construction plans document and spans from October 1, 2019 to December 15, 2020.

The equipment and work described in each construction phase of the construction plans document was used to estimate the equipment types and quantity of each equipment type in CalEEMod. The following additional assumptions were made: construction work occurs five days a week; the entire site (35,800 square feet) will require site preparation and grading; and the Site Demolition and Preparation Phase will result in the removal of 9,259 cubic yards of material. Note that no mitigation measures have been applied in determining the emission estimates.

**Table 2: Construction Emissions Summary**

	ROG	NOx	CO	SO <sub>2</sub>	PM <sub>10</sub> Total	PM <sub>2.5</sub> Total	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
	tons per year						metric tons per year			
2019	0.07	0.90	0.50	0.00	0.15	0.07	153	0.03	0.00	154
2020	0.37	3.49	2.94	0.01	0.21	0.16	514	0.11	0.00	516
Annual Maximum	0.37	3.49	2.94	0.01	0.21	0.16	514	0.11	0.00	516
SCAQMD Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10,000
Exceed Threshold?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No
	pounds per day									
Max. Day 2019	3.5	39.0	19.9	0.04	13.5	7.6	3,592	1.1	0.00	3,619
Max. Day 2020	6.5	61.5	52.8	0.1	3.7	2.9	9,661	2.0	0.00	9,710
Daily Maximum	6.5	61.5	52.8	0.1	13.5	7.6	9,661	2.0	0.00	9,710
SCAQMD Thresholds	75	100	550	150	150	55	N/A	N/A	N/A	N/A
Exceed Threshold?	No	No	No	No	No	No	N/A	N/A	N/A	N/A



The proposed LHY construction emissions are substantially less than those anticipated in the 1998 EIR. Further, specific construction-related emissions for the unbuilt 1998 CO<sub>2</sub> recovery and liquefaction plant would have been substantially higher than the proposed LHY Project; this is because vehicle emission rates have been steadily reducing between 1998 and 2019, construction methods have become more efficient between 1998 and 2019, and emission estimation tools (e.g., CalEEMod and EMFAC) have become more refined. For these reasons, the proposed LHY Project would generate less construction emissions than the anticipated 1998 CO<sub>2</sub> recovery and liquefaction plant construction emissions, and there would be less than significant impacts associated with construction emissions.

### **Operational Emissions**

***Less Than Significant Impact with Mitigation Incorporated.*** Operational air emissions would be considered functionally equivalent to those evaluated under the original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit as expressed within the production potential to emit (PTE). The facility capacity would not change from its existing allowed operational emissions levels as a result of the proposed LHY Project. The proposed LHY Project would be within the envelope of the contemplated operational capacity functionally assessed within the 1998 CUP Permit and expressed within the Project PTE. The facility capacity of the LHY Project would not change to exceed its existing permitted levels. The original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit states that the production limit of hydrogen is approximately 96 MMSCFD (Final EIR page 3-12) based on PTE. Through the air permitting process and due to efficiencies realized during production that reduced emissions, the PTE now allows up to 101 MMSCFD of hydrogen production. The proposed LHY Project would not change the existing hydrogen production limit of 101 MMSCFD.

The proposed LHY Project would include some additional operational emissions from the liquefier operations, electricity consumption and additional truck activities (an average of four delivery tankers per day). Additionally, the proposed Project would reduce the routine transportation miles of liquefied hydrogen associated with current operations, resulting in reduced truck-related air emissions, as liquefied hydrogen would no longer need to be transported from areas outside of Southern California to Southern California end-users. These additional operational emissions are presented below in Table 3.

**Table 3: Operational Emissions Summary**

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total	CO2	CH4	N2O	CO2e
	pounds per day						metric tons per year			
New Emission Sources										
Electricity Sources	0.00	0.00	0.00	0.00	0.00	0.00	790	0.03	0.01	793
Mobile Sources	0.03	1.11	0.30	0.00	0.06	0.02	46	0.00	0.00	46
Stationary Sources	0.00	5.73	0.72	0.00	0.00	0.00	4	0.01	0.00	5
Maximum	0.03	6.84	1.02	0.00	0.06	0.02	840	0.04	0.01	844
SCAQMD Thresholds	55	55	550	150	150	55	N/A	N/A	N/A	10,000
Exceed Threshold?	No	No	No	No	No	No	N/A	N/A	N/A	No
Existing Approved Emission Source										
Feedstock H2 Gas Production	6.13	5.70	6.99	0.10	4.37	4.37 <sup>1</sup>	39,126	0.11	0.03	39,137

Notes: 1. All PM<sub>10</sub> emissions are conservatively assumed to be PM<sub>2.5</sub> for emissions from feedstock H<sub>2</sub> gas production.

As shown above, all direct and indirect operational emissions levels would be below SCAQMD's daily significance threshold levels. Although the proposed LHY Project's air quality emissions do not directly warrant mitigation measures, the 1998 CUP Permit and EIR included mitigations measures EIR-AQ-2 (as updated), EIR-AQ-4, EIR-AQ-5, EIR-AQ-6 (as updated), EIR-AQ-7, EIR-AQ-8 (as updated), EIR-AQ-9 (as updated), EIR-AQ-10, EIR-AQ-11 (as updated), and EIR-AQ-14; these measures were reviewed for applicability to this project and updated where appropriate to reflect existing regulatory requirements.

**EIR-AQ-2** Suspend use of all fossil-fueled construction equipment during second-stage smog alerts.

**EIR-AQ-4** Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment to the extent feasible.

**EIR-AQ-5** Maintain construction equipment tuned up and retard diesel engine timing.

**EIR-AQ-6** Air Products shall develop a fugitive dust emission control plan. The plan shall be reviewed and approved by the City. Measures to be included in the plan include but are not limited to the following: (1) apply water every three hours to disturbed areas within a construction site, except during periods of rainfall. Implementation of this mitigation measure would reduce PM<sub>10</sub> emissions by 61 percent (SCAQMD, 2007); (2) All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches. Implementation of this mitigation measure would reduce PM<sub>10</sub> emissions 91 percent (SCAQMD, 2007); (3) Prohibit demolition activities when wind speeds exceed 25 mph. The emission

reductions associated with this mitigation measure are estimated to be 98 percent (SCAQMD, 2007); and (4) limit traffic speeds on unpaved roads to 15 mph or less. The emission benefits of this mitigation measure are estimated to be 57 percent (SCAQMD, 2007).

- EIR-AQ-7** Air Products shall place tarps over any trucks that are used to export or import soil to/from the project site.
- EIR-AQ-8** Implement street sweeping program with Rule 1186 compliant PM10 efficient vacuum units (14-day frequency). Emission reductions of 16 to 25 percent are predicted for this mitigation measure (SCAQMD, 2007).
- EIR-AQ-9** Use a gravel apron, 25 feet long by road width, to reduce mud/dirt trackout from unpaved truck exit routes. This mitigation measure could reduce emissions by 46 percent (SCAQMD, 2007).
- EIR-AQ-10** BACT as required by the SCAQMD shall be installed on the proposed project. Emission calculations were developed assuming the use of BACT so that no further emission reductions are expected.
- EIR-AQ-11** Emission offsets shall be provided as required by SCAQMD.
- EIR-AQ-14** Prohibit truck idling during facility operations in excess of five minutes (CARB, 2004).

All potential additional operational emissions are over and above the existing production emissions, and which would not change the allowed production emissions in the facility air permits and assessed in the 1998 CUP Permit and EIR. When the potential additional operational emissions are compared with the SCAQMD CEQA thresholds, the proposed LHY Project emissions would be below the SCAQMD significance thresholds. In addition, localized air emission impacts are not examined as residential and sensitive receptors are located 0.6 mile east of the proposed Project and would therefore not be significantly impacted by the Project. Because the additional construction and operational emissions would not generate a new significant air impact over that which was evaluated in the original EIR; the proposed LHY Project would generate a less than significant impacts. Although not required by the proposed LHY Project estimated emissions levels, the City of Carson included a review of the potentially applicable 1998 CUP Permit and EIR air quality mitigation measures. Some of the previous EIR mitigation measures have been brought forward and updated to continue to comply with local and state regulations applicable to construction and operations of any project within the jurisdiction of SCAQMD; these include mitigations measures EIR-AQ-2 (as updated), EIR-AQ-4, EIR-AQ-5, EIR-AQ-6 (as updated), EIR-AQ-7, EIR-AQ-8 (as updated), EIR-AQ-9 (as updated), EIR-AQ-10, EIR-AQ-11 (as updated), and EIR-AQ-14.



**c) *Would the project expose sensitive receptors to substantial pollutant concentrations?***

***Less Than Significant Impact.*** The potential impact to the surrounding area by the proposed Project is expected to be minimal as no population, housing, or environmental receptors are affected by the proposed Project. The closest residential area to the existing operation is 0.6 miles to the east; the proposed Project is within the boundaries of the existing operation and would not move any part of the overall operation closer to the residences. Local significance thresholds for construction and operational emissions published by the AQMD, shown in Table 2 and Table 3 in Section 3.3 (b) of this Environmental Checklist, indicate that emissions from the Project would not exceed SCAQMD thresholds and Project impacts would be below those that could produce localized impacts. Therefore, impacts to sensitive receptors would be less than significant.

**d) *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?***

***No Impact.*** The proposed LHY Project would not result in odors adversely affecting a substantial number of people. The Project site is located in a highly industrial area and the nearest residential area is located 0.6 mile east of the Project site. However, some odors may be generated during construction excavation activities if contaminated soil is encountered. In the event that contaminated soil with objectionable odors are encountered, SCAQMD rules related to contaminated odors (Rule 1466) would be applicable and therefore any odors would be controlled under existing rules and regulations. Therefore, the Project would have no impact with regard to objectionable odors.

### **3.4 Biological Resources**

**a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

***No Impact.*** The existing Air Products Hydrogen Production Facility is located in a heavy industrial area surrounded by other industrial land uses. The LHY Project will be constructed entirely within the property lines of the existing facility. Generally, developed areas provide habitat of minimal value for plant and wildlife species. There are no significant plant or animal resources in the area, and there are no rare, endangered, or threatened species at the site. Therefore, no impacts associated with candidate, sensitive, or special-status species would occur.

- b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

**No Impact.** The Project site is located on disturbed land within the existing Air Products Hydrogen Production Facility. No natural vegetation communities are present within the industrial Project site. Therefore, no impacts associated with riparian or sensitive vegetation communities would occur.

- c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

**No Impact.** No federally defined waters of the United States or state occur within the Project site. This includes the absence of federally defined wetlands and other waters (e.g., drainages) and state-defined waters (e.g., streams and riparian extent) (USFWS 2018). The Project would be subject to typical restrictions and requirements that address erosion and runoff (e.g., best management practices [BMPs]), including those of the Clean Water Act and National Pollutant Discharge Elimination System (NPDES) permit. In addition, all construction activities would be limited to developed and disturbed land and would occur entirely within the existing hydrogen facility. Therefore, no impacts to jurisdictional waters or wetlands would occur.

- d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**No Impact.** Wildlife corridors are linear, connected areas of natural open space that provide avenues for migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal.

Although some local movement of wildlife is expected to occur within the City, the City is not recognized as an existing or proposed Significant Ecological Area that links migratory populations, as designated by the County of Los Angeles (County of Los Angeles 2018). The Project site is located within a highly industrial area and would not interfere with the movement of any native residents, migratory fish, or wildlife species. Therefore, no impacts associated with wildlife movement or wildlife corridors would occur.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** The City does not have any local policies or ordinances protecting trees located on private property. As such, implementation of the Project would not conflict with local policies. Therefore, no impacts associated with local policies or ordinances protecting biological resources would occur.

- f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

**No Impact.** The Project site is not located within any habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan area. Therefore, no impacts associated with an adopted conservation plan would occur.

### 3.5 Cultural Resources

- a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?*
- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*
- c) *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

**Less Than Significant Impact with Mitigation Incorporated.** The proposed Project would have a less than significant impact on cultural resources with the incorporation of mitigation. The Project would not cause a substantial adverse change in the significance of a historical or archaeological resource and it is not expected to disturb any human remains. The LHY Project would be located within the same physical boundaries as the existing facility as assessed under the original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit and EIR. The Project site would be located in a heavily disturbed plot of land that has previously been excavated during past construction activities, and no known cultural resources have been identified at the site. Nonetheless, there is potential for intact cultural or archaeological resources to be present at subsurface levels. For this reason, the Project site should be treated as potentially sensitive for archaeological resources. Mitigation measure MM-CUL-1, MM-CUL-2 and MM-CUL-3 are required to reduce potential impacts to unanticipated archaeological resources. With the incorporation of the mitigation measures, impacts to cultural resources would be less than significant. No additional mitigation measures would be required.

**MM-CUL-1** The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area.

The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

**MM-CUL-2** Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe. Any historic archaeological material that is not Native American in origin shall be curated at a public, nonprofit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.

**MM-CUL-3** Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner

recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed. Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD). If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report



of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

### 3.6 Energy

- a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*
- b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

***Less Than Significant Impact with Mitigation Incorporated.*** The proposed LHY Project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources. The Project would also not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Energy use during construction would be short term and substantially less than that anticipated in the original EIR for the hydrogen facility. Construction of the hydrogen liquefaction unit would help to meet the demand for reformulated fuels through the production of renewable transportation fuels. Air Products expects to see a strong growth of merchant LHY in the coming years, primarily from fleet fueling for vehicles, hydrogen fuel cells for warehouse forklifts, and growth in the base industrial market. Air Products supplies the merchant hydrogen market in Oregon, California, and Arizona from Sacramento, California. Demand is outpacing supply; with the construction of the hydrogen liquefaction unit at the Carson, CA facility, Air Products will be able to serve this growing demand in the West without having to transport product across the country from

New Orleans, LA. Therefore, the Project would support the production of reformulated fuels and would not result in significant environmental impacts associated with inefficient energy consumption.

Because the proposed LHY Project could consume energy which could potentially conflict with state or local plans for renewable energy or energy efficiency, there would be a potentially significant energy impact. The 1998 CUP Permit and EIR included the following mitigation measure EIR-US-5 to reduce potentially significant energy impacts.

**EIR-US-5** Air Products shall comply with the building requirements of Title 24 of the California Code of Regulations regarding energy (e.g., heating and lighting) conservation measures.

With incorporation of mitigation measure EIR-US-5, there would be a less than significant energy impact. No additional mitigation measures would be required.

### 3.7 Geology and Soils

a) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

**No Impact.** The California Department of Mines and Geology has not identified the Project site as an Alquist-Priolo Earthquake Fault Zone (DOC 1999). The City is located in an area considered to be seismically active, similar to most of Southern California. However, surface faulting does not occur near the Project site or surrounding area, and there are no known active fault crossings on the site. The nearest known active regional fault is the Newport Inglewood Connected Fault zone, which is located approximately two to three miles northeast of the Project site. Therefore, no impacts associated with fault rupture would occur.

ii) *Strong seismic ground shaking?*

**Less Than Significant Impact with Mitigation Incorporated.** Implementation of the proposed Project is not expected to expose people or structures to earthquake hazards because new and existing structures are required to be designed to meet Uniform Building Code Zone 4 seismic safety standards. Compliance with the Uniform Building Codes is expected to result in less than significant impacts on geologic hazards. No faults or Fault-related features are known to exist on-site. The site is not located

in any Alquist-Priolo Earthquake fault Zone and is not expected to be subject to significant surface fault displacement.

Based on the historical record, it is highly probable that the Los Angeles region will be affected by future earthquakes. Research shows that damaging earthquakes will be likely to occur on or near recognized faults showing evidence of geologically recent activity. The proximity of major faults to the Air Products Carson Hydrogen Facility increases the probability that an earthquake may affect the Project site. There is the potential for damage to the hydrogen liquefaction unit and hydrogen facility in the event of an earthquake. The Newport-Inglewood fault, about two to three miles northeast of the Project site, poses a seismic hazard to Los Angeles (Toppozada et al., 1988, 1989), although no surface faulting has been associated with earthquakes along this structural zone. The impacts of an earthquake on the site are considered to be greater than the current conditions since additional structures would be constructed including a new hydrogen liquefaction unit. Impacts of an earthquake could include structural failure.

Structures at the site must be designed to comply with the Uniform Building Code Zone 4 requirements since the Project is located in a seismically active area. The City of Carson is responsible for assuring that the Project complies with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some non-structural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage.

Because the proposed LHY Project is within an active earthquake zone, there is a potentially significant seismic and ground-shaking impact. The 1998 CUP Permit and EIR included mitigation measures EIR-G-2, EIR-G-3, EIR-G-4 and EIR-G-5 (as updated) to reduce strong seismic and ground shaking impacts within the original hydrogen facility.

- |                |  |
|----------------|--|
| <b>EIR-G-2</b> | A structural engineer, civil engineer, or architect experienced with earthquake-resistant design, shall approve all building plans to determine the adequacy of seismic criteria for project structures, and to recommend appropriate design changes, if needed prior to issuance of building permits. |
| <b>EIR-G-3</b> | Air Products shall provide a soils study and/or hydrology report to the City of Carson as part of the building permit review process.  |
| <b>EIR-G-4</b> | Air Products shall obtain building permits, as applicable, for all new structures at the site. The Applicant shall submit building plans to the City of Carson for review. Air Products must receive approval of each building plan and/or building permit to assure                                   |

compliance with the latest Building Code adopted by the City prior to commencing construction activities as described in those plans and/or permit.

- EIR-G-5** Preliminary construction drawings as described in the LHY project must be submitted to the Los Angeles County Department of Public Works, Permit Section for review and approval as applicable.

With the incorporation of mitigation measures EIR-G-2, EIR-G-3, EIR-G-4 and EIR-G-5 from the 1998 CUP Permit and EIR (as updated), based on compliance with applicable local and state regulations, impacts associated with strong seismic ground shaking would be less than significant. No additional mitigation measures would be required.

*iii) Seismic-related ground failure, including liquefaction?*

**Less-Than-Significant Impact.** Soil liquefaction is a seismically induced form of ground failure that has been a major cause of earthquake damage in Southern California. Liquefaction is a process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain, such as an earthquake. The Newport–Inglewood Fault zone is a potential source of ground stress, and liquefaction could occur in the City if the groundwater table is high enough during an earthquake. Due to the existing alluvial and former slough areas within the City, there are areas with the potential for occurrence of liquefaction (City of Carson 2004).

Liquefaction is considered unlikely in relationship to the proposed Project since the parameters required for liquefaction to occur are not evident at the site, e.g., unconsolidated granular soils and a high water table. Ground water occurs at about 40 feet below the surface grade and the soils below the site consist of dense sand and clay soils which are not conducive to liquefaction. The Project has been designed to comply with the Uniform Building Code requirements which would minimize impacts from liquefaction. Therefore, impacts associated with liquefaction would be less than significant.

*iv) Landslides?*

**No Impact.** The Project site and surrounding area are relatively flat and lack any hillsides or topographic features typically susceptible to landslides. According to the City's General Plan EIR, the City does not contain any known areas where landslide movement has the potential to occur (City of Carson 2002). As such, the Project would not expose people or structures to risk of landslides. Therefore, no impacts associated with landslide would occur.

**b) Would the project result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant with Mitigation Incorporated.** The Project would involve earthwork and other construction activities that would disturb surface soils and temporarily leave exposed soil on the ground's surface. Common causes of soil erosion from construction sites include stormwater, wind, and soil being

tracked off site by vehicles. To help curb erosion, Project construction activities would comply with all applicable federal, state, and local regulations for erosion control. The Project would be required to comply with standard regulations, including SCAQMD Rules 402 and 403, which would reduce construction erosion impacts. Rule 402 requires that dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance off site (SCAQMD 1976). Rule 403 requires that fugitive dust be controlled with best available control measures so that it does not remain visible in the atmosphere beyond the property line of the emissions source (SCAQMD 2005). As part of the proposed Project, standard construction practices would be employed to minimize water erosion. Construction sites would be watered twice daily (except during periods of rains) to minimize the potential for wind erosion. The implementation of BMPs is expected to prevent the proposed Project from generating significant impacts due to wind or water erosion.

Because the proposed LHY Project site has been used for industrial facilities, there is the potential to encounter contaminated soils and groundwater. There would be a potentially significant soils impact. The 1998 CUP Permit and EIR developed mitigation measures EIR-G-1 and EIR-G-6 to mitigate construction impacts associated with contaminated soils and groundwater at the original hydrogen facility.

**EIR-G-1** If contaminated soils or ground water are encountered during construction, soil removal and remediation shall be addressed pursuant to federal, state, and local regulations and requirements, including the requirements of the California Environmental Protection Agency, Department of Toxic Substances Control, SCAQMD, and RWQCB, and in consultation with appropriate landowners.

**EIR-G-6** Sufficient information must be submitted to the Los Angeles County Department of Public Works, Permits Section for review and approval to assure that adequate measures, if required, are developed and implemented to protect the proposed project site from methane gas, as applicable to the Uniform Building Codes.

With the incorporation of mitigation measure EIR-G-1 and EIR-G-6, short-term construction impacts associated with encountering contaminated soils and groundwater would be reduced to a less than significant level. No additional mitigation measures would be required.

- c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

**Less-Than-Significant Impact.** As previously discussed in Section 3.8 (a) (iii), there are areas within the City with the potential for occurrence of liquefaction. The proposed Project site does not have soil conditions that are conducive to liquefaction, such as unconsolidated granular soil and a high water table. In addition, compliance with design requirements set forth in the current Uniform Building Code



would reduce potential impacts from unstable geologic units or expansive soils. Therefore, impacts associated with unstable geologic units or soils would be less than significant.

- d) ***Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

***Less-Than-Significant Impact.*** Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the cycle of wetting and drying. Clay minerals are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for substantial expansion.

According to the City's General Plan EIR, the City is underlain by variations of alluvial soil, ranging from sandy to clay loam soil types. The Ramona–Placentia sandy loam in the City does present high potential for shrink/swell behavior (City of Carson 2002). However, the U.S. Department of Agriculture's Web Soil Survey does not identify the Project site or surrounding areas as containing expansive soil. The soil on the Project site is classified primarily as Urban Land, which is a manufactured layer, as well as dense sand and clay soils. Therefore, impacts associated with expansive soils are anticipated to be less than significant.

- e) ***Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?***

***No Impact.*** The proposed Project site does not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. Small quantities of wastewater from toilets, sinks, and laboratories are expected to continue to be discharged through the on-site septic system. An NPDES permit would need to be obtained from the Los Angeles RWQCB in order for any wastewater to be discharged to the Dominguez Channel. The NPDES permit would place limitations on wastewater discharged from the facility. The hydrogen facility would be required to comply with the industrial waste discharge permit requirements or would be subject to enforcement action by the Los Angeles RWQCB. Therefore, due to the existing regulatory controls and assuming that the hydrogen facility complies with their industrial wastewater permit, there would be no impact to septic tanks or alternative wastewater disposal systems.

- f) ***Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

***Less Than Significant Impact with Mitigation Incorporated.*** According to the City's General Plan EIR (City of Carson 2002), because the City has undergone extensive transition and development over the years, the opportunity to encounter paleontological resources within the City is remote. Nonetheless, as is the case with most other development projects that involve earthwork activity, there is always a possibility—albeit low in this instance—that subsurface construction activity could unearth a potentially significant paleontological

resource. This would generate a potentially significant paleontological resource impact. Implementation of MM-G-1 would ensure that subsurface construction activity complies with the standard procedures for treatment of unanticipated discoveries of paleontological resources. With incorporation of mitigation measure MM-G-1 impacts associated with paleontological resources would be less than significant. No additional mitigation measures would be required.

**MM-G-1** In the event that paleontological resources (fossil remains) are exposed during construction activities for the Project, all construction work occurring within 50 feet of the find shall immediately stop until a Qualified Paleontologist, as defined by the Society of Vertebrate Paleontology's 2010 guidelines, can assess the nature and importance of the find. Depending on the significance of the find, the Qualified Paleontologist may record the find and allow work to continue or may recommend salvage and recovery of the resource. All recommendations will be made in accordance with the Society of Vertebrate Paleontology's 2010 guidelines and shall be subject to review and approval by the City of Carson. Work in the area of the find may only resume upon approval of a Qualified Paleontologist.

No unique geological resources (rock formations, hillsides, mountains, etc.) that could be disturbed by the proposed Project are present at the Project site. Therefore, impacts associated with the destruction of unique paleontological or geologic features are expected to be less than significant with mitigation incorporated.

### 3.8 Greenhouse Gas Emissions

**a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

***Less Than Significant Impact.*** As shown in Table 3, above, the proposed hydrogen liquefier has greenhouse gases (GHG) emissions from electricity used to run the plant, added vehicle traffic to service the liquefier, and catalyst regeneration. These GHG emission rates have been estimated using both the California Emissions Estimator Model (CalEEMod) and direct calculations based on the constituents of the gaseous hydrogen feedstock that is being processed to liquid form. These emissions are quantified to be well below (i.e. < 10%) the SCAQMD CEQA significance threshold for GHG CO<sub>2</sub> equivalent (CO<sub>2</sub>e) emissions of 10,000 metric tons per year. Based on these estimated GHG emissions presented in Table 3, project operations would therefore generate a less than significant GHG emissions impact.

In addition to these small annual GHG increases, the GHG emissions associated with the existing approved facility production of the gaseous hydrogen that is fed into the liquefier are also estimated and summarized and presented in Table 3 to provide for full disclosure. These existing facility feedstock emissions exceed the SCAQMD significance threshold of 10,000 MTPY CO<sub>2</sub>e due to the underlying technology required to produce hydrogen from hydrocarbons. With the existing facility feedstock emissions included, total project CO<sub>2</sub>e emissions from all sources are estimated to be approximately

30,000 MTPY above the SCAQMD threshold value (refer to Table 3, above). These existing facility feedstock emissions are already allocated to the facility and are existing permitted GHG emissions. GHG is attributed to the Carson Hydrogen Plant based on actual production output which varies with market demand and plant availability, up to permitted heat rate and emission limits. The addition of the liquefier does not change the output of the existing plant. The Carson facility participates in the GHG Cap and Trade program administered by the California Air Resources Board per AB 32 (Global Warming Solutions Act of 2006). As a result of the Carson facility's ongoing participation in this program, Air Products would create no adverse impact as a result of CO<sub>2</sub>e emissions from the proposed liquefier project. Therefore, the proposed Project would not generate either directly or indirectly a significant GHG emissions impact on the environment and would result in a less than significant GHG impact. No mitigation measures would be required.

- b) *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

***Less Than Significant Impact.*** Although AB 32 (Global Warming solutions Act of 2006) established the regulation of GHG after the original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit and EIR was prepared, the Air Products Carson facility participates in the GHG Cap and Trade program administered by the California Air Resources Board. There would be no change in compliance with AB 32 and no change in the continued participation in the GHG Cap and Trade program with the proposed LHY Project. Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purposed of reducing the emissions of GHG, and there would be a less than significant impact. No mitigation measures would be required.

### **3.9 Hazards and Hazardous Materials**

The hazards and hazardous materials section of this document evaluates any potential impacts from hazardous substances associated with the proposed Project. The proposed Project would handle gaseous hydrogen and liquefied hydrogen which, if accidentally released to the environment, could present hazards.

- a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

***Less Than Significant Impact with Mitigation Incorporated.*** Construction of the project would involve remedial earthwork excavation and construction of new structures. Remediation activities have been conducted at the hydrogen facility site so that soil contamination at the Project site is not expected. However, given the heavily industrialized nature of the site and surrounding areas, contaminated soils or ground water may be uncovered during construction. For construction workers, inhalation of VOCs migrating from soil gas or soil in a construction trench while conducting excavation activities could pose a potentially significant health hazard during the construction/remediation phase of the project. As

such, the RWQCB would be consulted regarding planning and approach prior to commencing any of these activities.

In addition to the risk posed by contaminated soils during construction of the Project, potentially hazardous materials would likely be handled on the Project site or construction activities would take place in close proximity to hazardous material processes. These materials would include hydrogen, gasoline, diesel fuel, lubricants, and other petroleum-based products to operate and maintain construction equipment or associated with the existing processes located at the site. Handling or performing construction activities in close proximity to these potentially hazardous materials would be temporary and would coincide with the short-term construction phase of the project.

Although construction materials would likely be stored on the Project site, storage would be required to comply with the guidelines set forth by each product's manufacturer, as well as in accordance with all applicable federal, state, and local regulations pertaining to the storage of hazardous materials. Consistent with federal, state, and local requirements, the transport of hazardous materials to and from the Project site would be conducted by a licensed contractor. Any handling, transport, use, or disposal of hazardous materials would comply with all relevant federal, state, and local agencies and regulations, including the EPA, the California Department of Toxic Substances Control, the California Occupational Safety and Health Administration (OSHA), Caltrans, the Resource Conservation and Recovery Act, SCAQMD, and the Los Angeles County Certified Unified Program Agency.

The proposed Project operations would result in the storage of liquefied hydrogen and the transportation of liquefied hydrogen via a truck for delivery to Southern California end-users. During routine operations all the liquefied hydrogen would be contained within enclosed systems and would not represent a routine hazard to the public or the environment. The proposed Project would not involve the disposal of hazardous materials. For accidental releases, see the discussion below in Section 3.9 (b).

- b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

***Less Than Significant Impact.*** Operation of the existing facility requires handling of hazardous materials and is subject to regulation by, and compliance with, the California Accidental Release Program (CalARP) and Federal Risk Management Program (RMP) as well as the preparation and update of a hazardous materials business plan (HMBP) with the Los Angeles County Fire Department, Hazardous Materials Division. The proposed LHY Project would continue to handle hazardous materials and would be included within the CalARP requirements and HMBP for the facility.

Air Products has evaluated the worst-case release scenario and conducted an Offsite Consequence Analysis of hazardous substances in case of an accidental release of liquid hydrogen at the proposed LHY facility. This offsite hazard risk evaluation complies with the CalARP program. Summarizing the evaluation findings, the potential impact to the surrounding area by the proposed Project is expected to generate impact zones as large as 0.4 miles for a worst-case liquefied tank release scenario. The Project is located within an industrial area and no residential populations, housing, or environmental receptors are located within this area. The closest residential area to the existing operation is 0.6 miles to the east; the proposed Project would be within the boundaries of the existing operation and would not move any part of the overall operation closer to the residences.

As was discussed in the previous EIR (City of Carson 1998) on the existing hydrogen plant, impacts already evaluated as part of the CEQA analysis on the existing plant examined hazards related to toxic and flammable gas releases, liquefied gas releases and flammable and combustible liquids releases. Releases of hazardous materials were estimated in the EIR to affect distances as far as 1.2 miles. Many of the proposed equipment installations and operations proposed under the 1998 EIR Project were not installed and there are no plans for their installation and operations (the Specialty Gas Plant, for example). The impacts of the proposed hydrogen liquefaction system would produce smaller impact zones than those examined in the 1998 EIR. In addition, as the impact zones associated with the proposed hydrogen liquefaction would not extend into residential areas, impacts associated with the facility would be less than significant, as was the conclusion associated with the 1998 EIR associated with onsite releases.

Risks associated with trucking were established as potentially significant in the 1998 EIR for the transport of hazardous materials. As liquefied hydrogen is currently being transported from areas outside of Southern California in order to supply end-users within Southern California, there may be a potential net reduction in hazardous material truck-miles in California associated with the installation of the hydrogen liquefaction system at the Carson Air Products facility. In addition, the 1998 EIR estimated truck transport from the Specialty Gas facility at 14 trucks per day, which is a greater transportation level than anticipated with the 5 trucks average per day under this project. The plant, for physical reasons, could fill no more than 10 trucks in one day in response to an emergency demand for the LHY fuel; however, the facility would then likely not fill for several days to recover from depleting its LHY fuel reservoir. For these reasons, the proposed Project would not exceed the average levels of truck filling activity (5 per day average) and would be less than the truck activity evaluated in the previous EIR (14 trucks per day). Therefore, there would be no new risk associated with filling trucks. For this reason, the proposed LHY Project would not require additional mitigation measures to reduce the risks of truck transportation.

Given the history of the project site and the potential for construction impacts to existing process units, there would be a potentially significant hazardous materials construction impact. Mitigation measure MM-H-1 is proposed to minimize risk to those working and handling subsurface soils or in proximity



to hazardous processes during the project construction phase. With the incorporation of mitigation measure MM-H-1, short-term construction impacts associated with the use, transport, and disposal of or construction activities in close proximity to hazardous materials would be less than significant. No additional mitigation measures would be required.

**MM-H-1** Before beginning work involving hazardous materials, a qualified contractor shall prepare (or update the existing available) a Hazardous Materials Health and Safety Plan (HASP) and submit the plan to the City of Carson. The purpose of the HASP is to protect on-site construction workers and off-site receptors in the vicinity of the construction site. The HASP shall describe the practices and procedures to be implemented to protect worker health in the event of an accidental release of hazardous materials, or if previously undiscovered hazardous materials are encountered during construction. The HASP shall include items such as spill prevention, cleanup, hot work, isolation of active process systems, restart and evacuation procedures. The HASP shall help protect the public and workers by providing procedures and contingencies to help reduce exposure to hazardous materials.

Because operations of the proposed LHY Project would result in the storage and transportation of liquefied hydrogen, and this could pose a hazards risk to the public or the environment, there would be a potentially significant hazards impact during operations. The 1998 CUP Permit and EIR included the following hazards mitigation measures for the original hydrogen facility to mitigate potential construction and operational impacts, EIR-H-1, EIR-H-2, EIR-H-3, and EIR-H-4.

**EIR-H-1** Ammonia deliveries and the deliveries of other hazardous materials should be scheduled to avoid peak hour traffic conditions.

**EIR-H-2** Air Products should provide effective driver training programs to assure that drivers are adequately trained in safety and emergency response issues.

**EIR-H-3** Deliveries of hazardous materials during adverse weather conditions (e.g., periods of heavy rain) should be avoided.

**EIR-H-4** Air Products should implement vehicle/truck inspection and maintenance programs.

With incorporation of mitigation measures EIR-H-1, EIR-H-2, EIR-H-3 and EIR-H-4, the potential hazards risk to the public and the environment from the proposed LHY Project operations would be below the levels identified in the 1998 EIR and would therefore be less than significant. No additional mitigation measures would be required.

In Air Product's 65-year history of transporting liquid hydrogen, there has been only one uncontrolled loss of containment, as reported by Air Products. Table 4 presents various features of Air Products' liquid hydrogen trailers and typical liquid oxygen trailers and gasoline trailers. A comparison of these features shows the safety elements integrated into the liquid hydrogen trailer design.

**Table 4: Design Parameters for Various Transport Vehicles**

	<b>Liquid Hydrogen Trailer</b>	<b>Liquid Oxygen Trailer</b>	<b>Gasoline Tanker</b>
Materials of construction	<ul style="list-style-type: none"> <li>Double walled:</li> <li>Outer: 0.5" thick steel</li> <li>Inner: &gt;0.110" thick 304 stainless steel</li> </ul>	<ul style="list-style-type: none"> <li>Double walled</li> <li>Outer: 0.122" 304 stainless</li> <li>Inner: 0.105" 304 stainless</li> </ul>	<ul style="list-style-type: none"> <li>Single walled</li> <li>0.151" - 0.187" thick aluminum alloy*</li> </ul>
Maximum capacity	<ul style="list-style-type: none"> <li>8,270 lbs</li> <li>14,000 gallons</li> <li>427 MM-BTU Equivalent</li> </ul>	<ul style="list-style-type: none"> <li>51,385 lbs</li> <li>5,400 gallons</li> </ul>	<ul style="list-style-type: none"> <li>54,657 lbs</li> <li>9,000 gallons</li> <li>1,000 MM-BTU Equivalent</li> </ul>
Product isolation	<ul style="list-style-type: none"> <li>Pneumatic fire control valves w/ fusible links.</li> <li>No product is ever downstream of these valves during transport</li> </ul>	<ul style="list-style-type: none"> <li>Pneumatic fire control valves w/ fusible links on main liquid line only</li> </ul>	<ul style="list-style-type: none"> <li>Internal safety valves w/ fusible links. *</li> <li>Often driven with 40 gal of product* downstream of these valves*</li> </ul>
Relief valves	<ul style="list-style-type: none"> <li>Redundant reliefs</li> <li>Located in rear</li> <li>Relieves to vent stack</li> <li>Rollover stack in case trailer is inverted</li> </ul>	<ul style="list-style-type: none"> <li>Located in rear</li> <li>Relieves to vent stack</li> </ul>	<ul style="list-style-type: none"> <li>Vacuum and pressure relief*</li> <li>1 per compartment*</li> <li>Located on top of tanker*</li> <li>No vent stack*</li> <li>May malfunction or leak when trailer is inverted*</li> </ul>
Offloading	<ul style="list-style-type: none"> <li>Connected to system with double walled metal hose</li> <li>Helium purged</li> <li>Excess vapor vented at site</li> </ul>	<ul style="list-style-type: none"> <li>Connected to system with corrugated metal hose</li> </ul>	<ul style="list-style-type: none"> <li>Connected to system rubber hose</li> <li>Liquid remains in lines*</li> <li>Excess vapor stored on tanker*</li> </ul>

\* "MC-306/DOT-406 Cargo Tank Truck: Design, Construction, and Operating Procedures"

The proposed Project would generate no hazardous material releases beyond those identified in the 1998 EIR with mitigation; the facility would continue to have no potential to reach the nearest residential areas under the worst-case release scenario; and the risks of truck transport of hazardous materials would be potentially reduced from the current operations and be below the levels identified in the 1998 EIR. In sum, there would be no new off-site impacts over the operations examined in the original Hydrogen Facility and Specialty Gas Facility as assessed in the 1998 CUP Permit and EIR. Impacts would be less than significant.

**c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

**No Impact.** There are no schools located within one-quarter mile of the proposed Project site. The closest school to the Project site is John Muir Elementary School, which is located approximately 1.2 miles east of the Project site. The transport of liquefied hydrogen may pass by schools; however, the routes of trucks is speculative based on end-user needs, and truck-miles would be substantially reduced from the current operations. Therefore, there would be no hazardous impact to schools.

- d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**Less Than Significant Impact.** The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with the CEQA requirements of providing information about the locations of hazardous materials release sites. California Government Code Section 65962.5 requires the California EPA to develop, at least annually, an updated Cortese List. The Department of Toxic Substances Control is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List.

The LHY Project site is not included on the Hazardous Waste and Substances Site List for the state. However, the Air Products Facility is listed as a Cleanup Program Site on the State Water Board's GeoTracker, which is the data management system for sites that have the potential to impact water quality in the state. The cleanup status for the site is listed as completed – case closed. Therefore, the LHY Project would have less than significant impact with regard to hazardous materials sites.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

**No Impact.** The Project site is not located within the vicinity of a private airstrip or an airport land use plan nor is it located within two miles of a public airport. The closest public airports to the Project site are Long Beach Airport, which is located approximately 3.9 miles east of the Project site, and the Compton/Woodley Airport, which is located approximately 5.3 miles north of the Project site. According to the Los Angeles County Airport Land Use Commission, the Project is not located within the airport land use plans for these nearby airports. Therefore, no impacts associated with airport noise or safety hazards are anticipated.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**No Impact.** The Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Traffic obstruction and/or detours during construction of the hydrogen liquefaction unit that could impact emergency response vehicles would not be expected since construction of the LHY Project would not close streets or obstruct traffic; the Project would be constructed entirely within the property lines of the existing Air Products Hydrogen Production Facility. Therefore, the Project would have no impact on emergency response or evacuation plans.

- g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

**No Impact.** The Project area is located in a heavy industrial zone. The Project area is not adjacent to wildlands nor is it located on lands classified as very high fire hazard severity zones. People and structures in the Project area would not be at risk of loss, injury, or death involving wildland fires. Therefore, no impacts associated with wildland fires are expected.

### 3.10 Hydrology and Water Quality

- a) ***Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

**Less Than Significant Impact with Mitigation Incorporated.** Compliance with industrial waste discharge permit conditions are expected to minimize impacts associated with wastewater discharge. A National Pollutant Discharge Elimination System (NPDES) permit would need to be obtained from the Los Angeles RWQCB in order for any wastewater to be discharged to the Dominguez Channel. The NPDES permit would place limitations on wastewater discharged from the facility which should include but not be limited to total volume, temperature, concentrations of various pollutants, pH, and so forth. The hydrogen facility would be required to comply with the industrial waste discharge permit requirements or would be subject to enforcement action by the Los Angeles RWQCB. Therefore, due to the existing regulatory controls and assuming that the hydrogen facility complies with their industrial wastewater permit, no violations of the NPDES permits are expected and this impact would be considered to be less than significant.

Uncontrolled rainfall runoff during construction could result in increased sediment loads to receiving water bodies which could be significant. During operation, installation of a storm water system and compliance with industrial waste discharge permit conditions are expected to minimize impacts to surface waters. To prevent pollutants from contaminating storm water, all oil containing equipment would be held within containment dike(s) that will be drained/pumped (following a storm event) to the existing oily water sumps and fed through an existing oily water separator. Also, any chemicals storage would be held within secondary containment such as a concrete dike or containment tubs with plugged/closed/no drains. Storm water not falling within these containment areas would gravity drain into the existing normal storm water collection/conveyance system.

Furthermore, the following mitigation measures were developed for the original hydrogen facility 1998 CUP Permit and EIR to mitigate potential construction and operational impacts to hydrology and water quality.

**EIR-W-1** The Applicant shall file a Notice of Intent and shall obtain a permit as applicable from the SWRCB under the Board's Waste Discharge Requirements for Discharge of Storm Water Runoff Associated with Construction Activity" (General Permit No. CAS000002). The Applicant shall obtain the permit as applicable from the SWRCB prior to any discharges of storm water associated with construction activities.

- EIR-W-2** The Applicant shall prepare a SWPPP incorporating structural and non-structural Best Management Practices as applicable to minimize erosion and the quantity of pollutants entering the storm water system during the construction phase of the project. An additional NPDES General Permit may be required for the discharge of ground water encountered during excavation activities. The RWQCB shall ensure the proper implementation of the SWPPP in cooperation with the County of Los Angeles and the City of Carson. Prior to the issuance of a building permit, the Applicant shall submit proof of compliance with SWRCB/RWQCB requirements to the City of Carson Department of Engineering Services.
- EIR-W-3** The Applicant shall apply for and receive an NPDES permit prior to any discharges to the Dominguez Channel associated with the operation of the hydrogen facility, as applicable. The RWQCB shall ensure proper implementation of the NPDES permit through permit conditions and monitoring requirements.
- EIR-W-4** The Applicant shall update its SWPPP incorporating structural and non-structural Best Management Practices to minimize the quantity of pollutants entering the storm water system during the operational phase of the project. The RWQCB shall ensure the proper implementation of the SWPPP in cooperation with the County of Los Angeles and the City of Carson.

With incorporation of mitigation measures EIR-W-1, EIR-W-2, EIR-W-3 and EIR-W-4 (as amended), the proposed LHY Project would not violate water quality standards or discharge requirements and there would be a less than significant impact to surface and ground water quality. No additional mitigation measures would be required.

- b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

***Less Than Significant Impact.*** The proposed Project is not expected to have a significant adverse effect on the quantity or quality of ground water in the area. Project impacts on ground water are expected to be less than significant because storm water and industrial wastewater will be controlled onsite, treated as required, and monitored prior to discharge, and no underground storage facilities are proposed as part of the Project. Water replenishment basins are not located within the Project area, and ground water in the vicinity of the Project site is generally poor and not used for potable sources. The Project would result in additional paving within the facility which would reduce the opportunity for ground water recharge while minimizing the potential for contaminants to enter the ground water. However, due to the site location and quality of ground water in the area, the site is not important to



ground water recharge in the area. Therefore, impacts to ground water recharge are expected to be less than significant.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

- i) *result in a substantial erosion or siltation on- or off-site?*

***Less Than Significant with Mitigation Incorporated.*** Soil erosion from wind or water could occur during construction as a result of earthmoving activities. As part of the proposed Project, standard construction practices would be employed to minimize water erosion. Construction sites would be watered twice daily (except during periods of rains) to minimize the potential for wind erosion. The implementation of BMPs is expected to prevent the proposed Project from generating significant impacts due to wind or water erosion. The proposed Project would not substantially increase the amount of pavement with the new concrete foundations nor would it change the storm water management system. A drain or two would potentially be relocated but this is not considered a major change to the plant storm water design. These details would be included in an updated SWPPP. With incorporation of mitigation measures EIR-W-1, EIR-W-2, EIR-W-3 and EIR-W-4 (as amended), the proposed LHY Project impacts associated with soil erosion would be less than significant. No additional mitigation measures would be required.

- iii) *create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

***Less Than Significant Impact with Mitigation Incorporated.*** The Project would not create runoff water which would exceed the capacity of existing or planned stormwater drainage systems. The proposed Project would not substantially increase the amount of pavement with the new concrete foundations nor would it change the storm water management system. A drain or two would potentially be relocated but this is not considered a major change to the plant storm water design. These details would be included in an updated SWPPP. During operation, installation of a storm water system and compliance with industrial waste discharge permit conditions are expected to minimize impacts to surface waters. To prevent pollutants from contaminating storm water, all oil containing equipment would be held within containment dike(s) that will be drained/pumped (following a storm event) to the existing oily water sumps and fed through an existing oily water separator. Also, any chemicals storage would be held within secondary containment such as a concrete dike or containment tubs with plugged/closed/no drains. Storm water not falling within these containment areas would gravity drain into the existing normal storm water collection/conveyance system. With incorporation of mitigation measures EIR-W-1, EIR-W-2, EIR-W-3 and EIR-W-4 (as amended), the proposed LHY Project impact to storm water drainage systems would be less than significant. No additional mitigation measures would be required.

ii) *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?*

iv) *impede or redirect flood flows?*

**No Impact.** The proposed LHY Project would not substantially alter the existing drainage pattern of the site in a way that would result in flooding or impede or redirect flood flows. The amount of surface runoff would not substantially be increased by the Project, and the Project would not substantially increase the amount of pavement with the new concrete foundations nor would it change the storm water management system. A drain or two would potentially be relocated but this is not considered a major change to the plant storm water design. These details would be included in an updated SWPPP. The Project would be located entirely within the existing boundaries of the hydrogen facility and would therefore not create a new barrier to flood flows. Therefore, there would be no impact associated with floods.

d) *Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

**No Impact.** The proposed Project would not be susceptible to seiche or tsunami. Seiche is generally associated with oscillation of enclosed bodies of water typically caused by ground shaking associated with a seismic event; however, the Project site is not located near an enclosed body of water. Flooding from tsunami conditions is not expected, since the Project site is located approximately 5 miles from the Pacific Ocean. Therefore, there would be no impacts associated with tsunami, seiche, or flood hazard.

e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**No Impact.** The proposed Project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. Project impacts on ground water resources are expected to be less than significant because storm water and industrial wastewater will be controlled onsite, treated as required, and monitored prior to discharge, and no underground storage facilities are proposed as part of the Project. In addition, water replenishment basins are not located within the Project area. Therefore, no significant impacts to groundwater management plans are expected. Compliance with industrial wastewater discharge permit conditions are expected to minimize impacts associated with wastewater discharge and water quality. Therefore, due to the existing regulatory controls and assuming that the hydrogen facility complies with their industrial wastewater permit, no violations of the NPDES permits are expected and there would be no impact to water quality control plans.

### 3.11 Land Use and Planning

**a) *Would the project physically divide an established community?***

**No Impact.** The physical division of an established community typically refers to the construction of a linear feature (such as a major highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying area. Under the existing condition, the Project site is not used as a connection between established communities. The proposed LHY Project would be located within the same physical boundaries as the existing facility as assessed under the original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit and EIR. All work would be within the same parcel of land (Assessor's Parcel Number 7315-020-021). There would be no change in the physical boundaries as originally reviewed in the 1998 EIR (Final EIR page 2-1). Therefore, no impacts associated with physical division of an established community would occur.

**b) *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

**No Impact.** The proposed LHY Project would be consistent with the existing land use designation (Heavy Industrial), and zoning designation (Manufacturing, Heavy and Design Overlay). There would be no change in the land use designations as originally reviewed in the 1998 EIR (Final EIR page 3-4). Construction and operation of the hydrogen liquefaction unit would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would have no impact on any land use plan.

### 3.12 Mineral Resources

**a) *Would the project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?***

**No Impact.** The City's General Plan EIR does not identify known mineral resources within the City (City of Carson 2002). Since no significant mineral resources have been identified within the City, implementation of the Project would not adversely affect the availability of known mineral resources. Therefore, no impacts associated with mineral resources would occur.

**b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

**No Impact.** According to the City's General Plan EIR, no known significant mineral resources are located within the City (City of Carson 2002). Implementation of the Project would not result in the loss of any known mineral resources. Therefore, no impacts associated with mineral resource recovery sites would occur.

### 3.13 Noise

- a) *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

***Less Than Significant Impact with Mitigation Incorporated.*** Noise impacts related to construction activities would be short term and substantially less than those anticipated in the original EIR. The Project impacts on noise during construction are expected to be temporary, limited to the daytime hours, and are not expected to significantly impact noise levels at residential areas; the nearest residential area is located 0.6 mile east of the Project site. Although no significant impacts are expected from construction activities, the following mitigation measures are recommended to minimize the potential for noise impacts during construction:

- Noise sensitive construction activities will be limited to daylight hours, i.e., 7:00 a.m. and 6:00 p.m. zones.
- Construction equipment will be fitted with mufflers, silencers or other appropriate measures and properly maintained to reduce noise.
- Truck traffic will be routed through non-residential areas.
- Workers exposed to construction noise in excess of 90 dBA for an 8-hour period will be required to wear hearing protection devices that conform to OSHA/NIOSH standards.

The Project impacts on noise during operation are expected to be less than significant prior to operation. The estimated noise levels for operation of the proposed Project are considered generally acceptable for the surrounding land uses. The land uses in the area are industrial uses and are expected to remain industrial. Noise impacts to residential areas and sensitive populations during operation of the Project are expected to be less than significant.

In addition, the following measure was developed as part of the Mitigation Monitoring Program for the original hydrogen facility 1998 CUP Permit and EIR to mitigate operational impacts associated with the facility.

**EIR-N-1** Air Products shall conduct noise measurements at the property boundary within six months of the start-up of the facility to assure that the CNEL estimated in the Final EIR for operation of the facility are met.

With the incorporation of mitigation measure EIR-N-1, the proposed LHY Project noise impacts due to a substantial temporary or permanent increase in noise levels are expected to be less than significant. No additional mitigation measures would be required.

- b) *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

**Less Than Significant Impact.** Construction activities have the potential to generate substantial groundborne vibrations. Some ground vibrations may be associated with trenching and boring activities. The perception threshold for ground-born vibration is a velocity of 0.01 inches per second. The Federal Transit Administration's 2006 Noise and Vibration Manual lists the threshold distance in feet for various types of construction equipment. For example, the feet to threshold distance could range from 11 feet to 711 feet for a small bulldozer or a pile driver, respectively. There are no sensitive receptors within 500 feet of any construction area. The proposed Project site is located approximately 0.6 mile west of the closest residential area. Therefore, impacts from ground vibrations are expected to be less than significant.

- c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

**No Impact.** The Project site is not located within the vicinity of a private airstrip or an airport land use plan nor is it located within two miles of a public airport. The closest public airports to the Project site are Long Beach Airport, which is located approximately 3.9 miles east of the Project site, and the Compton/Woodley Airport, which is located approximately 5.3 miles north of the Project site. According to the Los Angeles County Airport Land Use Commission, the Project is not located within the airport land use plans for these nearby airports. Therefore, no noise impacts associated with airports are anticipated.

### 3.14 Population and Housing

- a) *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*
- b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** Construction and operation of the proposed hydrogen liquefaction Project would not involve the relocation of individuals, impact housing or commercial facilities, or change the distribution of the population. The construction work force would be expected to come from the existing labor pool in the Southern California area. Operation of the hydrogen liquefaction unit would not affect population and housing. Since no population growth or reduction is expected to arise from the proposed Project, the housing needs are not expected to change as well. Therefore, no impacts to housing and population are expected.



### 3.15 Public Services

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services, including: fire protection, police protection, schools, parks, or other public facilities?*

***Less Than Significant with Mitigation Incorporated.*** Both construction and operation of the proposed Project should have no impacts to public services. There would be no need for new or physically altered governmental facilities due to construction or operation of the hydrogen liquefaction unit. An increase in existing police or fire resources is not expected from either the construction activities or the operation of the LHY Project.

The Los Angeles County Fire Department (LACFD) provides fire protection services to the City. There are six primary fire stations that provide fire and emergency medical services to the City. Four of the stations are located within the City's boundaries. The Fire Prevention Office is located at the Carson City Hall (701 East Carson Street), which is located approximately 2.2 miles northwest of the Project site. The nearest fire station is the LACFD Station 127 (2049 E 223<sup>rd</sup> Street), located approximately 0.9 miles northwest of the Project site.

Based on the proximity of the Project site to the existing LACFD facilities, and since the Project site is located in a part of the City that is within the service area of LACFD, it is anticipated that the Project could be served by LACFD without adversely affecting response times or other performance objectives. Therefore, there would be no impacts associated with LACFD facilities.

The County of Los Angeles Sheriff's Department (LASD) contracts with the City to provide police protection services. LASD staff has indicated that an officer-to-population ratio of one officer to every 1,000 residents is the desired level of service (County of Los Angeles 2014). The Carson Sheriff's Station is located at 21356 South Avalon Boulevard, approximately 2.3 miles northwest of the Project site.

Based on the proximity of the Project site to the existing Carson's Sheriff Station, and since the Project site is located in a part of the City that is within the service area of the Carson Sheriff's Station, it is anticipated that the Project could be served without adversely affecting response times or other performance objectives. Therefore, impacts associated with LASD facilities would be less than significant.

Traffic obstruction and/or detours during construction of the hydrogen liquefaction unit that could impact police, fire, and emergency response vehicles would not be expected since construction of the LHY Project would not close streets or obstruct traffic; the Project would be constructed entirely within the property lines of the existing Air Products Hydrogen Production Facility. Therefore, construction at the Project site would not be expected to strain police, fire, or other emergency response services.

Although no significant impacts have been identified, the following mitigation measure was recommended in the 1998 EIR to minimize potential impacts to the police department, fire department, and other public services during construction activities.

**EIR-PS-1**      The Project applicant shall notify local police, fire, and other emergency response providers of construction activities, locations, and schedules prior to beginning construction activities.

It is not anticipated that the proposed Project would have any impact on schools, parks, or other public facilities due to the industrial nature of the Project. Therefore, with incorporation of mitigation measure EIR-PS-1, the proposed LHY Project's potential impacts to public services are expected to be less than significant. No additional mitigation measures would be required.

### 3.16            Recreation

- a)      *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b)      *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

**No Impact.** All construction activities associated with the proposed Project would occur entirely within the property lines of the existing Air Products Hydrogen Facility, an industrial area, and would not interfere with use of existing recreational facilities. The usage of existing neighborhood and regional parks or other recreational facilities would not be increased by the proposed hydrogen liquefaction Project. The Project does not include recreational facilities or their construction. In addition, the proposed Project would not result in changes in population or population densities, which could impact recreational facilities. Therefore, no impacts to recreation would be expected.

### 3.17            Transportation

- a)      *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

**No Impact.** The proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. No roadway closures are expected as construction of the LHY Project would not occur outside of the proposed Project site, which would be located entirely within the existing Air Products Hydrogen Production Facility. The Project site is located in a heavy industrial area and would therefore not impact bicycle and pedestrian facilities. Therefore, the Project would not conflict with an applicable plan, ordinance, or policy that addresses the circulation system.

**b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?**

**Less Than Significant Impact with Mitigation Incorporated.** The proposed LHY Project would generate up to an average of four tanker truck trips per day. The existing facility operations currently generates approximately 15 commuters and three truck trips per day. The potential traffic effects of one additional employee and four tanker trucks per day plus the existing operations would be within the activity levels of the original EIR which describes that facility operations would include up to 19 commuters and 38 trucks per day (Final EIR page 5-82). Given the small number of car and truck trips associated with the proposed LHY Project, and given that these trips in conjunction with existing operations would be within the estimated traffic levels for the original CUP and EIR, there would be no change in the traffic operational impacts as compared to those originally reviewed in the 1998 EIR. In addition, construction of the proposed Project would occur entirely within the property lines of the existing hydrogen facility. The construction of the original hydrogen facility and associated pipelines analyzed in the 1998 EIR, which involved construction activities in locations beyond that designated for the LHY Project site, did not anticipate significant impacts to the Level of Service.

In addition, the following measure was developed as part of the Mitigation Monitoring Program for the original hydrogen facility 1998 CUP Permit and EIR to mitigate construction impacts to transportation.

**EIR-T-5** No employee shifts shall begin between the hours of 7:00 a.m. to 9:00 a.m. during construction.

With the incorporation of mitigation measure EIR-T-5, the proposed LHY Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), and there would be less than significant impacts to transportation. No additional mitigation measures would be required.

**c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**No Impact.** The proposed Project would not substantially increase hazards due to a geometric design feature. The LHY Project would be located within the same physical boundaries as the existing facility as assessed in the 1998 CUP Permit and EIR, and the Project would be consistent with the existing land use designation (Heavy Industrial) and zoning designation (Manufacturing, Heavy and Design Overlay). As such, no sharp curves, dangerous intersections, or incompatible uses would be introduced by the Project. Construction activities associated with the proposed LHY Project would not occur within the public access or on or along public roads. Therefore, there would be no impacts related to hazardous design features.

**d) Would the project result in inadequate emergency access?**

**No Impact.** Traffic obstruction and/or detours during construction of the hydrogen liquefaction unit that could impact police, fire, and emergency response vehicles would not be expected since

construction of the LHY Project would not close streets or obstruct traffic; the Project would be constructed entirely within the property lines of the existing Air Products Hydrogen Production Facility. Therefore, construction at the Project site would not be expected to result in inadequate emergency access.

### 3.18 Tribal Cultural Resources

- a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
- i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or*
  - ii) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

***Less Than Significant with Mitigation Incorporated.*** The Project is not expected to cause a substantial adverse change in the significance of a tribal cultural resource. As previously discussed in Section 3.5 of this Environmental Checklist, no historical resources were identified within the Project site or its immediate vicinity. A records search of the California Register of Historical Resources did not identify any resources with cultural value to a California Native American tribe at the Project site. The LHY Project would be located within the same physical boundaries as the existing Air Products Facility as assessed under the original Hydrogen Facility and Specialty Gas Facility 1998 CUP Permit and EIR. The Project site would be located in a heavily disturbed plot of land that has previously been excavated during past construction activities, and no known tribal cultural resources have been identified at the site.

The Project is subject to compliance with AB 52 (PRC Section 21074). AB 52 requires consideration of impacts to tribal cultural resources as part of the CEQA process and requires the City, as the lead agency, to notify any groups that are traditionally or culturally affiliated with the geographic area of the project and who have requested notification.

As a part of the government-to-government consultation efforts prescribed under AB 52, the City notified Native American representatives, inviting the tribes to consult on the Project. Any resulting recommendations received during consultation and agreed upon by the City will be incorporated as a project condition prior to the first public hearing for the Project.

Ground-disturbing and remediation activities that have previously taken place at the Project site would have significantly disturbed any tribal cultural resources that may have been present. Nonetheless, it is always possible that intact archaeological deposits are present at subsurface levels. For this reason, the Project site should be treated as potentially sensitive for archaeological resources. Mitigation measures (MM-CUL-1, MM-CUL-2 and MM-CUL-3) are required to reduce potential impacts to unanticipated archaeological resources. With the incorporation of the mitigation measure, impacts associated with tribal cultural resources would be less than significant.

### 3.19 Utilities and Service Systems

- a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

***Less Than Significant Impact with Mitigation Incorporated.*** The Project would not result in the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities. The proposed Project would not substantially increase the amount of pavement with the new concrete foundations nor would it change the storm water management system. A drain or two would potentially be relocated but this would not be considered a major change to the plant storm water design. These details would be included in an updated SWPPP for the Project. The increased demand for electricity from the proposed Project would be within the capabilities of the electric company to supply; the change from existing baseline activities from the proposed Project is presented in Table 1: Summary of Proposed Project Operations.

Several mitigation measures were developed for the original hydrogen facility 1998 CUP Permit and EIR to mitigate potential construction and operational impacts to utilities and service systems.

**EIR-US-1** Air Products or its designated representative shall notify the Underground Service alert prior to breaking ground for construction of underground utilities so that any existing subsurface structures can be properly identified.

**EIR-US-2** Air Products must participate in the Underground Service Alert System to minimize potential damage to the pipeline due to construction activities by others.

Because the proposed LHY Project would include ground disturbance, mitigation measures EIR-US-1 and EIR-US-2 from the previous 1998 CUP Permit and EIR would be applicable; with incorporation of these previous mitigation measures, the proposed LHY Project would have a less than significant impact to existing utilities and service systems. No additional mitigation measures would be required.



- b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**Less Than Significant Impact.** California Water Services Co. (City Water) is the method of water supply for the proposed LHY Project as well as the existing hydrogen facility. Table 1: Summary of Proposed Project Operations details the changes from existing baseline activities from the proposed Project. Water usage during construction and operation of the proposed hydrogen liquefaction unit would be substantially less than that anticipated for the original Hydrogen Facility and Specialty Gas Facility as assessed in the 1998 CUP Permit and EIR. The Project's water demands would be served by existing water supplies, and there would be sufficient water supplies available to serve the Project. Therefore, there would be a less than significant impact to available water supplies.

- c) *Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

**Less Than Significant Impact.** As previously discussed in Section 3.19 (a), the proposed Project would not result in the construction of new wastewater treatment facilities. However, the proposed Project would result in an increase in wastewater generated. Construction wastewater would be collected and taken to a local wastewater treatment facility or discharged to the Dominguez Channel in compliance with an NPDES permit. Sanitary wastes during construction would be collected in portable chemical toilets and transported to appropriate treatment/disposal facilities. During operation, sanitary wastewater from bathrooms, sinks, etc. would continue to be discharged to an on-site septic system since no connection to the sewer system is available at the proposed Project site. Therefore, no significant impact on wastewater is expected during the construction phase, assuming an NPDES permit is issued prior to wastewater discharge.

It is expected that a majority of the industrial wastewater will be discharged to the Dominguez Channel. Alternative methods for handling wastewater would include transportation off-site for treatment or discharge to a local refinery wastewater system. Refineries generally have an industrial wastewater discharge permit issued by the LACSD and/or the local city. Refineries generally also have NPDES permits for certain wastewater discharges. As there are no specific plans to discharge to a specific refinery, it cannot be determined if the refinery would need to modify its LACSD and/or NPDES permit, or if any other changes would be required to the refinery's wastewater treatment system.

Table 1: Summary of Proposed Project Operations presents the changes from existing baseline activities from the proposed Project. Wastewater generated from the LHY Project would be substantially less than that generated from the current baseline operations at the hydrogen facility. Therefore, impacts associated with wastewater treatment capacities would be less than significant.

- d) *Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

***Less Than Significant Impact with Mitigation Incorporated.*** The construction of the LHY Project would generate construction waste materials such as concrete, miscellaneous underground electrical conduits and fixtures, and soil. The non-hazardous waste materials would be transported to a landfill or recycled as feasible. Therefore, the Project may have a negative impact on landfill capacities. However, sufficient landfill capacity currently exists to handle these materials. Mitigation against waste generated by the Project would include pre-construction planning and implementing waste reduction measures to the greatest extent possible, and recycling of construction wastes such as metals and applicable non-hazardous wastes, as feasible. Any contaminated soil encountered during construction shall be addressed pursuant to local, state, and federal regulations and in consultation with appropriate landowners.

The following mitigation measures were developed for the 1998 CUP Permit and EIR to mitigate potential Project construction solid waste impacts.

**EIR-US-3** For contaminated soil that is discovered along the pipeline routes, soil remediation shall be addressed pursuant to federal, state and local regulations and requirements, and in consultation with appropriate landowners.

**EIR-US-4** Air products shall recycle construction wastes, e.g., concrete materials, to the extent feasible.

Because the proposed LHY Project would include generation of solid waste during the construction phase, mitigation measures EIR-US-3 and EIR-US-4 from the previous 1998 CUP Permit and EIR would be applicable; with incorporation of these previous mitigation measures, the proposed LHY Project would have a less than significant impact to existing utilities and service systems. Therefore, the impacts to solid waste and local infrastructure would be less than significant with incorporation of mitigation measures EIR-US-3 and EIR-US-4. No additional mitigation measures would be required.

- e) *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

***No Impact.*** All collection, transportation, and disposal of solid waste generated by the Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste. Therefore, there would be no impact associated with adherence to solid waste regulations.

### 3.20 Wildfire

*If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:*

- a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- b) *Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
- c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*
- d) *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

**No Impact.** The Project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Project will be constructed on approximately 35,800 square feet of land in the northwest corner and entirely within the property lines of the existing Air Products Hydrogen Production Facility at 23320 S. Alameda Street in the City of Carson. Therefore, no impacts associated with wildfire risks are expected.

### 3.21 Mandatory Findings of Significance

- a) *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

**No Impact.** As discussed throughout this IS/MND, there would be no impacts related to archaeological resources, paleontological resources, and tribal cultural resources. As discussed in Section 3.4, Biological Resources; Section 3.5, Cultural Resources; and Section 3.18, Tribal Cultural Resources, the Project would not result in significant impacts to biological, cultural, or tribal cultural resources. Therefore, the Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

- b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

***Less Than Significant with Mitigation Incorporated.*** As addressed throughout this IS/MND, the Project would have no impact, a less-than-significant impact, or a less-than-significant impact with mitigation incorporated with respect to all environmental impact areas. For Section 3.3, Air Quality; and Section 3.8, Greenhouse Gas Emissions, CalEEMod was used to assess the emissions impacts resulting from the Project. Potential impacts associated with air quality and greenhouse gas emissions were determined to be less than significant for the proposed LHY Project.

Several resource areas (i.e., Section 3.1, Aesthetics; Section 3.2, Agricultural and Forestry Resources; Section 3.4, Biological Resources; Section 3.8, Greenhouse Gas Emissions; Section 3.11, Land Use and Planning; Section 3.12, Mineral Resources; Section 3.14, Population and Housing; Section 3.16, Recreation; and Section 3.20, Wildfire) were determined to have a less-than-significant or no impact compared to existing conditions, and, thus, the Project would not contribute to cumulative impacts related to these environmental topics. Other issues areas (i.e., Section 3.5, Cultural Resources; Section 3.7, Geology and Soils; Section 3.9, Hazards and Hazardous Materials, and Section 3.18, Tribal Cultural Resources) are by their nature site-specific, and impacts at one location do not add to impacts at other locations or create additive impacts. The proposed LHY Project includes the following mitigation measures prepared to address potential impacts in Section 3.3, Air Quality; Section 3.6, Energy; Section 3.10, Hydrology and Water Quality; Section 3.13, Noise; Section 3.15, Public Services; Section 3.17, Transportation; and Section 3.19, Utilities and Service Systems.

- EIR-AQ-2** Suspend use of all fossil-fueled construction equipment during second-stage smog alerts.
- EIR-AQ-4** Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment to the extent feasible.
- EIR-AQ-5** Maintain construction equipment tuned up and retard diesel engine timing.
- EIR-AQ-6** Air Products shall develop a fugitive dust emission control plan. The plan shall be reviewed and approved by the City. Measures to be included in the plan include but are not limited to the following: (1) apply water every three hours to disturbed areas within a construction site, except during periods of rainfall. Implementation of this mitigation measure would reduce PM10 emissions by 61percent (SCAQMD, 2007); (2) All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches. Implementation of this mitigation measure would reduce PM10 emissions 91 percent (SCAQMD, 2007); (3) Prohibit

- demolition activities when wind speeds exceed 25 mph. The emission reductions associated with this mitigation measure are estimated to be 98 percent (SCAQMD, 2007); and (4) limit traffic speeds on unpaved roads to 15 mph or less. The emission benefits of this mitigation measure are estimated to be 57 percent (SCAQMD, 2007).
- EIR-AQ-7** Air Products shall place tarps over any trucks that are used to export or import soil to/from the project site.
- EIR-AQ-8** Implement street sweeping program with Rule 1186 compliant PM10 efficient vacuum units (14-day frequency). Emission reductions of 16 to 25 percent are predicted for this mitigation measure (SCAQMD, 2007).
- EIR-AQ-9** Use a gravel apron, 25 feet long by road width, to reduce mud/dirt trackout from unpaved truck exit routes. This mitigation measure could reduce emissions by 46 percent (SCAQMD, 2007).
- EIR-AQ-10** BACT as required by the SCAQMD shall be installed on the proposed project. Emission calculations were developed assuming the use of BACT so that no further emission reductions are expected.
- EIR-AQ-11** Emission offsets shall be provided as required by SCAQMD.
- EIR-AQ-14** Prohibit truck idling during facility operations in excess of five minutes (CARB, 2004).
- EIR-US-5** Air Products shall comply with the building requirements of Title 24 of the California Code of Regulations regarding energy (e.g., heating and lighting) conservation measures.
- EIR-G-1** If contaminated soils or ground water are encountered during construction, soil removal and remediation shall be addressed pursuant to federal, state, and local regulations and requirements, including the requirements of the California Environmental Protection Agency, Department of Toxic Substances Control, SCAQMD, and RWQCB, and in consultation with appropriate landowners.
- EIR-G-2** A structural engineer, civil engineer, or architect experienced with earthquake-resistant design, shall approve all building plans to determine the adequacy of seismic criteria for project structures, and to recommend appropriate design changes, if needed prior to issuance of building permits.



- EIR-G-3** Air Products shall provide a soils study and/or hydrology report to the City of Carson as part of the building permit review process.
- EIR-G-4** Air Products shall obtain building permits, as applicable, for all new structures at the site. The Applicant shall submit building plans to the City of Carson for review. Air Products must receive approval of each building plan and/or building permit to assure compliance with the latest Building Code adopted by the City prior to commencing construction activities as described in those plans and/or permit.
- EIR-G-5** Preliminary construction drawings as described in the LHY project must be submitted to the Los Angeles County Department of Public Works, Permit Section for review and approval as applicable.
- EIR-G-6** Sufficient information must be submitted to the Los Angeles County Department of Public Works, Permits Section for review and approval to assure that adequate measures, if required, are developed and implemented to protect the proposed project site from methane gas, as applicable to the Uniform Building Codes.
- MM-H-1** Before beginning work involving hazardous materials, a qualified contractor shall prepare (or update the existing available) a Hazardous Materials Health and Safety Plan (HASP) and submit the plan to the City of Carson. The purpose of the HASP is to protect on-site construction workers and off-site receptors in the vicinity of the construction site. The HASP shall describe the practices and procedures to be implemented to protect worker health in the event of an accidental release of hazardous materials, or if previously undiscovered hazardous materials are encountered during construction. The HASP shall include items such as spill prevention, cleanup, hot work, isolation of active process systems, restart and evacuation procedures. The HASP shall help protect the public and workers by providing procedures and contingencies to help reduce exposure to hazardous materials.
- EIR-H-1** Ammonia deliveries and the deliveries of other hazardous materials should be scheduled to avoid peak hour traffic conditions.
- EIR-H-2** Air Products should provide effective driver training programs to assure that drivers are adequately trained in safety and emergency response issues.
- EIR-H-3** Deliveries of hazardous materials during adverse weather conditions (e.g., periods of heavy rain) should be avoided.
- EIR-H-4** Air Products should implement vehicle/truck inspection and maintenance programs.

- EIR-W-1**      The Applicant shall file a Notice of Intent and shall obtain a permit as applicable from the SWRCB under the Board's Waste Discharge Requirements for Discharge of Storm Water Runoff Associated with Construction Activity" (General Permit No. CAS000002). The Applicant shall obtain the permit as applicable from the SWRCB prior to any discharges of storm water associated with construction activities.
- EIR-W-2**      The Applicant shall prepare a SWPPP incorporating structural and non-structural Best Management Practices as applicable to minimize erosion and the quantity of pollutants entering the storm water system during the construction phase of the project. An additional NPDES General Permit may be required for the discharge of ground water encountered during excavation activities. The RWQCB shall ensure the proper implementation of the SWPPP in cooperation with the County of Los Angeles and the City of Carson. Prior to the issuance of a building permit, the Applicant shall submit proof of compliance with SWRCB/RWQCB requirements to the City of Carson Department of Engineering Services.
- EIR-W-3**      The Applicant shall apply for and receive an NPDES permit prior to any discharges to the Dominguez Channel associated with the operation of the hydrogen facility, as applicable. The RWQCB shall ensure proper implementation of the NPDES permit through permit conditions and monitoring requirements.
- EIR-W-4**      The Applicant shall update its SWPPP incorporating structural and non-structural Best Management Practices to minimize the quantity of pollutants entering the storm water system during the operational phase of the project. The RWQCB shall ensure the proper implementation of the SWPPP in cooperation with the County of Los Angeles and the City of Carson.
- EIR-N-1**      Air Products shall conduct noise measurements at the property boundary within six months of the start-up of the facility to assure that the CNEL estimated in the Final EIR for operation of the facility are met.
- EIR-PS-1**      The Project applicant shall notify local police, fire, and other emergency response providers of construction activities, locations, and schedules prior to beginning construction activities.
- EIR-T-5**      No employee shifts shall begin between the hours of 7:00 a.m. to 9:00 a.m. during construction.

- EIR-US-1** Air Products or its designated representative shall notify the Underground Service alert prior to breaking ground for construction of underground utilities so that any existing subsurface structures can be properly identified.
- EIR-US-2** Air Products must participate in the Underground Service Alert System to minimize potential damage to the pipeline due to construction activities by others
- EIR-US-3** For contaminated soil that is discovered along the pipeline routes, soil remediation shall be addressed pursuant to federal, state and local regulations and requirements, and in consultation with appropriate landowners.
- EIR-US-4** Air products shall recycle construction wastes, e.g., concrete materials, to the extent feasible.

With the incorporation of feasible mitigation measures identified within this IS/MND, and listed above, the proposed LHY Project's individual-level impacts would be reduced to less-than-significant levels, which would, in turn, reduce the potential for these impacts to be considered part of any possible cumulative impact. Therefore, the Project would not result in individually limited but cumulatively considerable impacts.

- c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

***Less Than Significant with Mitigation Incorporated.*** As evaluated throughout this IS/MND, with incorporation of mitigation, environmental impacts associated with the proposed Project would be reduced to less than significant levels. Therefore, the Project would not directly or indirectly cause substantial adverse effects on human beings.

## **References**

### **PERSONS CONSULTED AND REPORT PREPARERS**

MRS Environmental Inc.  
Nicole Trezza, Planner  
Greg Chittick, Senior Engineer  
Luis Perez, Project Manager

Max Castillo, City of Carson, Assistant Planner  
Alvie Betancourt, City of Carson, Planning Manager  
Gabrieleno Band of Mission Indians  
James Reebel, Air Products, Applicant

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