## Initial Study

# Haynes Generating Station
# Units 5 and 6 Repowering Project


Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, California 90012

**April 6, 2009**

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# SECTION 1
# PROJECT DESCRIPTION

## 1.1 Overview of the Project

The Los Angeles Department of Water and Power (LADWP) proposes to construct a 600-megawatt (MW) electrical simple cycle generating system (SCGS) at its existing Haynes Generating Station (HnGS) in Long Beach, California. The proposed SCGS would include six natural gas-fired combustion turbines (CTs), at 100 MW each, associated cooling and pollution control systems, and other ancillary facilities. The new generation units would be designated Units 11, 12, 13, 14, 15, and 16 and would provide a total net generating capacity of 592 MW. The proposed project includes decommissioning of two existing steam boiler generators (Units 5 and 6) that have a total generation capacity of 600 MW. The proposed project is being implemented in part pursuant to a formal Settlement Agreement between LADWP and the South Coast Air Quality Management District (SCAQMD) related to air pollutant emissions from stationary sources under the Regional Clean Air Incentives Market program. The proposed SCGS would substantially improve the LADWP generation system efficiency, reliability and flexibility compared to the existing steam boiler units it would replace.

## 1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from State or local government agencies. The proposed construction and operation of the SCGS constitutes a project as defined by CEQA (California Public Resources Code §§21000 et seq.). Where a project requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency." LADWP is the lead agency because pursuant to CEQA Guidelines §15367, "'Lead Agency' means the public agency which has the principal responsibility for carrying out or approving a project." Pursuant to the Warren-Alquist Act, the California Energy Commission would not be the lead agency for this project because it would result in no net increase in generating capacity at the facility.

As a lead agency, LADWP must complete an environmental review to determine if the proposed project could create significant adverse environmental impacts. To fulfill the purpose and intent of CEQA, this Initial Study has been prepared to assist in making that determination. Based on the nature and scope of the proposed project, the evaluations contained in the Initial Study environmental checklist (included herein), and the comments received from agencies and members of the public during review of the Notice of Preparation (NOP) of an Environmental Impact Report (EIR), factors that have potential to involve significant adverse environmental impacts will be determined. Such factors will become the focus of more detailed analyses in an EIR to determine the nature and extent of any potential environmental impacts and establish appropriate mitigations for those impacts determined to be significant. Based on the Initial Study analysis and NOP review, factors for which no significant adverse environmental impacts are expected to occur will be eliminated from further evaluation in the EIR. A preliminary evaluation of the potentially affected factors is included in the Initial Study checklist in Section 2.

## 1.3 Project Location

HnGS is located at 6801 East 2nd Street in the City of Long Beach, immediately south of State Route 22 (Garden Grove Freeway) and approximately one mile east of State Route 1 (Pacific Coast Highway). Access to HnGS is provided from 2nd Street, which forms the southern property boundary. Seventh Street (State Route 22) serves as the northern site boundary; only emergency access is provided from this street. Figure 1-1 shows HnGS in relation to the region.

## 1.4 Historical Perspective and Current Operations at HnGS

The site of HnGS was acquired by LADWP in 1957 for the purpose of constructing a generating facility to replace the Seal Beach Steam Generating Plant, which had been operating in the area since the 1920s. Units 1 and 2 at HnGS were placed into operation in 1962 and 1963, respectively; Units 3 and 4 were placed into operation in 1964 and 1965, respectively; and Units 5 and 6 were placed into operation in 1966 and 1967, respectively. Unit 7 (a 2 MW emergency backup power generator) was added in 1970. In 2004, a Combined Cycle Generating System (CCGS; Units 8, 9, and 10) with a rated capacity of 575 MW replaced the generation capacity of steam boiler Units 3 and 4, which were decommissioned. As part of the CCGS project, Unit 6 was also physically altered to reduce its generating capacity from 341 MW to 259 MW. Currently, the installed total net generating capacity at HnGS is 1,619 MW. The former and current net capacities for generators at HnGS are summarized below (excluding the emergency generator):

Original Generating Capacity:

| | | |
|---|---|---|
| Unit 1 | 222 | MW |
| Unit 2 | 222 | MW |
| Unit 3 | 222 | MW |
| Unit 4 | 222 | MW |
| Unit 5 | 341 | MW |
| Unit 6 | 341 | MW |
| Total | 1570 | MW |

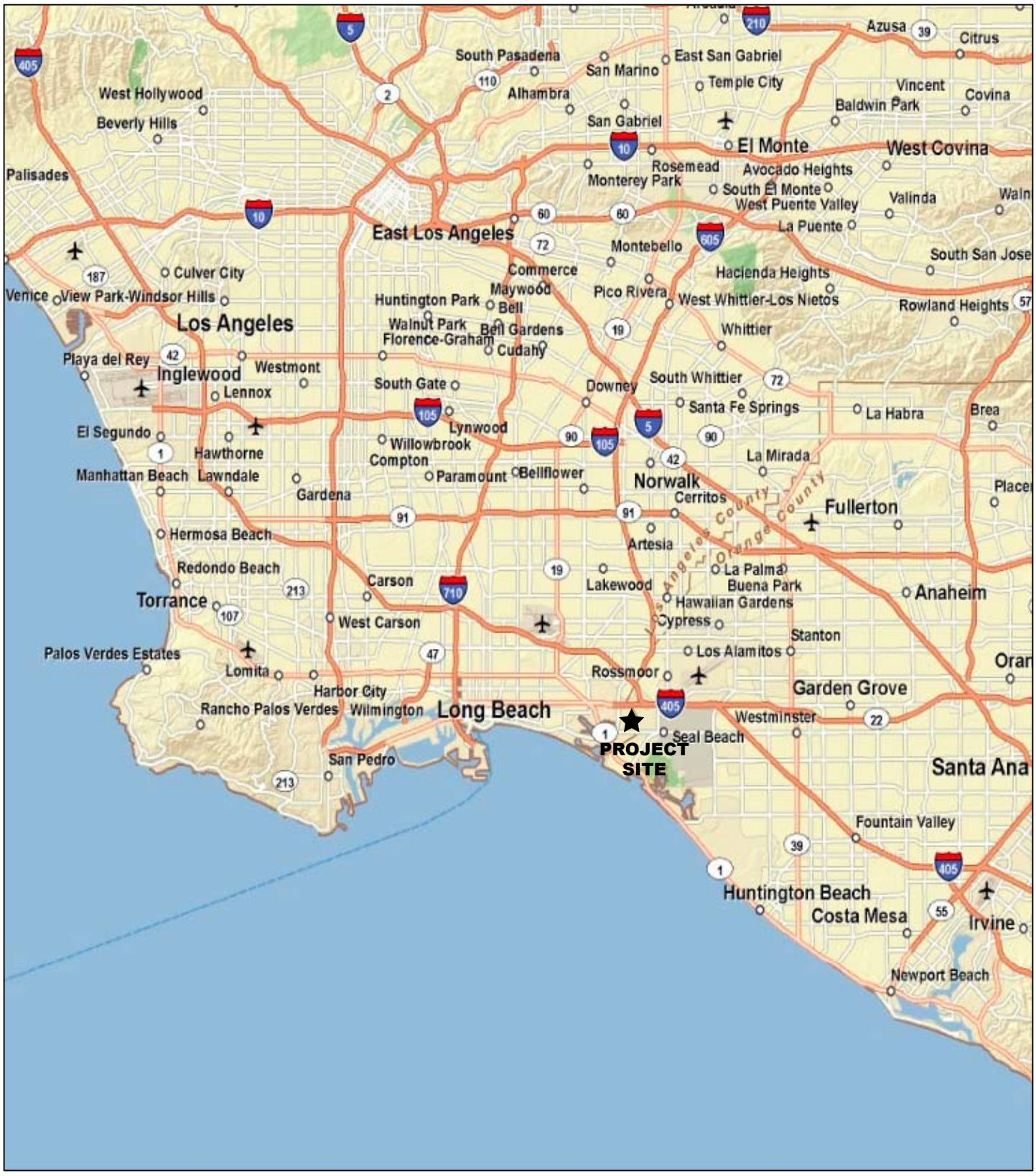
Changes resulting from Units 3 and 4 Repowering (2004):

| | | |
|---|---|---|
| Unit 3 | - 222 | MW (permanently disabled) |
| Unit 4 | -222 | MW (permanently disabled) |
| Unit 6 | -82 | MW (permanently derated) |
| CCGS | 575 | MW (total of Units 8, 9, and 10) |
| Total | 1619 | MW (49 MW net gain for HnGS) |

## 1.5 Existing Site Description

HnGS is an electric power generating facility that supplies power to the LADWP power distribution grid. HnGS is a largely developed industrial property consisting of approximately 122 acres, the majority of which is located in the City of Long Beach, County of Los Angeles. Approximately 7.5 acres in the northeast corner of the HnGS property are located in the City of Seal Beach, County of Orange. The proposed project would be located in the northern portion of the HnGS property, within the City of Long Beach.

Uses surrounding HnGS consist primarily of industrial, commercial, and residential uses, including the Leisure World residential community along the entire eastern boundary of HnGS; light industrial functions (including office, research and development, and manufacturing) in the Boeing Integrated Defense Systems Specific Plan Area to the southeast; the Island Village residential community to the south; vacant land to the southwest; the Alamitos Generating




N.T.S.

Figure 1-1
Regional Location

Station (an electrical generating station operated by the AES Corporation) along the entire western boundary, across the San Gabriel River; residential areas to the northwest; and a community park and residential areas to the north. Most of the eastern station boundary is also the boundary between Los Angeles and Orange counties. A regional bike trail runs along the upper bank of the San Gabriel River, adjacent to HnGS. The general setting of the site and surrounding areas are shown on Figure 1-2.

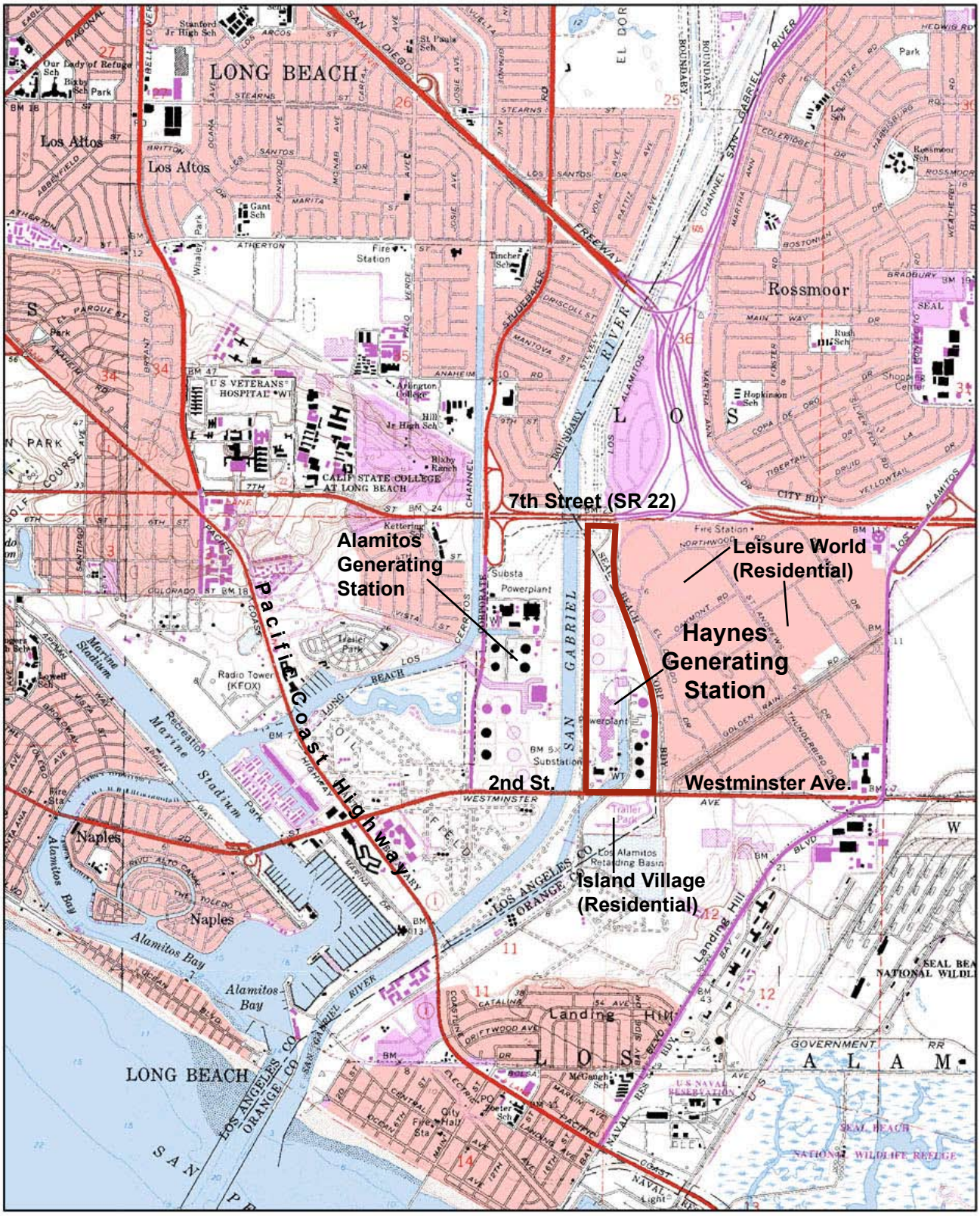
Operating generators at the facility include four steam boilers units (Units 1, 2, 5, and 6) and a CCGS, consisting of one steam generating turbine (Unit 8) and two natural-gas fired CT generators (Units 9 and 10) fitted with Heat Recovery Steam Generator (HRSG) systems. The existing generator units range in height from approximately 75 feet (the CCGS) to approximately 150 feet for the six older units (including decommissioned Units 3 and 4). In addition to the primary structures, the generator exhaust stacks range in height from approximately 150 feet (Units 9 and 10 of the CCGS) to approximately 250 feet for the six older units. All the generator units are located in roughly the southwest quadrant of the HnGS property. The operating and decommissioned generator units themselves occupy approximately 15 acres of the site.

A circulating water channel provides ocean water for cooling the Haynes steam boiler units. The channel extends southwestward from the HnGS property for approximately one mile, roughly paralleling the San Gabriel River between 2nd Street and State Highway 1. Near the highway, water is drawn into the channel through a system of pipes that cross under the San Gabriel River and connect to an intake structure in the Alamitos Bay Marina. At HnGS, water is drawn from the channel through separate pump and screen chambers for generator Units 1, 2, 5, and 6, and the CCGS. The cooling water is released through three discharge structures (one for Units 1 and 2, one for Units 5 and 6, and one for the CCGS (formerly used by decommissioned Units 3 and 4) located in the bank of the San Gabriel River, to the west of HnGS.

To the west of the generator units, are the electrical switchyards that are fed by the existing generators and connect to an electrical transmission line that runs along the western edge of HnGS and supplies electrical power to the LADWP distribution grid. Existing generator Units 1, 2, 5, 6, 9, and 10 run on natural gas that is supplied by continuous feed from a line that enters the HnGS property from the north. A small compressor station in the central part of the property boosts the natural gas pressure for use in Units 9 and 10.

Near the northern end of the HnGS property are three large, unused aboveground tanks formerly used to store fuel oil prior to the conversion of the original HnGS to natural gas fuel. These tanks are approximately 200 feet in diameter and 56 feet in height. As part of the ongoing facilities management program, these tanks are being cleaned and certified free of hazardous wastes and will be dismantled prior to the beginning of the proposed project construction.

There are five additional aboveground fuel oil storage tanks in the southeastern quadrant of the HnGS property. One tank is used to store distillate oil as a backup fuel for the CCGS in emergency situations when natural gas may not be available. The other tanks are not in use and are essentially empty. The northernmost of the five tanks is approximately 200 feet in diameter and 43 feet in height. Each of the other tanks is approximately 160 feet in diameter and 43 feet in height. Each tank is located within a separate spill containment area surrounded by an approximately 4-foot high earthen dike. Three 500,000-gallon settling basins, used to process industrial wastewater and surface runoff at HnGS, are also located in the southeastern quadrant of the property. A site plan of the existing HnGS is provided in Figure 1-3.




Source: gis.ca.gov
USGS 7.5 Minute Digital Raster Graphic

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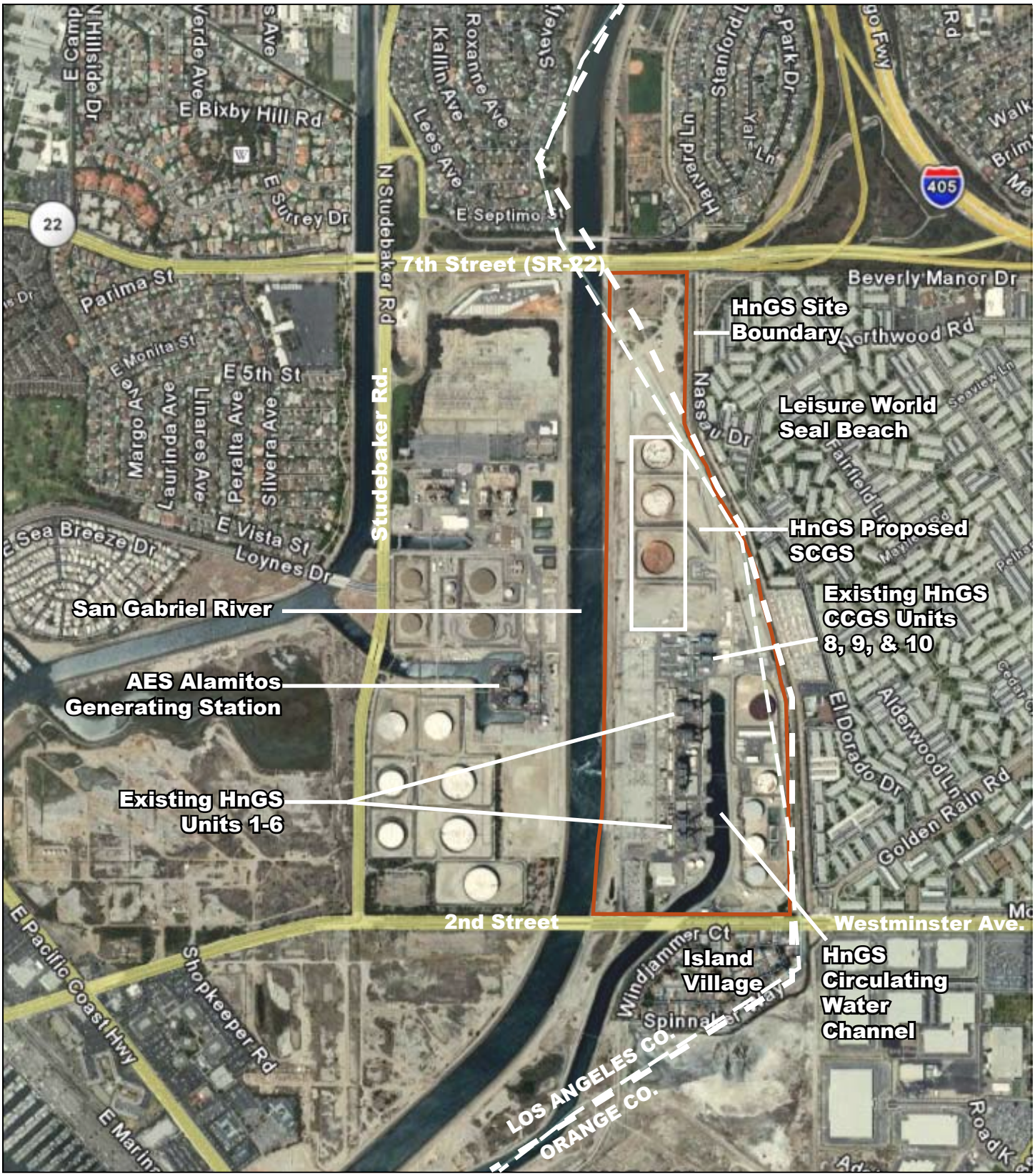
Figure 1-2
Vicinity Map




Source: Google Earth, 2008

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Figure 1-3
Existing Site

## 1.6 Project Facilities and Construction

### Facilities

The proposed SCGS for the HnGS Units 5 and 6 Repowering Project includes six natural gas-fired CTs and associated cooling and pollution control systems. The new generation units would be designated as Units 11, 12, 13, 14, 15, and 16. A standby power generator of up to 4-MW capacity would also be provided. The actual net generating capacity of the proposed SCGS would be 592 MW. The proposed project also includes decommissioning existing steam boiler generation Units 5 and 6. Units 5 and 6 currently have a net capacity of 341 MW and 259 MW, respectively (600 MW total). The total net generating capacity of the HnGS facility after the completion of the proposed project would be about 1611 MW, which is 8 MW less than the current capacity of the facility. The existing and proposed units, with expected generating capacities, are summarized as follows:

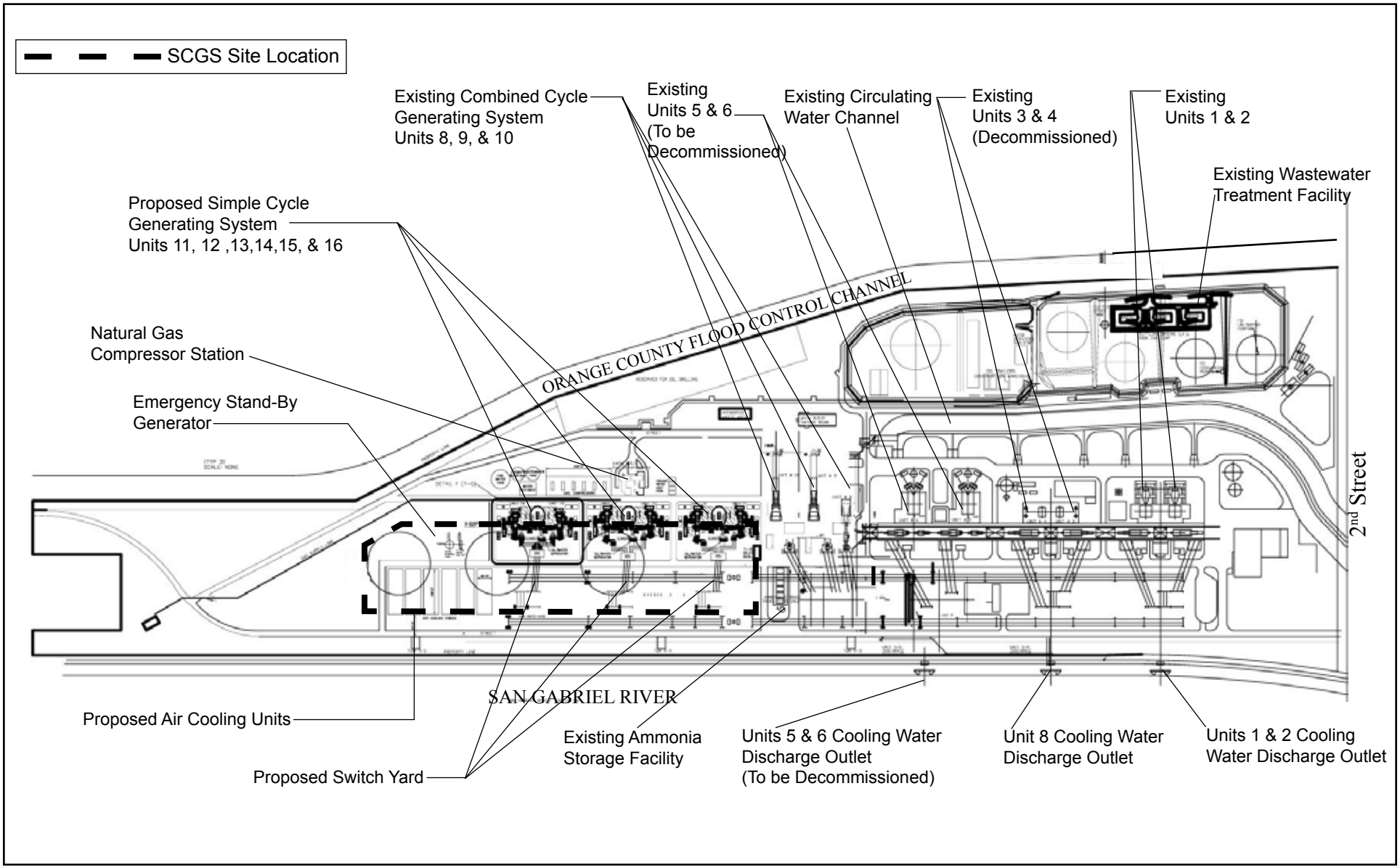
| | | |
|---|---|---|
| Unit 1 | 222 | MW |
| Unit 2 | 222 | MW |
| CCGS | 575 | MW (total of Units 8, 9, and 10) |
| SCGS | 592 | MW (proposed project) |
| Total | 1,611 | MW (8 MW less than current capacity) |

The proposed project would also require the installation of ancillary facilities and equipment, such as gas compressors; electrical transformers and switching equipment; and a water treatment system required to purify water for use in the SCGS. The three large unused aboveground fuel storage tanks at the north end of HnGS would be dismantled under the proposed project to make room for the SCGS and the dry cooling system. A conceptual site plan showing proposed facilities is provided in Figure 1-4.

### Construction

Construction of the proposed project is scheduled to begin the second quarter of 2010 and continue to completion at the end of June, 2012. The duration of construction activities would be approximately 26 months and would normally take place six days per week, Monday through Saturday. To insure that construction activities stay on schedule, Sunday shifts may be required at times during the construction period, and two shifts per day may also be necessary at times. During peak project construction periods, a total of approximately 300 workers could be present at the site on the same day (although not at the same time), in either one or two shifts.

Construction activities for the proposed project would include grading and site preparation, construction of access roads and equipment foundations, driving of piles for the SCGS and support equipment, construction of the CTs (with selective catalytic reduction [SCR] equipment and exhaust stacks), construction of the dry cooling towers, extension of the existing electrical switch yard, and turbine commissioning (testing and calibration of SCGS prior to operations). All required construction staging, storage, and laydown areas related to project construction would be located within the existing HnGS boundaries. New generating equipment would be brought to the site on trucks, and oversize loads are anticipated. In addition, contractors would require temporary trailers on site for construction planning and management activities.




Source: LADWP, 2008

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Figure 1-4
Site Plan

## 1.7 Project Operations

### Power Generating Equipment

The SCGS would include six simple cycle CTs. The equipment would be designed to provide a net load capacity of 592 MW. The SCGS would be fired by natural gas. The CTs would produce thermal energy through the combustion of the natural gas, and the thermal energy would be converted into mechanical energy required to drive the turbines and generators, which produce electricity. Natural gas would be obtained through the site's existing gas supply lines. Air would be supplied to the CTs through an inlet air filter and evaporative coolers via an air inlet duct. Fuel (natural gas) would be supplied at approximately 920 pounds per square inch gauge pressure by gas compressors at full operating load. This mixture of fuel and air would be ignited and burned, producing high-temperature pressurized gas to drive the turbine and electric generator.

The new CTs would use a combination of processes to control air pollutant emissions. The combustors in the CTs would use water injection to reduce nitrogen oxides (NOx) emissions. An SCR system also would be provided for the CTs that would use a catalyst to facilitate a reaction between NOx and aqueous ammonia to reduce NOx emissions and produce nitrogen and water. The aqueous ammonia would be atomized with air and vaporized with an electric heater. The ammonia/air mixture would be blended within a static mixer and injected into the flue gas ahead of the catalyst bed via an injection grid. A CO catalyst would also be installed to comply with the South Coast Air Quality Management District's (SCAQMD's) New Source Review and Best Available Control Technology requirements.

Each CT section would include a weatherproof enclosure, and lighting, as well as fire and gas detection equipment, would be provided in each compartment.

There would be three step-up transformers. Two CT generators would share and feed a single step-up transformer, which would be connected by pole-mounted electrical lines to a new switchyard. Power would be transmitted off site through existing transmission lines.

Water that is used in the SCGS must be first treated to remove undesirable constituents that could foul the cooling or pollution control equipment. This water purification process generates a wastewater that would be collected and discharged to the waste treatment ponds in the southeast corner of HnGS. Here, the wastewater would be treated and discharged with other HnGS facility wastewaters.

### Cooling System

The proposed SCGS would be cooled by dry cooling towers utilizing a closed-loop water system to transfer heat from the CTs to the towers. Each CT would have an intercooler in the compression section of the turbine, in which warm air, discharged from the low pressure compressor, would be sent to an air-to-water heat exchanger for cooling before returning to the high-pressure compressor section. This inter-stage cooling provides cooler flow to the high-pressure compressor and increases overall efficiency and power output. The warm water from the heat exchanger would be sent to one of six dry cooling towers (one for each CT). The water would be cooled by fans that would draw cooler air over the tubes containing the warmer water, and the cooled water would then be pumped back to the heat exchangers. The dry cooling towers would be located on the HnGS site northwest of the CTs.

The proposed project would result in the decommissioning of the portion of the plant's existing once-through cooling water circulation system that is currently utilized for Units 5 and 6. However, no physical modifications to this system would occur within either the circulating water channel (located east of the existing generating units) or the San Gabriel River. The plant's existing once-through cooling water circulation system would continue to serve Units 1 and 2, and the CCGS. The proposed project would not require construction activity within either the cooling water channel or the San Gabriel River.

### Ammonia Handling and Storage

Aqueous ammonia (ammonium hydroxide at 29.5 percent concentration by weight) is presently used in the SCR systems in existing HnGS Units 1, 2, 5, 6, 9, and 10 to reduce NOx emissions. Aqueous ammonia would also be used in the proposed SCGS that would replace Units 5 and 6. The ammonia for the existing and new units would continue to be delivered to HnGS by truck and stored at the site's existing aqueous ammonia tank facility. The existing ammonia storage consists of six cylindrical aboveground storage tanks, with a total capacity of 225,000 gallons (37,500 gallons in each tank). No new ammonia storage or deliveries would be required for the proposed project since ammonia used for the SCGS would be generally offset by the removal from service of existing Units 5 and 6.

### Removal from Service of Units 5 and 6

Within 90 days of completion of the commissioning of the proposed SCGS, Units 5 and 6 would be permanently removed from service.

### Operating Personnel Requirements

Once constructed, the proposed project would not require additional personnel beyond those currently employed at HnGS to support site operations. The facility would be capable of operating 24 hours per day, seven days per week.

### Project Termination and Decommissioning

The estimated life of the new simple-cycle equipment at HnGS is expected to be more than 25 years. Equipment that is no longer effective may then be shut down and/or decommissioned, replaced, or modified in accordance with applicable regulations, market conditions, and technology prevailing at the time of termination. Decommissioning of the new units in the future may involve a combination of salvage or disposal in accordance with applicable federal, state, and local regulations.

## 1.8 Land Use Consistency

A portion of HnGS is located within the City of Long Beach's Local Coastal Plan area, which is zoned PD-1 (Planned Development). The majority of the proposed project facilities would fall outside the local coastal zone, but the three southernmost CTs would fall within the zone. The City of Long Beach has issued a categorical exclusion for HnGS from Local Coastal Plan permitting pursuant to the California Government Code (section 53091 et seq.), which exempts municipally owned electrical generation facilities from local regulation. Nonetheless, the existing and proposed industrial use at HnGS is consistent with the PD-1 zone and the specific provisions of the Local Coastal Plan.

## 1.9 Environmental Safeguards

HnGS operates under various local, state, and federal laws and in accordance with various permits and conditions issued by government agencies. Based on these permits and conditions, it is anticipated that the proposed SCGS would be operated in accordance with all government regulations and industry standards, providing adequate safeguards to adjacent populations and the environment.

## 1.10 Required Permits and Approvals

Prior to construction, the proposed project would require regulatory permits and approvals, most of which would come from the SCAQMD. Pursuant to the Clean Water Act, minor changes to the HnGS waste and surface water discharge may require modification or re-issuance of the site's National Pollutant Discharge Elimination System (NPDES) permit from the California Regional Water Quality Control Board (RWQCB).

The project would operate under various federal and state laws, some of which could require regulatory action by governmental agencies. For example, use of oversize loads on trucks and transportation of hazardous/flammable materials requires a transportation permit from California Department of Transportation (Caltrans). Use and storage of hazardous materials on the site requires compliance with the Resource Conservation and Recovery Act under state and federal Environmental Protection Agencies. Under the Clean Water Act, discharges of storm water for construction projects in excess of one acre are regulated under a General Storm Water Construction Activities Permit issued by California State Water Resources Control Board with oversight by the RWQCB.

For the proposed project, SCAQMD and the RWQCB are considered responsible agencies under CEQA. A Responsible Agency means "a public agency which proposes to approve a project for which a lead agency is preparing an EIR." (CEQA Guidelines §15381). Potential permits and approvals are as follows:

**City of Los Angeles Department of Water and Power**

- Certification by the Board of Commissioners that the EIR was prepared in accordance with CEQA and other applicable codes and guidelines
- Approval by the Board of Commissioners of the proposed project

**South Coast Air Quality Management District**

- Authority to Construct
- Permit to Operate

**State of California Los Angeles Regional Water Quality Control Board**

- Discharge Permit for construction dewatering and hydrostatic test water discharge in storm system and channel
- National Pollution Discharge Elimination System (NPDES) Permit for Construction Dewatering
- NPDES Permit for Hydrostatic Test Water Discharge
- Storm Water Pollution Control Permit

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# SECTION 2
# INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with §15063(d) (3) of the *CEQA Guidelines* (2008) to determine if the project may have a significant effect on the environment.

An explanation is provided for all determinations in Section 3, *Environmental Impact Assessment*, of this document. A "No Impact" or "Less than Significant Impact" determination is made when the proposed project would not have any impact or would not have a significant effect on the environment for that issue area based on project-specific circumstances.

**Project Title:**

Haynes Generating Station Units 5 and 6 Repowering Project

**Lead Agency Name and Address:**

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

**Contact Person and Phone Number:**

Tom Dailor
Environmental Supervisor
Los Angeles Department of Water and Power
(213) 367-0221

**Project Sponsor's Name and Address:**

Los Angeles Department of Water and Power
Power Systems Services
111 North Hope Street
Los Angeles, CA 90012

**Project Location:**

The proposed project is located at 6801 East 2nd Street in the City of Long Beach, California, and is situated adjacent to the San Gabriel River and south of State Route 22 (7th Street). The HnGS property is primarily within the County of Los Angeles; however, the northeastern corner of the station is within the County of Orange.

**General Plan Designation:**

The proposed project site is designated as PD-1 (Planned Development) under the City of Long Beach General Plan and is located in the South East Area Development and Improvement Plan District.

**Zoning:**

PD-1

**Description of Project:**

LADWP proposes to construct a 600-MW electrical SCGS at the existing HnGS in Long Beach, California. The proposed SCGS would include six natural gas-fired CTs, at 100 MW each, associated cooling and pollution control systems, and other ancillary facilities. The new generation units would be designated Units 11, 12, 13, 14, 15 and 16. The proposed project includes permanently removing from service two existing steam boiler generators (Units 5 and 6) that have a total generation capacity of 600 MW.

**Surrounding Land Uses and Setting:**

Uses surrounding HnGS consist primarily of industrial, commercial, and residential uses, including the Leisure World residential community along the entire eastern boundary of HnGS; light industrial functions (including office, research and development, and manufacturing) in the Boeing Integrated Defense Systems Specific Plan Area to the southeast; the Island Village residential community to the south; vacant land to the southwest; the Alamitos Generating Station (an electrical generating station operated by the AES company) along the entire western boundary, across the San Gabriel River; residential areas to the northwest; and a community park and residential areas to the north. Most of the eastern station boundary is also the boundary between Los Angeles and Orange counties. A regional bike trail runs along the upper bank of the San Gabriel River, adjacent to HnGS.

**Agencies That May Have an Interest in the Proposed Project:**

CEQA Lead Agency

- Los Angeles Department of Water and Power

Responsible/Trustee Agencies

- Los Angeles Regional Water Quality Control Board
- South Coast Air Quality Management District

Reviewing Agencies

- California Department of Transportation

## 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 Environmental Impacts discussion in Section 3.

| | | |
|---|---|---|
| ☐ Aesthetics | ☐ Agriculture Resources | ☒ Air Quality |
| ☒ Biological Resources | ☐ Cultural Resources | ☐ Geology/Soils |
| ☐ Hazards & Hazardous Materials | ☒ Hydrology/Water Quality | ☐ Land Use Planning |
| ☐ Mineral Resources | ☒ Noise | ☐ Population/Housing |
| ☐ Public Services | ☐ Recreation | ☒ Transportation/Traffic |
| ☒ Utilities/Service Systems | ☒ 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 EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Charles C. Holloway — April 6, 2009

Signature — Date

Charles Holloway
Manager of Environmental Assessment
Los Angeles Department of Water and Power

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **I.** | **AESTHETICS**. Would the project: | | | | |
| a. | Have a substantial adverse effect on a scenic vista? | | | | **X** |
| b. | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | **X** |
| c. | Substantially degrade the existing visual character or quality of the site and its surroundings? | | | **X** | |
| d. | Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | | | **X** | |
| e. | Create a new source of substantial shade or shadow that would adversely affect daytime views in the area? | | | | **X** |
| **II.** | **AGRICULTURE RESOURCES**. 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. 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? | | | | **X** |
| b. | Conflict with existing zoning for agricultural use, or a Williamson act contract? | | | | **X** |
| c. | Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | | | | **X** |
| **III.** | **AIR QUALITY**. 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? | **X** | | | |
| b. | Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | **X** | | | |
| c. | 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | **X** | | | |
| d. | Expose sensitive receptors to substantial pollutant concentrations? | **X** | | | |
| e. | Create objectionable odors affecting a substantial number of people? | | | **X** | |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **IV.** | **BIOLOGICAL RESOURCES**. 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? | **X** | | | |
| 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? | | | | **X** |
| c. | Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | **X** |
| 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? | **X** | | | |
| e. | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | **X** |
| 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? | | | | **X** |
| **V.** | **CULTURAL RESOURCES**. Would the project: | | | | |
| a. | Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? | | | | **X** |
| b. | Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | | | **X** | |
| c. | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | **X** |
| d. | Disturb any human remains, including those interred outside of formal cemeteries? | | | **X** | |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **VI.** | **GEOLOGY AND SOILS**. Would the project: | | | | |
| a. | Expose people or structures to 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. | | | | **X** |
| | ii) Strong seismic ground shaking? | | | **X** | |
| | iii) Seismic-related ground failure, including liquefaction? | | | **X** | |
| | iv) Landslides? | | | | **X** |
| b. | Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill? | | | **X** | |
| 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? | | | **X** | |
| d. | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | **X** |
| 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 wastewater? | | | | **X** |
| **VII.** | **HAZARDS AND HAZARDOUS MATERIALS**: Would the project: | | | | |
| a. | Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | **X** | |
| 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? | | | **X** | |
| c. | Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | **X** |
| 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? | | | | **X** |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| 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 for people residing or working in the project area? | | | | X |
| f. | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| g. | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | X | |
| h. | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | X |
| **VIII.** | **HYDROLOGY AND WATER QUALITY**. Would the project: | | | | |
| a. | Violate any water quality standards or waste discharge requirements? | X | | | |
| b. | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | X |
| c. | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on or off site? | X | | | |
| d. | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site? | X | | | |
| e. | Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | | | X | |
| f. | Otherwise substantially degrade water quality? | | | | X |
| g. | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | X |
| h. | Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | | | | X |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| i. | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | **X** |
| j. | Inundation by seiche, tsunami, or mudflow? | | | | **X** |
| **IX.** | **LAND USE AND PLANNING**. Would the project: | | | | |
| a. | Physically divide an established community? | | | | **X** |
| b. | Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | | **X** |
| c. | Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | | **X** |
| **X.** | **MINERAL RESOURCES**. 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? | | | | **X** |
| 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? | | | | **X** |
| **XI.** | **NOISE**. Would the project result in: | | | | |
| a. | Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | **X** | | | |
| b. | Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | **X** | | | |
| c. | A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | **X** | | | |
| d. | A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | **X** | | | |
| 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 expose people residing or working in the project area to excessive noise levels? | | | | **X** |
| f. | For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | **X** |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XII.** | **POPULATION AND HOUSING**. 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)? | | | | **X** |
| b. | Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | **X** |
| c. | Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | **X** |
| **XIII.** | **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 following public services: | | | | |
| | i) Fire protection? | | | | **X** |
| | ii) Police protection? | | | | **X** |
| | iii) Schools? | | | | **X** |
| | iv) Parks? | | | | **X** |
| | v) Other public facilities? | | | | **X** |
| **XIV.** | **RECREATION**. Would the project: | | | | |
| a. | 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? | | | | **X** |
| b. | Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | | | | **X** |
| **XV.** | **TRANSPORTATION/TRAFFIC**. Would the project: | | | | |
| a. | Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | **X** | | | |
| b. | Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | **X** | | | |
| c. | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | **X** |

| | | Potentially Significant Impact | Less than Significant Impact After Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| d. | Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | X | | | |
| e. | Result in inadequate emergency access? | | | | X |
| f. | Result in inadequate parking capacity? | | | | X |
| g. | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | | | | X |
| **XVI.** | **UTILITIES AND SERVICE SYSTEMS**. Would the project: | | | | |
| a. | Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | X | |
| b. | Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | X | |
| c. | Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | X | |
| d. | Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | X | | | |
| e. | Result in a determination by the wastewater treatment provider that 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? | | | X | |
| f. | Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | X | |
| g. | Comply with federal, state, and local statutes and regulations related to solid waste? | | | | X |
| **XVII.** | **MANDATORY FINDINGS OF SIGNIFICANCE**. | | | | |
| 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? | X | | | |
| 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. | X | | | |
| c. | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | X | | | |

# SECTION 3
# ENVIRONMENTAL IMPACT ASSESSMENT

## INTRODUCTION

The following discussion addresses impacts to various environmental resources per the Initial Study checklist questions contained in Appendix G of the *CEQA Guidelines*, as summarized above in Section 2.0, *Initial Study Checklist*. It was prepared in accordance with §15070 and §15071 of the *CEQA Guidelines* (2008).

### I. AESTHETICS

**Would the project:**

**a) Have a substantial adverse effect on a scenic vista?**

**No Impact.** The proposed project would be located in the interior of the existing 122-acre HnGS, a fully developed industrial complex that began operations in the early 1960s and consists of large generator units, fuel tanks, and other facilities related to electrical power generation. The proposed project would be located adjacent to these facilities and generally on the site of several existing large aboveground storage tanks, which will be dismantled prior to construction of the proposed project. Elements of the proposed project may be partially or largely visible from certain viewpoints within adjacent residential areas (Leisure World, Seal Beach, to the east), along public roads that border HnGS (2nd Street to the south and 7th Street to the north), and along the San Gabriel River Trail, a bike path located along the western edge of HnGS. However, based on the nature of the proposed project in relation to the existing setting of HnGS and its surroundings (including the 150-acre AES Alamitos Generating Station located across the San Gabriel River from HnGS), there would be no adverse effects on existing scenic vistas. No impact would occur, and no further study of this issue is required.

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

**No Impact.** The proposed project would not require the removal of, or impact views, of any scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway. State Route 1 (Pacific Coast Highway), is an eligible (although not officially designated) state scenic highway (*Caltrans Scenic Highway Program*). It is located approximately one mile west of the proposed project site. There are no other scenic highways in the vicinity of the proposed project. The project facilities would be located within an existing fully developed industrial site and, from viewpoints along State Route 1, would either be screened by or blend in with existing larger generator units and other facilities within HnGS and the AES Alamitos Generating Station (located between HnGS and State Route 1). Therefore, the proposed project would not damage any scenic resources within a state scenic highway. No impact would occur, and no further study of this issue is required.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less Than Significant Impact.** HnGS, a fully developed industrial site that began operations in the early 1960s, is located in an area that includes residential, commercial, and other large industrial uses. HnGS includes nine existing generator units, numerous large aboveground storage tanks, and other facilities associated with electrical power generation. The 150-acre Alamitos Generating Station, which also includes numerous existing generator units and aboveground storage tanks, is located immediately west of HnGS, across the San Gabriel River.

The proposed project would be located in the interior of HnGS, adjacent to existing facilities and generally on the site of several existing large aboveground storage tanks, which will be dismantled prior to construction of the proposed project. The proposed facilities would be generally equal to or smaller in scale than existing facilities on site. Elements of the proposed project may be partially or largely visible from certain viewpoints within adjacent residential areas (Leisure World, Seal Beach, to the east), along public roads that border HnGS (2nd Street to the south and 7th Street to the north), and along the San Gabriel River Trail. However, based on the nature and scale of the proposed project in relation to the existing setting of HnGS and its surroundings, there would be no significant adverse effects on the existing visual character or quality of the site and its surroundings. The impact would be less than significant, and no further study of this issue is required.

**d) Create new source of substantial light or glare that would adversely affect day or nighttime views in the area?**

**Less Than Significant Impact.** The proposed generator units and dry cooling structures would require light fixtures similar to those on the existing facilities at HnGS. The lighting is needed to provide for the safety of workers that are working at the facility at night, and to provide for security of the installation. Based on the existing level of lighting at the station and the scale of the proposed units compared with the existing facilities, this new source of light would not be expected to adversely affect nighttime views in the area. The materials used in the construction of the new generator units would not be expected to add a new source of glare at the facility.

Lighting related to nighttime construction of the project, if required, would create a new source of light. This impact would be temporary, related to only the construction phase of the proposed project. Based on the distance of the construction from residences adjacent to HnGS and on the ability to direct light away from the residential areas, construction related lighting would not be expected to create a significant adverse effect. The impact would be less than significant, and no further study of this issue is required.

**e) Create a new source of substantial shade or shadow that would adversely affect day views in the area?**

**No Impact.** The proposed generator units and dry cooling structures would be similar in mass and height to existing HnGS facilities, including several that would be replaced by the proposed project. The proposed project would be sufficiently set back from property lines so as to not result in substantial shadows being cast on the surrounding properties. No impact would occur, and no further study of this issue is required.

## II. AGRICULTURE RESOURCES

**Would the project:**

**a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**No Impact.** The proposed project would be located within an existing fully developed industrial site that does not meet the definition of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the State of California or of Farmland of Local Importance in the County of Los Angeles as defined in the Farmland Mapping and Monitoring Program (*California Department of Conservation Publication FM 94-02*). No impact would occur, and no further study of this issue is required.

**b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No Impact.** The proposed project would be located within the existing HnGS property, which is industrially developed and zoned PD-1 (Planned Development). Based on the existing and historical uses at the HnGS property, the proposed project site is not subject to a Williamson Act contract. No impact would occur, and no further study of this issue is required.

**c) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use?**

**No Impact.** There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) on or in the vicinity of the proposed project site. The proposed project would be located within an existing industrially developed property and would involve the removal from service of two existing power generator units and the construction of a new SCGS within the property boundaries. It would not involve other changes in the existing environment that could result in the conversion of Farmland, either directly or indirectly, outside the property boundaries to non-agricultural use. No impact would occur, and no further study of this issue is required.

## III. AIR QUALITY

**Would the project:**

**a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., the SCAQMD Plan or Congestion Management Plan)?**

**Potentially Significant Impact.** The SCAQMD and the Southern California Association of Governments (SCAG) have responsibility for preparing an Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The proposed project site is located within the South Coast Air Basin (SCAB), which is managed by the SCAQMD. SCAB has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Currently, the entire basin is a non-attainment area for the following pollutants: 8-hour ozone ($O_3$); particulate matter less than 10 microns in diameter ($PM_{10}$); particulate matter less than 2.5 microns in diameter $PM_{2.5}$; and is a federal maintenance area for carbon monoxide (CO) and NOx. The AQMP analyzes air quality on a regional level and identifies region-wide attenuation methods to achieve the air quality standards, including regulations for stationary-source polluters; facilitation of new transportation technologies, such as low-emission vehicles; and capital improvements, such as park-and-ride facilities and public

transit improvements. The most recently adopted plan is the 2007 AQMP, adopted on June 11, 2007. This plan is the SCAQMD's portion of the State Implementation Plan.

During operations, the proposed project would result in emissions of NOx, CO, volatile organic compounds (VOCs), and $PM_{10}$ that are anticipated to be below SCAQMD significance thresholds when considering the net impact of decommissioning Units 5 and 6. The proposed SCGS also would emit other pollutants whose concentrations in the vicinity must be modeled and evaluated. While the proposed project is likely to be shown consistent with the AQMP on the basis of net emissions, an air quality impact analysis and health risk assessment will be conducted to substantiate the extent of air quality impacts. A consistency analysis will be included with the air quality evaluation in the EIR.

**b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Potentially Significant Impact.** Operation-related activities associated with the proposed project would result in emissions of NOx, CO, VOCs, and $PM_{10}$ that are anticipated to be below SCAQMD significance thresholds when considering the net impact of decommissioning Units 5 and 6. The proposed project would construct a 600-MW electrical SCGS consisting of six natural gas-fired CTs and generators and associated equipment, and would emit substantial emissions. While the proposed project is not likely to contribute substantially to an existing air quality violation, the actual emissions and air quality effects will be analyzed and quantified in the EIR. Other considerations such as stack height plume dispersion and potential health risk factors will be addressed as required for purposes of substantiating permit compliance and consistency with air quality standards and regulations.

Construction activities are anticipated to include mobilization, component acquisition and fabrication, site preparation, SCGS and cooling tower erection, and system startup and commissioning. The construction-related air emissions generated during the scheduled 26-month construction period (e.g., from operation of on-site heavy-duty construction equipment, on-site worker activities, worker commute trips, and construction material transport trips) would potentially exceed SCAQMD construction air emissions significance criteria. Construction activities would be short-term in nature and would not add to long-term air quality degradation. However, these emissions may exceed the SCAQMD daily emissions thresholds. Temporary construction emissions would, therefore, be considered potentially significant and will be analyzed further in the EIR.

The proposed project would be required to comply with all relevant federal, state, and local air quality regulations, including acquisition of a permit to construct and permit to operate from SCAQMD. Compliance with air quality rules and regulations will be discussed in the EIR.

**c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Potentially Significant Impact.** The project site is located in the SCAB, which is a non-attainment area for 8-hour $O_3$, $PM_{10}$, and $PM_{2.5}$, and a federal maintenance area for CO and NOx. While operation of the proposed project is not anticipated to exceed the SCAQMD daily emissions thresholds or contribute substantially to an existing air quality violation, the combustion emissions generated from operation will be analyzed in the EIR in conjunction with the removal from service of Units 5 and 6 to determine whether the project's net emissions

would in fact create potential significant adverse air quality impacts. The EIR will analyze project emissions in conjunction with the removal from service of Units 5 and 6 and with other proposed and/or reasonably foreseeable future projects in the vicinity to determine if it could result in a cumulative considerable net increase in criteria pollutants for which the project region is a non-attainment area. This issue will be analyzed as a potentially significant cumulative impact in the EIR.

Construction activities for the proposed project would contribute to an increase in air quality emissions for which the region is non-attainment. As such, air quality impacts from construction will be evaluated using the thresholds of significance established by the SCAQMD. Construction activities associated with implementation of the proposed project could result in increases in air pollutant emissions, which individually or cumulatively, would exceed established thresholds for these criteria pollutants. The impact is potentially significant and will be analyzed in the EIR.

The combustion of natural gas in the proposed SCGS will produce several air contaminants that meet the definition of a greenhouse gas. The quantities of greenhouse gases emitted from the project will be estimated and the significance of those emissions evaluated in the EIR using the latest SCAQMD and State of California guidance.

**d) Expose sensitive receptors to substantial pollutant concentrations?**

**Potentially Significant Impact.** Exhaust gases will be emitted from the stacks of the SCGS and will disperse in the atmosphere in the vicinity of the site. In order to ensure that the emissions from the proposed project do not expose local residents, worker populations, and other sensitive receptors to air pollutants at levels that could cause a health risk, the EIR will include a health risk assessment (HRA). The HRA will quantify the concentration of pollutants to which receptors in the project vicinity could be exposed.

**e) Create objectionable odors affecting a substantial number of people?**

**Less than Significant Impact.** Any odors (e.g., odors from construction vehicle emissions) would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions). Byproducts from the combustion of natural gas are not known to produce objectionable odors. Since the HnGS converted primarily to natural gas as a fuel source, complaints about odors emanating from the plant are virtually non-existent. Diesel fuel is presently stored on site and is used as a fuel for the existing emergency generator, as an emergency fuel for units 9 and 10, and for cleaning fuel oil lines. Diesel fuel would be used for the emergency generator that will part of the proposed project. Low sulfur/low nitrogen distillate oil would continue to be stored on site and used to fuel the site's existing power generators if there was an emergency and the natural gas supply to the site was cut off. However, the use of this oil would be extremely infrequent. Ammonia is also stored on site in an approved storage system with an operational spill monitoring system in place. Except in the event of an unforeseen occurrence, the potential for odors is low and would not affect a substantial number of people.

Other than construction vehicle operation, no activities are anticipated to occur that would have the potential to cause odor impacts during the construction of the proposed project. Because use of construction vehicles would be temporary and no objectionable odors would remain after project construction, impacts would be less than significant, and no further analysis of this issue is required.

## IV. BIOLOGICAL RESOURCES

**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?**

**Potentially Significant Impact.** The potential for occurrence of important biological resources at the site has been evaluated by qualified biologists in relation to previous projects at HnGS (*Biological Survey Report for the Haynes Generating Station Units 5 and 6 Repowering Project by EDAW, Inc., November, 2003*).

The proposed project would have no impact on sensitive terrestrial plant species known to occur in the region because habitat or other favorable conditions for such species do not exist on the project site. The proposed project would be located entirely within the boundaries of the existing HnGS, which is a fully developed industrial site that has been used continuously for electrical generation for over 40 years. In addition, a large portion of the site, including areas that would be involved in the proposed project construction and operation, has been disturbed by construction activities associated with the CCGS for the HnGS Units 3 and 4 Repowering Project. This continuous operations, maintenance, and construction activity at HnGS has prevented the establishment of extensive areas of vegetation, which exist in only relatively small disturbed patches along the eastern and western fringes of the station. The project site essentially consists of paved, graveled, or dirt surfaces with no vegetation. The non-paved surfaces are regularly controlled for weeds and are subject to other periodic site maintenance.

The lack of vegetative habitat and the activity associated with power generation make the site of low interest to terrestrial wildlife. During previous surveys, rodent activity was apparent in the electrical transmission line alignment adjacent to the San Gabriel River, along the western perimeter of the site, although positive identification of type of rodents inhabiting the site was not made. The project site is within the historic range of two sensitive species of rodents, the Pacific pocket mouse and the Los Angeles pocket mouse. Currently, the only known populations of these species occur at a great distance from the project site. Based on the distant location of the known populations and site habitat characteristics, the probability is extremely remote for occurrence of either sensitive rodent species at HnGS. Therefore, no impacts to these species would occur.

Raptors have been known to rest and perch on metal walks, railings, and stairs of the exhaust stacks and fuel storage tanks at HnGS. Station personnel have reported past nesting on site by peregrine falcons. Red tail hawks also visit the site regularly. In any event, the proposed SCGS would not adversely affect the use of the site by raptors because they have adapted to the activity and high-noise environment.

In the past, burrowing owls have nested in pipes in a storage yard and in berms on the site. However, the site has undergone significant construction in the past five years, including current activity to clean the large storage tanks on the northwestern portion of the site. Based on the level of activity and disturbance associated with construction and current operations at the station, burrowing owls are not anticipated at the site, and no impacts to this species would occur.

A number of sensitive bird species have been observed in water channels on and adjacent to the station, including California brown pelicans (a federal and state endangered species) flying over the San Gabriel River, and snowy egrets (a California species of special concern) at the

circulating water channel. No construction activities related to the proposed project would occur in either the circulating water channel or the San Gabriel River. No adverse impacts to sensitive bird species that inhabit these water channels are anticipated.

From existing literature sources, there are a number of common fish species that inhabit the San Gabriel River in the reach between the HnGS site. Recently, several green sea turtles (*Chelonia mydas*) were seen in the San Gabriel River just downstream of the facility's discharge outfall. Green sea turtles have been seen occasionally in the lower reach of the river since 1998 and are thought to be drawn by favorable habitat conditions that are enhanced by the warm water discharges (MBC, July 2005). As a result of the recent sightings, the Aquarium of the Pacific and National Marine Fisheries Service are cooperating to study the turtles at this location (Long Beach Press Telegram, September 2, 2008). The U.S. Fish and Wildlife Service lists the green sea turtle as threatened, except for the breeding populations in Florida and the Pacific Coast of Mexico, which are endangered (U.S. Fish and Wildlife Service website).

No construction activity related to the proposed project would take place in either the San Gabriel River or the circulating water channel located in the south-central part of HnGS. However, since the proposed project would remove from service that portion of the once-through cooling water system associated with existing Units 5 and 6 and change the volume of ocean water used at HnGS for cooling generators, the effects of this change on marine biota will be analyzed in the EIR.

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

**No Impact.** Previous surveys at HnGS by qualified biologists *(Biological Survey Report for the Haynes Generating Station Units 5 and 6 Repowering Project by EDAW, Inc., November, 2003*) have determined that there are no sensitive natural communities at HnGS. The project site has been regularly maintained and is essentially free of any vegetation. Areas that would be involved in the construction of the proposed project have been recently disturbed by activities associated with the construction of the CCGS and recent tank cleaning projects. Based on the previous survey, there are no portions of the proposed construction areas that could be considered riparian habitat. No portions of the circulating water channel contain riparian vegetation because the manufactured banks of the channel are regularly maintained. The adjacent San Gabriel River provides very marginal riparian habitat in the vicinity of the site, as the river's banks are rip-rapped and contain little vegetation. No construction activity related to the proposed project would take place in either the circulating water channel or the San Gabriel River. No impact would occur, and no further study of this issue is required.

**c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No Impact.** The proposed project would not adversely affect federal wetlands. The proposed construction areas were previously surveyed by qualified biologists to determine whether conditions that meet the definition of wetlands under Section 404 of the Clean Water Act are present. The project site is regularly maintained and is essentially free of any natural habitat areas. Based on the survey, there are no portions of the proposed construction areas that meet the definition of wetlands. No construction would occur in either the circulating water channel or the San Gabriel River channel. No impact would occur, and no further study of this issue is required.

**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/breeding sites?**

**Potentially Significant Impact.** Based on the previous biological survey of the proposed project site (November 2003) and a review of relevant literature; and considering the historic use of HnGS, the site is not used by any native resident or migratory wildlife species as a migratory corridor nor does the site contain a wildlife nursery.

No construction activity related to the proposed project would take place in the San Gabriel River. However, the proposed project would remove from service that portion of the once-through cooling water system associated with existing Units 5 and 6, reducing intake volumes at HnGS and discharge volumes at the river channel. Therefore, the proposed project could interfere with the movement of resident native fish species within the river, and the issue will be analyzed further in the EIR.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?**

**No Impact.** The project would not conflict with any local policies or ordinances relative to biological resources. The primary vegetation on site consists of perimeter trees and shrubs along the east property line, and there are no oak trees, heritage trees, or other unique tree specimens. No impact would occur, and no further study of this issue is required.

**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?**

**No Impact.** The proposed project site is not part of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impacts would occur, and no further study of this issue is required.

## V. CULTURAL RESOURCES

**Would the project:**

**a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?**

**No Impact.** According to a records search for the HnGS property conducted for a previous project (*Archaeological Survey Report for the Haynes Generating Station Repowering Project*, November 2001), and a November 14, 2003, site survey *(Archaeological Survey Report for the Haynes Generating Station Units 5 and 6 Repowering Project by EDAW, Inc., 2003)*, no resources on the proposed project site are currently listed in the National Register of Historic Places, the California Register of Historical Resources, or any local register of historical resources. HnGS facilities began operations in the mid-1960s and are not old enough to be of historic significance. No impact would occur, and no further study of this issue is required.

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?**

**Less Than Significant Impact.** According to the previous archaeological records search for the HnGS property (*Archaeological Survey Report for the Haynes Generating Station Repowering Project*, November 2001) and a November 14, 2003, site survey *(Archaeological Survey Report for the Haynes Generating Station Units 5 and 6 Repowering Project, EDAW, Inc., 2003)*, no known archaeological resources exist on the project site. The records search revealed that multiple small archaeological sites exist in the vicinity of the HnGS, one of which included human remains. Due to the extensive amount of construction and ground disturbing activity that has taken place on the property in the past, it is unlikely that undisturbed cultural resources would be encountered during construction. However, the possibility cannot be entirely ruled out. A measure employed by LADWP at other facilities with low potential of encountering resources during construction is to inform and train grading contractors to be aware that resources may be encountered and to establish a procedure to divert construction so that any unexpected discovery can be investigated. These measures will be incorporated in the grading specifications. The impact would be less than significant, and no further study of this issue is required.

**c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**No Impact.** There are no unique geologic features located at the proposed project site. Soils and geologic structure at the site are derived from alluvium deposited by the San Gabriel River.

Based on consultations with the San Diego Natural History Museum for the previous project (*Haynes Generation Station Repowering Project Initial Study*; November 2001), no known paleontological resources exist at the HnGS. The site is not likely to contain scientific resources due to the predominance of river deposited alluvium. This conclusion is based on review of resource maps and review of preliminary geologic and soils information. Accordingly, the project would not destroy unique or important paleontological resources, and no further study of this issue is required.

**d) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less Than Significant Impact.** There are no known human interment sites on the proposed project site. Should human remains be unearthed during construction, appropriate procedures, including halting of construction activities in the area of the remains and contacting the Los Angeles County Coroner, shall be followed. These procedures follow state law and are not discretionary. The impact would be less than significant, and no further study of this issue is required.

## VI. GEOLOGY AND SOILS

**Would the project:**

**a) Expose people or structures to 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.** Two major active earthquake faults are located within the vicinity of the HnGS. The Palos Verdes Fault is located approximately eight miles southwest of the station at its

nearest point. The Newport-Inglewood Fault is located approximately 0.4 mile southwest of the station. Portions of the Newport-Inglewood Fault, including the section nearest to Haynes, are contained in an Alquist-Priolo Earthquake Fault Zone. However, no fault is known to pass through the station property, and fault rupture at the station is not anticipated (*Los Angeles Department of Water and Power Risk Management Plan, Ammonia Storage and Supply System, Haynes Generating Station, June 1999*). No impact would occur, and no further study of this issue is required.

**ii) Strong seismic ground shaking?**

**Less Than Significant Impact.** The HnGS is located within the seismically active Southern California region, and, like all locations within the area, is potentially subject to strong seismic ground shaking. Two major active earthquake faults are located within the vicinity of the HnGS. The Palos Verdes Fault is located approximately eight miles southwest of the station at its nearest point, and the Newport-Inglewood Fault is located approximately 0.4 mile southwest of the station. Numerous other active faults are located within a fifty-mile radius of the proposed project site (*Los Angeles Department of Water and Power, Risk Management Plan, Ammonia Storage and Supply System, Haynes Generating Station, June 1999*). The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. Strong seismic ground shaking would not increase the exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death. The proposed project would conform to the latest version of the California Building Code, the Uniform Building Code, and all other applicable federal, state, and local codes relative to seismic design. The impact would be less than significant, and no further study of this issue is required.

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

**Less Than Significant Impact.** The HnGS property is subject to seismic-related ground failures related to liquefaction. The soil at the site consists of marine tidal deposits and alluvial deposits. These include layers of sands and silts below the groundwater table, which is at approximately 12 feet below the ground surface in some locations. Analysis has indicated that liquefaction may occur in the saturated silt and sand layers during a maximum credible earthquake event at the site (*Los Angeles Department of Water and Power, Risk Management Plan, Ammonia Storage and Supply System, Haynes Generating Station, June 1999*). However, the proposed removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries would not increase the exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure. Construction plans for the SCGS incorporate the use of driven foundation piles, which is an approved method of mitigating liquefaction hazards. The proposed project also would conform to the latest version of the California Building Code, the Uniform Building Code, and all other applicable federal, state, and local codes relative to liquefaction conditions. The impact would be less than significant, and no further study of this issue is required.

**iv) Landslides?**

**No Impact.** The proposed project site and surroundings are essentially flat, and the potential for landslides does not exist. No impact would occur, and no further study of this issue is required.

**b) Result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant Impact.** Construction of the proposed project would result in ground surface disturbance during excavation and grading that could create the potential for erosion to occur. However, the site is relatively flat and has been previously graded. Storm Water General Construction Permit Best Management Practices (BMPs) would be employed to control any potential erosion or sedimentation impacts related to the proposed project or its construction. Therefore, project construction will not result in substantial soil erosion or the loss of topsoil. The impact would be less than significant, and no further study of this issue is required.

**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?**

**Less Than Significant Impact.** The HnGS property is subject to seismic-related ground failures related to liquefaction. The soil at the site consists of marine tidal deposits and alluvial deposits. These include layers of sands and silts below the groundwater table, which is at approximately 12 feet below the ground surface in some locations. Analysis has indicated that liquefaction may occur in the saturated silt and sand layers during a maximum credible earthquake event at the site (*Los Angeles Department of Water and Power, Risk Management Plan, Ammonia Storage and Supply System, Haynes Generating Station, June 1999*). As a result of liquefaction, settlement and lateral spreading of soils may also occur. Construction plans for the SCGS incorporate the use of driven foundation piles, which is an approved method of mitigating liquefaction hazards. The proposed project would also conform to the latest version of the California Building Code, the Uniform Building Code, and all other applicable federal, state, and local codes relative to unstable soil conditions. The proposed project site and surroundings are relatively flat, and the potential for landslides does not exist. The impact would be less than significant, and no further study of this issue is required.

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

**No Impact.** Based on soil formations at HnGS, the proposed project would not encounter expansive soils. No impact would occur, and no further study of this issue is required.

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

**No Impact.** The HnGS is currently served by an on-site sewage treatment facility for wastewater disposal. The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. It would not increase the number of personnel on site or require an expansion of the existing wastewater treatment facility for sanitary waste purposes. No septic tanks or alternative wastewater disposal system would be included. No impact would occur, and no further study of this issue is required.

## VII. HAZARDS AND HAZARDOUS MATERIALS

**Would the project:**

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

**Less Than Significant Impact.** See discussion under item *b*, below.

**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?**

**Less Than Significant Impact.** Although construction of the proposed project may involve the transport, storage, and use of some hazardous materials (e.g., on-site fueling and servicing of construction equipment), such construction-related activities would be temporary in nature and would not be expected to create a significant hazard to workers or the community either from routine use of the materials or a reasonably foreseeable accident. All construction activities involving hazardous materials would be subject to federal, state, and local health and safety requirements involving transport, use, storage, and disposal.

The operation of the proposed project would involve the use of potentially hazardous materials, including natural gas to fuel the CT units and aqueous ammonia and catalysts used in the SCR systems of the CT units to reduce air pollutant emissions. All of these materials are currently used at HnGS related to the operation of the existing generator units. Relative to the transport, use, and, when necessary, disposal of these materials during operations, they would be handled and contained in accordance with government regulations and industry standards, including the LADWP Risk Management Plan for HnGS.

The proposed SCGS would consist of six individual 100-MW CT generator units that would be fueled with natural gas. As is the case with the existing generator units at HnGS, natural gas would be supplied to the proposed units by continuous feed from existing gas company lines. There would be no storage of natural gas on site. The natural gas used for the proposed generator units would replace that currently used for existing Units 5 and 6, which have a combined generating capacity of 600 MW and which would be removed from service as part of the proposed project. Therefore, under the proposed project, there would be no increased hazard to the public or the environment resulting either from routine use or a reasonably foreseeable accident involving natural gas.

The proposed project would employ catalysts in the SCR systems to reduce air emissions. These catalysts would be vanadium-based on a titanium support matrix. They are a toxic solid but would not be in a form that could catch fire, be introduced into the storm water system, or be dispersed by the wind, limiting the potential for off-site impacts. Spent SCR catalysts would be recycled or disposed of properly, and no significant hazard to the public or the environment resulting either from routine use or a reasonably foreseeable accident involving the catalyst material is anticipated.

The proposed CT units would each employ a SCR system to reduce NOx air emissions. The SCR systems would utilize aqueous ammonia (a solution consisting of 29.5% ammonia and 70.5% water) for this purpose. A release of toxic gas could occur from vapors that would emanate from an accidental spill of the ammonia solution. Aqueous ammonia is currently stored at HnGS site for use in SCR systems associated with the existing steam boiler units (Units 1, 2, 5, and 6) and the CCGS (in the HRSGs associated with Units 9 and 10). The ammonia is currently stored in five 37,500-gallon aboveground storage tanks. A sixth 37,500-gallon tank is kept unfilled in the event that one of the other tanks must be emptied. These tanks would remain in the same location and continue to operate after completion of the proposed project. It is estimated that under similar operating parameters, the proposed SCGS (Units 11 through 16) would use an equal or lesser amount of ammonia than the existing steam generators (Units 5 and 6) it would replace. No increase in the existing storage capacity or the rate of use or delivery of ammonia would be

required for the proposed project. Therefore, there would be no increased hazard to the public or environment resulting either from routine use or a reasonably foreseeable accident involving the transport, storage, and use of ammonia.

The proposed project does not create an increased hazard to the public or the environment related to the routine use or reasonably foreseeable accident involving hazardous materials. The impact would be less than significant, and no further study of this issue is required.

**c) 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.** The nearest schools to HnGS are Kettering Elementary School (Long Beach Unified School District), which is approximately 0.4 miles to the west; Hill Middle School (Long Beach Unified School District), which is approximately 0.5 miles to the northwest; and Hopkinson Elementary School (Los Alamitos Unified School District), which is approximately 0.6 miles to the northeast. No schools are located within one-quarter mile of HnGS. No impact would occur, and no further study of this issue is required.

**d) Be located on a site which 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?**

**No Impact.** Government Code Section 65962.5 refers to a list of facilities that may be subject to the Resource Conservation and Recovery Act (RCRA) corrective action program. HnGS is listed on the database (*Environmental Protection Agency Envirofacts Data Warehouse, RCRAInfo Database*) because the facility is a generator of hazardous waste. HnGS is not on a list of known contaminated sites nor is it subject to corrective action. Hazardous wastes from the facility are managed in accordance with applicable federal, state, and local rules and regulations. The hazardous waste generated from proposed project activities would consist primarily of spent catalyst, which is not expected to present a significant risk to human health or the environment. The catalyst would be disposed or recycled at an approved facility. No impact would occur, and no further study of this issue is required.

**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 for people residing or working in the project area?**

**No Impact.** See discussion under item *f*, below.

**f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** The proposed project is not located within an airport land use plan area or within two miles of a public airport or public use airport. There are no general aviation airports or airstrips in the vicinity of HnGS. Long Beach Municipal Airport (LGB) is located approximately 3 miles to the northwest of HnGS. HnGS is located beneath the general approach pattern for Runway 30 and the departure pattern for Runway 12 at LGB. However, the approach/departure elevations for aircraft are well above HnGS such that the proposed project facilities would not represent a potential obstruction to air navigation. The Joint Forces Training Base (JFTB), Los Alamitos, (a non-public use airport) is located approximately 2 miles to the northeast of HnGS. However, the departure pattern for Runway 22L and the approach pattern for Runway 4R at the JTFB takes aircraft at least 1 mile east of HnGS. The proposed project would not interfere with air navigation

or contribute to an increased safety hazard for HnGS personnel related to local air operations. No impact would occur, and no further study of this issue is required.

**g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less Than Significant Impact.** The proposed project would be located in the interior of the existing HnGS site. It would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan for any area outside the station. Procedures for emergency response and evacuation are provided to all LADWP employees at the station. These procedures would be updated as necessary in the Risk Management Plan for HnGS to account for the proposed generator units and associated facilities. All personnel involved in the construction of the proposed project would also receive training regarding emergency response and evacuation measures at the station during the construction phase of the proposed project. The impact would be less than significant, and no further study of this issue is required.

**h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**No Impact.** The proposed project site is located in an urbanized area, surrounded primarily by existing industrial and residential development, and is not subject to risk from wildland fires. No impact would occur, and no further study of this issue is required.

## VIII. HYDROLOGY AND WATER QUALITY

**Would the project:**

**a) Violate any water quality standards or waste discharge requirements?**

**Potentially Significant Impact.** Construction activities would comply with applicable requirements of the RWQCB, including compliance with NPDES permit regulations. BMPs would be employed during project construction to control any potential erosion or siltation impacts related to construction activities. Compliance with NPDES requirements would ensure that construction impacts are less than significant and no further study is required.

The handling of all wastewater generated during operations at HnGS is governed by the facility's NPDES discharge permit. The RWQCB issued Haynes NPDES permit (CA0000353, CI-2769), specifying waste discharge requirements for the period June 29, 2000 through May 10, 2005 (RWQCB 2000). In June 2004, the RWQCB amended the Haynes permit (via Order No. R4-2004-0089), to provide for the changes in discharge associated with the operation of the CCGS (Unit 8 uses once-through cooling) and the cessation of discharge from decommissioned Units 3 and 4. The amended permit also addresses several anticipated changes in regulations potentially affecting the plant's discharge, primarily related to the reclassification of the lower reach of the San Gabriel River adjacent to HnGS as an estuary (the existing permit's discharge limits are based on State Water Resources Control Board Ocean Plan standards for an enclosed bay). A timeframe was established for collecting new information that would be used to substantiate compliance with revised regulations or, in some cases justify modification of the established discharge parameters. As provided in the amended permit, LADWP continues to operate under the requirements of permit CA0000353 during the period that new information is developed and reviewed by RWQCB.

The permit for the HnGS related to discharge to the San Gabriel River is a complex instrument that regulates all parameters of the discharge including numeric limits on treated industrial waste constituents, storm water constituents and quantities, marine once-through cooling water flows, temperature of cooling water discharges, and other process related constituents such as chlorine and heavy metals. In addition, the permit is the regulatory instrument that implements the laws and requirements relating to entrainment and impingement of sea life on the plant's ocean water intake structures. The classification of the lower San Gabriel River as an estuary presents a number of issues to the plant's operational discharge that LADWP is currently addressing in consultation with RWQCB. This process is taking place concurrently with the proposed project but is on a separate time line.

The proposed SCGS would not utilize ocean water for cooling, but instead would utilize an air cooling system. Upon shutdown of Units 5 & 6, ocean water would cease to be drawn through the intake structures and discharged through the outlet structures of these units, and the maximum volume of ocean water required for cooling at HnGS would be reduced. Since the flow of ocean water associated with HnGS operations would change both in terms of intake from Alamitos Bay and discharge into the San Gabriel River, the impacts related to this change will be addressed in the EIR.

While the proposed SCGS would not utilize ocean water cooling, the existing Units 1, 2, and 8 would continue to rely on once-through ocean water cooling. As noted, waste discharge standards for the HnGS facility are in the amendment process, and LADWP is working with the RWQCB to develop appropriate technical data and renew the permit on a separate timetable. In that the proposed project represents a move away from once-through cooling and the permit considerations related to Units 1, 2 and 8 are on a separate time table, the EIR for the SCGS will not address the facility's waste discharge permit amendment or speculate about future changes in operations associated with the regulatory process. Consequently, the impact assessment for the proposed project in relation to the termination of the Units 5 & 6 cooling water system will focus on a comparative analysis of actual conditions in the marine environment surrounding HnGS before and after the implementation of the project, and the revised waste discharge regulations for the HnGS per se will not be addressed in the EIR.

**b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

**No Impact.** The proposed project would involve the construction of new generator units that would cover a relatively small surface area in HnGS. The proposed project would not require groundwater supplies or substantially interfere with groundwater recharge. No impact would occur, and no further study of this issue is required.

**c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?**

**Potentially Significant Impact.** See discussion under item *e*, below. The storm water drainage and control system for the site would be redesigned and will be evaluated in the EIR relative to the potential increase in erosion and siltation from surface runoff.

**d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increasing the rate or amount of surface runoff, in a manner which would result in flooding on or off site?**

**Potentially Significant Impact.** See discussion under item *e*, below. The storm water drainage and control system for the site would be redesigned and will be evaluated in the EIR relative to the potential increase in the rate or amount of surface runoff.

**e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?**

**Less Than Significant Impact.** The proposed project would involve the construction of new generator units and associated facilities that would cover a relatively small surface area in a location in the interior of the HnGS. The proposed SCGS and other project facilities would be located primarily in an area of HnGS that is currently surrounded by earthen containment dikes, from which runoff is directed through subsurface drainage structures to the Orange County flood control channel located along the eastern boundary of HnGS. The dikes would be removed as a result of project construction, and surface runoff would no longer be contained and directed to the existing subsurface drainage facilities. Under the proposed project, storm water runoff would be collected at new catchment devices and directed to a holding tank or basin in the east-central part of HnGS. The captured storm water would be detained, tested, treated as necessary, and released to the flood control channel at a controlled rate through existing discharge structures. The total surface area related to the proposed project contributing runoff to the flood control channel would not generally exceed the area that currently drains to the channel. The project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. The impact would be less than significant, and no further study of this issue is required.

Construction activities would comply with applicable requirements of the RWQCB, including compliance with NPDES permit regulations. BMP's would be employed during project construction to control any potential erosion or siltation impacts related to construction activities. Compliance with NPDES requirements would ensure a less than significant impact, and no further study of this issue related to construction is required.

**f) Otherwise substantially degrade water quality?**

**No Impact.** The proposed project would remove from service that portion of the once-through cooling water system associated with existing Units 5 and 6, the impacts of which will be addressed in the EIR as noted in item *a*, above. No other impacts that could substantially degrade water quality would occur and no further study of this issue is required.

**g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact**. The HnGS, within which the proposed project would be located, is not located within a 100-year flood hazard area as indicated on Federal Emergency Management Agency (FEMA) Flood Insurance zone maps for Los Angeles County (*LACDA Overflow Map, May 14, 2001*). The proposed project would not provide any new housing nor would it increase the risk related to flood hazard for existing housing in the vicinity currently located outside the 100-year flood hazard area. No impact would occur, and no further study of this issue is required.

**h) Place within a 100-year flood area structures to impede or redirect flood flows?**

**No Impact**. The HnGS, within which the proposed project would be located, is not located within a 100-year flood hazard area as indicated on FEMA Flood Insurance zone maps for Los Angeles County (*LACDA Overflow Map, May 14, 2001*). No impact would occur, and no further study of this issue is required.

**i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**No Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. It would not increase the risk of loss, injury, or death involving flooding on the site or in the vicinity. No impact would occur, and no further study of this issue is required.

**j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?**

**No Impact.** The proposed project would not increase the risk associated with seiche, tsunami, or mudflow at the site. It is considered unlikely that the HnGS would be significantly affected by tsunamis because the facility is located approximately two miles upstream from the point where the San Gabriel River enters San Pedro Bay. The facility is also protected by the dikes along the San Gabriel River and by its elevation (approximately ten feet) above the cooling water channel. The HnGS is not subject to seiche or mudflows. No impact would occur, and no further study of this issue is required.

## IX. LAND USE AND PLANNING

**Would the project:**

**a) Physically divide an established community?**

**No Impact.** The proposed project would be located in the interior of an existing fully developed industrial site and would not physically divide any established community. No impact would occur, and no further study of this issue is required.

**b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Impact.** HnGS, along with the Alamitos Generating Station, located across the San Gabriel River, forms Subarea 19 of the Southeast Area Development and Improvement Plan (SEADIP) of the City of Long Beach Local Coastal Plan. According to the SEADIP ordinance, Subarea 19 is a completely developed site of industrial use and is zoned PD-1 (Planned Development). The existing industrial use of the site is consistent with the PD-1 ordinance. In addition, the City of Long Beach has issued a categorical exclusion for HnGS from Local Coastal Plan permitting pursuant to the California Government Code (section 53091 et seq.), which exempts municipally owned electrical generation facilities from local regulation. No impact would occur, and no further study of this issue is required.

**c) Conflict with any applicable habitat conservation plan or natural community conservation plan?**

**No Impact.** The proposed project would be located in the interior of an existing fully developed industrial site that is not part of a habitat conservation plan or natural community conservation plan. No impact would occur, and no further study of this issue is required.

## X. MINERAL RESOURCES

**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?**

**No Impact.** No mineral resources are known to exist on the project site that would be affected by the proposed project. No impact would occur, and no further study of this issue is required.

**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?**

**No Impact.** The proposed project would not result in the loss of a locally important mineral resource. The project site is not located on significant mineral or energy deposits as mapped by the City of Long Beach or the state. No impact would occur, and no further study of this issue is required.

## XI. NOISE

**Would the project result in:**

**a) Exposure of persons to or generation of noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Potentially Significant Impact.** The proposed project would be located in the interior of an existing industrial site. However, the residential community of Leisure World, Seal Beach, is located along the eastern boundary of the HnGS. Although it is anticipated that the proposed generator units would run more quietly than the existing Units 5 and 6 that they would replace, the proposed project may expose persons to noise levels in excess of standards established in the local general plan or noise ordinance. Further evaluation of potentially significant impacts related to noise generated by the proposed project will be conducted in the EIR.

In addition, noise levels during construction could potentially expose nearby sensitive receptors (i.e., residential uses) to noise levels above established standards. Although this activity would be temporary, related to only the construction phase of the project, it may still be considered significant. Further evaluation of potentially significant impacts during the project construction phase will be conducted in the EIR.

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Potentially Significant Impact.** The operation of the proposed project is not expected to expose persons to excessive groundborne vibration or groundborne noise levels. However, certain activities during project construction, including the use of pile drivers, may expose persons to excessive groundborne noise levels. Although this impact would be temporary, related to only the

construction phase of the proposed project, it may still be considered significant. Further evaluation of potentially significant impacts related to groundborne noise generated by construction activities for the proposed project will be conducted in the EIR.

**c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Potentially Significant Impact.** The proposed project would be located in the interior of an existing industrial site. However, the residential community of Leisure World, Seal Beach, is located along the eastern boundary of the HnGS. Although it is anticipated that the proposed generator units would run more quietly than the existing Units 5 and 6 that they would replace, the proposed project would add some additional sources of operational noise (e.g., the air cooling system). As a result, there may be a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Further evaluation of potentially significant impacts related to noise generated by the proposed project will be conducted in the EIR.

**d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Potentially Significant Impact.** A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project may occur related to project construction. Although this impact would be related to only the construction phase of the proposed project, it may still be considered significant. Further evaluation of potentially significant impacts related to noise generated by construction activities for the proposed project will be conducted in the EIR.

**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 expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The proposed project is not located within an airport land use plan area or within two miles of a public airport or public use airport. HnGS is located approximately two miles from the JFTB, Los Alamitos. Based on the approach-departure flight tracks of aircraft using the base, the proposed project site is well outside the 60 Community Noise Level Equivalent contour, and people working in the project area would not be exposed to excessive noise levels related to aircraft operations at the base. No impact would occur, and no further study of this issue is required.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The proposed project is not located within the vicinity of a private airstrip. No impact would occur, and no further study of this issue is required.

## XII. POPULATION AND HOUSING

**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)?**

**No Impact.** The proposed project would provide no new homes or businesses. The project would not increase the power generating capacity at the station, and therefore, the project would not

indirectly induce population growth in the area in the context of total power generation and demand for the Southern California region. No impact would occur, and no further study of this issue is required.

**b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The proposed project is located within a fully developed industrial site owned by the LADWP and would not displace any existing housing. No impact would occur, and no further study of this issue is required.

**c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The proposed project is located within a fully developed industrial site owned by the LADWP and would not displace any people. No impact would occur, and no further study of this issue is required.

## XIII. PUBLIC SERVICES

**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:**

**i) Fire protection?**

**No Impact.** Fire protection for the HnGS is provided by the City of Long Beach Fire Department. The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the current HnGS property boundaries, and no new or expanded fire protection services would be required at the site. No impact would occur, and no further study of this issue is required.

**ii) Police protection?**

**No Impact.** Police protection for the HnGS is provided by the City of Long Beach Police Department and LADWP security personnel. The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the current HnGS property boundaries, and no new or expanded police protection services would be required at the site. No impact would occur, and no further study of this issue is required.

**iii) Schools?**

**No Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. It would not result in demand for new or expanded schools. No impact would occur, and no further study of this issue is required.

**iv) Parks?**

**No Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property

boundaries. It would not result in demand for new or expanded parks. No impact would occur, and no further study of this issue is required.

**v) Other public facilities?**

**No Impact.** The proposed project would not increase the need for other new or expanded government facilities. No impact would occur, and no further study of this issue is required.

## XIV. RECREATION

**Would the project:**

**a) 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?**

**No Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. It would not increase the use of existing neighborhood or regional parks or other recreational facilities. No impact would occur, and no further study of this issue is required.

**b) Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**No Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. It does not include recreational facilities or require the construction or expansion of recreational facilities. No impact would occur, and no further study of this issue is required.

## XV. TRANSPORTATION/TRAFFIC

**Would the project:**

**a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?**

**Potentially Significant Impact.** The proposed project would construct a 600-MW electrical SCGS, which includes six natural gas-fired CTs and appurtenant facilities. Operation of the proposed project would not cause any increase in traffic in relation to the existing traffic load and capacity of the street system because it would not significantly increase beyond current levels the number of workers or vehicles required to operate facilities at the station. Currently, on a normal day shift, there are approximately 125 employees on site at HnGS.

Construction of the proposed project would require a large workforce and the delivery of large quantities of material and equipment to the site. This condition would be temporary, related to only the construction phase of the proposed project. However, project construction may cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. Further evaluation of potentially significant impacts related to traffic generated by construction activities for the proposed project will be conducted in the EIR.

**b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

**Potentially Significant Impact.** Operation of the proposed project would not substantially increase the amount of daily traffic visiting the HnGS facility or exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. No further analysis of this issue related to project construction is required.

Construction of the proposed project would require a large workforce and the delivery of large quantities of material and equipment to the site. This condition would be temporary, related to only the construction phase of the proposed project. However, construction traffic may exceed a level of service standard established by the county congestion management agency for designated roads or highways. Further evaluation of potentially significant impacts related to traffic generated by construction activities for the proposed project will be conducted in the EIR.

**c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The proposed project would include exhaust stacks on the new SCGS units; however, these stacks would be considerably lower than any of the existing stacks on the site and would not create significant hazards to navigation or require changes in approach patterns at Long Beach Airport. No impact would occur, and no further analysis of this issue is required.

**d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Potentially Significant Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. There would be no construction of new off-site roads or modifications to existing off-site roads. No incompatible uses on off-site roads would result from the proposed project. However, trucks turning into and out of the site during construction could create a hazard to through traffic because of large loads and slow speeds. Further evaluation of potentially significant impacts related to hazards due to incompatible uses during project construction will be conducted in the EIR.

**e) Result in inadequate emergency access?**

**No Impact.** The proposed project would not result in inadequate emergency access. Construction activities would take place within the existing HnGS property boundaries, and would not impact existing emergency access to the station or to locations outside the station. During project operation, no changes would occur at HnGS that would significantly affect emergency access to the site. No impact would occur, and no further study of this issue is required.

**f) Result in inadequate parking capacity?**

**No Impact.** Operation of the proposed project would not result in inadequate parking capacity because it would not significantly increase beyond current levels the number of workers or vehicles required to operate facilities at the station, which currently has adequate parking area to accommodate personnel and operations vehicles. All construction-related vehicles and equipment and construction worker vehicles would be stored within the boundaries of the HnGS and would not impact off-site parking. No impact would occur, and no further study of this issue is required.

**g) Would the project conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

**No Impact.** The proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Construction activities would take place entirely within the boundaries of the HnGS and would not require the removal or relocation of alternative transportation facilities (i.e., bus stops and bike lanes). Accordingly, no impacts to alternative transportation would occur, and no further study of this issue is required.

## XVI. UTILITIES AND SERVICE SYSTEMS

**Would the project:**

**a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**Less Than Significant Impact.** See discussion under item *b*, below.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The proposed project provides for the removal from service of two existing steam generators (Units 5 and 6, with a combined total of 600 MW generating capacity) and the construction of a new 600-MW SCGS within the existing HnGS property boundaries. It would not result in a significant increase in the number of personnel at the station during project operations; therefore, no significant increase in sanitary wastewater is anticipated.

The SCGS would generate industrial wastewater, primarily related to reject water from treatment processes necessary to provide purified water that would be injected into the gas turbine combustors to help control NOx emissions and from the SCGS evaporative cooler. The SCGS wastewater would be routed to on-site wastewater treatment facilities, and, after appropriate treatment, eventually discharged at a controlled rate to the San Gabriel River through the existing HnGS cooling water circulation system. This would not represent a significant change from existing operations at HnGS. Industrial wastewater generated by existing Units 1, 2, 5, 6, 8, 9, and 10 is currently treated on site and discharged through the cooling water circulation system. Because Units 5 and 6 would cease operations after completion of the proposed project, the existing on-site wastewater treatment system, in its current configuration or with appropriate modification, would adequately accommodate wastewater flows from the proposed SCGS. No new off-site water or wastewater treatment facilities or expansion of existing off-site facilities would be required. The impact would be less than significant, and no further study of this issue is required.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The proposed SCGS would be located primarily in an area of HnGS that is currently surrounded by earthen containment dikes, from which runoff is directed through subsurface drainage structures to the Orange County flood control channel located along the eastern boundary of HnGS. The dikes would be removed as a result of project construction, and surface runoff would no longer be contained and directed to the existing subsurface drainage

facilities. Under the proposed project, storm water runoff would be collected at new catchment devices and directed to a holding tank or basin in the east-central part of HnGS. The captured storm water would be detained, tested, treated as necessary, and released to the flood control channel at a controlled rate through existing discharge structures. The total surface area related to the proposed project contributing runoff to the flood control channel would not generally exceed the area that currently drains to the channel. No new off-site storm water drainage facilities or expansion of existing off-site facilities would be required. The impact would be less than significant, and no further study of this issue is required.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Potentially Significant Impact.** The SCGS would require water primarily for injection into the gas turbine combustor to help control NOx emissions and for air inlet evaporator cooling during hot weather conditions to enhance the turbine output and performance. The estimated instantaneous water flow requirement for all six units of the SCGS is 1,040 gallons per minute. The project annual usage is estimated at 503 acre-feet based on a 30% annual capacity factor for the SCGS up to 1,006 acre-feet based on a 60% annual capacity factor. A portion of the water imported to HnGS for the project would be lost as reject related to water treatment processes necessary to provide purified water for use in the SCGS. It is currently anticipated that project water would be supplied from City of Long Beach reclaimed water sources. However, these reclaimed sources may not be available during the initial operating period for the proposed project. Furthermore, backup supplies of water would be required in the event that the reclaimed water source was temporarily unavailable. Although water supplies have been preliminarily identified to accommodate project needs, and although these needs are anticipated to be generally equivalent to those for existing generation Units 5 and 6 (which would be removed from service by the proposed project), new or expanded entitlements may be required. The impacts related to water supply are potentially significant, and this issue will be examined further in the EIR.

**e) 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.** HnGS is not served by a municipal or other wastewater treatment provider. All wastewater is treated on site. The proposed project provides for the removal from service of two existing steam generators (Units 5 and 6, with a combined total of 600 MW generating capacity) and the construction of a new 600-MW SCGS within the existing HnGS property boundaries. It would not result in a significant increase in the number of personnel at the station during project operations; therefore, no significant increase in sanitary wastewater is anticipated.

The SCGS would generate industrial wastewater, primarily related to reject from water treatment processes necessary to provide purified water that would be injected into the gas turbine combustors to help control NOx emissions and from the SCGS evaporative cooler. The SCGS wastewater would be routed to the on-site wastewater treatment facility, and, after appropriate treatment, eventually discharged at a controlled rate to the San Gabriel River through the existing HnGS cooling water circulation system. This would not represent a significant change from existing operations at HnGS. Industrial wastewater generated by existing Units 1, 2, 5, 6, 8, 9, and 10 is currently treated on site and discharged through the cooling water circulation system. Because Units 5 and 6 would cease operations after completion of the proposed project, the existing on-site wastewater treatment system, in its current configuration or with appropriate

modification, would adequately accommodate wastewater flows from the proposed SCGS. The proposed project would not increase the current wastewater treatment requirements for the station such that the service of a wastewater treatment provider would be required. The impact would be less than significant, and no further study of this issue is required.

**f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less Than Significant Impact.** The proposed project provides for the removal from service of two existing power generator units and the construction of a new SCGS within the existing HnGS property boundaries. Its operation would not significantly increase the solid waste disposal needs for HnGS such that the landfill that serves the site would exceed its permitted capacity. Small amounts of hazardous waste would be generated during proposed project operations. Over time, the catalyst material used in the SCR process loses its effectiveness and must be replaced. The spent catalyst would be recycled, or it would be transported by a licensed hazardous waste transporter to a permitting hazardous waste treatment, storage, or disposal facility. There are currently three Class I (hazardous waste) landfills located in California, and hazardous wastes can also be transported to permitted facilities outside California. The relatively small amount of hazardous waste generated by the proposed project would not contribute significant quantities of material to these facilities.

The construction of the proposed project would temporarily generate increased solid waste at the site. Construction debris would be recycled or transported to a landfill site and disposed of appropriately. In accordance with AB 939, LADWP's construction contractor would ensure that source reduction techniques and recycling measures are incorporated into project construction. The amount of debris generated during project construction is not expected to significantly impact landfill capacities. The impact would be less than significant, and no further analysis of this issue is required.

**g) Comply with federal, state, and local statutes and regulations related to solid waste?**

**No Impact.** The proposed project would be located within the existing HnGS property boundaries. Solid wastes at the station are currently accumulated, handled, and disposed in accordance with federal, state, and local regulations. Since the proposed project is a modification to this existing facility, solid wastes would continue to be managed in accordance with these regulations.

During construction and operation of the proposed project, LADWP would comply with all City and state solid waste diversion, reduction, and recycling mandates, including compliance with the County-wide Integrated Waste Management Plan. No impact would occur, and no further study of this issue is required.

## XVII. 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?**

**Potentially Significant Impact.** The proposed project would be located entirely within the boundaries of the existing HnGS, which is a fully developed industrial site. As discussed in

Section IV, habitat or other favorable conditions for sensitive terrestrial plant species do not exist on the project site. The lack of vegetative habitat and the noise created by power generation equipment make the site of low interest to wildlife.

However, while no construction activities related to the proposed project would occur in either the circulating water channel or the San Gabriel River, as discussed in Sections IV and VIII, the proposed SCGS would not utilize the existing once-through cooling water system and that portion of the once-through cooling water system associated with existing Units 5 and 6 would be removed from service, reducing intake volumes at HnGS and discharge volumes at the river channel. This reduced flow of ocean water in the HnGS cooling water system could result in potentially significant adverse impacts to common and sensitive marine biota, and the issue will be analyzed further in the EIR.

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

**Potentially Significant Impact.** The proposed project may have impacts that have been identified in the Initial Study as individually limited, but may be cumulatively considerable, depending on other current or probable future projects in the vicinity. The EIR will evaluate potential project-related cumulative impacts.

As discussed Section II, the proposed project could contribute to cumulative air quality impacts within a region that is non-attainment for $O_3$, $PM_{10}$, and $PM_{2.5}$. The production of GHG related to project construction and operations could result in cumulative impacts that contribute to global warming. Cumulative noise and traffic impacts could also occur during project construction. These impacts are potentially significant and will be discussed further in the EIR.

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

**Potentially Significant Impact.** As discussed in Sections III, XI, and XV, environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly, may occur from implementation of the proposed project. Further evaluation of potentially significant impacts will be conducted in the EIR relative to air quality (related to project operation and project construction); noise (related to project operation and project construction); and transportation/traffic (related to project construction).

# SECTION 4
# LIST OF PREPARERS, ACRONYMS, AND REFERENCES

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## ACRONYMS

| | |
|---|---|
| AQMP | Air Quality Management Plan |
| BMPs | best management practices |
| CAA | Clean Air Act |
| Caltrans | California Department of Transportation |
| CCGS | Combined Cycle Generating System |
| CEQA | California Environmental Quality Act |
| CO | carbon monoxide |
| CT | Combustion Turbine |
| EIR | Environmental Impact Report |
| FEMA | Federal Emergency Management Agency |
| GHG | greenhouse gases |
| HnGS | Haynes Generating Station |
| HRA | Health Risk Assessment |
| HRSG | Heat Recovery Steam Generator |
| JFTB | Joint Forces Training Base (Los Alamitos) |
| LADWP | Los Angeles Department of Water and Power |
| LGB | Long Beach Airport |
| MW | megawatt |
| NOP | Notice of Preparation |
| NOx | nitrogen oxides |
| NPDES | National Pollution Discharge Elimination System |
| $O_3$ | ozone |
| $PM_{10}$ | particulate matter less than 10 microns in diameter |
| $PM_{2.5}$ | particulate matter less than 2.5 microns in diameter |
| RCRA | Resource Conservation and Recovery Act |
| RWQCB | Regional Water Quality Control Board |
| SCAB | South Coast Air Basin |
| SCAQMD | South Coast Air Quality Management District |
| SCGS | Simple Cycle Generating System |
| SCR | Selective Catalytic Reduction |
| SEADIP | Southeast Area Development and Improvement Plan |
| VOCs | volatile organic compounds |

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