Planning Division
305 West Third Street
Oxnard, CA 93030
805/385-7858
FAX 805/385-7417

INITIAL STUDY
NEGATIVE DECLARATION 07-02

MANDALAY PEAKER PROJECT, SOUTHERN CALIFORNIA EDISON
COASTAL DEVELOPMENT PERMIT PZ 06-400-5

251 N. HARBOR BOULEVARD, OXNARD, CALIFORNIA
May 11, 2007

Introduction

This *Initial Study* has been prepared in accordance with relevant provisions of the *California Environmental Quality Act (CEQA) of 1970*, as amended, and the CEQA *Guidelines* as revised. *Section 15063(c)* of the CEQA *Guidelines* indicates that the purposes of an Initial Study are to:

1. Provide the Lead Agency (i.e., the City of Oxnard) with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration;

2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to quality for a Negative Declaration;

3. Assist the preparation of an EIR, if one is required, by:
   - Focusing the EIR on the effects determined to be significant;
   - Identifying the effects determined not to be significant;
   - Explaining the reasons why potentially significant effects would not be significant; and
   - Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.

4. Facilitate environmental assessment early in the design of a project;

5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;

6. Eliminate unnecessary EIRs; and

7. Determine whether a previously prepared EIR could be used with the project.

The City of Oxnard *Threshold Guidelines - Initial Study Assessment* (February 1995) was used along with other pertinent information for preparing the *Initial Study* for this project.

The purpose of the *Threshold Guidelines* is to inform the public, project applicants, consultants and City staff of the threshold criteria and standard methodology used in determining whether or not a project (individually or cumulatively) could have a significant effect on the environment. Furthermore, the *Threshold Guidelines* provide instructions for completing the *Initial Study* and determining the type of environmental document required for individual projects.

Determining the significance of environmental impacts is a critical and often controversial aspect of the environmental review process. It is critical because a determination of significance may require that the project be substantially altered, or that mitigation measures be readily employed to avoid the impact or reduce it below the level of significance. If the impact cannot be reduced or avoided, an Environmental Impact Report (EIR) must be prepared. An EIR is a detailed statement that describes and analyzes the significant environmental impacts of a proposed project, discusses ways to reduce or avoid them, and suggests alternatives to the project, as proposed. The preparation of an EIR can be a costly and time-consuming process.

Determining the significance of impacts is often controversial because the decision requires staff to use their judgment regarding a subject that is not clearly defined by the law. The State CEQA *Guidelines* define the term "significant impact on the environment" as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. However, there is no iron-clad definition of what constitutes a substantial change because the significance of an activity may vary according to location.

To help clarify and standardize decision-making in the environmental review process, Oxnard has developed thresholds of environmental significance. Thresholds are measures of environmental change that are quantitative for subjects like noise, air quality, and traffic; and qualitative for subjects like aesthetics, land use compatibility, and biology. These thresholds are used in the absence of other empirical data to define the significance of impacts. For some projects, however, special studies and/or the professional judgment of City staff may enter into the decision-making process. Therefore, Oxnard's thresholds are intended to serve as guidelines, and to augment existing CEQA provisions governing the definition of significance.

The City's environmental thresholds will be periodically updated as new information becomes available, or as standards regarding acceptable levels of environmental change are reevaluated. For example, the air quality thresholds adopted by Oxnard were established through State and Federal legislation. These standards, and the methodology used to compute them, may change over time. When this occurs, the City will evaluate the data and, if necessary, modify the thresholds to reflect improved awareness.

When other agencies have jurisdiction over a given site, the project proponent will have to meet the design, mitigation, and monitoring requirements imposed by those agencies, as well as any additional requirements established by the City of Oxnard.

CITY OF OXNARD

INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Southern California Edison Mandalay Bay Peaker Generator

2. Lead Agency Name and Address:

   City of Oxnard
   Planning Division
   305 West Third Street
   Oxnard, CA 93030

3. Contact Person and Phone Number:

   Christopher Williamson, Senior Planner
   (805) 385-8156 Chris.Williamson@ca.oxnard.ca.us

4. Project Location: 251 N. Harbor Boulevard, Oxnard, California.

5. Project Applicant Name and Address:

   Southern California Edison
   2244 Walnut Grove Avenue
   Rosemead, CA 91770

6. Coastal (General) Plan Designation: Public Utility/Energy Facility (PUEF)

7. Coastal Zoning: Coastal Energy Facility (EC)

8. Description of Project:

Project Overview

Southern California Edison Company (SCE) proposes a 45-Megawatt (MW) "peaker" generator that will be operated primarily during periods of peak power demand when the electrical grid system needs additional usable electric power capacity, or when power is needed for the electrical distribution grid to maintain voltages within an acceptable range. The project facilities will include one natural gas-fired General Electric (GE) LM6000 gas turbine generator, pollution control equipment including a selective catalytic reduction (SCR) system and an oxidation catalyst, an 80-foot tall exhaust stack, a 10,500-gallon 19-percent aqueous ammonia storage tank, fuel gas supply line, fuel gas compressor, water supply line, water demineralizer, two water storage tanks, transformers, 66 kilovolt (kV) transmission tap line, a natural gas-fired "black-start" generator that can be independently started, a power control module, a 65- by 75-foot customer substation, and a 40- by 75-foot gas metering station.

Project Location

The proposed equipment will be installed at 251 N. Harbor Boulevard, in Oxnard, on property owned by SCE within an area approximately 220- by 320-foot in size. The site is bounded on the north by the existing Reliant Energy Mandalay Power Plant facility and channel; on the west by an existing oil processing facility, coastal dunes, and the Mandalay state beach and the Pacific Ocean; on the east by Harbor Boulevard, undeveloped SCE-owned land, and agricultural fields; and on the south by an access road; two operating oil pumps, and state and city-owned coastal dunes. Located across Harbor Boulevard and approximately 750 feet southeast of the proposed site is an under-development residential project known as Northshore at Mandalay Bay with 292 units. The proposed project site was a former tank farm that served the adjacent Mandalay Power Generation facility. A site location map and aerial photograph of the facility are provided as **Figures 1** and **2**, respectively. A detailed plot plan can be found in **Appendix B**.

Required Permits

The proposed project requires a Coastal Development Permit from the City of Oxnard and an Authority to Construct / Permit to Operate from the Ventura County Air Pollution Control District (VCAPCD).

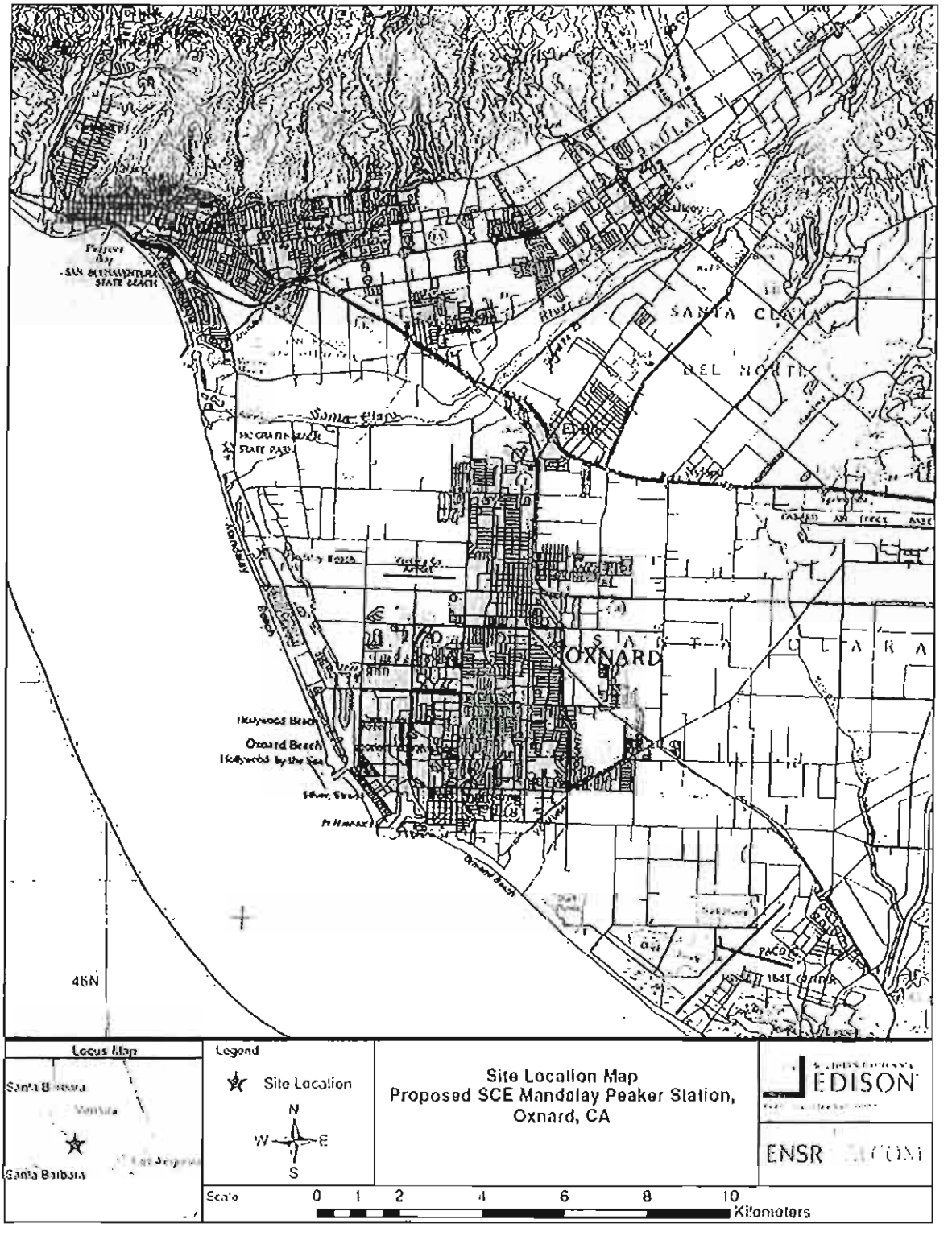

Figure 1 Site Location Map

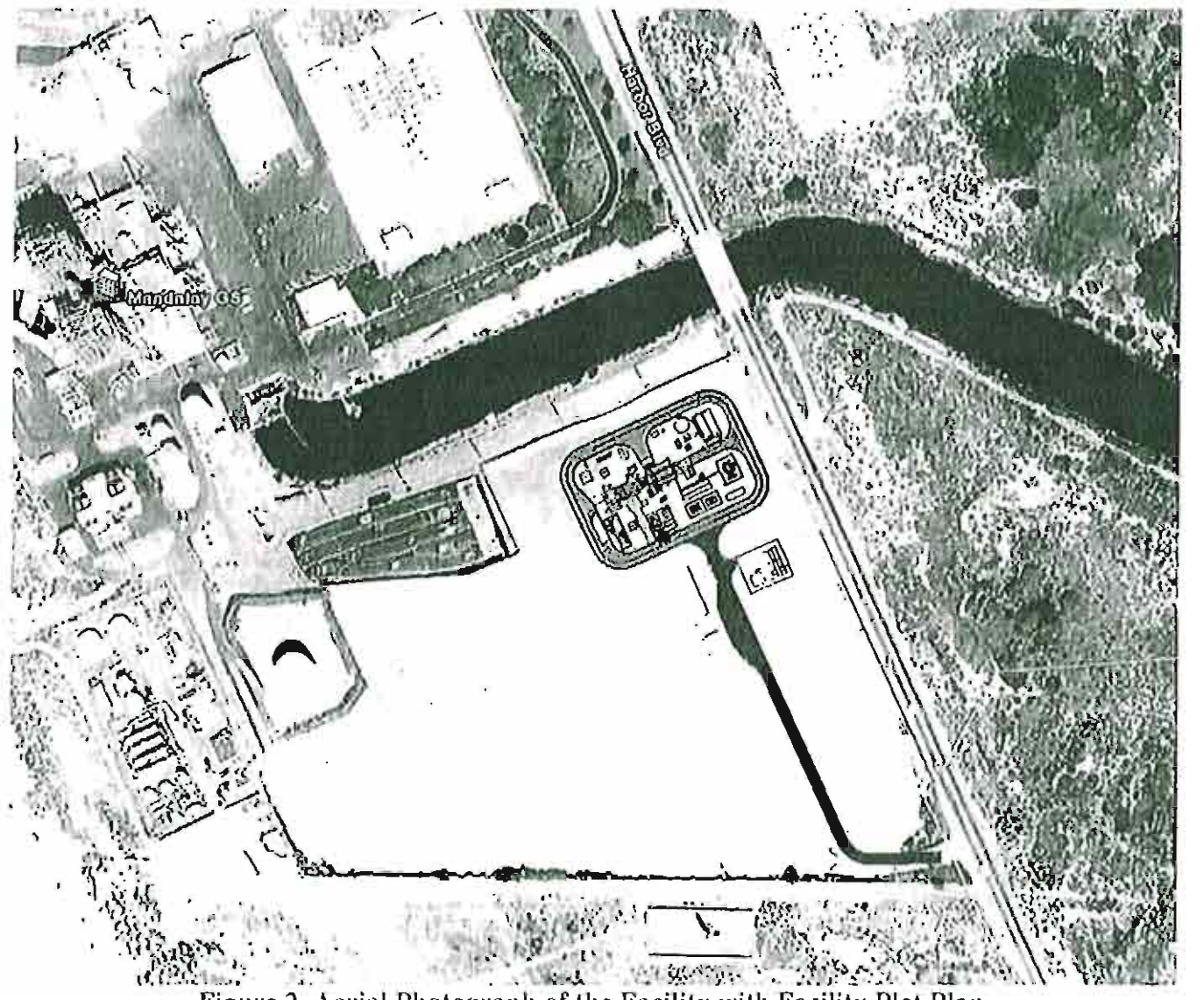

Figure 2 Aerial Photograph of the Facility with Facility Plot Plan

Project Background

On August 15, 2006, the California Public Utilities Commission (CPUC) issued an Assigned Commissioner's Ruling (ACR) addressing electric reliability needs in Southern California for summer 2007. The ACR also included reference to the California Independent System Operator's (CAISO) August 9, 2006 letter (CAISO 2006) to the CPUC "... urge[ing] the CPUC to direct the state's investor-owned utilities ... to solicit a combination of quick-start generation and demand response opportunities that can be developed over the next six to 12 months to increase available supply at the peak hours and enhance grid reliability." A copy of the ACR is provided in Appendix A.

SCE is taking steps to install five peaker generator projects either within or near existing substations at five locations around southern California as listed in **Table 1**. **Figure 3** shows the relative locations of the proposed facilities. The proposed Mandalay project is one of the five peaker projects and is the only one located within Ventura County and on the coast. These five peaker projects will enhance the reliability of the electric grid system in the region.

Table 1

Five Proposed Peaker Generator Projects

Proposed Peaker Plant	Location	MW
Center	City of Norwalk	45
Barre	City of Stanton	45
Etiwanda	City of Rancho Cucamonga	45
Mira Loma	City of Ontario	45
Mandalay	City of Oxnard	45

The proposed peaker units will be connected to the local lower-voltage distribution grid. The unit(s) will be used to supply local electricity needs and sustain local distribution voltages within acceptable limits during times of system strain or imbalance. Such strains on the system can occur during periods of prolonged high demand, when a high-voltage transmission line goes out of service, or when a generator unexpectedly goes offline. Adequate voltage support results in electric power of higher quality, which benefits industrial and electronic equipment. Without sufficient grid support, electric grid imbalances or system strains can result in a "cascading blackout," which could leave portions of the southern California electrical grid system without power.

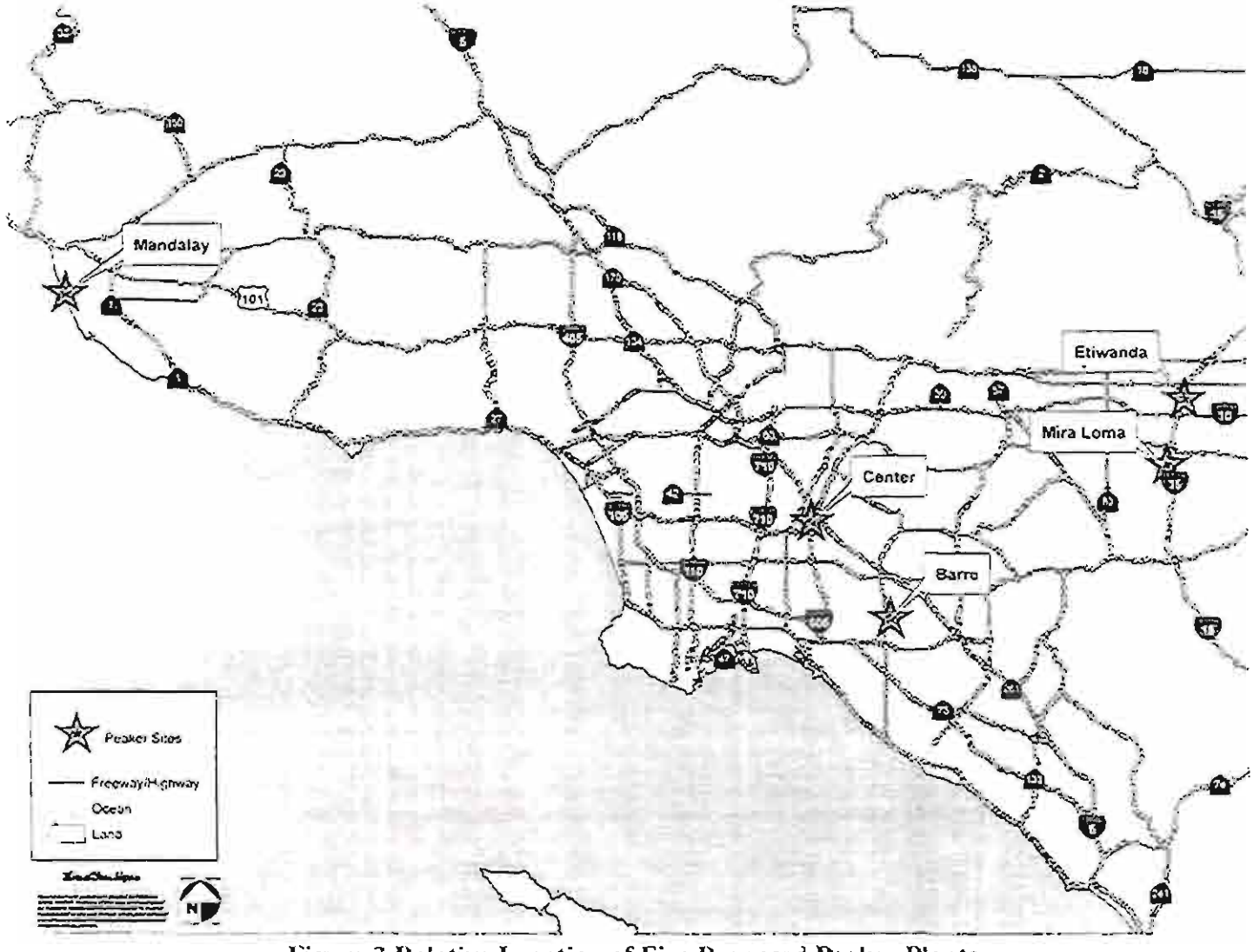

Figure 3 Relative Location of Five Proposed Peaker Plants

Finally, the proposed peaker unit is being strategically sited near an existing generating station to provide "black start" capability. In the event that the local electrical system does experience a blackout, the peaker will be able to start without the rest of the system in operation. It can then be used to start other local generating stations and bring the electrical system back on line quickly and efficiently.

Project Plans

Site (S1-S3), elevations (S4), grading (G1), and landscape plans (L1-L4) are included as Appendix B.

Equipment Description

Combustion Turbine Generator. The Oxnard facility will include one GE LM6000 gas turbine generator with a rated net output of approximately 45 MW. The turbine consists of a heavy-duty, single-shaft, combustion turbine-generator and associated auxiliary equipment. The turbine is designed to fire natural gas only. The turbine is capable of stable operation at 50 to 100 percent load while meeting specified emissions performance criteria. The turbine is equipped with accessories required to provide efficient, safe, and reliable operation, including the following:

- Inlet air filters and on-line filter cleaning system,
- Evaporative inlet air coolers,
- On-line and off-line compressor wash system,
- Fire detection and protection system,
- Lubrication oil system, including oil coolers and filters,
- Generator coolers,
- Starting system, auxiliary power system, and control system, and
- Acoustical enclosures designed for outdoor service.

Emission controls for the combustion turbine include water injection and a Selective Catalytic Reduction (SCR) system with 19 percent aqueous ammonia injection for nitrogen oxide (NO_x) emissions control. An oxidation catalyst will be provided for reactive organic compounds (ROC) and carbon monoxide (CO) emissions control. NO_x, CO and sulfur oxides (SO_x) emissions from the turbine will be monitored using a Continuous Emissions Monitoring System (CEMS). An 80-foot stack will exhaust turbine emissions.

Black Start Generator. The Mandalay Peaker Project will have a natural gas-fired Waukesha VGF Series Gas Enginator Generating System. The engine is rated at 865 horsepower (Hp) and produces 645 kilowatt (KW) of electric power. The engine is a lean-burn, four stroke, turbocharged engine that meets U.S. Environmental Protection Agency (EPA) Tier 2 engine standards. This generator is used for "black start" capability for the facility.

Support Equipment. The support equipment at the facility will include the following:

- 19 percent aqueous ammonia storage tank (10,500 gallons)
- Fuel gas compressor, electric powered (800 Hp)
- Water demineralizer system and deionized water storage tank (50,000 gallons)
- Fire water storage tank (180,000 gallons)
- Transformers, and
- Power Control Module.

Ancillary Facilities

Landscaping and Roads. Landscaping designed to blend in with existing and planned landscaping in the vicinity will be installed along the full length of the SCE property line fronting Harbor Boulevard. A new access road will also be constructed onsite to connect the project facility to the existing site entrance.

Temporary Construction Areas. In addition to the locations where project facilities will be constructed, an approximately 450- by 450-foot construction staging or "laydown" area will be required adjacent to the project site to store supplies and materials that are delivered to the site prior to installation. Construction office trailers and temporary parking space for peaker and pipeline construction workers will also be provided onsite. These activities will utilize the full extent of the site property while construction activities are ongoing. See **Figure 4** for the estimated layout of construction facilities.

Electrical Transmission Substation. The project will require the construction of a new electrical transmission substation approximately 65- by 75-foot in size just to the south of the proposed peaker site. This facility will contain deadend structures, an electrical breaker, disconnects, and a mechanical electrical equipment room, to ensure safe operation of the transmission system.

Electrical Interconnection. The peaker plant will tap into an existing 66kV transmission line located east of Harbor Boulevard and approximately 500 feet to the northeast of the proposed project site. **Figure 5** shows the conceptual layout of the transmission line connection. This connection will require the installation of approximately 200 circuit feet of new transmission line to connect the peaker to the new transmission substation and an additional 1,350 circuit feet of new transmission line between the new substation and the existing 66 kV transmission line. The routing of the transmission line will require placement of two 55-60 foot tall wood power poles within the project site to connect the peaker to the new transmission substation.

After the line exits the substation, it will cross Harbor Boulevard at right angles. This will require the placement of two 55-65 foot tall wood power poles south of the substation to route the line to the point where it will cross Harbor Boulevard. After the line crosses Harbor Boulevard, it will be routed along an existing transmission corridor on the east side of the street. In order to accommodate the weight of the new transmission line, provide sufficient ground clearance for safety purposes, and route the line to the appropriate tap point on the existing 66 kV transmission line east of Mandalay Substation.

approximately six wood power poles from the existing transmission corridor will be replaced with new wood power poles in the same or nearby locations, and approximately four additional wood power poles will be added in new locations. The new poles will be similar in appearance and approximately five feet taller than the existing poles along Harbor Boulevard, which range from 60 to 75 feet in height.

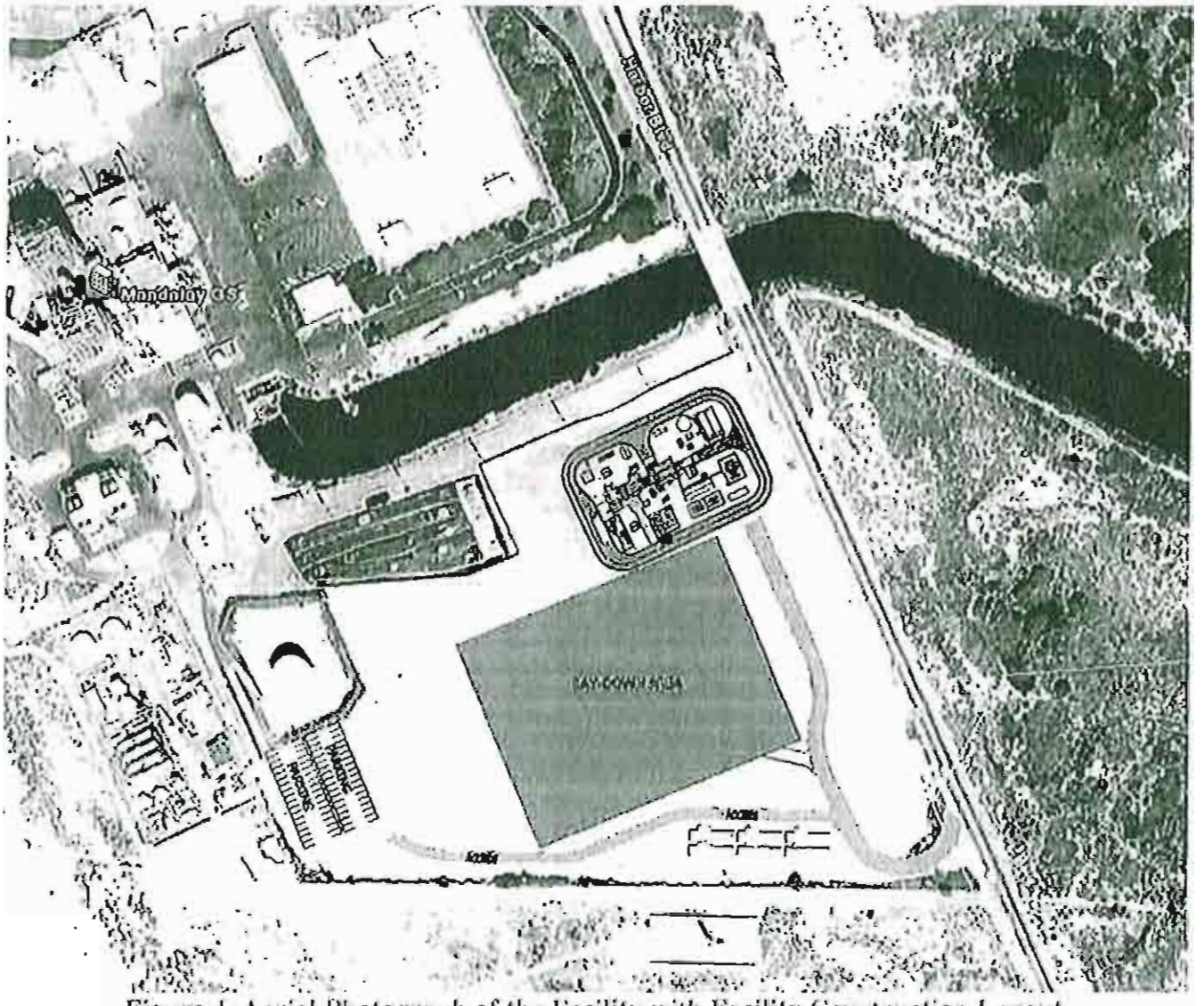

Figure 4 Aerial Photograph of the Facility with Facility Construction Layout

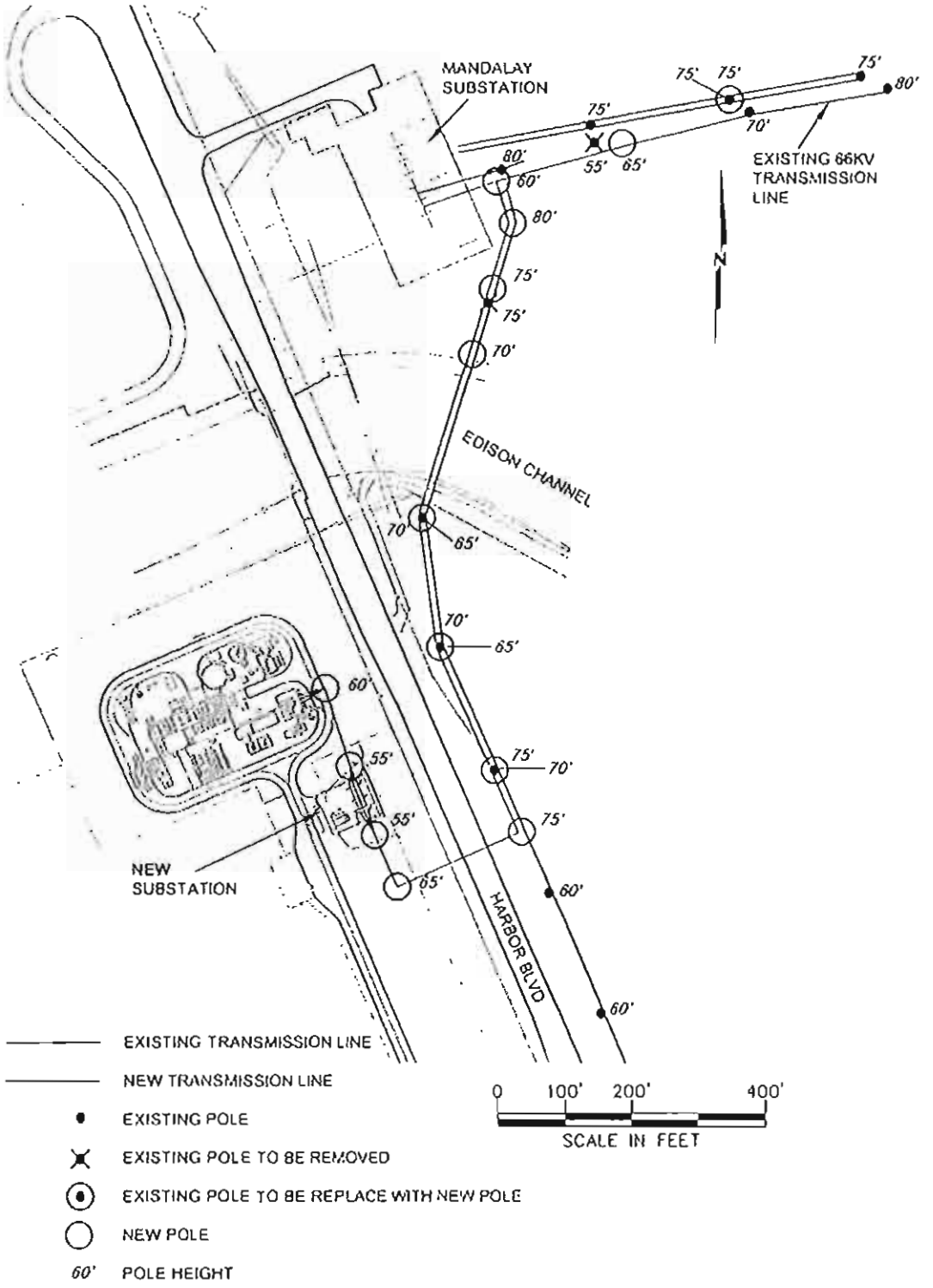

Figure 5. Conceptual Layout of Transmission Line

Natural Gas Pipeline. A new pipeline will be required to supply natural gas to the project site. The pipeline route will exit the project site to the south of the customer substation and cross Harbor Boulevard at right angles. From there, the pipeline will travel northwest along the east side of and parallel to Harbor Boulevard, until it turns inland to tie into the existing transmission pipeline that serves the Mandalay Generating Station located just to the north of the generating station property. Figure 6 shows the proposed route of the natural gas pipeline. A gas metering station of approximately 40- by 75-foot in size will also be constructed to the south of the project facility in order to measure the amount of gas being used.

The pipeline will be 6-inches in diameter, with a length of approximately 1,800 feet. The pipeline will be installed at a minimum depth of 36 inches, with a planned depth of 42 inches. The maximum depth of the pipeline may vary, and depends on the location of existing substructures that will be encountered along the proposed route. The pipeline will be constructed on project property and within the public right-of-way for Harbor Boulevard in a previously disturbed pipeline corridor. A temporary construction easement along the road shoulder and in the vicinity of the tie-in point will be required.

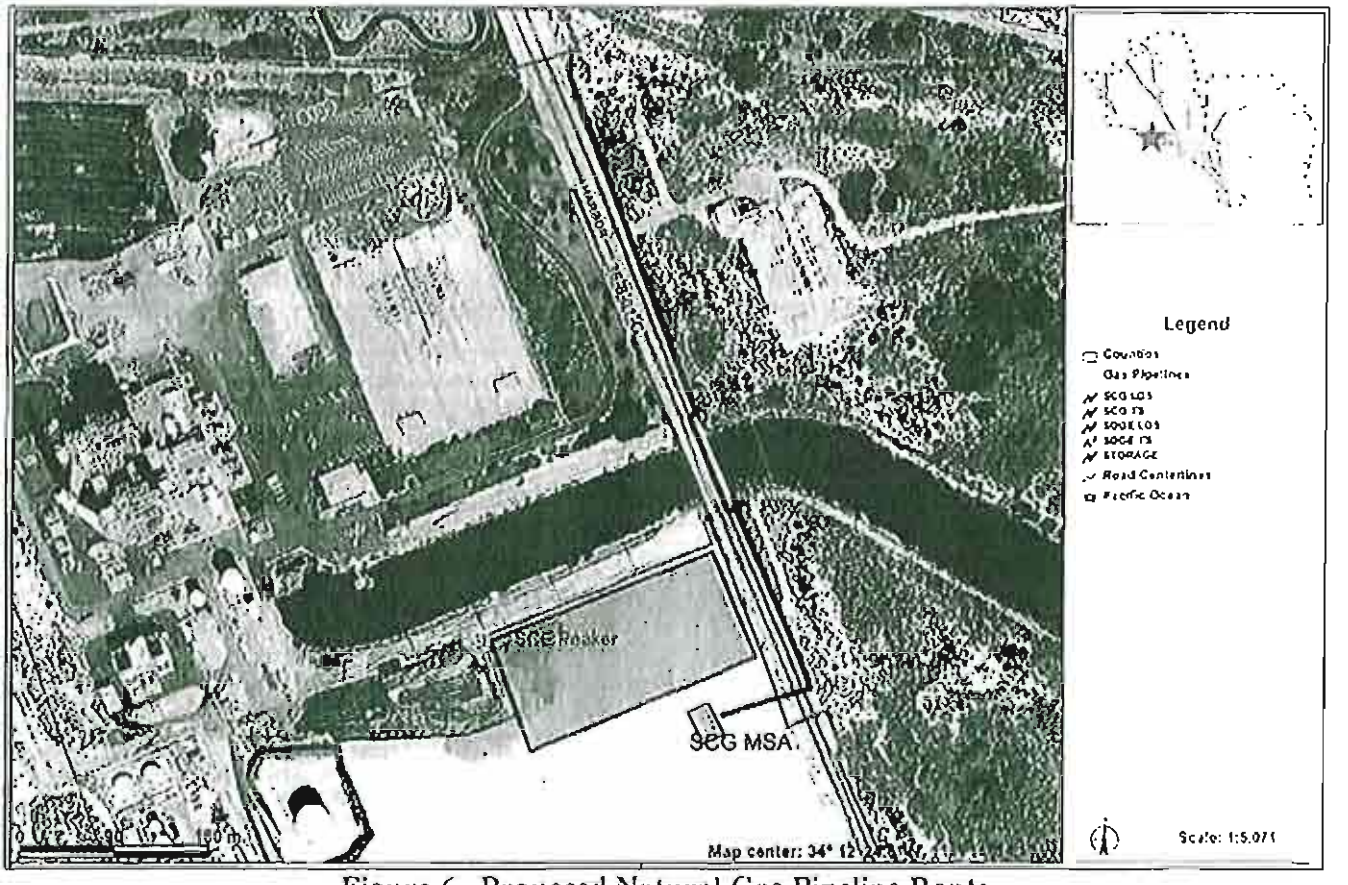

Figure 6. Proposed Natural Gas Pipeline Route

The width of the required easement will be approximately 30 feet from the edge of the pavement along the road shoulder and 54 feet in the vicinity of the tie-in.

Pipeline construction is expected to take place concurrent with the peaker plant construction and will take approximately seven weeks to complete. Construction equipment required for pipeline installation includes pipe trucks, dump trucks, welding equipment, backhoes, conventional boring equipment and lifting equipment. A construction crew of up to 20 people is required for pipeline construction. The construction crews will be at various locations along the proposed route during construction. A 100- by 100-foot staging area will be located within the 450- by 450-foot staging area on the peaker project site.

The pipeline construction process would proceed in the following general order: (1) pre-construction activities, including mobilization, surveying, staking, and pavement cutting; (2) trenching; (3) hauling, stringing, and bending the line pipe; (4) lowering in, line-up, and welding; (5) weld inspection; (6) application of protective coating to weld joints; (7) backfilling and compaction; (8) hydrostatic testing; and (9) cleanup, paving, and restoration. Construction will progress at an average rate of 75 to 100 feet per day. SCE anticipates that temporary lane closure may be required on Harbor Boulevard for pipeline construction; however, road closure is not anticipated. Trenches within the paved roadway as well as within 15 feet of the pavement edge will be covered with steel plates during non-working hours, so that traffic lanes will be open.

Other Connections. The water connection will be made to an existing line located within Harbor Boulevard directly adjacent to the project site. There is currently no sewer line located in the vicinity. Until a sewer line becomes available, waste water will be collected and trucked off site for disposal.

Process Description

The operation of each of the major project components is explained in the following sections. A simplified process flow diagram is provided as **Figure 7**.

Basic Equipment. Thermal energy is produced in the LM6000 turbine through the combustion of natural gas, which then is converted into mechanical energy by the turbine section that drives the inlet air compressor (integral with the turbine) and electric generator. The turbine consumes natural gas, water, and air, each of which is conditioned prior to use, as explained below.

- Natural gas is provided from the local pipeline, and will be pressurized by an 800 Hp electric fuel gas compressor.
- Water is supplied to the project from the City of Oxnard water supply system. The water is treated with a demineralizer which consists of either a skid-mounted or trailer-mounted ion exchange system. Treated water is stored in a storage tank prior to use. The treated water is directly injected into the turbine for NO_x emissions control.
- Ambient air is filtered through a self cleaning filter prior to use. In addition, the project includes an inlet air cooler that may or may not be used, depending on ambient conditions. The inlet air cooler conditions combustion air using evaporative cooling by injection of a fine mist of water directly into the air stream.

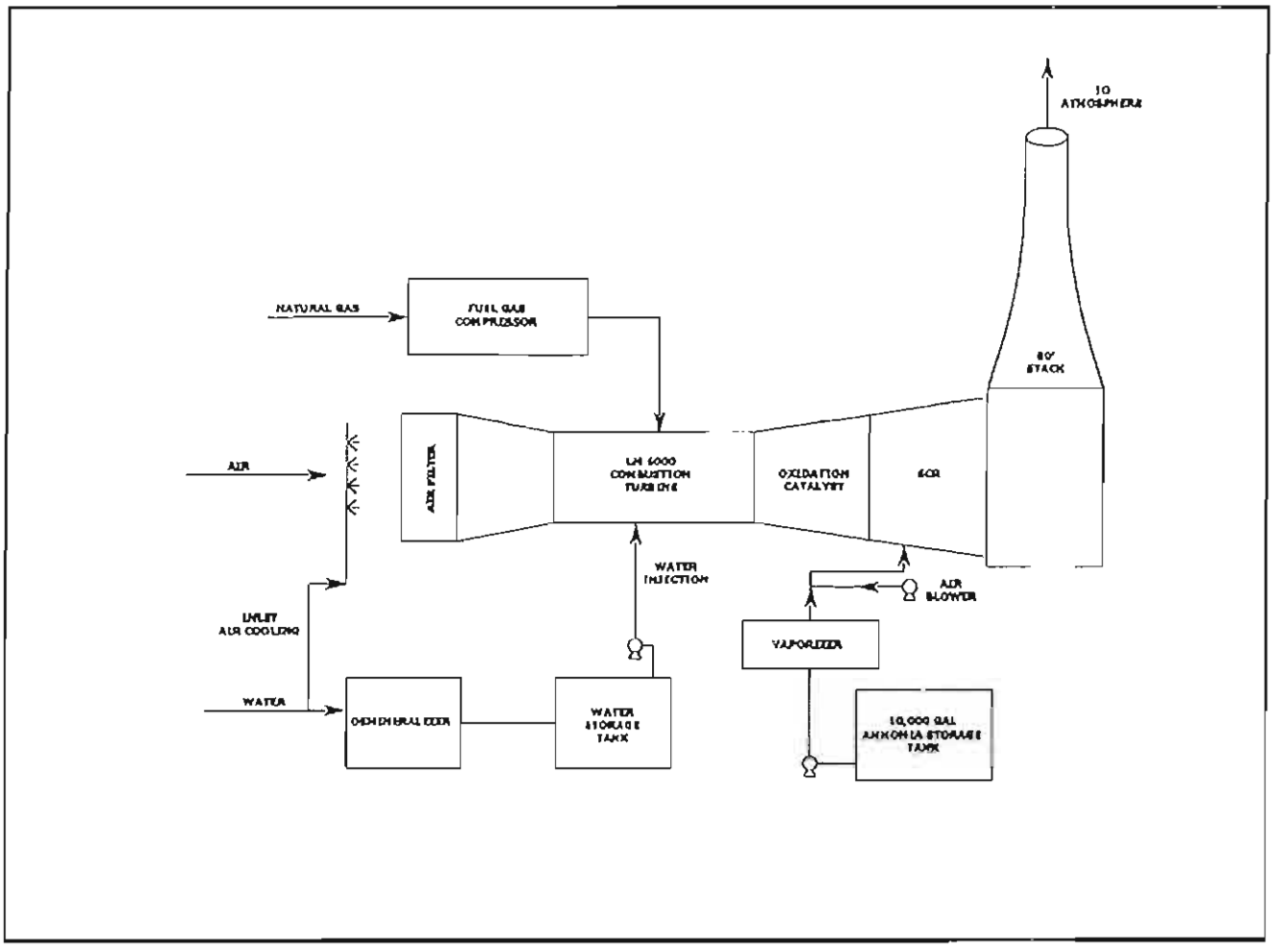

Figure 7 Process Flow Diagram

The material usage rates for the combustion turbine are shown in Table 2. SCE is requesting a permit condition from the Ventura County Air Pollution Control District (VCAPCD) to limit the annual mass emissions to below the VCAPCD's emissions offset thresholds for all criteria pollutants[1]. This requested condition effectively limits annual consumption of each of the raw materials. The LM6000 turbine is designed for up to 120 startups per year; however, based on its anticipated use as a peaker, startup frequency will likely be less.

[1] Criteria pollutants are NOx, SOx, CO, ROC, and particulate matter (PM10).

Table 2 LM6000 Turbine Material Usage Process Rates

Raw Material	Consumption Rate
Natural Gas	4.36×10^5 Scf/hr 8.17×10^8 Scf/year (first year) 9.12×10^8 scf/year (subsequent years)
Water	62 gallons per minute (LM6000 only) 9.41×10^6 gallons per year (All equipment)
Aqueous Ammonia (19 percent ammonia by weight)	16 gallons per hour 27,700 gallons per year

Black Start Generator. The proposed peaker project is designed with "black start" capability. A combustion turbine requires electric power to initiate operation – the fuel gas compressor must compress the natural gas and, similar to an automobile engine, an electric motor must spin the turbine to start it. Most turbine-based power plants draw power from the regional electric grid for their start-up power requirements. In a situation when there is a blackout on the grid, starting the turbine using power from the grid is obviously not possible.

To provide black start capability, the proposed project will be equipped with a natural gas-fired spark ignition engine that powers a 645 KW generator. The generator engine is started using battery power and once started, provides sufficient power to start the combustion turbine. Once the turbine is online, the black start generator is shut down.

Operating Schedule

As a peaker, the proposed project is expected to have limited hours of operation. SCE anticipates that the plant will be operated primarily during peak electricity demand periods. These periods typically occur during the hot summer months. However, the facility could operate at any time during the year, depending on the local grid performance and regional energy demands. In addition, SCE plans to operate the power plant at least one day per week for a short period of time (typically one to eight hours) to ensure reliability of the system.

Project Schedule

To comply with the CPUC's ruling, SCE would like to construct the proposed peaker plant in time to serve SCE customers by summer 2007, or as soon as possible thereafter.

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" or as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural 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: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

☐ I find the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the 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 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 or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Christopher Williamson — May 7, 2007

Signature — Date

Christopher Williamson — Senior Planner

Print Name — Title

EVALUATION OF ENVIRONMENTAL IMPACTS

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

A. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista? (*2020 General Plan, VIII - Open Space/ Conservation Element, XII - Community Design Element; FEIR 88-3, 4.12 - Aesthetic Resources*)	☐	☐	☒	☐
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (*2020 General Plan, VIII - Open Space/ Conservation Element; XII - Community Design Element; FEIR 88-3, 4.12 - Aesthetic Resources*)	☐	☐	☒	☐
3. Substantially degrade the existing visual character or quality of the site and its surroundings? (*2020 General Plan, VIII - Open Space/Conservation Element, XII - Community Design Element; FEIR 88-3, 4.12 - Aesthetic Resources*)	☐	☐	☒	☐
4. Create a source of substantial light or glare, which would adversely affect day or nighttime views in the area? (*2020 General Plan, VIII - Open Space/Conservation Element, XII - Community Design Element; FEIR 88-3, 4.12 - Aesthetic Resources*)	☐	☐	☒	☐

Discussion:

A.1 - 3) The proposed project site is located on the north-eastern portion of SCE-owned property at 251 N. Harbor Boulevard in the City of Oxnard. The site is bounded on the north by the existing Reliant Energy Mandalay Power Plant facility and channel; on the west by an existing oil processing facility, coastal dunes, and the Mandalay state beach and the Pacific Ocean; on the east by Harbor Boulevard, undeveloped SCE-owned land, and agricultural fields; and on the south by an access road; two operating oil pumps, and state and city-owned coastal dunes. Located across Harbor Boulevard and approximately 750 feet southeast of the proposed site is an under-development residential project known as Northshore at Mandalay Bay with 292 units. To the north of the proposed site is a canal that supplies cooling water to the Mandalay Power Generation facility. The Pacific Ocean is located approximately 750 feet west of the site, and the undeveloped Mandalay State Beach Park is located approximately 1,000 feet southwest of the proposed project site.

The proposed project site is an old tank farm that once provided fuel oil storage for the Mandalay Power Generation facility. The site has been graded and is vacant of structures or above-ground utilities. The site is relatively flat in elevation, with a low bermed area on its perimeter east of an existing Mandalay Power Generation facility tank. Project facilities will be located within an

approximate 220-by 320-foot area in the northeast corner of the site. A 65- by 75- foot customer substation and a 45- by 75-foot gas metering station will also be constructed just to the south of the main project site. The main project facilities will include one natural gas-fired GE LM6000 gas turbine generator, pollution control equipment including a selective catalytic reduction (SCR) system and an oxidation catalyst, an 80-foot tall exhaust stack, a 10,500 gallon aqueous ammonia storage tank, fuel gas supply line, fuel gas compressor, water supply line, water demineralizer, two water storage tanks, transmission transformers, 66 kV transmission tap line, a natural gas-fired black-start generator, and a facility control building.

The proposed project would be considered to have a significant adverse impact on aesthetics or visual resources if it would result in a substantial adverse effect on a scenic vista or designated scenic highway, or if it would substantially degrade the existing visual character or quality of the site and its surroundings. According to the Open Space and Conservation Element of the City of Oxnard *2020 General Plan*, Harbor Boulevard between the Santa Clara River and Channel Islands Boulevard is designated as a scenic highway. The Open Space and Conservation Element also identifies the beaches and coastlines in Oxnard, and the lower dunes in the Mandalay Beach State Park north of Fifth Street as scenic visual resources. Potential sensitive receptors that may be affected by a change in scenic visual resources in the proposed project area include motorists along Harbor Boulevard, recreational users along the beach and shoreline approximately 750 feet west of the project site, recreational users at Mandalay Beach State Park located approximately 1,000 feet southwest of the project site, and future residents of the proposed Northshore at Mandalay Bay residential area located approximately 750 feet southeast of the proposed project site.

In order to shield views of project structures from sensitive receptors along Harbor Boulevard, a landscape plan is incorporated as part of the project design. The landscape plan includes berms, native vegetation, and planting a row of trees along Harbor Boulevard and along a portion of the northern boundary of the site to visually screen the proposed peaker unit and associated structures. This will reduce the potential visual impact of the proposed project elements as viewed by sensitive receptors along Harbor Boulevard and from the proposed Northshore at Mandalay Bay residential area southeast of the proposed project site. The preliminary Landscaping Plan is included in **Appendix B**.

In order to analyze the potential visual impact of the proposed project on nearby sensitive receptors, photographic visual simulations of the major project structures with the planned landscaping elements incorporated were prepared and are included in **Appendix C**. Four photographs were taken looking toward the proposed project site were taken from four vantage points along Harbor Boulevard. Visual simulations of the major project structures and mature landscape plan were then added to the photographs of the existing views. The proposed landscape plan contains a number of native plants for which photographs were not readily available. Those plants were simulated by using photographs of visually similar plants with the same look and feel.

- View 1 (VP1) – Project view from northeast corner of the project site

This view looks southwest toward the project site from Harbor Boulevard at the northeast corner of the SCE property line, near the intersection with the existing canal. This view would be seen by a

driver traveling south on Harbor Boulevard who looks to the right when crossing the canal. From this angle, the major project structures (i.e., the water tank, the peaker generating unit, and the exhaust stack) would be almost entirely shielded by the proposed landscaping. Only the tops of the new transmission poles and deadend structures would be clearly visible.

- View 2 (VP2) – Project view from midpoint of the project site

This view looks northwest toward the project site from Harbor Boulevard at approximately the midpoint of the SCE property line. This view would be seen by a driver traveling north on Harbor Boulevard as s/he passes the project site. From this angle, the tops of the transmission poles are the only project structures that would be visible. Additionally, the proposed landscaping would hide the existing Mandalay Generating Station from view.

- View 3 (VP3) – Project view from southeast corner of the project site

This view looks northwest toward the project site from Harbor Boulevard at the southeast corner of the SCE property line. This is also the closest point to the project from the future Northshore at Mandalay Bay housing development. This view would be seen by a driver traveling north on Harbor Boulevard or someone standing at ground level at the corner of the project. This view shows that the only project structures that would be visible from ground level are the tops of the transmission poles. Again, the proposed landscaping would hide the existing Mandalay Generating Station from view.

- View 4 (VP4) – View of transmission poles from Harbor Boulevard looking south

This view shows the changes to the transmission system where it taps into an existing transmission line located behind the existing Mandalay Substation. This view would be seen by a driver traveling south on Harbor Boulevard. This view shows that one additional power pole will be visible in the distance on the left side of the view and that the existing poles directly across from the project on the east side of Harbor Boulevard will appear slightly taller.

In **Appendix D** are several landscape elevations and sections, and a computer simulation of the view from the second story window of the nearest future residence in the Northshore at Mandalay Bay housing development. Because this home will be constructed on an elevated building pad, this simulation shows the expected view looking down at the project site from approximately 30 feet above the existing ground level (40 feet above sea level). The simulation also depicts the existing Mandalay Generating Station stack (not the remainder of the facility) for perspective. These simulated views show that at full maturity, the landscaping is expected to fully shield the project from view, with the exception of the stack and transmission poles. However, from this angle, the existing Mandalay Generating Station would be clearly visible. It is expected that within three to five years after planting, the majority of the peaker facility would be fully screened.

Views of the proposed project site from the beach and shoreline would be essentially blocked by the intervening topography and the existing oil processing structures. Recreational users at the Mandalay State Beach Park located approximately 1,000 feet southwest of the proposed project site would be able to view the tallest project structure (i.e. the 80-foot exhaust stack). However, the intervening land

between the Mandalay State Beach Park and the proposed project site is dotted with existing oil processing structures, which are approximately 70 feet high, and the stack at the Mandalay Power Generation facility which is 203 feet high. The existing oil derricks would be the main visual element of the view looking north from the Park and would overshadow the more distant, and therefore smaller and less intrusive, view of the proposed project elements. (See VP7)

A.4) Construction of the proposed project would occur over a three to four month period. Construction activities are planned to occur primarily during daylight hours; however, nighttime lighting during construction will be necessary. Typical stanchion-mounted banks of lights will be used to provide the temporary lighting. The standard practice will be to place construction lighting so that it faces toward the interior of the facility, particularly when working near the site periphery, to shield and focus the lights so that they point downward or parallel to the ground. Also, the amount of lighting will be limited to no more than what is needed to adequately illuminate the specific locations where the night work is occurring.

The proposed project will require permanent lighting to be installed around the exterior of the generating unit and associated equipment for safety and security purposes. New lighting that will be installed on the proposed equipment will be consistent in intensity and type with the existing lighting on equipment within the Mandalay Power Generation facility.

Based on these considerations, the proposed project is expected to have a less than significant impact from new sources of light or glare on daytime or nighttime views in the area.

Conclusion
Impacts on visual resources and light and glare are anticipated to be less than significant.

Mitigation: Since no significant adverse impacts to visual resources or aesthetics are expected to occur as a result of construction and operation of the proposed project, no mitigation is required or proposed.

Monitoring: As adequate screening vegetation is proposed as part of the project and there are no mitigations, no mitigation monitoring is required or proposed.

Result After Mitigation: Aesthetic impacts from the proposed project would be less than significant.

B. AGRICULTURAL RESOURCES* Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use? (*2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.7 - Agricultural Resources*)	☐	☐	☐	☒
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract? (*2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.7 - Agricultural Resources*)	☐	☐	☐	☒
3. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use? (*2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.7 - Agricultural 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.*

Discussion:

B.1) The proposed project involves construction of a small power plant at a site that was formerly used as a tank farm within an industrial zone. No agricultural resources exist at the property. The nearest agricultural land is located approximately 0.3 miles east of the project site. Further, the proposed project will not convert prime farmland, unique farmland or farmland of statewide importance to non-agricultural use or involve other changes in the existing environment that could convert farmland to non-agricultural use.

B.2 & 3) The project site and adjacent areas are not currently zoned for agricultural use. The proposed project does not conflict with an existing agricultural zone or Williamson Act (Division of Land Resource Protection 2006) contracts and does not include converting agricultural land for non-agricultural uses.

Mitigation:

Since no significant agricultural resources impacts were identified, no mitigation is required or proposed.

Monitoring:
Since no mitigation is required or proposed, mitigation monitoring is not required.

Result After Mitigation:
No impacts on agricultural resources are expected from the proposed project.

C. AIR QUALITY*

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plan? (FEIR 88-3, 4.5 - Air Quality; Ventura County Air Quality Assessment Guidelines; Urbemis 2002Computer Program)	☐	☐	☒	☐
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? *(FEIR 88-3, 4.5 - Air Quality; Ventura County Air Quality Assessment Guidelines; Urbemis 2002 Computer Program)*	☐	☐	☒	☐
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? *(FEIR 88-3, 4.5 - Air Quality; Ventura County Air Quality Assessment Guidelines; Urbemis 2002 Computer Program)*	☐	☒	☐	☐
4. Expose sensitive receptors to substantial pollutant concentrations? *(FEIR 88-3, 4.5 - Air Quality; Ventura County Air Quality Assessment Guidelines; Urbemis 2002 Computer Program)*	☐	☐	☒	☐
5. Create objectionable odors affecting a substantial number of people? *(FEIR 88-3, 4.5 - Air Quality; Ventura County Air Quality Assessment Guidelines; Urbemis 2002 Computer Program)*	☐	☐	☐	☒

Where available, the significant criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Discussion:
C.1) The project is expected to comply with the Ventura County Air Quality Management Plan (AQMP). The plan was adopted in 1995, and was revised in 1997 and 2004. According to the Ventura County Air Quality Assessment Guidelines (October 2003), a project that conforms to the applicable General Plan designation and has emissions below two pounds per day of ROC, and below two pounds

per day of NO_x, is not required to assess consistency with the AQMP. As discussed in more detail in the response to C.3 below, the proposed project has mitigated operational emissions of ROC of less than two pounds per day, and thus, assessing AQMP consistency is not required for operational ROC emissions. Mitigated operational NO_x emissions exceed two pounds per day but are less than six pounds per day. According to the Ventura Air County Assessment Guidelines, consistency with the AQMP is assessed by comparing population growth in the County associated with the proposed project with population forecasts in the AQMP. Operation of the proposed project will require a maximum of one new employee to perform maintenance activities. Therefore, the proposed project will potentially increase County population by no more than one person, which will not be inconsistent with the AQMP. Thus, the proposed project will not conflict with or obstruct implementation of the AQMP, and will have a less than significant impact.

C.2) The main project facilities will include one GE LM6000 gas turbine generator, an 80-foot-tall exhaust stack, a 10,500 gallon aqueous ammonia storage tank, fuel gas supply line, fuel gas compressor, water supply line, water demineralizer, two water storage tanks, transmission transformers, 66 kV transmission tap line, a natural gas-fired black-start generator, and a power control module. Emission controls for the combustion turbine include water injection and a selective catalytic reduction (SCR) system for nitrogen oxides (NOx) emissions control, and an oxidation catalyst for reactive organic compounds (ROC) and carbon monoxide (CO) emissions control. Of the various project elements, the combustion turbine generator requires an Authority to Construct (ATC) from the Ventura County Air Pollution Control District (VCAPCD), pursuant to VCAPCD Rule 10. An application has been submitted to the VCAPCD to provide the necessary information to issue an ATC for the proposed project.

A project that may cause an exceedance of any ambient air quality standard (state or federal), or may make a substantial contribution to an existing exceedance of an air quality standard will have a significant adverse air quality impact. "Substantial" is defined as making measurably worse an existing exceedance of a state or federal ambient air quality standard. State and Federal Ambient Air Quality Standards (AAQS) are shown in Table C-1.

Table C-1 Ambient Air Quality Standards

Air Pollutant	State Standard	Federal Primary Standard	Most Relevant Effects
	Concentration/ Averaging Time	Concentration/ Averaging Time	
Ozone	0.09 ppm, 1-hr. avg. 0.070 ppm, 8-hr avg.[3]	0.12 ppm, 1-hr avg. 0.08 ppm, 8-hr avg.	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. 20 ppm, 1-hr avg.	9.0 ppm, 8-hr avg. 35 ppm, 1-hr avg.	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg.	0.053 ppm, ann. avg.	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg. 0.25 ppm, 1-hr. avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr avg.	(a) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM10)	20 $\mu g/m^3$, annual arithmetic mean 50 $\mu g/m^3$, 24-hr avg.	50 $\mu g/m^3$, annual arithmetic mean 150 $\mu g/m^3$, 24-hr avg.	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children

Table C-1 Ambient Air Quality Standards

Air Pollutant	State Standard	Federal Primary Standard	Most Relevant Effects
	Concentration/ Averaging Time	Concentration/ Averaging Time	
Suspended Particulate Matter (PM2.5)	12 $\mu g/m^3$, 24-hr avg.	15 $\mu g/m^3$, annual arithmetic mean 65 $\mu g/m^3$, 24-hr avg.	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Sulfates	25 $\mu g/m^3$, 24-hr avg.	Not applicable	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 $\mu g/m^3$, 30-day avg.	1.5 $\mu g/m^3$, calendar quarter	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70 percent, 8-hour average (10 a.m. - 6 p.m. PST)	Not applicable	Visibility impairment on days when relative humidity is less than 70 percent
Hydrogen Sulfide	0.03 ppm, 1-hr avg.	Not applicable	Odor annoyance
Vinyl Chloride	0.010 ppm, 24-hr avg.	Not applicable	Known carcinogen

ppm – parts per million $\mu g/m^3$= micrograms per cubic meter.

' This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

To verify that the proposed project would not violate any air quality standard, or contribute substantially to an existing or projected violation, dispersion modeling of the proposed project's operational emissions was conducted to determine if operation of the proposed project would violate, or contribute substantially to an existing or projected violation of carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2) or PM10 air quality standards. Ozone is a secondary pollutant, formed by atmospheric reactions. Therefore, dispersion modeling is not conducted for ozone. The dispersion modeling was conducted in accordance with the recommendations on the CARB modeling guidelines (*http://www.arb.ca.gov/html/soft.htm#modeling*) and EPA's Guideline on Air Quality Models. Criteria pollutant modeling was performed for all operating conditions for comparison against the California and National Ambient Air Quality Standards (AAQS). Peak daily emissions during the construction and operational periods were compared to significance thresholds established by the VCAPCD.

Construction Criteria Pollutant Emissions

Construction emissions can be distinguished as either on-site or off-site. On-site emissions generated during construction principally consist of construction equipment exhaust emissions (CO, ROC, NO_x, sulfur oxides [SO_x]), and particulate matter with an aerodynamic diameter of 10 microns or less [PM10]), fugitive dust (PM10) from grading and excavation, and ROC from painting and asphaltic paving. Off-site emissions generated during construction principally consist of exhaust emissions and entrained paved road dust from worker commute trips and material delivery trips, as well as emissions associated with natural gas pipeline construction activities such as trenching, welding, and paving. A brief description of the methods used to estimate construction-related emissions is provided below; a detailed explanation, along with detailed calculations is provided in **Appendix E**.

Fuel combustion in construction equipment results in the generation of CO, volatile organic compounds (VOC)[2], NO_x, SO_x, and PM10 emissions. The exhaust emission factors used for the calculation of CO, VOC, NO_x, SO_x and PM10 emissions are composite horsepower-based off-road emission factors for 2007 developed for the South Coast Air Quality Management District (SCAQMD)[3] by the California Air Resources Board (CARB) from its OFF-ROAD Model. The types of construction equipment and the maximum daily operating time for each type of equipment were estimated during two-week construction periods.

The combustion of fuel in on-road motor vehicle engines results in the generation of CO, ROC, NO_x, SO_x, and PM10 emissions. CO, VOC, NO_x, SO_x and PM10 emission factors were compiled by the SCAQMD by running CARB's EMFAC2002 (version 2.2) Burden Model. In addition, the VOC emission factors take into account diurnal, hot soak, running and resting emissions, and PM10 emission factors take into account tire and brake wear.

The number and length of daily on-site and off-site motor vehicle trips by trucks to deliver materials and supplies, remove construction debris, etc., were estimated during two-week construction periods. The anticipated number of construction workers during each two-week construction period was used to calculate the number of construction worker commute trips, assuming an average vehicle ridership of 1.0, that is each worker would drive separately to and from the site each day. This assumption may overestimate the number of trips, since some construction workers are likely to carpool.

Vehicle travel on paved roads and unpaved surfaces generates fugitive PM10 emissions by entrainment of road dust. Off-site motor vehicle travel during construction of the proposed project will primarily be on paved roads; however, the majority of natural gas pipeline construction activities will take place on unpaved surfaces. On-site motor vehicle travel will be on unpaved surfaces before the proposed project site is paved, which will occur only near the end of construction of the proposed project.

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[2] For the purpose of this Initial Study, the terms VOC and ROC refer to the same pollutant, and can be used interchangeably. VCAPCD uses ROC, and this term is used in this Initial Study when referring to emissions. VOC is used when specifically used by the technical reference, e.g. emission factors provided by the equipment manufacturer or the SCAQMD.

[3] SCAQMD emissions factors were used in this analysis to be consistent with the analysis conducted for the four similar projects SCE plans to install within the SCAQMD. The use of SCAQMD factors is not expected to have a significant impact on the emission calculations.

Excavation of foundations for new equipment during construction of the proposed project and excavation during trenching during construction of the natural gas pipeline will generate fugitive PM10 emissions from soil handling and from wind erosion of temporary storage piles. Water will be used for dust control during project construction. Based on SCE's anticipated excavation schedule for project construction, a maximum of approximately 1,200 square yards of soil (10,800 ft^2, or approximately 0.25 acre) would be disturbed in any one day. Wind erosion of temporary soil storage piles during excavation generates fugitive PM10 emissions. Water will be applied at a rate of approximately 0.2 gallon per square yard per hour. The control efficiency from watering was assumed to be 50 percent.

The project equipment will generally be supplied with a protective coating already applied prior to delivery to the site; however, some onsite touchup may be required before the start of operations. The application of industrial maintenance surface coatings (painting) generates ROC emissions when organic solvents in the coating evaporate as the coating dries. The applicant anticipates that a maximum of 20 gallons of coating would be used for touchup at the site, applied over two days (10 gallons per day).

Paving areas with asphalt generates VOC emissions as the asphalt cures. It was assumed that half the project site's 220-by 320-foot area and a maximum of one-quarter mile of a 30-foot wide access road would be paved with asphalt. Half of the paving would be conducted on one day at the end of the construction schedule, and the other half of the paving on a subsequent day. A portion of the trench for the natural gas pipeline will be cut in Harbor Boulevard. The trench will be repaved to match the existing roadway. A maximum of 4,500 square feet of paving is estimated to occur during any one day during the pipeline construction.

Daily emissions from construction equipment exhaust, on-site motor vehicle exhaust and entrained dust, grading and excavation, asphaltic paving, painting, and off-site motor vehicle exhaust and entrained dust during each two-week construction period were calculated using the procedures described in the preceding paragraphs. Total daily emissions of each criteria pollutant (CO, VOC, NO_x, SOx, and PM10) during each period were then calculated by summing the daily emissions from the various emission sources. Peak daily emissions of each criteria pollutant were then determined from the daily emissions during each construction period. Peak daily construction emissions for the proposed project are listed in Table C-2.

As discussed in Section 5.2 of the Ventura County Air Quality Assessment Guidelines, "Calculating Ozone Precursor Emissions from Project Construction," VCAPCD recommends a mitigation threshold of 25 pounds per day for construction-related emissions of ozone precursors NOx and ROC to avoid a significant adverse impact to ozone air quality during project construction. As shown in Table C-2, the proposed project will exceed the threshold for both pollutants, and mitigation is recommended. Additionally, since the PM10 concentrations in Ventura County exceed the state PM10 standard, VCAPCD recommends that lead agencies include Fugitive Dust Mitigation Measures that are recommended in the guidelines, with special attention given to projects that require a grading permit.

Table C-2 Construction Peak Daily Emissions Summary

Source	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)
Power Plant					
On-Site Diesel Construction Equipment	47.3	16.7	84.0	0.1	5.6
On-Site Gasoline Construction Equipment	0.0	0.0	0.0	0.0	0.0
On-Site Motor Vehicle Exhaust	1.0	0.1	0.1	0.0	0.0
On-Site Motor Vehicle Fugitive PM	--	--	--	--	33.3
On-Site Excavation Fugitive PM	--	--	--	--	0.4
On-Site Architectural Coating[a]	--	0.0	--	--	--
On-Site Asphaltic Paving[b]	--	0.0	--	--	--
Total On-Site	48.2	16.8	84.1	0.1	39.3
Off-Site Motor Vehicle Exhaust	17.6	2.0	5.4	0.0	0.2
Off-Site Motor Vehicle Fugitive PM	--	--	--	--	1.2
Total Off-site	17.6	2.0	5.4	0.0	1.4
Power Plant Total	64.1	27.5	81.6	0.1	7.8
Gas Line					
On-Site Diesel Construction Equipment	31.5	11.0	57.8	0.1	4.2
On-Site Gasoline Construction Equipment	0.0	0.0	0.0	0.0	0.0
On-Site Motor Vehicle Exhaust	0.9	0.1	0.8	0.0	0.0
On-Site Motor Vehicle Fugitive PM	--	--	--	--	29.2
On-Site Excavation Fugitive PM	--	--	--	--	5.5
On-Site Architectural Coating[a]	--	0.0	--	--	--
On-Site Asphaltic Paving[b]	--	0.0	--	--	--
Total On-Site	32.4	11.1	58.6	0.1	38.9
Off-Site Motor Vehicle Exhaust	21.6	2.4	8.9	0.0	0.3
Off-Site Motor Vehicle Fugitive PM	--	--	--	--	1.5
Total Off-site	21.6	2.4	8.9	0.0	1.8
Gas Line Total	54.0	13.6	67.6	0.1	40.7
Total	119.8	32.3	157.1	0.2	81.5
Mitigation Threshold	*N/A*	*25*	*25*	*N/A*	*N/A*
Mitigation Recommended?	N/A	Yes	Yes	N/A	N/A

Note: Totals may not match sum of individual values because of rounding.
[a] Architectural coating does not occur during the two-week period with the peak daily VOC emissions.
[b] Asphaltic paving does not occur during the two-week period with the peak daily VOC emissions.

Operational Criteria Pollutant Emissions

Estimated criteria pollutant emissions from the proposed project are described in this section. Emissions are based on the project description, proposed permit limits, and anticipated operating levels. The emission calculations and supporting documentation are provided in detail in Appendix D of this Initial Study.

LM6000 Combustion Turbine Direct Operational Emissions

Emissions from the LM6000 turbine are due to the combustion of natural gas fuel. Controlled emission guarantees for NO_x, CO, PM10, ROC, and ammonia (NH_3) slip were obtained from the vendor (GE) for the LM6000 turbine for normal operations. The emissions for sulfur dioxide (SO_2) are based on EPA's Compilation of Air Pollution Emission Factors (AP-42), and the sulfur content of pipeline natural gas. To ensure PM10 emission rates are not underestimated, SCE assumes that all of the SO_2 will react with excess ammonia (ammonia slip) to form ammonium sulfate, which will exist as fine particulate matter (PM10). Based on the relative masses of ammonium sulfate and SO_2, approximately two pounds of ammonium sulfate is formed for every pound of SO_2 released.

As a peaker power plant, daily and annual operating hours will depend on electrical demand and grid performance. However, as explained in more detail below, emissions were calculated assuming 120 startup and 120 shutdown events per year and 1,881 operating hours per year. The number of startups, shutdowns and operating hours are reduced slightly in the first year of operation due to commissioning activities.

Normal operations consist of periods when the LM6000 turbine is operating at full load under controlled conditions with water injection, SCR, and oxidation catalyst all in operation. The maximum guaranteed emission rates of NOx, CO, and ROC occur at 34 degrees Fahrenheit (°F) and were used in the emission calculations. The guaranteed hourly rates of SO_2 and PM10 do not vary by ambient temperature. AP-42 emission factors were used to calculate SO_2 maximum hourly emission rates using the AP-42 emission factor and maximum fuel flow rate. **Table C-3** summarizes the maximum hourly emission rates for criteria pollutants for the LM6000 turbine during normal operations.

Table C-3 LM6000 Turbine Maximum Hourly Emissions During Normal Operations

Pollutant	Maximum Emission Rate (lb/hr)	Basis
NOx	4.30	Vendor Guarantee
CO	6.30	Vendor Guarantee
PM10	4.54	Vendor Guarantee[1]
ROC	1.31	Vendor Guarantee
SO_2	0.27	AP-42 and fuel sulfur content

[1] Vendor guarantee of 4.0 lb/hr, plus 2 times SO_2 emission rate to account for estimated sulfates

Startup (SU) and shutdown (SD) NOx and CO emission calculations for the LM6000 turbine were performed using SU and SD curves provided by GE. ROC emissions are estimated using the vendor guaranteed emission rate for controlled emissions. Uncontrolled ROC emissions were estimated by dividing the controlled emission rate by one minus the control efficiency of the oxidation catalyst. SUs will take approximately 12 minutes to achieve full load conditions, with the SCR controlling emissions at its guaranteed control efficiency. The oxidation catalyst is expected to have no control efficiency for the first 6.5 minutes of the SU sequence, and be fully functional (i.e., controlling ROC and CO

emissions) for the remaining 5.5 minutes of the SU sequence.

SDs will last approximately eight minutes. Emission estimates for NO_x and CO were provided by GE for each phase of the eight-minute SD sequence. The oxidation catalyst is expected to be functional for the first 2.5 minutes of the SD sequence, and have no control efficiency for the remaining 5.5 minutes of the shutdown period. Therefore, controlled ROC emission rates were used for the first 2.5 minutes of the SD sequence and uncontrolled ROC emission rates described above were used for the remaining 5.5 minutes of the SD sequence. Emissions of PM10 and SO_2 during SU/SD are not expected to be higher than those proposed for normal operations, since these pollutant emission rates are strictly a function of the quantity of natural gas burned and are not controlled or reduced by the SCR or oxidation catalyst. **Table C-4** summarizes the proposed maximum hourly emission rates for criteria pollutants for the LM6000 turbine during SU/SD conditions. The emission calculations and supporting documentation are provided in detail in **Appendix E** of this Initial Study.

Table C-4 LM6000 Turbine Maximum Hourly Emissions During SU/SD Conditions

Pollutant	Maximum SU Emission Rate[1] (lb/hr)	Maximum SD Emission Rate[2] (lb/hr)
NOx	7.74	6.53
CO	8.74	7.86
PM10	4.54	4.54
ROC	1.38	1.37
SO_2	0.27	0.27

1. Maximum SU Emission Rate includes 12 minutes of SU plus 48 minutes of normal operation.
2. Maximum SD Emission Rate includes eight minutes of SD plus 52 minutes of normal operations.

Commissioning of the turbine and emission controls for the LML6000 is anticipated to take 25 hours. Commissioning is a process in which the turbine is tested for function and tested under various load conditions, and a period in which the emission controls are tested individually and collectively. Commissioning is essential for ensuring safe and reliable operation of the equipment. Emission calculations for uncontrolled[1] and partially controlled emissions of NOx, CO, and ROC provided by GE were used to calculate peak hourly emission rates for these pollutants. As with SU/SD, emissions of PM10 and SO_2 are not expected to be higher than those proposed for normal operations, since these pollutant emission rates are strictly a function of the quantity of natural gas burned. Therefore, normal operation emissions are presented during commissioning for PM10 and SO_2. **Table C-5** summarizes the uncontrolled and controlled hourly and total emissions during commissioning for the LM6000 turbine. The emission calculations and supporting documentation are provided in detail in **Appendix E** of this Initial Study.

[1] Commissioning will involve operating the turbine with no emission controls, followed by periods of operation with partial control of NOx provided by water injection.

Table C-5 LM6000 Turbine Commissioning Emission Rates

Pollutant	Uncontrolled Emissions (lb/hr)	Controlled Emissions [1] (lb/hr)	Total Commissioning Emissions (lb)
NOx	105.65	43.3	1394.26
CO	62.20	62.20	1555.00
PM10	4.54	4.54	113.54
ROC	1.96	1.96	49.10
SO_2	0.27	0.27	6.77

[1] Only NOx emissions will be partially controlled during a portion of commissioning.

Turbine commissioning will take place over a period of approximately two to three weeks. The turbine may be run for several hours per day during that period. However, commissioning is not a routine operational practice; it is a one-time only requirement that follows initial installation.

Annualized emission rates were calculated for two annual periods: 1) during the first year of operation that includes commissioning, and 2) during subsequent years that do not include the commissioning period. The first year of operation will consist of 25 hours of uncontrolled commissioning emissions, 60 SU/SD cycles, and 1,756 hours at normal operations. Subsequent year annual emissions were calculated assuming 120 SU/SD events and 1,881 hours per year of normal operations. Table C-6 summarizes the annual emission rates for LM6000 turbine for the first year and subsequent years.

Table C-6 LM6000 Emissions for First Year and Subsequent Years of Operation

Pollutant	First Year with Commissioning (tpy)	Subsequent Years (tpy)
NOx	4.9	4.9
CO	6.8	6.9
PM10	4.3	4.8
ROC	1.3	1.4
SO_2	0.3	0.3

Black Start Generator ICE Direct Operational Emissions

The black start generator is powered by a natural gas-fired Waukesha Internal Combustion Engine (ICE). The ICE will operate only during black start conditions (i.e., during power outages), and for routine testing and maintenance. Black starts are anticipated to occur a maximum of two times per year. Routine testing and maintenance will occur on a monthly basis. The Waukesha ICE will operate 30 minutes per black start event, and 30 minutes per month for maintenance reliability testing. Controlled emission guarantees for the ICE were obtained from Waukesha for NO_x and CO. Guaranteed emission rates of total hydrocarbon were obtained from Waukesha and are assumed to be

100 percent ROC. AP-42 emission factors were used to calculate SO_2 and PM10 emission rates. **Table C-7** summarizes the maximum hourly and annual emission rates of criteria pollutants for the Waukesha ICE. The emission calculations and supporting documentation are provided in detail in **Appendix E** of this Initial Study.

Table C-7 Waukesha ICE Maximum Hourly and Annual Emissions

Pollutant	Emission Factor	Hourly Emissions (lb/hr)	Potential to Emit (tpy)
NOx	1.25 g/bhp-hr	1.19	8.34×10^{-1}
CO	1.59 g/bhp-hr	1.52	1.06×10^{-2}
PM10	9.91×10^{-3} lb/MMBtu	3.19×10^{-2}	2.23×10^{-4}
ROC	0.45 g/bhp-hr	0.43	3.00×10^{-3}
SO_2	5.88×10^{-4} lb/MMBtu	1.89×10^{-3}	1.32×10^{-5}

Table C-8 summarizes the expected on-site facility-wide emission rates for the proposed project during normal operations.

Table C-8 Proposed Facility-Wide Criteria Pollutant Emissions During Normal Operations

Pollutant	Maximum Hourly Emission Rate (lb/hr)	Maximum Daily Emission Rate (lb/day)	Year One [1] (tpy)	Subsequent Years [2] (tpy)
NOx	5.49	104.39	4.9	4.9
CO	7.82	152.72	6.8	6.9
PM10	4.57	109.03	4.3	4.8
ROC	1.74	31.87	1.3	1.4
SO_2	0.27	6.50	0.3	0.3

[1] Includes commissioning.
[2] Subsequent years following commissioning.

Indirect (Offsite) Operational Criteria Pollutant Emissions

The proposed use of aqueous ammonia in the SCR system will require periodic deliveries (maximum of four per year; no more than one per day) of aqueous ammonia to the project site by tanker truck. Aqueous ammonia will be delivered to the site from a supplier in Los Angeles County; for the purpose of this analysis, the one-way travel distance within Ventura County to the site from the Los Angeles - Ventura County line is assumed to be 31 miles. Truck exhaust emission factors and entrained paved road PM10 emission factors were developed based on EMFAC 2002 for Los Angeles County. Exhaust emissions from these truck trips were calculated based on these emission factors and the travel distance within Ventura County. The project will require the periodic truck transport of wastewater to an offsite treatment facility because initially the project will be install without a connection to the local industrial sewer system. For the purpose of this analysis, the one-way distance from the project site to the wastewater treatment facility is estimated to be 10 miles.

The project may also require up to one operations or maintenance worker trip to the site per day. For the purpose of this analysis, the one-way travel distance to the site for this worker is assumed to be 30 miles. Exhaust emissions from these vehicle trips were developed based on EMFAC 2002 for Los Angeles County. Emissions are calculated based on these emission factors and the travel distance within Ventura County.

Indirect operational emissions are shown in Table C-9. The calculations of daily ammonia delivery truck and maintenance worker exhaust and entrained road dust emissions are provided in **Appendix E.**

Table C-9 Indirect Operational Emissions

Vehicle Type	One-Way Miles	Emissions				
		CO (lb/day)	ROC (lb/day)	NO_x (lb/day)	SO_x (lb/day)	PM10 (lb/day)
Ammonia Delivery Truck	30	0.33	0.07	2.14	0.00	0.09
Waste Haul Truck	10	0.34	0.08	2.21	0.00	0.09
Off-Site Construction Worker Commute	30	0.77	0.08	0.08	0.00	0.00
	Total	**1.44**	**0.23**	**4.43**	**0.01**	**0.19**

Summary of Operational Emissions
Section 3.3.1 of the Ventura County Air Quality Assessment Guidelines identifies mass-emission rate significance thresholds for ozone precursors NO_x and ROC during project operation. Mass-emission based significance thresholds are not identified for CO, PM10 or SO_x emissions. The peak daily project operational emissions are compared to the significance thresholds in **Table C-10**. As shown in the table, the unmitigated peak daily project operational emissions exceed significance thresholds. However, the VCAPCD provides emission offsets for permitted equipment up to 5.0 tons per year of NO_x and 5.0 tons per year of ROC[5]. Because this facility will operate only a limited number of hours per year, the annual potential to emit from permitted equipment (the combustion turbine generator) shown in **Table C-6** is less than 5.0 tons per year of NO_x and less than 5.0 tons per year of ROC. Therefore, the VCAPCD will provide emission offsets for NO_x and ROC emissions from the combustion turbine generator. These offsets will mitigate the proposed project's ROC and NO_x from the combustion turbine generator, which reduces the proposed project's peak daily ROC and NO_x emissions below the VCAPCD CEQA significance threshold for operations.

Localized Air Quality Analysis
Criteria pollutant modeling was performed for all operating conditions for comparison against the California and National Ambient Air Quality Standards (AAQS). A comprehensive discussion of the modeling analysis complete with figures is provided in Appendix E.

[5] In an ozone non-attainment area such as Ventura County, all emissions increases of ozone precursors (i.e., NOx and ROC) must be offset. For permitted equipment, emission offsets are provided by VCAPCD provided the emissions do not exceed 5.0 tons per year of NOx and 5.0 tons per year of ROC. If project emissions exceed these thresholds, the applicant must provide offsets.

The USEPA Industrial Source Complex – PRIME (ISC-PRIME, version 04269) dispersion model was used for this analysis in accordance with VCAPCD guidance. Due to significant downwash[6] issues from the black start ICE, the ISC-PRME model was used to refine the analysis. The model was run using the regulatory default options, except that the NOCALM option was used pursuant to VCAPCD requirements.

Table C-10 Operational Emissions Significance Evaluation

Source	CO (lb/day)	ROC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)
Direct Operational Emissions					
Combustion Turbine Generator	151.20	31.44	103.20	6.50	109.00
Black Start Generator	1.52	0.43	1.19	0.00	0.03
Peak Daily Direct Operational Emissions	152.72	31.87	104.39	6.50	109.03
Peak Daily Indirect Operational Emissions	1.44	0.23	4.43	0.01	0.19
Total Peak Daily Emissions	154.16	32.10	108.82	6.51	109.22
Significance Threshold	*N/A*	*25*	*25*	*N/A*	*N/A*
Mitigation Recommended?	*N/A*	Yes	Yes	*N/A*	*N/A*
Emission Offsets provided by VCAPCD	*N/A*	31.44	103.20	*N/A*	*N/A*
Mitigated Net Emission Increase	154.16	0.66	5.62	6.51	109.22
Significant following Mitigation?	N/A	No	No	N/A	N/A

Modeled stack parameters represent the worst-case stack parameters for the LM6000 turbine over several load conditions (startup, commissioning, and normal operations). Worst-case stack parameters are defined as the lowest exhaust temperature and velocity over all possible operating conditions. The black start ICE stack parameters represent 100 percent load conditions.

The highest short-term emission rates for all operating conditions were modeled for the LM6000 and black start ICE for the short-term averaging periods (i.e., one to 24-hour). The black start ICE was assumed to run a maximum of one-half hour per day. Emissions for the ICE were scaled accordingly for short-term periods longer than one hour. Emissions of SO_2 and PM10 during startup and commissioning are not expected to be any higher than during normal operations; therefore, only NO_x and CO were modeled during startup and commissioning. The black start ICE was assumed not to operate during the commissioning period.

[6] "Downwash" is a modeling term used to refer to the interference that a building or structure will have on the airflow downwind of a source of air emissions such as a stack.

The air quality modeling used three years of meteorological data collected at the Ventura County Air Pollution Control District (VCAPCD) Emma Wood State Beach site, which is a coastal site that experiences meteorological conditions similar to the conditions experienced at the proposed project site. These conditions include periods with poor dispersion of emissions, such as occurs during heavy coastal fog. Use of these data was approved by the VCAPCD for the Authority to Construct (ATC) application for the facility. To ensure that potential impacts from operation of the project were evaluated under all meteorological conditions, the modeling was conducted for every hour of the three-year period. The potential impacts of project emissions on air quality during each hour were calculated, and the highest impacts were identified. As shown in Tables C-11 through C-13, these maximum impacts from the project would not cause significant localized impacts.

A network of receptors was generated for the analysis that consists of the following:

- Fenceline receptors placed every 30 meters (m);
- 100-m spacing from the fenceline to one kilometer (km) from the fenceline;

Modeling results are shown in **Tables C-11** through **C-13**. Maximum predicted impacts due to facility operations were added to representative background concentrations for comparison against the California AAQS. Background CO, SO_2 and PM10 concentrations are from the VCAPCD El Rio monitoring site, and background NO_2 concentrations are from the Emma Wood State Beach monitoring site. Because background PM10 concentrations exceed the most stringent AAQS, a different approach was used to determine significance. Modeled PM10 concentrations are considered to be significant if the project's emissions cause a change in ambient air concentration equal to or greater than the Significant Impact Level (SIL).

As shown in **Table C-11**, the modeled impacts (Total Concentration) are less than the applicable AAQS for NO_2, CO, and SO_2. Normal operations occur when the turbine is at 100 percent load. The background concentration of PM10 exceeds the applicable AAQS. However, the maximum predicted PM10 impacts due to operation of the proposed project are well below the SILs.

Table C-11 Normal Operations Modeling Results

Pollutant	Averaging Period	Maximum Predicted Impact ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	SIL ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Increment ($\mu g/m^3$)
NO_2	1-hour	160.70	97.8	258.50	n/a	470	n/a
	Annual	8.37E-03	16.9	16.90	1	100	25
CO	1-hour	204.62	8,280.0	8,484.62	2000	23,000	n/a
	8-hour	16.12	4,025.0	4,041.12	500	10,000	n/a

SO_2	1-hour	0.26	18.3	18.56	n/a	655	n/a
	3-hour	0.08	13.1	13.18	25	1,300	512
	24-hour	6.59E-03	10.5	10.51	5	105	91
	Annual	7.0E-05	2.6	2.60	1	80	20
PM10	24-hour	0.11	127.2	127.31	5	50	30
	Annual	1.11E-03	31.0	31.00	1	20	17

[1] Background PM10 concentrations exceed the California AAQS and increments. Project impacts are insignificant.

As shown in **Tables C-12** and **C-13**, NO_x and CO emissions due to operation of the proposed project (Total Concentration) will not cause or contribute to an exceedance of the AAQS. Based on the modeling analysis, operation of the proposed project will have a less than significant impact on ambient air quality.

Table C-12 Startup Modeling Results

Pollutant	Averaging Period	Maximum Predicted Impact ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	SIL ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Percent of AAQS
NO_2	1-hour	160.70	97.8	258.50	n/a	470	55%
CO	1-hour	204.62	8,280.0	8,484.62	2000	23,000	37%
	8-hour	16.12	4,025.0	4,041.12	500	10,000	40%

Table C-13 Commissioning Modeling Results

Pollutant	Averaging Period	Maximum Predicted Impact ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	SIL ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Percent of AAQS
NO_2	1-hour	47.21	97.8	145.01	n/a	470	31%
CO	1-hour	27.79	8,280.0	8,307.79	2,000	23,000	36%
	8-hour	7.09	4,025.0	4,032.09	500	10,000	40%

C.3) Construction and operational emissions were evaluated to determine if the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

As discussed in C.2, mitigation measures are required for NO_x, VOC and PM10 emissions during construction of the proposed project. Emissions during construction of the proposed project are not

expected to be cumulatively considerable after implementation of these mitigation measures.

As shown previously in **Table C-10**, with the application of the VCAPCD-provided emission offsets during operation, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

C.4) A health risk assessment (HRA) was conducted to determine if the proposed project would expose sensitive receptors to substantial toxic air contaminant (TAC) pollutant concentrations. A project would be considered significant if predicted cancer risk exceeds one excess cancer case per million exposed persons (one-per-million), or if either chronic non-carcinogenic or acute hazard indices (HI) exceed 1.0 at any off-site receptor. The HRA was performed using normal operating TAC emissions from the proposed facility. TAC emissions during periods of startup/shutdown and commissioning are not expected to result in adverse health risks due to the short-term nature of the emissions.

The health risk assessment was conducted in three steps. First, emissions of TACs from the proposed equipment were estimated. Second, exposure calculations were performed using the ISCST3 dispersion model. Third, results of the exposure calculations along with the cancer potency factor, and chronic non-carcinogenic and acute Reference Exposure Levels (RELs) for each TAC were used to perform the risk characterization to quantify individual health risks.

TACs emissions for the LM6000 turbine and Waukesha ICE were calculated using AP-42 and the California Air Toxic Emission Factor (CATEF) database, respectively. AP-42 emission factors and the maximum hourly and annual fuel consumption rates were used to calculate peak hourly and annual average TAC emission rates for the LM6000 turbine. For the Waukesha ICE, CATEF emission factors, the maximum hourly fuel consumption rate, duration of operation, and number of annual operating hours were used to calculate peak hourly and annual average TAC emission rates. Ammonia slip emissions from the SCR were provided by GE for various operating conditions. **Table C-14** summarizes the proposed facility-wide TAC emission rates for the proposed project during normal operations. TAC emission estimates, and detailed calculations and explanations are provided in **Appendix D**.

The methods used to assess potential human health risks at the nearest off-site receptors are consistent with the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* published by the California Office of Environmental Health Hazard Assessment (OEHHA) (OEHHA 2003). The CARB Hot Spots Analysis and Reporting Program (HARP, Version 1.3) software was used to perform the analysis. A brief description of the HRA is provided below; a more detailed explanation of the methods and assumptions used in the HRA is provided in **Appendix D**.

Stack parameters used in the analysis represent 100 percent load conditions for both the LM6000 and Waukesha ICE sources. The coordinates are in Universe Transverse Mercator (UTM), Zone 11, referenced in United States Geological Survey (USGS) North American Datum 1927 (NAD27).

Building downwash was calculated internally by HARP. A network of receptors was generated for the analysis that consists of the following:

- Fenceline receptors placed every 30 m;
- A Cartesian grid at 100-m spacing out two kilometers from the fenceline;
- Discrete residential receptors located at the proposed residential development to the southeast of the facility; and
- Discrete off-site worker receptors located at Mandalay Power Generation facility.

There are no sensitive receptors within three kilometers of the proposed site.

C-14 Facility-Wide TAC Emissions During Normal Operations

Pollutant	Maximum Hourly Emission Rate (lb/hr)	Annual Average Emission Rate[1] (lb/yr)
1,3-Butadiene	1.32E-03	4.27E-01
Acetaldehyde	1.97E-02	3.83E+01
Acrolein	3.07E-03	6.13E+00
Ammonia[3]	3.20E+00	6.79E+03
Benzene	7.44E-03	1.44E+01
Benzo(a)pyrene[2]	8.27E-09	1.16E-07
Benzo(b)fluoranthene	1.25E-07	1.75E-06
Benzo(g,h,i)perylene	2.31E-08	3.23E-07
Benzo(k)fluoranthene	2.40E-08	3.36E-07
Chrysene	4.38E-08	6.13E-07
Dibenz(a,h)anthracene	8.27E-09	1.16E-07
Ethylbenzene	1.47E-02	3.06E+01
Formaldehyde	3.35E-01	6.80E+02
Indeno(1,2,3-cd)pyrene	2.20E-08	3.07E-07
Naphthalene	6.64E-04	1.25E+00
PAH [as benzo(a)pyrene][2]	9.93E-04	2.11E+00
Propylene	1.65E-02	2.31E-01
Propylene Oxide	1.31E-02	2.78E+01
Toluene	5.94E-02	1.24E+02
Xylene	3.09E-02	6.13E+01
	Total HAP [3]	986.8

1 Subsequent years following commissioning represent worst-case TAC annual emissions.
2 LM6000 PAHs are listed as composite PAHs (as benzo[a]pyrene) in emission factor list; Black start generator PAHs are speciated in emission factor database.
3 Ammonia is not a hazardous air pollutant (HAP) and is not included in the HAP Total.

Carcinogenic risks and chronic non-carcinogenic and acute health effects were assessed using the dispersion modeling described above and numerical values of toxicity provided by OEHHA. Exposure pathways included inhalation, homegrown produce (using default ingestion fractions), and dermal, soil,

and mother's milk absorption. Off-site worker exposure used the HARP default setting, since the proposed facility could potentially operate 24 hours during a single day, although operation is anticipated to be substantially less. Long-term risks (i.e., cancer risk and chronic non-carcinogenic hazard index) and short-term risks (acute HI) were calculated at the fenceline, as well as all Cartesian grid and discrete receptors.

Table C-15 presents the risk assessment results for each group of receptors, as applicable. The calculated cancer risks were below one-per-million, and the calculated chronic non-carcinogenic and acute hazard indices were less than 1.0. All predicted risks are below the established health risk assessment significance thresholds. Therefore, the proposed project will have a less than significant impact with respect to expose of sensitive receptors to substantial toxic air contaminant pollutant concentrations.

Table C-15 Maximum Predicted Risks

Receptor	Cancer Risk (Per Million)	Chronic Hazard Index	Acute Hazard Index
Residential	0.01	0.0002	0.68
Off-Site Worker	0.002	0.0002	0.68
CEQA Significance Thresholds	*1.0*	*1.0*	*1.0*
Significant? (Yes/No)	No	No	No

C.5) During construction of the proposed project, diesel fuel will be combusted in the construction equipment, asphalt will be used for the access roads, parking areas, and areas where the new natural gas pipeline will be constructed within the existing street; and small quantities of paint may be used to touch up the equipment and structures. These activities may emit odors; however, given the predominantly onshore winds, any odors emanating from the project would affect land that is currently unpopulated open space, farmland and SCE's Mandalay substation. Based on these factors, odors from construction activities are expected to have less-than-significant impacts.

The combustion turbine and black start generator proposed for the project will burn natural gas exclusively. Natural gas combustion is not known to cause objectionable odors. The SCR system proposed for NO_x emissions control will use aqueous ammonia as the reducing agent. The aqueous ammonia will be stored in a tank that will emit no ammonia vapors under normal operating conditions and, consequently, is not expected to cause objectionable odors. The ammonia slip in the turbine exhaust will be limited by conditions on the air permit to 5 ppm. The odor threshold for ammonia is 5.75 ppm (3M, 2004). Because of the buoyancy of the heated exhaust emissions, the dispersion of emission over distance, and the distance from the stack to the nearest receptor, ammonia slip emissions are not expected to cause noticeable odor.

Based on these factors, the proposed project will have no significant adverse impacts from objectionable odors.

Mitigation:

The mitigation measures described in this section are designed to control emissions caused by project construction activities - grading, clearing, excavation, earth moving, and mobile equipment necessary to perform these activities.

AQ-1 The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

AQ-2 Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.

AQ-3 Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:

a) If soil is hauled off site, all haul trucks shall be required to cover their loads as required by California Vehicle Code §23114.

b) All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

AQ-4 Graded and/or excavated inactive areas of the construction site shall be monitored by SCE's construction contractor at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

AQ-5 Signs shall be posted on-site limiting traffic to 15 miles per hour or less.

AQ-6 During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.

AQ-7 Harbor Boulevard shall be swept at least once per day and/or as needed during construction if visible soil material is carried over to adjacent streets and roads.

AQ-8 Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

AQ-9 Equipment idling time shall be minimized.

AQ-10 Equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications.

AQ-11 Alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), electric, or equipment meeting Tier 2 standards, shall be used if feasible.

Monitoring:
Whenever City building inspectors are on-site, they shall inspect operations for compliance. SCE will maintain records demonstrating that all mitigation measures are implemented as required, and records may be reviewed by the City at any time for compliance review.

Result After Mitigation:
The proposed project will have a less than significant impact on air quality.

D. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
Would the project:				
1. 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? (*2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan*)	☐	☒	☐	☐

D. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
2. 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? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan)*	☐	☐	☒	☐
3. 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? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan)*	☐	☐	☐	☒
4. 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? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan)*	☐	☒	☐	☐
5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan)*	☐	☐	☒	☐
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? *(2020 General Plan, VIII - Open Space/ Conservation Element; FEIR 88-3, 4.10 - Biological Resources; and Local Coastal Plan)*	☐	☐	☒	☐

Discussion:

The applicant commissioned a biological resources survey of the proposed project site to determine potential impacts from the project to biological resources. The survey report is provided as Appendix F to substantiate the discussion provided herein.

D.1 - 3) The proposed project has a number of components including the peaker unit, electrical transmission substation, gas metering station, natural gas pipeline, water line, and transmission line, each of which affect different land areas. Project construction activities for the peaker unit, transmission stubstation, gas metering station and water line will be located within the boundaries of a heavily disturbed site formerly used as a fuel storage area between 1959-2003. In 2003, the existing equipment was removed and the site remediated and graded. The site is currently cleared and open. The peaker unit site is located within an area defined by the City of Oxnard's Local Coastal Plan as Sensitive Habitat. However, since the area has been heavily disturbed by previous uses there would not be a significant disruption of habitat value from the proposed project. These previously disturbed areas do not have the potential for occurrence of endangered, threatened, sensitive or special status species.

Five special-status species occur in the project vicinity: the California least tern, western snowy plover, Belding's savannah sparrow, burrowing owl, and Ventura marsh milk-vetch. The listing status and occurrence of these species is further described in **Appendix F**. Aside from burrowing owl, which was observed on the project site during soil testing in early February (most likely a winter visitor to the site), no suitable nesting or foraging habitat is present on the proposed peaker site for these species.

The only information available regarding snowy plovers at Mandalay State Beach when the Biological Resources Assessment in **Appendix F** was prepared was that seven snowy plovers were observed at Mandalay State Beach during the 2006 breeding season; no information on whether nesting had been documented, or on reproductive success, was available. The following information regarding the number of snowy plover nests in the project area was provided by biologist Reed Smith:

Year	Mandalay State Beach	McGrath Lake
2003	3	8
2004	7	8
2005	2	3
2006	6	3

The impact discussion in the Biological Resources Assessment states that "California least terns may nest northwest of the project site at McGrath Lake during project construction (more than 1000 feet north of the project site). However, considering the fact that this species nests at active container terminals (Port of Los Angeles, the second-largest nesting site in California in 2006) and airports (Lindberg Field in San Diego, which supported over 100 nests in 2006), it is unlikely that the noise, vibration and other disturbances associated with construction and operation of the Mandalay Peaker project would result in significant indirect impacts on this species.

This statement also holds true for snowy plovers, since the western limits of the project site (including staging areas and other activities associated with the project) would be more than 300 feet east of the dunes at Mandalay State Beach where snowy plovers may nest. The author of the Biological Resources Assessment worked many years with snowy plovers at Camp Pendleton Marine Base where they nested (and continue to nest) successfully despite military operations including frequent traffic by large tanks

on the beach just west of the nesting area, generating both noise and vibration. Among other locations adjacent to human disturbance, snowy plovers also nest successfully at a nesting site at Batiquitos Lagoon in San Diego County that is adjacent to 4-lane Carlsbad Boulevard. Snowy plovers are more susceptible to disturbances caused by people and pets walking close to nests (Page, G. W., J. S. Warriner, J. C. Warriner, and P. W. C. Paton. 1995. Snowy Plover (Charadrius alexandrinus). In The Birds of North America, No. 154 (A. Poole and F. Gill, eds.).

The peaker project stack may provide perching habitat for raptors that may prey on least terns or snowy plovers; however, many other potential perches are present in the project vicinity, including utility poles and other existing structures associated with the existing Mandalay Generating Station. Thus, the steam stack is not expected to provide more suitable perching habitat for potential snowy plover predators than is currently available.

The electrical transmission line for the project, which will require placement of some new poles, is within areas of suitable habitat for burrowing owl, a State of California-designated species of special concern, and Ventura marsh milk-vetch, a Federal and State listed endangered plant species. This area supports an existing coastal sand dune community called the Mandalay dune complex. Installation of new (and replacement of some existing) poles associated with construction of the transmission line may potentially require the removal of portions of the coastal dune scrub vegetation. No listed or sensitive species were observed within the coastal sand dune scrub community during the biological survey.

A pre-construction survey will be conducted for both the Ventura marsh milk-vetch (**BIO-1**) and burrowing owl (**BIO-2**) prior to installation of transmission poles and for portions of the natural gas pipeline that may occur within suitable habitat for these species. For the majority of its length, the natural gas pipeline will be constructed in an unpaved portion of the right-of-way on the east side of Harbor Boulevard within a previously disturbed pipeline corridor. The pipeline will be located within the street as it crosses the bridge over the canal. Considering that the pipeline will require a temporary construction easement of 30 feet from the edge of the pavement, widening to approximately 54 feet near the tie-in location, pre-construction surveys for Ventura marsh milk-vetch (**BIO-1**) and burrowing owl (**BIO-2**) will be conducted where impacts to native dune scrub habitat will occur. Placement of transmission poles, the gas pipeline, and other ground disturbing activities including site access and location of spoils will be adjusted to protect listed plant populations or occupied owl burrows that may be discovered.

Additionally, the following best management practices (BMP's) will be implemented to minimize indirect impacts on biological resources:

- Clearing of vegetation will be confined to the area needed for construction;
- The contractor will employ erosion and sediment control BMP's, as appropriate for site conditions, to avoid potential runoff of construction materials into drainage or other waterways;
- The contractor will employ storage and material management BMP's to minimize the potential for spills of hazardous materials during construction. Any contaminated soils excavated during

site construction will be removed from the site and properly disposed of offsite;

- Vehicle fueling and maintenance will not occur within 100 feet of waterways including the Edison canal;
- Construction trash will be promptly disposed of in covered containers and removed from the project site.

Following site construction, the site will be landscaped with a selection of native plants and/or non-invasive species. The list of proposed landscaping plants has been reviewed against the California Native Plant Society List of invasive plants to ensure that none of the proposed landscaping species would be considered invasive. The list is also consistent with the permitted plant list for the Northshore project.

No elements of the of the proposed project will have a substantial adverse effect on endangered, threatened, sensitive, or special status species, or on riparian habitat, protected wetlands, or other sensitive natural communities as long as these measures are implemented prior to and during project activities.

D.4) No native resident or migratory fish species or native wildlife nursery sites exist within the proposed project site. Depending on the timing, construction activities may potentially impact nesting birds protected by the Federal Migratory Bird Treaty Act (MBTA). Buffer zones will be placed around any active nests located within 100 feet of construction activities until the nests are no longer active (BIO-3).

D.5-6) The Mandalay Peaker Project will not conflict with applicable local policies or ordinances protecting biological resources. The peaker unit site is located within an area defined by the City of Oxnard's Local Coastal Plan as Sensitive Habitat. However, since the area has been heavily disturbed by previous uses there would not be a significant disruption of habitat value from the proposed project. Additionally, the proposed project is not located within or near any Habitat Conservation Plan areas or Natural Community Conservation Plan areas. Therefore, no impacts with conservation plans are anticipated.

Mitigation:

BIO-1 A pre-construction survey will be conducted by a qualified biologist during the appropriate time of year for Ventura marsh milk-vetch following determination of the final transmission pole layouts. Perennial plants within the genus *Astragalus* are readily visible and should be detectable throughout the year. If individual plants are identified or suspected, pole placement and site access will be adjusted, as necessary, to avoid impacts to this species. If impacts to the Ventura marsh milk-vetch cannot be avoided during construction, consultation with the California Department of Fish and Game and U.S. Fish and Wildlife Service will be conducted to develop appropriate measures to minimize project impacts to less than significant.

BIO-2 A pre-construction survey will be conducted by a qualified biologist for burrowing owls no more than 30 days prior to ground disturbing activities following the determination of the final transmission pole layouts. The survey will be conducted on the proposed peaker site and within suitable habitat areas associated with the transmission line route. Should any burrows be actively used by owls within the project site, appropriate distances based on current California Department of Fish and Game guidelines will be kept from all occupied burrows, and a qualified biological monitor will be present during construction activities. If burrowing owls cannot be avoided during construction, consultation with the California Department of Fish and Game will be conducted to develop appropriate measures to minimize project impacts on burrowing owls to less than significant.

BIO-3 Project grubbing and other project construction activities that may destroy bird nests will be limited to the general non-breeding season (approximately September 1 through March 1). However, if project grubbing and grading cannot avoid the breeding season, a qualified biologist will conduct a preconstruction survey of the project area prior to grubbing or grading activity. If occupied nests of birds are observed within the construction zone, a minimum buffer of 100 feet will be established between the nest and limits of construction. Additionally, the construction crew will avoid activities within the buffer zone until the bird nest(s) is/are no longer occupied, per a subsequent survey by the qualified biologist. If work within the established 100 foot buffer cannot be avoided, SCE will consult with the U.S. Fish and Wildlife Service and California Department of Fish and Game to determine if there are appropriate measures that may be taken to continue work in these areas.

Monitoring:
If Ventura marsh milk-vetch, occupied owl burrows, or occupied bird nests are identified during pre-construction surveys, a qualified biologist will be present during transmission line construction/pole placement and other activities in suitable habitat to prevent impact to these species. The Planning Division shall monitor compliance.

Result After Mitigation:
Since SCE will be consulting with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to implement best practices, the proposed project is not expected to result in significant adverse impacts on either terrestrial or aquatic biological resources following mitigation.

E. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.11 - Cultural Resources)*	☐	☐	☐	☒
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.11 - Cultural Resources)*	☐	☐	☐	☒
3 Directly or indirectly destroy a unique paleontological resource or site or unique geological feature? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.12 - Aesthetic Resources)*	☐	☐	☐	☒
4. Disturb any human remains, including those interred outside of formal cemeteries? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.11 - Cultural Resources)*	☐	☐	☐	☒

Discussion:

E.1 - 2) Project construction will occur in a highly disturbed former fuel storage tank area, a previously disturbed transmission line corridor and in the Harbor Boulevard public right-of-way. A record search was conducted at the California Historical Resources Information System (CHRIS), South Central Coastal Information Center, located at California State University Fullerton. The record search identified no previously recorded cultural resources within the project area. A pedestrian survey was completed on the proposed project area, including the transmission line corridor, by qualified cultural resources personnel. Ground visibility during the survey was approximately 90 percent, and no new cultural resources were located. No further archaeological studies are required at this time for the proposed project location.

E.3) The Los Angeles Sheet geological map was reviewed for the areas of the proposed project location to determine whether sensitive paleontological resources are likely to occur within or adjacent to the area of potential effects of the site (Rogers 1965). The geologic deposits underlying the proposed project site include recent alluvial fan deposits. Alluvial fan deposits are not conducive to the formation or preservation of paleontological resources (fossils). No paleontological resources were observed during the field survey.

E.4) Because the proposed project will be constructed on previously disturbed ground, no disturbance

of human remains is expected. If human remains are encountered during the construction or any other phase of development, work in the area of the discovery will be halted in that area and directed away from the discovery. No further disturbance would occur until the county coroner makes the necessary findings as to the origin pursuant to Public Resources Code 5097.98-99, Health and Safety Code 7050.5. If the remains are determined to be Native American, the Native American Heritage Commission (NAHC) would be notified within 24 hours as required by Public Resources Code 5097. The NAHC would notify the designated Most Likely Descendant who would provide recommendations for the treatment of remains within 24 hours. The NAHC mediates any disputes regarding treatment of remains.

Mitigation:

CUL – 1 Developer shall contract with a Native American monitor to be present during all subsurface grading, trenching or construction activities on the project site. The monitor shall provide a final report to the Planning Division summarizing the activities during the reporting period. A copy of the contract for these services shall be submitted to the Planning Division Manager for review and approval prior to issuance of any grading permits. The monitoring report(s) shall be provided to the Planning Division prior to approval of final building permit signature.

Monitoring:

The Native American monitor will be on-site during excavations.

Result After Mitigation:

The proposed project will not have a significant impact on cultural or paleontological resources following mitigation (if necessary).

F. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
a. 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 known fault? Refer to Division of Mines and Geology Special Pub. 42. (2020 General Plan, IX Safety Element: FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☒	☐
b. Strong seismic ground shaking? (2020 General Plan, IX - Safety Element: FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☒	☐

F. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
c. Seismic-related ground failure, including liquefaction? (2020 General Plan, IX - Safety Element; FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☒	☐
d. Landslides? (2020 General Plan, IX - Safety Element; FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☐	☒
2. Result in substantial soil erosion, or the loss of topsoil? (2020 General Plan, IX - Safety Element; FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☒	☐
3. 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? (2020 General Plan, IX - Safety Element; FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☒	☐
4. 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? (2020 General Plan, IX - Safety Element; FEIR 88-3, 4.8 - Earth Resources)	☐	☐	☐	☒

Discussion:

F.1) The proposed project will be constructed in an area of known seismic activity. Approximately 38 active faults are known to exist within a 60-mile radius of the project site. Of primary concern is the Oak Ridge Fault (Blind Thrust Offshore), approximately 3.9 miles southwest of the project site which represents the most significant potential source of strong seismic ground shaking at the project site. The fault trends in an east-west direction and extends from offshore in the Pacific Ocean toward the Ventura-Oxnard coastline. This fault is considered capable of generating a 6.9 magnitude earthquake. Based on the California Geological Survey's, Probabilistic Seismic Hazards Mapping Ground Motion Page (2006), there is a 10 percent probability of earthquake ground motion exceeding 0.582 times the acceleration of gravity (g) at the project site over a 50-year period.

Although within a seismically active area, according to the Alquist-Priolo Earthquake Fault Zoning Maps (2000) and Fault Activity Map of California (1994), the project site is not located on a fault trace that would define the site as a special seismic study zone under the Alquist-Priolo Act. Thus, the risk of earthquake-induced ground rupture is considered less than significant.

Because the proposed project is located in a seismically active region, there is the potential for damage to the new project structures in the event of an earthquake. According to the latest geotechnical report

for the proposed site (Kleinfelder, 2006), differential seismic induced settlements at the site could be on the order of ¼ inch. New structures must be designed to comply with recommendation presented in the geotechnical report (Kleinfelder, 2006), the California Building Code (CBC)(2001 edition) and the Uniform Building Code (UBC) Zone 4 requirements because the project site is located in a seismically active area. The CBC and UBC are considered to be standard safeguards against major structural failures and loss of life. The goal of the codes is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The UBC bases seismic design on minimum lateral seismic forces ("ground shaking"). The UBC requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. SCE will design all structures to meet the latest UBC codes. With adherence to proper design and construction practices, no significant impacts from seismic ground shaking would be expected.

Liquefaction is a mechanism of seismic ground failure in which earthquake-caused ground motion causes loose, water-saturated, cohesionless soils to temporarily lose bearing capacity. A geotechnical study performed at the proposed project site in October and December 2006 (Kleinfelder, 2006) showed soils consisting of interbedded layers of sands and sandy silts in approximately 55 feet below ground surface (bgs). The upper one to four feet of loose material at the site consists of artificial fill placed following demolition of the former tank farm (Kleinfelder, 2006). The top 10 feet are generally loose to medium dense and become more compact to dense with depth. Soils below approximately 55 feet bgs become increasingly fine grained and are stiff to very stiff. Coarse-grained soils at depths greater than 10 feet are medium dense to very dense. Soil borings, Cone Penetration Tests (CPTs) and electrical resistivity profiles were advanced as part of the study and ranged in depth from eight to 100 feet bgs. Groundwater was not encountered in the soil borings or measured in the CPTs. Historic high groundwater at the project site has been reported to be less than five feet bgs (Kleinfelder, 2006).

There is the potential for liquefaction induced impacts at the project site. The appropriate parameters for liquefaction exist at the site, including unconsolidated granular soils and a high water table. In addition, Seismic Hazard Zone maps prepared by the State of California (Division of Mines and Geology 2002) indicate that the site is in an area with the potential for liquefaction. In addition, the site has a high potential for liquefaction to occur during seismic event based on subsurface soil conditions observed during the most recent geotechnical study (Kleinfelder, 2006). If liquefaction should occur at the site, there is the potential for up to approximately two to three inches of lateral displacements to occur towards the adjacent channel (Kleinfelder, 2006). The CBC and UBC requirements consider liquefaction potential and establish more stringent requirements for building foundations in areas potentially subject to liquefaction. Therefore, compliance with the CBC and UBC requirements is expected to minimize the potential impacts associated with liquefaction. Thus, liquefaction impacts are expected to be less than significant.

The new pipeline that will supply natural gas to the project site will be filled with high pressure natural gas. Natural gas is flammable and explosive under certain conditions. If an earthquake were to rupture the natural gas pipeline, a potentially hazardous condition may expose people to substantial adverse

effects. However, natural gas pipelines exist in many city streets, and already exist in Harbor Boulevard, in which this new pipeline will be constructed. (Note that the new pipeline is required because the capacity of existing branch lines is insufficient for the additional gas demand of the peaker turbine, and the new pipeline will connect the project to a larger main gas (trunk) line.) With adherence to the applicable federal and state regulatory requirements for the design and installation of gas pipelines, the risk of accidental release is less than significant.

The site is not considered to be an area with the potential for permanent ground displacement due to earthquake-induced landslides or due to heavy precipitation events because of the relatively flat topography.

F.2) During construction, the possibility exists for temporary erosion resulting from excavation and grading activities. Because of the proximity to the ocean, the U.S. Department of Agriculture (USDA) Soil Conservation Service (1970) has designated soil in the site vicinity as being in an area of very severe soil erosion hazard based on its proximity to the ocean. SCE will develop a construction Storm Water Pollution Prevention Plan (SWPPP) to minimize soil erosion during storm events. Appropriate dust control practices will minimize the potential for windblown dust erosion during construction. No unstable earth conditions or changes in geologic substructures are expected to result from the proposed project.

Because they will be constructed within existing city streets, construction and operation of the natural gas and water pipelines will have no impact on soil erosion or result in the loss of topsoil.

F.3) According to the Ventura County General Plan Hazards Appendix (2005), portions of the Oxnard Plain are experiencing subsidence as a result of the extraction of water from the underlying aquifers at a rate that exceeds the rate of replenishment. The exact rate of regional subsidence is not known; however, historical records (up to 1968) show rates of between 0.04 and 0.05 feet per year (ft/yr) and in some areas up to one foot in a fifteen to twenty-year period (0.05 to 0.07 ft/yr). Efforts to reduce the rate of overdraft in aquifers have reduced impacts from subsidence in some areas; however, the definite cause or causes and rate of this subsidence have not been fully developed. The project site is located in an area of probable subsidence (Ventura County General Plan, 2005); however, no evidence of subsidence has been observed or recorded at the project location. The proposed project is expected to have a less than significant impact to due to subsidence.

According to the most recent geotechnical report (Kleinfelder, 2006), the site is located at an elevation ranging from approximately 11 feet above sea level at the northeast portion of the site to approximately nine feet above sea level at the southwest portion of the site. Maximum high tides are approximately seven feet above mean sea level (msl), resulting in an average elevation difference of approximately two to four feet between high tide and the project site. Project equipment at the site could be potentially impacted during a storm surge; however, due to the distance from the shore and the structures and berm located between the proposed project and the shore, impacts are expected to be less than significant.

The project site is not prone to landslides or collapse because surface topography at the site and vicinity is relatively flat. No areas prone to landslides were identified on the maps prepared by the California Geological Survey (2002). As discussed above, construction of new structures will take into consideration the potential for liquefaction. In summary, the proposed project is expected to have a less than significant impact due to subsidence and liquefaction and no significant impacts due to erosion, landslides, or soil collapse.

F.4) The uppermost 10 feet of soil at the project site generally is composed of loose, fine to medium-grained sand with gravel. The USDA Soil Conservation Service (1970) classifies these soils as having a low potential for expansion due to the lack of clays. These materials do not tend to show significant soil expansion and are not considered an expansive soil as defined in Table 18-1-B of the UBC (1994), and thus, the proposed project would not expected to create substantial risks to life or property due to expansive soils.

Mitigation:
Since no significant geologic impacts were identified, no mitigation is required or proposed.

Monitoring:
With the implementation of the survey and design and construction of berms or other protective measures, if needed, no further monitoring would be required.

Result After Mitigation:
No significant adverse impacts on geology and soils are expected from the proposed project following mitigation.

G. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? (*2020 General Plan, IX - Safety Element*)	☐	☐	☒	☐
2. 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? (*2020 General Plan, IX - Safety Element*)	☐	☐	☒	☐

G. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (*2020 General Plan, IX - Safety Element*)	☐	☐	☐	☒
4. 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? (*2020 General Plan, IX - Safety Element*)	☐	☐	☐	☒
5. 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? (*2020 General Plan, IX - Safety Element*)	☐	☐	☐	☒
6. 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? (*2020 General Plan, IX - Safety Element*)	☐	☐	☐	☒
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (*2020 General Plan, IX - Safety Element; City of Oxnard Emergency Preparedness Plan and Response Manual*)	☐	☐	☐	☒
8. 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? (*2020 General Plan, IX - Safety Element*)	☐	☐	☒	☐

Discussion:

Overview: The proposed peaker project will include various safety programs addressing hazardous materials storage and use, emergency response procedures, employee training requirements, hazard recognition, fire safety, first-aid/emergency medical procedures, hazardous materials release

containment/control procedures, hazard communications training, Personal Protective Equipment (PPE) training, and release reporting requirements. These programs include a Risk Management Plan (RMP) for aqueous ammonia storage and use in accordance with the California Accidental Release Prevention (CalARP) regulations, Injury and Illness Prevention Program, fire response program, plant safety program and facility standard operating procedures. As required under federal and California regulations, a Hazardous Material Business Plan (HMBP) will be prepared and submitted to the local Certified Unified Program Agency (CUPA), the City of Oxnard Fire Department.

SCE will prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction activities and for operations to describe the management practices in place to prevent the release or discharge of hazardous materials to the waters of the State. SCE will also prepare a Spill Prevention Control and Countermeasures (SPCC) plan that will describe the storage of oil (e.g., lube oil in the turbine sump, lube oil in the black start generator sump, insulating oil in the transformers), the facility's spill prevention measures, the potential consequences of a spill, and spill response measures.

G.1) The proposed project will use a variety of hazardous materials during construction and operations. The routine storage and use of these materials is discussed below.

Project Construction. Hazardous materials that will be used during project construction include gasoline, diesel fuel, oil, lubricants, paint and small quantities of solvents. Diesel fuel is the hazardous material with the greatest potential for environmental consequences during the construction phase due to its use in construction equipment, and the frequent refueling that may be required. To minimize the potential for a release, diesel fuel will not be stored on-site, except in equipment/vehicle fuel tanks. When refueling is required, a mobile fuel truck will be brought on-site to fuel each vehicle or device. Any fuel spilled will be promptly cleaned up, and contaminated soil disposed of in accordance with the applicable state and federal requirements.

Small volumes of hazardous materials, including oil and lubricants for construction equipment, solvents and paint, will be temporarily stored on-site inside fuel and lubrication service trucks. Paints and solvents will be stored in a flammable material storage metal rolloff container. Maintenance and service personnel will be trained in handling these materials. The most likely incidents involving these hazardous materials would be associated with minor spills or drips. Small spills and drips can be easily cleaned up, so impacts would be less than significant.

Project Operation

Fuel Gas Delivery. A new natural gas pipeline within the Harbor Boulevard right-of-way adjacent to the project site will supply natural gas to the facility; there will be no onsite storage of natural gas. Natural gas is flammable and explosive under certain conditions. A release from the pipeline may result in significant hazards and risk to people. The Southern California Gas Company has a program in place to monitor gas pipelines to detect leaks and minimize risks to people; this new pipeline would be subject to the same routine inspection program. With adherence to the applicable federal and state regulatory requirements for the design and installation of

gas pipelines, the risk of accidental release is anticipated to be less than significant.

Compressed Gas Storage and Use. Compressed gases stored and used at the facility may include gases typically used for maintenance activities, such as welding, and calibration gases for the emissions monitoring equipment. These gases include carbon dioxide, acetylene, argon, carbon monoxide, nitric oxide, nitrogen and oxygen. Carbon dioxide is also used as a fire suppression agent in the turbine and black start generator enclosures. Compressed gas storage and use is not expected to cause significant adverse impacts to the public or environment.

Aqueous Ammonia. Aqueous ammonia (19 percent ammonia concentration by weight) will be the only chemical stored in sufficient quantities at the Project site to be classified as a regulated substance subject to the requirements of the CalARP RMP program.

An SCR system with aqueous ammonia injection will be used to control NO_x emissions in the turbine exhaust. Since the turbine is intended to generate electricity during peak periods of demand, the SCR system is expected to be operated on the same, infrequent schedule. NO_x emission control can be accomplished using either anhydrous ammonia (an undiluted almost pure form of ammonia) or aqueous ammonia (a water solution of lower concentration). The selection of the less hazardous form of ammonia (aqueous rather than anhydrous) is one major means for mitigating potential hazards of an accidental spill. Since it is of much lower concentration, a potential aqueous ammonia spill would have a proportionately lower impact than an equivalent size anhydrous ammonia spill. Because anumonia is diluted with water, the ammonia vapor pressure will be lower than anhydrous ammonia resulting in a lower evaporation rate, which reduces the potential for off-site impacts in the event of an accidental release. In order to have the same amount of ammonia available for use in NO_x control, aqueous ammonia requires more frequent tank truck shipments than anhydrous ammonia because of its lower concentration. Aqueous ammonia was selected over anhydrous ammonia for the proposed project in order to reduce the severity of any potential ammonia accident.

Aqueous ammonia will be stored on-site in a 10,500-gallon storage tank. Metallic storage tanks have a mean time to catastrophic failure of 0.0109 per million hours of service, or on average, one failure every 10,500 years (Center for Chemical Process Safety, 1989). Thus, failure of a pressurized aqueous ammonia storage tank during the lifetime of the facility is unlikely.

The ammonia system will consist of a storage tank, secondary containment, dispensing pumps, distribution piping, and vaporization skid. The storage tank will be located adjacent to the aqueous ammonia unloading area. The tank will be a single-walled design with a volume of 10,500 gallons; however, the tank will only be filled to 85 percent of its capacity (8,925 gallons). The storage tank will be constructed of materials that are compatible with 19 percent aqueous ammonia. The ammonia storage tank will be manufactured to meet American Society of Mechanical Engineers (ASME) Code Section 8, Division 1, Addenda "A", Chapter 4 specifications, and will meet all California Title 8 requirements for ammonia storage vessels. The tank will be equipped with pressure safety valves, a level gauge,

pressure gauge, and vacuum breaker system. A local alarm horn will be set to indicate 85 percent filling of the tank (tank full). The tank will be mounted to meet seismic codes within a concrete containment structure. The secondary containment has been sized to contain 12,500 gallons, or approximately 120 percent of the storage tank contents. The secondary containment structure will measure 47 feet long by 13 feet wide by three feet high. This secondary containment volume will contain the entire capacity of the tank plus an additional allowance for precipitation from a 25-year, 24-hour storm event. The secondary containment will be connected to an underground concrete dry sump via a 24-inch diameter drain pipe (surface area of pipe opening of 3.14 square-foot) that will allow a catastrophic ammonia spill to be flushed into the sump in approximately one minute. Any liquids collected in the sump will be removed manually by an operator using either a portable pump or a vacuum truck. Only trained technicians will conduct system maintenance and repairs.

Aqueous ammonia will typically be delivered to the facility by tank truck in 7,000-gallon loads. The aqueous ammonia unloading station will consist of a sloping concrete pad 36 feet long by 15 feet wide and will be surrounded by a berm six inches in height. The pad will slope to a drain to the storage tank secondary containment sump. The drain will have a diameter of 24-inch (surface area of 3.14 square feet) which will ensure that no pooling occurs in the event of a spill during unloading. Emergency shutoff valves will be provided at the ammonia unloading station for emergency isolation of aqueous ammonia in the system. A check valve in the ammonia fill line (to the storage tank) will also be provided which will prevent back flow of aqueous ammonia from the storage tank. The tank truck will be equipped with emergency shut-off systems to stop the ammonia transfer in case of an emergency during the unloading operation.

Ammonia leak detection sensors will be installed both inside and outside the secondary containment area, which will allow rapid detection and quick response to any accidental spill of ammonia. These sensors will activate local alarms, horns, and strobe lights. The ammonia detectors will alarm locally and also in the control room. A wind banner (sock) will be installed to continuously indicate the wind direction. A personal protective shower and eyewash station will be located in the immediate vicinity of the ammonia storage tank.

SCE will prepare a CalARP RMP for the storage and use of aqueous ammonia. The RMP will be based on studies identifying potential hazards associated with the handling of aqueous ammonia at the facility, including a hazards analysis, a seismic assessment, and an off-site consequence analysis. Facility management will evaluate any ammonia system improvements that are recommended as a result of the studies. The RMP will address in detail the emergency planning and response actions in the event of an ammonia release from the facility, including emergency response plans and training procedures. The RMP will be submitted to the City of Oxnard Fire Department for review and approval.

Aqueous Ammonia Transport. With respect to the transport of ammonia, U.S. Department of Transportation (DOT) regulations require all tank truck trailers to meet strict requirements for collision and accident protection. The tank trucks are designed to withstand violent accidents without breach of the primary containment. The frequency for serious hazardous material incidents involving large trucks is approximately 0.0022 per million vehicle miles (U.S. DOT 2004). Assuming a one-way trip distance to the project site of 31 miles from the Los Angeles County line to the site to deliver ammonia and an estimated four truck deliveries per year of aqueous ammonia, an accident resulting in a serious hazardous material incident would be expected to occur approximately once every 3.67 million years. Thus, a release of aqueous ammonia from a delivery truck enroute to the facility during the lifetime of the facility is unlikely.

Other Chemicals. The facility is expected to use and store several other chemicals. They include lube oil stored in a new 1,250-gallon carbon steel tank associated with the turbine. The turbine enclosures provide secondary containment for the tank. The tank will be inspected periodically (e.g., monthly) to ensure that it is not leaking. Lube oil has low toxicity and does not meet the criteria for any hazard class defined by the Uniform Fire Code (UFC).

Insulating oil will be used in the new electrical transformers installed at the facility. The insulating oil is not released to the environment under normal conditions of use. Each transformer will be installed in a secondary containment structure that will contain 100 percent of the transformer capacity plus an allowance for precipitation.

In addition to the specific chemicals discussed above, small quantities (less than five gallons) of paints, oils, grease, solvents, pesticides, detergents, and janitorial supplies typical of those purchased at a retail hardware store may also be stored and used at the facility. Flammable materials (e.g., paints, solvents) will be stored in flammable material storage cabinet(s) with built-in containment sumps. Routine use of these supplies is not expected to cause a significant hazard to the public or the environment.

G.2) Aqueous ammonia is a regulated substance that has the potential for off-site consequences and risk, if accidentally released.. Risk has two components - frequency and severity. The more often a particular mishap is likely to occur and the more hazardous the material involved in the mishap, the higher the risk. Risk can be reduced by reducing either the frequency of occurrence, the severity of the release, or both in combination. As discussed, SCE will be using aqueous ammonia for NOx emissions control, rather than the more hazardous anhydrous ammonia. This choice leads to more frequent ammonia deliveries, increasing the probability of a release, but it significantly reduces the severity of a potential release.

An off-site consequence analysis was performed for the worst-case release scenario involving aqueous ammonia at the peaker ammonia storage and handling facility. The details of this analysis, including the parameters selected for the analysis are presented below.

Worst-Case Release Scenario – The worst-case release scenario has been defined in the CalARP regulations. For aqueous ammonia, the CalARP Program defines the worst-case release as the

instantaneous release of the entire contents of the storage vessel and the evaporation of ammonia from the surface of the resulting pool of ammonia. Passive mitigation such as a containment structure may be taken into account in the analysis. The worst-case release scenario selected for the peaker facility was the complete and instantaneous release of 8,925 gallons of ammonia solution from the tank into the secondary containment. Because the secondary containment will be sloped and will drain to the underground sump in one minute, it was assumed that ammonia evaporation rate to the atmosphere will consist of three parts: (1) evaporation for one minute from the secondary containment (area of 611 ft^2); (2) evaporation from the collection drain in the secondary containment (3.14 ft^2); and (3) evaporation from the collection drain in the delivery truck catch basin (3.14 ft^2). Also, because the selected toxic endpoint of 200 ppm is based on 1-hour average concentration, ammonia evaporation was limited to one hour from the drains. In order to estimate conservative ammonia evaporation rates for air dispersion modeling, it was assumed that one-minute ammonia evaporation from the secondary containment (611 ft^2) and 60-minute ammonia evaporation from collection drains (surface area 6.28 ft^2) will occur simultaneously.

Toxic Endpoint - The distance from the point of release to a location at which the regulated toxic substance concentration is equal to or greater than a specified concentration must be determined to define the vulnerability zone. That specified concentration is known as the toxic endpoint. As required by CalARP regulations, the ammonia toxic endpoint used was 0.14 mg/L. This corresponds to a concentration of 200 parts per million (ppm) by volume, and represents the American Industrial Hygiene Association (AIHA) Emergency Response Planning Guideline (ERPG-2), which is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action."

Wind Speed/Atmospheric Stability Class - CalARP regulations require the use of a wind speed of 1.5 meters per second (m/s) and atmospheric stability class F in the off-site consequence analysis for the worst-case release scenario. This combination of stability class and wind speed was chosen for the worst-case scenario to represent the conditions that result in the least amount of regulated substance dilution and the farthest distance to the toxic endpoint. These dispersion conditions would be characteristic of conditions that occur during heavy coastal fog, with stable (inversion) conditions and light wind speeds.

Ambient Temperature/Humidity - CalARP regulations for the worst-case release analysis require use of the highest daily maximum temperature in the previous three years, and average relative humidity. The highest temperature was identified from a review of meteorological data obtained from the Desert Research Institute for the last three years (2004 through 2006) for the Oxnard Airport. This is the nearest meteorological station to the proposed peaker facility where long-term ambient temperature data are available. Thus, the highest reported daily temperature of 93°F for the Oxnard Airport was used for the dispersion analysis for the worst-case release scenario. The annual average relative humidity of 73 percent, also reported for the Oxnard Airport on the Weatherbase.Com Internet site, was used for the off-site consequence analysis.

Surface Roughness - CalARP regulations require that either urban or rural topography be used for performing the air dispersion analysis for the identified release scenarios. The rural and urban topographical conditions are characterized in the air dispersion models in terms of surface roughness. The rural condition is defined by CalARP regulations as "no buildings in the immediate area and the terrain is generally flat and unobstructed." Urban terrain is characterized by numerous obstacles, including buildings or trees. In general, without encountering many rough surface features to create air turbulence, a regulated substance plume will travel a longer distance. Area maps were reviewed and an inspection of the surrounding terrain and buildings was performed to select site-specific surface conditions. Since many buildings do not surround the proposed peaker site, the aqueous ammonia storage location was characterized as a rural area for air dispersion analysis.

Dense or Neutrally Buoyant Gases - CalARP regulations require that the models used for dispersion analysis should appropriately account for the density of the released gas. The ammonia cloud formed during the worst-case release scenario would be neutrally buoyant.

Dispersion Model Used - EPA has developed the SCREEN3 model for performing air dispersion modeling analyses for neutrally buoyant releases. This model was used for performing the consequence analysis for the aqueous ammonia worst-case release scenario. EPA and National Oceanic and Atmospheric Administration (NOAA) have recently updated the Aerial Locations of Hazardous Atmospheres (ALOHA) model for estimating evaporation rates from spills of aqueous ammonia solutions (EPA/NOAA, 2006). This model was used for estimating evaporation rates from the diked areas (pools).

Temperature of Released Substance - The ammonia solution will be stored and handled at ambient temperature. As a consequence, the release temperature was assumed to be equal to the highest maximum temperature of 93°F recorded at the Oxnard Airport station.

Offsite Consequence Analysis Results. The results of the SCREEN3 model analysis indicated that an ammonia concentration of 200 ppm would extend up to 246 feet. The closest fenceline where the general public may have unrestricted access will be at the property line at Harbor Boulevard, a distance of 283 feet from the aqueous ammonia storage tank. Thus, the toxic endpoint concentration of 200 ppm would not extend to the closest fenceline where general public will have unrestricted access. It should also be noted that the nearest residence proposed to be built will be at a distance of approximately 750 feet from the storage tank.

The existing Reliant Mandalay Generating Station fenceline is closer than 270 feet from the proposed peaker facility's ammonia storage tank; thus, an ammonia concentration of 200 ppm would extend beyond the existing Mandalay Generating Station fenceline. However, access for the general public to the Mandalay Generating Station's grounds is restricted; thus, a catastrophic release of ammonia at the proposed peaker facility is not expected to have a significant adverse impact on the general public.

It is also important to note that the probability of a catastrophic failure of the aqueous ammonia storage tank is very low because of the following safety features included in the design of the ammonia system:

(1) the storage tank will be made of stainless steel; (2) the tank will meet ASME Codes; (3) the tank will be equipped with a dual pressure safety valve, pressure gauge, a vacuum breaker system, and pressure and ammonia level transmitters; (4) the tank will be filled only up to 85 percent of its capacity; (5) a local alarm with horn will be set to indicate 85% filling of the tank (tank full), (6) the tank will be mounted to meet seismic codes inside a concrete containment structure, which will also be a physical barrier that will prevent vehicles from hitting the ammonia storage tank; (7) ammonia detectors will be located inside and outside the secondary containment; (8) administrative procedures will be in place to handle safely any heavy equipment brought to the site after the installation and filling of the ammonia tank; and (9) chemical accident prevention program elements will be established by SCE to comply with the requirements of the CalARP program.

Additionally, the meteorological conditions suggested by the Cal ARP regulations and used for air dispersion modeling analysis for the proposed peaker facility are unrealistic; thus, the estimated toxic endpoint distance of 246 feet is highly conservative (over predicted). For example, CalARP regulations require the use of the highest temperature recorded in the last three years as the release temperature, which represents a day time temperature. However, atmospheric stability "F" recommended for use for air dispersion modeling is typical of nighttime conditions. Thus, the combination of the high temperature, which leads to a high ammonia evaporation rate, and the low-dispersion conditions used in the modeling would not occur at the same time. Therefore, it is expected that the toxic endpoint distance would be significantly lower than 246 feet if realistic meteorological parameters are used for performing the offsite consequence analysis for the proposed peaker facility.

Considering the above facts, a catastrophic release of ammonia at the proposed peaker facility is not expected to have a significant adverse impact on the general public.

Ammonia Release During Transport. The hazards associated with the transport of regulated hazardous materials (CCR Title 19, Division 2, Chapter 4.5 [the CalARP requirements]), including aqueous ammonia, would include the potential exposure of numerous individuals in the event of a traffic accident that would lead to a spill. The major route for aqueous ammonia to reach the facility is from the 101 Freeway, along Rice Avenue to West Gonzales Road, and then to Harbor Boulevard, which would generally avoid sensitive receptors. Factors such as the amount transported, wind speed, ambient temperatures, route traveled, and distance to sensitive receptors are considered when determining the consequences of a hazardous material spill. As described previously, an accident resulting in a serious hazardous material incident would be expected to occur approximately once every 3.67 million years. Thus, a release of aqueous ammonia from a delivery truck en-route to the facility during the lifetime of the facility is unlikely. In the unlikely event that a tanker truck would rupture and release the entire 7,000 gallons of aqueous ammonia, the ammonia solution would have to pool and spread out over a flat surface in order to create sufficient evaporation to produce a significant vapor cloud. For a road accident, the roads are usually graded and channeled to prevent water accumulation, and a spill would be channeled to a low spot or drainage system, which would limit the surface area of the spill and subsequent

toxic emissions. Additionally, the roadside surfaces may not be paved and may absorb some of the spill. Without this pooling effect on an impervious surface, the spilled ammonia would not evaporate into a toxic cloud and impact residences or other sensitive receptors in the area of the spill. Based on the improbability of an ammonia tanker truck accident with a major release, and its potential severity if it did occur, the conclusion of this analysis is that potential impacts due to accidental release of ammonia during transportation are less than significant.

Ammonia Unloading Release. As discussed above, the aqueous ammonia unloading area will consist of a concrete pad surrounded by a berm six inches in height. The pad will be sloped toward a drain at one end, which will have an opening of 3.14 square feet. This drain will lead to a covered containment sump, which will be common to both the storage tank secondary containment and the delivery truck catch basin. This underground sump will be large enough to contain the entire contents of the delivery truck (7,000 gallons). The catch basin surface area (540 square feet) for the delivery truck is smaller than the surface area (611 square feet) for the secondary containment. Thus, the impact from a catastrophic failure of the aqueous ammonia tanker (7,000 gallons) during unloading is expected to be lower than from the catastrophic failure of the ammonia storage tank (8,925 gallons). Therefore, an ammonia unloading release would not cause a significant adverse impact.

As shown in this analysis, the impacts from a catastrophic release from the ammonia tank, a tank truck accident, or an unloading accident at the project site to the general public and also at the nearest residence are less than significant.

The pipeline that will supply natural gas to the project site will be filled with high-pressure natural gas. Natural gas is flammable and explosive under certain conditions. Thus, a release from the pipeline could result in significant hazard to people. However, natural gas pipelines exist in many city streets and already exist in the street where the proposed pipeline will be constructed. With adherence to applicable state and federal regulatory guidelines for the design and installation of gas pipelines, the risk of accidental release is less than significant.

A simultaneous release of both ammonia and natural gas was not evaluated, because no reaction would be expected if aqueous ammonia and natural gas are mixed. Additionally, the probability of mixing of these two substances is very low because of the separation of the two substances at the facility and the safety features that have been incorporated into the facility design.

G.3) There are no existing or proposed schools within one-quarter mile of the proposed project site.

G.4) The proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Contamination is not known to be present at the project site, but environmental contamination has been identified on the Mandalay Generating Station property adjacent to the project site. Soil samples will be taken during excavation for construction of the proposed project. If contaminated soil is encountered, the soil will be disposed of in

accordance with state and federal hazardous waste regulations. Therefore, project operation is not expected to create a significant hazard to the public or the environment.

G.5 - 6) The proposed project is not located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and is not located within the vicinity of a private airport. Therefore, the proposed project is not expected to result in a safety hazard for people residing or working in the project area.

G.7) The proposed project is not expected to interfere with an emergency response plan or emergency evacuation plan. The facility will have one to two employees located on site during normal working hours and when the unit is operating. SCE will develop an emergency response and emergency evacuation plan for the facility.

G.8) The proposed project site is located on a property formerly used as a tank farm for the storage of fuel oil. The property is currently graded, and generally absent of vegetation.

The proposed project will utilize natural gas as the fuel for the combustion turbine and the black-start generator. Natural gas poses a fire and/or explosion risk as a result of its flammability and, while it will be used in substantial quantities, it will not be stored on-site. The potential risk of a natural gas pipeline rupture will be reduced to insignificant levels through adherence to applicable codes and the development and implementation of effective safety management practices. The insulating oil used in the transformer is not flammable. Although the lube oil used in the turbines is combustible, fire or explosion is a highly unlikely occurrence.

As discussed in Section I, Land Use, the land use to the north, west and south of the project site is industrial. While no residences currently exist within the project vicinity, a nearby housing development is under construction. After construction of the proposed housing development, the nearest residence will be approximately 750 feet to the southeast, across Harbor Boulevard. As such, the proposed project is not expected to 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.

Mitigation:
This section describes the mitigation measures that are proposed in order to ensure that impacts resulting from hazardous materials handling at the facility are less than significant.

Construction Phase

HM-1. During construction, hazardous materials stored on-site will be limited to small quantities of paint, coatings and adhesive materials, and emergency refueling containers. These materials will be stored in their original containers inside a flammable material metal rolloff storage container. Fuels, lubricants, and various other liquids needed for operation of construction equipment will be transported to the construction site on an as-needed basis by equipment service trucks.

It is anticipated that adherence to these standard operating procedures will minimize the potential for incidents and lessen the impact of spills involving hazardous materials during construction.

Operation Phase
Since no significant hazard impacts during operation of the proposed project were identified, no additional mitigation is required or proposed.

Result After Mitigation:
Based on the above considerations, the potential hazards and hazardous materials impacts related to the construction and operations at the proposed site, and the transport of hazardous materials associated with the proposed operations are less than significant.

H. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements? (2020 General Plan, VIB - Public Facilities Element, VIII - Open Space/ Conservation Element; FEIR 88-3, 4.9 - Water Resources)	☐	☐	☐	☒
2. 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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (*2020 General Plan, VIB - Public Facilities Element, VIII - Open Space/ Conservation Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
3. 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? (*2020 General Plan, VIB - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒

H. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
4. 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, which would result in substantial erosion or siltation on- or off-site? (*2020 General Plan, VII - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
5 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? (*2020 General Plan, VII - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
6. Otherwise substantially degrade water quality? (*2020 General Plan, VII - Public Facilities Element, VIII Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
7. 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? (*2020 General Plan, VII - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (*2020 General Plan, VII - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒
9. 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? (*2020 General Plan, VII - Public Facilities Element, VIII - Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources*)	☐	☐	☐	☒

H. HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
10. Inundation by seiche, tsunami, or mudflow? *(2020 General Plan, VII - Public Facilities Element, VIII Open Space/Conservation Element, IX - Safety Element; FEIR 88-3, 4.9 - Water Resources)*	☐	☐	☐	☒

Discussion:

H.1 & 6) The construction of the Mandalay Peaker Project will include site preparation and installation of operating and auxiliary components. Water will be used during grading activities to minimize dust emissions; however, the amount of grading required is minimal since the site is already flat. The water used for dust suppression is not expected to infiltrate to groundwater or flow offsite and, therefore is not expected to impact water quality.

There will also be small volumes of water utilized during construction to conduct hydrostatic testing of system piping and storage. This water will be re-used several times before being transported off-site or discharged to the City's wastewater treatment system. Note that currently there is no sewer system in the site vicinity, but one is expected to be installed sometime in the future. Until a sewer line becomes available, waste water will be collected and trucked off site for disposal. The contaminant loading is expected to consist of hydrocarbons and suspended solids. The discharge is not expected to negatively impact the City's physical or biological treatment processes.

Operation of the proposed project will only generate small volumes of wastewater, primarily from blowdown from the gas turbine evaporative coolers. However, these coolers would only be used during periods of extreme high ambient temperatures while the unit is in operation, which is expected to occur only infrequently. Wastewater will be discharged to the City's wastewater treatment system and will meet the City's pretreatment standards. The discharge is not expected to negatively impact the City's physical or biological treatment processes. As noted above, currently there is no sewer system in the site vicinity. The evaporative coolers will not be operated (and thus will not generate blowdown) until after a sewer line is installed in the street and the project connects to that sewer line.

Storm water collected on the site will be checked as required prior to disposal. Storm water flow off-site will be minimal and will not alter or disturb existing drainage patterns. The facility will not store or use hazardous materials outdoors. Consequently, storm water is not expected to be contaminated to any significant degree, and, therefore, storm water runoff will not degrade water quality in the receiving water body.

H.2) The proposed project is not expected to adversely affect the quantity or quality of groundwater in the area. Groundwater will not be used to supply the project. A small amount of water will be used for dust suppression during grading activities but infiltration of this volume will not affect the existing groundwater in the area.

The proposed project facilities will require paving or concrete foundations or other impervious surfaces covering approximately 75,000 square feet (1.61 acres). This area represents only 11 percent of the land area of the 16.1-acre SCE Mandalay property, and will have an insignificant impact on storm water infiltration to the underlying aquifer.

Because it will be constructed within the existing street, construction and operation of the gas pipeline will have no impact on groundwater recharge, or any other impact to groundwater supplies.

H.3 - 5) The SCE Mandalay property is already graded and, except for the 220- by 320-foot project footprint and the access road, the site will not be graded during project construction. Existing site topography will be maintained to the extent possible so that storm water runoff flows will follow the existing drainage patterns, except around equipment where it will be collected and treated as required. Runoff from the area in front of the landscaping berm will be collected in a drainage pipe routed back to the original drainage pattern. The proposed project is not expected to alter existing drainage patterns, cause significant erosion or siltation, or affect the operation of existing storm water drainage systems.

H.7 - 9) The proposed project will involve construction activities adjacent to an existing substation and power plant, does not include the construction of any new housing, and would not place new housing within a 100-year flood hazard area. The Mandalay site is located approximately 750 feet from the Pacific Ocean between the limits of the 100-year and 500-year flood zones (Federal Emergence Management Agency, 1985).

The proposed project site is located in an area that is subject to inundation in the event of dam failure (Ventura County Office of Emergency Services [VCOES], 2002). The site is down stream of Lake Castaic, Lake Piru, Lake Pyramid, and Bouquet Dam. Because the facility will normally be manned by only one or two employees during the normal work week (Mon-Fri) and when the peaker is operating, a dam failure would not significantly increase the risk of exposure of people to a flood. Damage to the proposed facility as a result of a dam failure may potentially include damage to the ammonia storage tank resulting in a release. The impacts to the community as a result of the dam failure would be significant, but it is unlikely that the impacts would be made significantly worse with an ammonia release.

H.10) The Mandalay site is located approximately 750 feet from the Pacific Ocean and adjacent to the Edison Canal. According to the Ventura County Tsunami Inundation Hazard Areas Map (VCOES, 2002), the site is located in an area that may be subject to inundation by a tsunami. The run-up, or the elevation above sea level of a tsunami at the limit of penetration, is estimated to be 10 meters (VCOES, 2002). The projected recurrence interval is hundreds to thousands of years along the Southern California coast (Legg et al., 2003). The California coastline has a tsunami warning system that will help ensure timely evacuation of the residents in affected areas. Similar to the dam failure scenario discussed above, because the facility will normally be manned by only one or two employees during the normal work week (Mon-Fri) and when the peaker is operating, a tsunami would not significantly increase the risk of exposure of people to the inundation. Damage to the facility as a result of a tsunami

may potentially include damage to the ammonia storage tank resulting in a release. However, ammonia is highly soluble in water. If damage to the aqueous ammonia storage tank were caused by a tsunami, and aqueous ammonia were released, the released aqueous ammonia would mix with seawater. Mixing with seawater would substantially reduce the rate of evaporation of gaseous ammonia from the mixture in two ways. First, the seawater would dilute the aqueous ammonia, which would reduce the ammonia concentration. The ammonia evaporation rate would be lower in a more dilute solution than in the 19 percent solution contained in the storage tank.

The evaporation rate of ammonia from an aqueous solution is affected by the pH of the solution. At a pH of about 9.8 or higher, the ammonia is essentially all present as dissolved ammonia gas, which can evaporate from the solution. At a lower pH, the ammonia dissociates into ammonium and hydroxyl ions, which do not evaporate from the solution. The pH of the 19 percent solution in the storage tank is above 12, so the ammonia could evaporate from the solution if it were released without dilution with seawater. However, the pH of seawater is between about 7.5 and 8.5, and substances dissolved in seawater "buffer" it, so that it is resistant to changes in pH when other solutions are mixed with it. As a result, mixing the aqueous ammonia from the storage tank with seawater would lower its pH below 9.8, so most of the ammonia would be dissociated and not able to evaporate.

As a result of the effects of mixing the aqueous ammonia with seawater on the ammonia evaporation rate, a release of aqueous ammonia from the storage tank caused by a tsunami is not anticipated to cause significant adverse impacts.

The site is located in a relatively flat area; therefore, the proposed project is not susceptible to mudflows (e.g., hillside or slope areas) so that no significant impacts from mudflows would be expected. The site is not close enough to any enclosed or partially enclosed water bodies to be subject to inundation from seiche waves.

Mitigation:
No significant adverse impacts to hydrology and water quality are expected to occur as a result of construction or operation of the proposed project. Since no significant hydrology and water quality impacts were identified, no mitigation is required or proposed.

Monitoring:
Mitigation monitoring is not required because no mitigation measures were identified.

Result After Mitigation:
No significant adverse impact on hydrology or water quality use are expected due to the proposed project.

I. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact

I. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Physically divide an established community? (2020 General Plan, V - Land Use Element; FEIR 88-3, 4.1 - Land Use)	☐	☐	☐	☒
2. 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? *(2020 General Plan; City adopted Specific Plans; Local Coastal Program; and Zoning Ordinance; FEIR 88-3, 4.1 - Land Use)*	☐	☐	☐	☒
3. Conflict with any applicable habitat conservation plan or natural community conservation plan? *(2020 General Plan, VIII - Open Space/Conservation Element; FEIR 88-3, 4.1 - Land Use)*	☐	☐	☐	☒

Discussion:

I.1) The proposed equipment will be installed at 251 N. Harbor Boulevard, in Oxnard, on property owned by SCE within an area approximately 220- by 320-foot in size. The site is bounded on the north by the existing Reliant Energy Mandalay Power Plant facility and channel; on the west by an existing oil processing facility, coastal dunes, and the Mandalay state beach and the Pacific Ocean; on the east by Harbor Boulevard, undeveloped SCE-owned land, and agricultural fields; and on the south by an access road; two operating oil pumps, and state and city-owned coastal dunes. Located across Harbor Boulevard and approximately 750 feet southeast of the proposed site is an under-development residential project known as Northshore at Mandalay Bay with 292 units. The proposed project site was a former tank farm that served the adjacent Mandalay Power Generation facility.

I.2) According to the City of Oxnard *2020 General Plan* adopted on October 7, 1990 and amended in July 2004, the land use designation for the proposed project site is "Public Utility/Energy Facility" (PUEF). This designation applies to electrical generating and transmission facilities located within the City, as well as facilities related to oil and gas development. The existing Mandalay Power Generation facility and the proposed project are consistent with this land use designation. Figure I-1 illustrates the land use designations for the proposed project site and adjacent properties. As shown in Figure I-1, adjacent land to the west, north, and east of the proposed project site is designated as PUEF; and adjacent land to the south is designated as "Miscellaneous Resource Protection" (MRP) and "Recreational Area" (RA). An area designated as "Residential Low 3-7 DU" (RL) is located across Harbor Boulevard and approximately 750 feet southeast of the proposed project site.

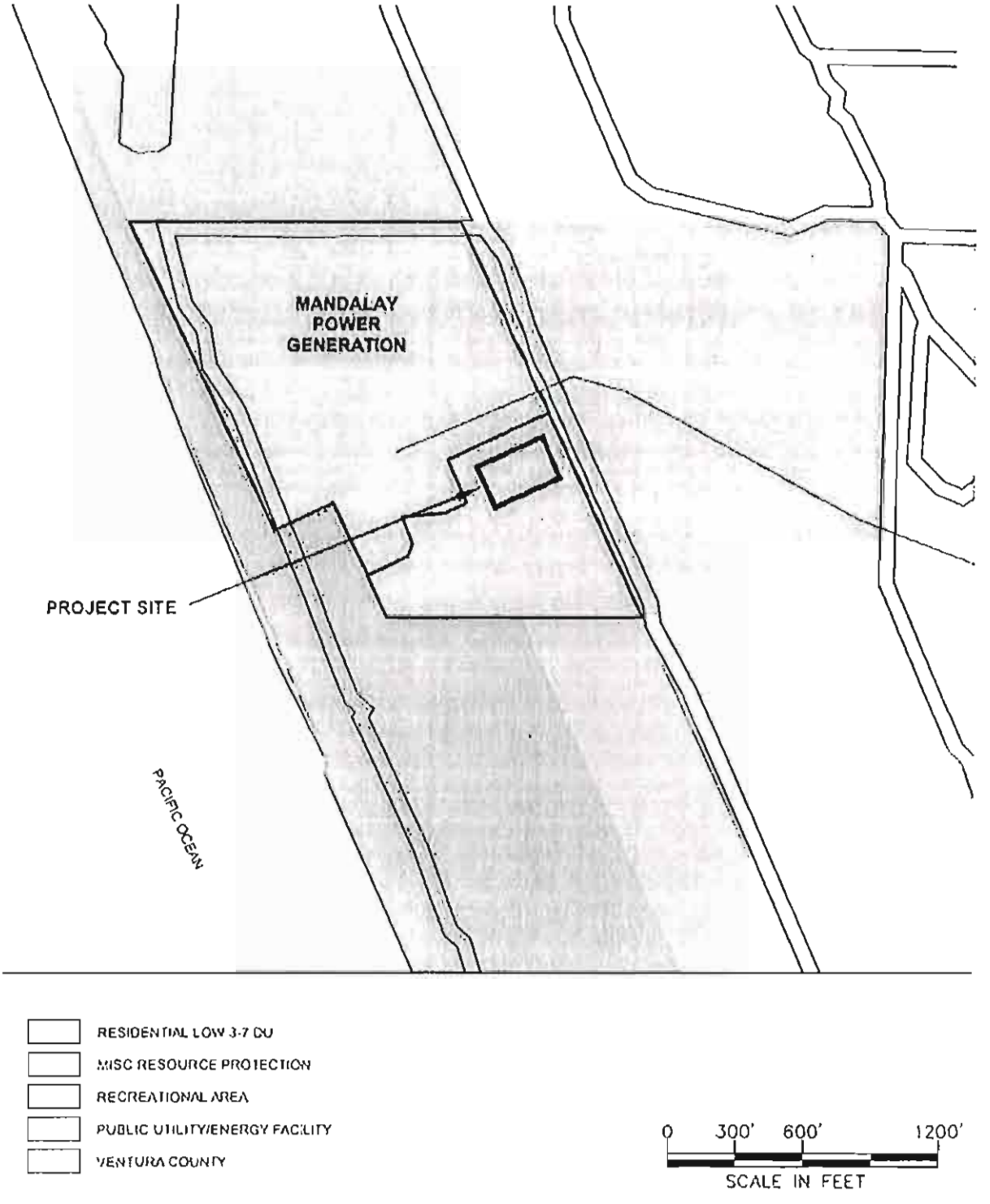

Figure I-1 General Plan Land Use Map

The City of Oxnard has also adopted a Local Coastal Program consisting of a *Coastal Land Use Plan* and *Coastal Zoning Regulations and Zone Maps*. The proposed project site is within the local coastal zone boundary, which extends generally 3,000 feet inland from the Pacific Ocean. The City of Oxnard *Coastal Land Use Plan*, which governs land uses within the local coastal zone, allows industrial and energy development in the area already designated specifically for energy facilities, while protecting beaches and wetlands. The City of Oxnard *Coastal Zoning Regulations and Zone Maps*, revised June 13, 2005, designate the proposed project site as "Coastal Energy Facility" (EC). The existing Mandalay Power Generation facility and the proposed project are consistent with this zoning designation as the power plant uses ocean water for cooling and discharges into the ocean.

Figure I-2 shows the zoning designations for the proposed project site and adjacent properties. As shown in **Figure I-2**, adjacent land to the west, north, and east of the proposed project site is designated as "Coastal Energy Facility" (EC); and adjacent land to the south is designated as "Coastal Resource Protection" (RP) and "Coastal Recreation" (RC). An area zoned for "Single-Family Beach" (RB1) is located across Harbor Boulevard and approximately 750 feet southeast of the proposed project site.

The *Coastal Land Use Plan* and 30101 of the *California Public Resources Code* define a "Coastal Dependent Development or Use" as "any development or use which requires a site on, or adjacent to, the sea to be able to function at all." Based on this definition, the project does not qualify as a coastal dependent use, and would not be allowed at this location. The project could, however, be classified as an accessory use to the existing Mandalay Power Generating facility. The final determination of use and zoning code conformance will be made by the Planning Commission.

I.3) The City of Oxnard has a wide variety of natural resources and unique habitats, such as coastal beaches, wetlands, riparian and dune areas. The City of Oxnard *2020 General Plan*, Open Space/Conservation Element, *Natural Resources Map* locates the proposed project site within the Coastal Zone, along Mandalay State Beach, approximately 1,000 feet south of an identified riparian habitat, and approximately 500 feet north of identified dunes habitat. The proposed project would be constructed and operated on a site located at the southerly boundary of the existing Mandalay Power Generating facility property. The proposed project is not located within or near any habitat conservation plan area or natural community conservation plan area; therefore, no impacts with conservation plans are anticipated.

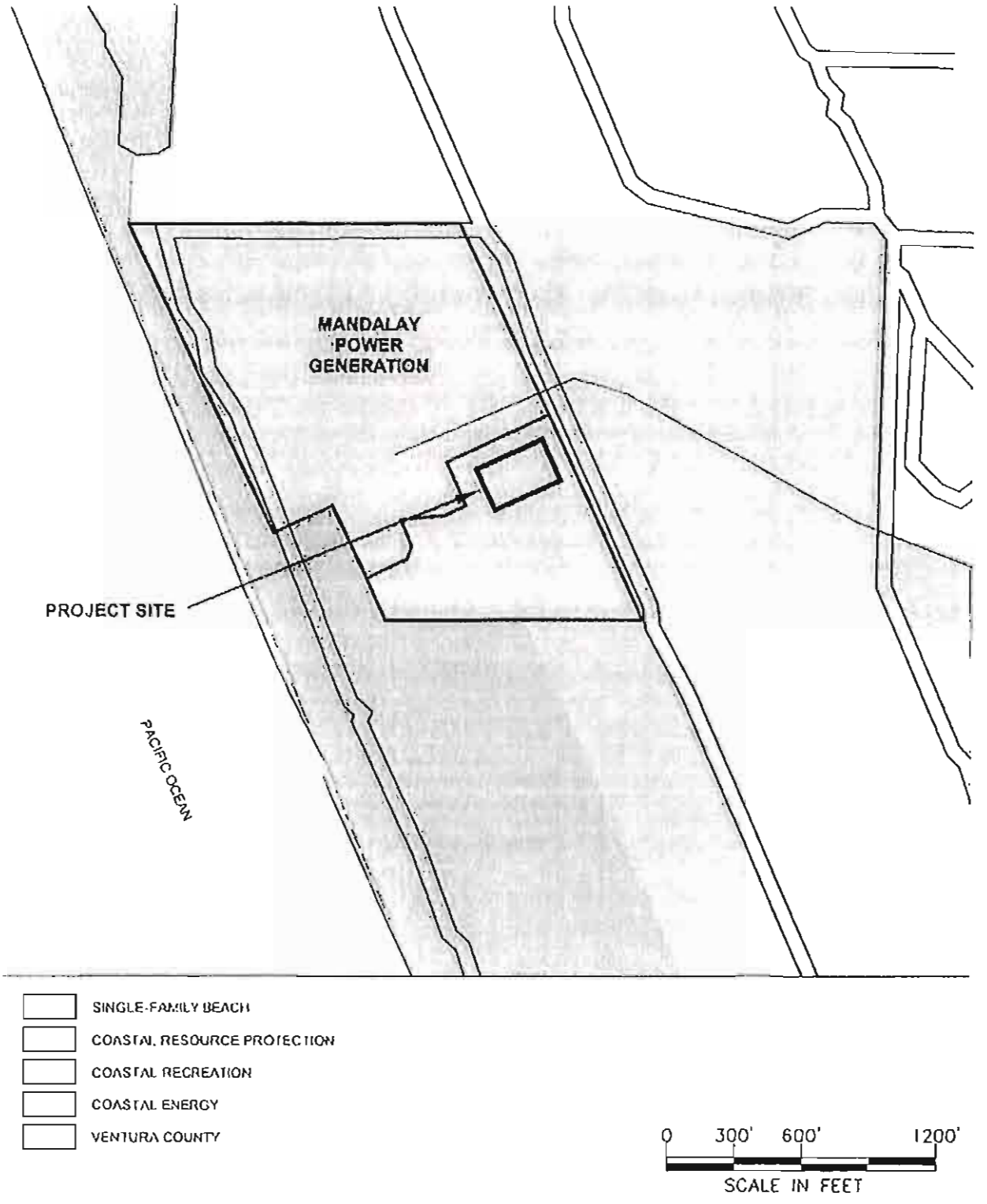

Figure I-2 Zoning Map

The Ventura County General Plan – Goals, Policies, and Programs (December 6, 2005 edition) specifies goals and policies related to protecting coastal beaches and sand dunes. Policy 1.10.2 states, "*Discretionary development* which would cause significant impacts to coastal beaches or sand dunes shall be prohibited unless the *development* is conditioned to mitigate the impacts to less than significant levels." Mandalay State Beach Park is located southwest of the proposed project site, and sand dunes are located approximately 500 feet to the south of the project site and to the east of Harbor Boulevard. It is not anticipated that construction or operation of the proposed peaker unit at the project site would affect these nearby beach and/or sand dune resources. The proposed natural gas line will be constructed within the Harbor Boulevard public right-of-way, and, therefore, its construction will not affect the sand dune resources. New and replacement power poles will be installed within an existing transmission line corridor east of Harbor Boulevard, and, therefore, they will not cause potential new impacts to the sand dunes.

Because it will be constructed within the existing street, construction and operation of the water pipeline will not conflict with any applicable land use plan, policy, or regulation.

Mitigation:

LUP-1 If the Planning Commission finds the proposed use is not consistent with the Coastal Zone designation, the applicant would have to file for a Coastal Land Use Plan amendment to add "non-coastal energy facility" to the approved use list.

Monitoring:

The Planning Division would process the Coastal Land Use Plan amendment, if needed.

Result After Mitigation:

No impacts to land use would result from the proposed project.

J. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. 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? (*2020 General Plan, V - Land Use Element; FEIR 88-3, 4.8 - Earth Resources*)	☐	☐	☐	☒
2. 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? (*2020 General Plan, V - Land Use Element, FEIR 88-3, 4.8 - Earth Resources*)	☐	☐	☐	☒

J.1 - 2) The proposed project will be constructed on land within an existing industrial area. The only known mineral resource within a two-mile radius of the site is the West Montalvo Oil Field, which lies directly beneath the site. The proposed project will not significantly restrict access to the oil field. No impacts are expected.

Mitigation:
Since no significant mineral resource impacts were identified, no mitigation is required or proposed.

Monitoring:
Since no mitigation is required or proposed, no mitigation monitoring is required.

Result After Mitigation:
No adverse impacts to mineral resources are expected from the construction and operation of the proposed project.

K. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. 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? (*2020 General Plan, X - Noise Element; FEIR 88-3, 4.4 - Noise, Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15*)	☐	☐	☐	☒
2. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? (*2020 General Plan, X - Noise Element; FEIR 88-3, 4.4 - Noise; Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15*)	☐	☐	☐	☒
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (*2020 General Plan, X - Noise Element; FEIR 88-3, 4.4 - Noise; Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15*)	☐	☐	☐	☒
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels without the project? (*2020 General Plan, X - Noise Element; FEIR 88-3, 4.4 - Noise; Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15*)	☐	☐	☒	☐

K. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
5. 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? *(2020 General Plan, X - Noise Element; FEIR 88-3, 4.4 - Noise; Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15)*	☐	☐	☐	☒
6. For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? *(2020 General Plan, X Noise Element; FEIR 88-3, 4.4 - Noise; Oxnard Sound Regulations - Sections 19-60.1 through 19-60.15)*	☐	☐	☐	☒

Discussion:

Overview of Noise

SCE commissioned an independent Acoustical Analysis to be conducted by Veneklasen Associates, who conducted noise modeling and contouring for operation of the proposed project, identified noise criteria, ambient noise conditions, and operation parameters. This report is attached as **Appendix G**.

Noise is usually defined as unwanted sound and can be an undesirable by-product of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, causes actual physical harm, or has an adverse effect on health. The definition of noise as unwanted sound implies that it has an adverse effect or causes a substantial annoyance to people and their environment.

Sound is measured on a logarithmic scale of sound pressure[7] known as a decibel (dB). Sound pressure level (SPL) alone is not a reliable indicator of loudness because the human ear does not respond uniformly to sounds at all frequencies. For example, the human ear is less sensitive to low and high frequencies than to medium frequencies that more closely correspond with human speech.

In response to the human ear sensitivity to different frequencies, the A-weighted noise level, referenced in units of dBA, was developed to better correspond with people's subjective judgment of sound levels. In general, changes in a community noise level of less than three dBA are not typically noticed by the human ear (USDOT, 1980). Changes from three to five dBA may be noticed by some individuals who are extremely sensitive to changes in noise. An increase of greater than five dBA is readily noticeable, while the human ear perceives a 10 dBA increase in sound level to be a doubling of sound volume. A

[7] "Sound Pressure Level" (SPL) is calculated as a logarithmic function of the "sound level". SPL is measured in units of dBA; sound levels are measured in units of pressure (pascals [Pa]).

doubling of sound energy results in a three dBA increase in sound, which means that a doubling of sound wave energy would result in a barely perceptible change in sound level.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of mobile point sources (motor vehicles). Sound generated by a stationary point source typically diminishes (attenuates) at a rate of six dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites, and it attenuates at a rate of 7.5 dBA at acoustically "soft" sites (USDOT, 1980).[8] For example, a 60 dBA noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dBA at 100 feet from the source and it would be 48 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively (USDOT, 1980). Solid walls and berms may reduce noise levels by 5 to 10 dBA (USDOT 1980).

When assessing community reaction to noise there is an obvious need for a scale that averages varying noise exposure over time and quantifies the result in terms of a single number descriptor. Several scales have been developed that address community noise levels. Those that are applicable to this analysis are the Equivalent Noise Level (L_{eq}), Community Noise Equivalent Level (CNEL), and the Day-Night Average Sound Level (Ldn). L_{eq} is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any time period but is typically measured for one-minute, 15-minute, one-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour period. However, this noise scale is adjusted to account for some individual's increased sensitivity to noise levels during evening and nighttime hours. A CNEL noise measurement is obtained after adding five decibels to sound levels occurring during the evening from 7:00 p.m. to 10:00 p.m. and 10 decibels to sound levels occurring during the nighttime from 10:00 p.m. to 7:00 a.m. The logarithmic effect of these additions is that a 60 dBA, 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL. Similar to that of a CNEL measurement, Ldn is obtained after adding 10 dBA to the night time hours between 10:00 p.m. and 7:00 a.m.

K.1 - 4) The proposed project site is located on the north-eastern portion of SCE-owned property at 251 N. Harbor Boulevard in the City of Oxnard. The project site is bounded on the north by the existing Mandalay Power Generation facility, on the west by an existing oil processing facility, on the east by Harbor Boulevard and undeveloped land, and on the south by an access road and oil field with operating well pumps. The Pacific Ocean is located approximately 750 feet west of the proposed site, and the undeveloped Mandalay State Beach Park is located approximately 1,000 feet southwest of the proposed project site. The closest residences are currently approximately 2,300 feet from the proposed site. A proposed low-density residential area, Northshore at Mandalay Bay, will be located across Harbor Boulevard, approximately 750 feet southeast of the proposed project peaker site.

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[8] A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard packed soils. An acoustically "soft" or absorptive site is characteristic of normal earth and most ground with vegetation.

Ambient Noise Conditions. The existing noise environment at the proposed project site is dominated primarily by industrial equipment operated on neighboring properties, vehicle traffic, and aircraft noise. In order to determine existing ambient noise conditions, noise measurements were performed along the Mandalay Substation property line. The noise measurements are referenced to L_{50}, which indicates the average sound pressure level that is exceeded 50 percent of the total measurement period. The daytime noise measurements ranged from a minimum L_{50} of 58 dBA to a maximum of 62 dBA. Noise measurement details and locations are identified in **Appendix G**.

Significance Criteria. Noise impacts will be considered significant if operational or construction noise levels exceed the standards established in the City of Oxnard General Plan or the City of Oxnard Municipal Code (Chapter 7 Nuisances, Article XI Sound Regulation §7-190 through §7-194).

The Oxnard Municipal Code §7-185 "Exterior Sound Standards" establishes an allowable exterior sound level of 55 dBA for residential land uses (measured at the property line between the hours of 7:00 a.m. and 10:00 p.m.). Section 7-185 (C) further states:

> "No person at any location within the city shall create, maintain, cause or allow any sound on property which causes the sound level, when measured on any other property, to exceed:
>
> (1) The allowable exterior sound level for a cumulative period of more than 30 minutes in any hour..."

Since the proposed project would operate the peaker unit and associated equipment for periods longer than 30 minutes in an hour, the noise limit of 55 A-weighted decibels (dBA) at the nearest residential property line would be the applicable significance criteria according to subsection (C). However, §7-185 (D) states "In the event the ambient sound level exceeds any of the first four sound level categories in subsection (C) above, the allowable exterior sound level applicable to the category shall be *increased to reflect ambient sound level*" (emphasis added). Therefore, the ambient sound level of 58 dBA measured at the project site boundary would be the noise standard for determining project noise impacts.

The City of Oxnard *2020 General Plan* Noise Element contains goals and policies established to minimize potential noise problems associated with new development. Policy C(1) states, "The City should encourage land uses that are not noise sensitive in areas that are permanently committed to noise producing land uses, such as transportation corridors." Policy C(4) states, "The City shall promote, where feasible, alternative sound attenuation measures other than the traditional wall barrier. These may include berms, a combination of berms and landscaping, or locating buildings away from the roadway or other noise source." Since the proposed project site is located on property owned by SCE adjacent to the existing Mandalay Power Generation facility and will include landscaping along the northern property line and along Harbor Boulevard, the proposed project would be consistent with these City noise goals and policies.

Construction Noise Impacts. Construction activities for the proposed project are expected to generate noise associated with the use of heavy construction equipment and construction-related traffic during the four-month construction period. The City of Oxnard Municipal Code, Chapter 7 Nuisances, Article XI Sound Regulation §7-188(D) exempts "sound sources associated with or created by construction, repair, remodeling or grading of any real property…provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturday." Since the proposed project construction activities involving the use of heavy construction equipment and construction-related traffic will occur Monday through Saturday between 7:00 a.m. and 6:00 p.m., the noise impacts associated with project-related construction activities would be exempt from the City of Oxnard noise control standards.. Any construction activities occurring after 6:00 p.m. will be limited to activities which would not create any significant noise, such as wiring, welding, etc. The public will not be subjected to construction noise levels that exceed federal Occupational Safety and health (OSHA) noise standards of 90 dBA for workers.

Nighttime construction activities may be required. During those periods, SCE will avoid the use of heavy construction equipment and other activities that produce high noise levels, and will not exceed the standards detailed in the City ordinance. Thus, temporary project-related construction noise would be considered less than significant.

Onsite Power Plant Construction Equipment Sound Levels. Construction activities would generate temporary and intermittent noise increases during the construction of the Project. Estimated reference sound levels from equipment expected to be utilized in the construction of this project are presented in Table K-1.

Table K-1
Estimated Noise Levels Generated by Onsite Construction Equipment

Construction Equipment	Horsepower	Average Unit SPL @50'	Total Equipment Pieces	Average Total SPL @50'
Welding rigs	38	68	2	71
Backhoe	210	79	2	82
Compressor	37	79	4	85
Front-end loader	147	81	1	81
15 ton crane	175	78	3	83
75 ton crane	250	80	1	80
On-Site Pickup Truck	200	79	3	84
Off-Site Dump Truck	320	81	2	84
Off-Site Concrete Truck	320	81	5	88
Off-Site Delivery Truck	320	81	1	81
Welding rigs	38	68	2	71
			Total:	93[1]

[1] When adding together noise from more than one source, the dBA noise level is not additive. See Appendix G for a discussion on adding together noise levels from more than one source.

SPL = Sound Pressure Level, dBA

Reference sound levels for each piece of construction equipment were based on published references to equipment of similar type and/or size (USDOT, 1980). As noted in the table presented above, typical reference unit noise levels generated by construction equipment for this project are expected to generally fall in the range of 68 to 81 dBA at a distance of 50 feet from the activity. These reference noise levels will diminish with distance at a rate of between 6.0 to 7.5 dBA per doubling distance, depending on surroundings.

Pipeline Construction Equipment Sound Levels. Pipeline construction would typically proceed at 75 to 100 feet per day. Pipeline construction would typically occur Monday through Saturday from 7:00 a.m. to 7:00 p.m., or as specified within the approved road encroachment permit for the project. Pipeline construction would be conducted using one main construction "spread" (workers and equipment). The "spread" will be approximately 100 feet long, involving approximately 20 construction personnel. Pipeline construction noise levels are expected for approximately one day at the location of the spread along the pipeline route. The proposed pipeline route would run north along Harbor Boulevard, connecting with the existing Gas Company pipeline on Harbor Boulevard. The proposed pipeline route would have to cross a channel just north of the project site. The pipeline route is within the public right-of-way on Harbor Boulevard and in the adjacent road shoulder. The occupants of the Mandalay Generating Station may be impacted when the noisiest part of the construction passes.

Table K-2
Estimated Noise Levels Generated by Pipeline Construction Equipment

Construction Equipment	Horsepower	Average Unit SPL @50'	Total Equipment Pieces	Average Total SPL @50'
Welding rigs	38	68	4	74
Backhoe	118	77	1	77
Compressor	49	79	2	82
Front-end loader	140	81	2	84
Compactor	99	77	1	77
Excavator	99	77	1	77
15 ton crane	230	78	2	81
Roller	65	75	1	75
Reed Screen	65	75	1	75
Pickup Truck	200	79	2	82
Dump Truck	320	81	1	81
Water Truck	320	81	1	81
Concrete Truck	320	81	1	81
Delivery Truck	320	81	1	81
			Total:	92[1]

[1] When adding together noise from more than one source, the dBA noise level is not additive. See Appendix G for a discussion on adding together noise levels from more than one source.

SPL = Sound Pressure Level, dBA

Reference sound levels for each piece of pipeline construction equipment were based on published references to equipment of similar type and/or size (USDOT, 1980). As indicted in **Table K-2**, typical reference unit noise levels generated by pipeline construction equipment for this project are expected to generally fall in the range of 68 to 81 dBA at a distance of 50 feet from the activity.

Construction Sound Propagation. To estimate Project construction levels at distances greater that 50 feet from the site, construction noise modeling was performed based on equipment listed in **Tables K-1** and **K-2**. Estimates are conservatively based on the maximum number of units that expected to be on site at any given day during any two week construction period. Modeling extrapolation was conducted using a six dBA reduction per doubling of distance, conservatively ignoring any additional attenuation due to ground effects. Model results are presented in **Table K-3**.

Table K-3
Distance-Attenuated Noise Levels Generated by Construction Equipment

Distance from Construction	Predicted Project Construction SPL (dBA)	Predicted Pipeline Construction SPL (dBA)
50 feet	79 to 93	92
75 feet	75 to 89	88
180 feet	69 to 83	82
2,300 feet	46 to 60	59

As indicated in **Table K-3**, the predicted project construction SPL exceeds the City noise threshold for non-construction activities at the nearest project property line (the property line is approximately 180 feet from the construction activities) with the Mandalay Generating Station and at the nearest residence (the nearest residence is currently approximately 2,300 feet from the construction activities). For pipeline construction, the Predicted Pipeline Construction SPL also exceeds the City noise threshold for non-construction activities at both 180 and 2,300 feet from the center of the construction activities. The predicted SPLs conservatively assume simultaneous operation of the maximum number of construction equipment pieces, and actual pieces of construction equipment on site at any given time would typically be less, resulting in lower sound levels than shown in the **Table K-3**.

The total maximum noise level is not expected to be achieved for the following reasons. First, not all pieces of construction equipment are expected to be operating simultaneously. Second, noise receptors are expected to be located a distance of greater than 50 feet from the most noise intensive activities Construction activities that would exceed the City noise threshold would be limited to the allowable construction hours as defined by the City's noise regulations. Therefore impacts from construction noise would be less than significant.

Operational Noise Impacts. The proposed project will add one LM6000 peaker gas turbine generator unit and associated equipment. Equipment installed for the proposed project will typically operate

during daytime hours when peak electrical loads are required (normally between 1:00 p.m. and 9:00 p.m., although as a peaker plant, the equipment may operate at any time of the day or night). **Table K-4** summarizes the maximum sound pressure levels for proposed peaker generator unit and other associated equipment. As shown in **Table K-4**, the peaker unit would produce a maximum sound pressure level of 85 dBA at a distance of 3 feet, and the maximum sound pressure levels for the related equipment would range from 60 dBA to 95 dBA at a distance of 3 feet.

Table K-4
Maximum Sound Pressure Levels for Proposed Project Equipment

Equipment	Maximum Sound Pressure Level at 3 Feet[1]	Project Noise Level at the Most Stringent Property Line[2]
LM6000 Combustion Turbine Generator	85 dBA	48 dBA from project equipment; 58 dBA total with background
Exhaust Stack	85 dBA	
SCR	85 dBA	
CTG Air/Oil Cooler	85 dBA	
13.8 /4.16 kV Transformer	60 dBA	
13.8/480 V Transformer	60 dBA	
GSU Transformer	70 dBA	
Air Compressors	85 dBA	
Ammonia Forwarding and Storage System	85 dBA	
Fuel Gas Compressor	95 dBA	
Black start Generator	85 dBA	

[1] Source: General Electric Corporation, 2006. All other equipment associated with the peaker unit that is not listed above is expected to generate noise levels below 60 dBA.
[2] Project noise level of plus background noise level. Project noise level alone is 48 dBA.

In order to predict future noise conditions at the proposed project site, a three-dimensional computer model of the project site was developed utilizing LIMA noise modeling software. The software utilizes the International Standards Organization (ISO) standard 9613-2 "Acoustics – Attenuation of Sound During Propagation Outdoors" to evaluate the expected future noise conditions. According to the computer model results, the expected noise level at the nearest residential property line at the northernmost boundary of the Northshore at Mandalay Bay development would be 48 dBA. These sound levels were calculated at an elevation of five feet above ground level. Although the second story elevation of future residences at the Northshore at Mandalay Bay development may be as high as 32 feet above ground level, the sound levels at this higher elevation would be less than 0.5 dBA more than the sound levels in Table K-4. Since expected project-generated noise levels (48 dBA) would be substantially lower than the existing measured noise levels (58 to 62 dBA), the combined effect of proposed project operational noise and ambient noise would not increase the ambient noise levels.

Weather conditions at and around the project site include heavy fog. Sound has been known to be affected by weather inversions. These inversions can reflect sound downwards to focus more of the energy at certain receptor points. However, there is no clear way to accurately model or predict if weather will cause sound energy to focus. In foggy weather, sound usually propagates less as some of the sound energy is absorbed by the damp air. This is why it typically is quiet when one walks through the fog. Therefore, the sound perceptible at any given location, including the Northshore project, would be expected to be less during a heavy coastal fog than at other times.

Since the ambient sound level of 58 dBA measured at the project site boundary is the applicable noise standard for determining project noise impacts, project operations would not increase the ambient noise level, and the proposed project would have no noise impacts. In summary, operation of the proposed project would not generate noise levels in excess of standards established in the local general plan or noise ordinance; it would not generate excessive ground borne vibration or ground borne noise levels; and it would not cause a substantial permanent, temporary, or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

In conclusion, as shown in this analysis, the noise impacts from project construction activities and peaker operations at the nearest proposed residence are less than significant.

K. 5 & 6) The proposed project site is located approximately 1-3/4 miles west of the Oxnard Airport which operates as a commuter service facility. The California Division of Aeronautics requires land use within a 65 dBA Community Noise Equivalent Level (CNEL) contour around airports to be compatible with airport operations. According to the Oxnard General Plan Noise Element, the proposed project site is outside of both the 65 dBA CNEL and the 60 dBA CNEL noise contours for the Oxnard Airport. Thus, the proposed project would not expose people working in the project area to excessive noise levels associated with airplanes.

Based upon the above considerations, significant adverse noise impacts are not expected from the proposed project.

Mitigation:
Since no significant noise impacts were identified, no mitigation is required or proposed.

Monitoring:
No monitoring is required or proposed.

Result After Mitigation:
Noise impacts would be less than significant.

L. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through an extension of roads or other infra-structure)? (*2020 General Plan, IV - Growth Management Element, V - Land Use Element, Revised 2000-2005 Housing Element, FEIR 88-3, 4.2 - Population, Housing and Employment, 5.0 - Growth-Inducing Impacts*)	☐	☐	☐	☒
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (*2020 General Plan, IV - Growth Management Element, V - Land Use Element, Revised 2000-2005 Housing Element, FEIR 88-3, 4.2 - Population, Housing and Employment, 5.0 - Growth-Inducing Impacts*)	☐	☐	☐	☒
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (*2020 General Plan, IV - Growth Management Element, V - Land Use Element, Revised 2000-2005 Housing Element, FEIR 88-3, 4.2 - Population, Housing and Employment, 5.0 - Growth-Inducing Impacts*)	☐	☐	☐	☒

Discussion:

L.1) Construction of the proposed project will take place over a period of three to four months. At the peak of construction, approximately 55 to 60 construction workers will be required. The vast majority of the work requires common construction methods such as grading, welding, and construction of concrete foundations for buildings and structures. SCE anticipates that the majority of these construction activities will be staffed by local construction workers. Certain construction activities may require specialized services not available in the local workforce, and a limited number of workers with these skill sets may be brought into Oxnard from the Los Angeles area. SCE anticipates that these workers would commute daily. Once construction is completed, this project is expected to employ one to two workers from the local area. Therefore, the project is not expected to directly induce growth.

The project will be constructed entirely within the boundaries of the existing SCE property, a former tank farm. Access to the facility is via Harbor Boulevard; no new infrastructure, roads, or road extensions are required for construction or operations. Thus, the proposed project will not induce substantial growth indirectly.

L. 2 & 3) The proposed project will be constructed completely within an existing industrial site that was formerly developed as a tank farm. The tanks have been removed, and the site has been vacant since that time. No housing will be displaced as a result of the project.

As noted, SCE anticipates that the majority of the construction workforce will be drawn from the local area, and workers with specialized skills not available locally are expected to commute from Los Angeles area. During operations, the power plant will be unmanned. One to two maintenance personnel may be required on-site periodically. Therefore, no additional housing construction will be required to support the labor force needed during either project construction or operation.

Mitigation:
No adverse impacts on population size, population distribution, or housing are expected to result from project construction and operation. Since no significant population or housing impacts were identified, no mitigation is required or proposed.

Monitoring:
Mitigation monitoring is not required because no mitigation measures are required.

Result After Mitigation:
The proposed project is not expected to result in significant adverse population or housing impacts.

M. PUBLIC SERVICES*

Would the project result in substantial adverse physical impacts to the following:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Fire protection? (2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.13 - Public Services)	☐	☐	☒	☐
2. Police protection? (*2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.13 - Public Services*)	☐	☐	☒	☐
3. Schools? (*2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.13 - Public Services*)	☐	☐	☐	☒
4 Parks? (*2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.13 - Public Services*)	☐	☐	☐	☒
5. Other public facilities? (*2020 General Plan, VII Public Facilities Element; FEIR 88-3, 4.13 - Public Services*)	☐	☐	☐	☒

* *Include potential effects 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.*

Discussion:

M.1) Project construction will involve a hot tap into an existing natural gas transmission line. This is a routine construction practice which, when performed in accordance with OSHA regulations and industry standard safe operating practices, is not expected to require the support of the local fire protection services.

The project will be constructed with two fire protection systems: 1) a carbon dioxide gas extinguishing system, and 2) a water hydrant system. The carbon dioxide gas system will be installed in the turbine and black start generator enclosures. Carbon dioxide is used because it can extinguish a fire without damaging the combustion turbine or the generator. The carbon dioxide system is a fully automated system with alarm function. The water system services the control module and other structures at the facility (except for the two enclosures), and operates off the city water supply. The facility will be fully automated and alarmed. As with any alarmed fire protection system, the Fire Department will likely respond to an alarm. However, based on the projected infrequent operation of the facility and the fire protection systems provided in the facility design, the additional burden to fire protection services is expected to be less than significant.

Operation of the power plant will require periodic delivery of aqueous ammonia to the facility. The ammonia system will be provided with four ammonia detectors. One will be located at the top of the dry sump, which will detect ammonia in the dry sump as well as ammonia coming from the unloading pad; one will be located at the aqueous ammonia tank which will detect ammonia in the event of a tank leak; one will be located at the forwarding pump skid; and one will be located at the ammonia flow control/vaporizer unit. The ammonia detectors will be set to alarm at 35 ppm, 50 ppm, and 250 ppm. These alarms will produce a local audible/visible alarm at the ammonia storage area, and will activate alarms in both the on-site plant control module and the 24-hr offsite manned monitoring station. An ammonia concentration of 250 ppm will automatically shut down the ammonia pumps. The facility's 24-hr surveillance camera system will also be used to remotely monitor the ammonia storage tank system. The Oxnard Fire Department will be called if a significant incident is detected. As discussed in detail in **Section G**, the probability or consequence of an aqueous ammonia release is low. Based on the projected infrequent ammonia delivery schedule and low risk of ammonia release; the delivery, storage and use of ammonia at the proposed facility is not expected to significantly impact the hazardous material ("Haz Mat") response capabilities of the Fire Department.

M.2 - 5) Because the construction workforce is small (55 to 60 people at the peak) and construction will take place over three to four months and will involve daily commuting (no population increase), project construction is not expected to place additional burden on police protection, parks, schools or other public facilities during construction activities.

The proposed project will be constructed within a fenced enclosure for security purposes, and will be provided with lighting at night to discourage trespassing and vandalism as well as a camera surveillance system. The project will be constructed in a primarily industrial area with similar facilities in the area, and for those reasons is not expected to attract an unusual level of attention. Routine surveillance by the local police department is expected to supplement the physical security provided in the project

design. The facility will be manned by one to two employees under normal operating circumstances. Based on the physical security provided and the low number of employees, the additional burden to police protection services is expected to be less than significant. Based on these staffing projections, there is no anticipated additional burden on existing parks, schools or other public facilities as a result of the proposed project.

The U.S. Department of Homeland Security (DHS) recently published the Chemical Facility Anti-Terrorism Standards; Final Rule (interim final rule, IFR) in the Federal Register on April 9, 2007 (6 CFR Part 27). This rule imposes comprehensive federal security regulations for high risk chemical facilities. The rule will require owners of facilities housing certain quantities of specified chemicals to complete a preliminary screening assessment that will determine the level of risk associated with the facility. Potential consequences of a terrorist attack or an incident at the facility are important factors in determining the level of risk associated with the facility. If the facility qualifies as a high risk facility based on the preliminary screening assessment, then the facility owner will be required to prepare a security vulnerability assessment and site security plan for submittal to the DHS.

Appendix A to 6 CFR Part 27 lists all DHS Chemicals of Interest. Aqueous ammonia in concentrations less than 20 percent is not listed as a Chemical of Interest due to its low risk. Because the proposed peaker facility will only store aqueous ammonia in concentrations less than 20 percent, the facility is not considered to be a high risk facility by the DHS. Although the peaker site is not required to prepare a special site security plan for DHS, SCE will be installing a 24-hr surveillance camera system, site perimeter monitoring and a site access control system as part of its standard security measures. These measures will restrict public access to the facility's aqueous ammonia storage tank and protect the facility from vandalism.

Mitigation:
No significant adverse impacts to fire protection, police protection, parks, schools or other public facilities are expected to occur as a result of construction and operational activities at the project site. Since no significant impacts were identified, no mitigation is required or proposed.

Monitoring:
Mitigation monitoring is not required because no mitigation measures were identified.

Result After Mitigation:
The proposed project is not expected to result in significant adverse impacts to fire protection, police protection, parks, schools or other public facilities.

N. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? *(2020 General Plan, XIII - Parks and Recreation Element; FEIR 88-3, 4.12 - Aesthetic Resources, 4.13 - Parks and Recreation Services)*	☐	☐	☐	☒
2. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? *(2020 General Plan, XIII - Parks and Recreation Element; FEIR 88-3, 4.12 - Aesthetic Resources, 4.13 - Parks and Recreation Services)*	☐	☐	☐	☒

Discussion:

N.1 - 2) Mandalay Beach State Park is the closest recreational facility; the entrance to the park is located at the intersection of Harbor Boulevard and Fifth Street, approximately one mile south of the proposed facility. However, as discussed in **Section L**, there will be no changes in population size or densities resulting from the proposed project. Therefore, implementation of the proposed project will not cause an increase in the use of existing neighborhood and regional parks or other recreational facilities. Further, the proposed project will be located at an established industrial facility and will have no effect on existing nearby parks including: Mandalay Beach State Park, McGrath State Beach or Oxnard State Beach, or other recreational facilities. The proposed project also will not require the construction or expansion of recreational facilities and, thus, will not have an adverse physical effect on the environment.

The Oxnard Local Coastal Plan Policy No. 54 requires that all new industrial and energy related development should be located and designed to minimize adverse impacts upon public access to the beach. However, the proposed peaker facility is located within a historical energy generating site that is zoned for coastal energy development. The site is surrounded on three sides by industrial and energy development, and no public access exists at this location. Because public access has not existed from this site for more than 50 years, the project will not result in any adverse impacts to public beach access.

Mitigation:

No significant adverse impacts to recreation are expected to occur as a result of construction and operational activities at the Mandalay site. Since no significant recreation impacts were identified, no mitigation is required or proposed.

Monitoring:
Mitigation monitoring is not required because no mitigation measures were identified.

Result After Mitigation:
The proposed project is not expected to result in significant adverse recreation impacts.

O. TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Cause an increase in traffic, which 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)? *(2020 General Plan, VI - Circulation Element; FEIR 88-3, 4.3 - Transportation/Circulation)*	☐	☐	☒	☐
2. Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways? *(2020 General Plan, VI - Circulation Element; FEIR 88-3, 4.3 - Transportation/Circulation)*	☐	☐	☒	☐
3. Result in a change in traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? *(2020 General Plan, VI - Circulation Element; FEIR 88-3, 4.3 – Transportation/Circulation)*	☐	☐	☐	☒
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? *(2020 General Plan, VI - Circulation Element; FEIR 88-3, 4.3 - Transportation/ Circulation)*	☐	☐	☐	☒
5. Result in inadequate emergency access? *(2020 General Plan, VI - Circulation Element; FEIR 88-3, 4.3 - Transportation/Circulation)*	☐	☐	☐	☒
6. Result in inadequate parking capacity? *(Zone Ordinance - Parking Regulations and Parking Lot Design Standards)*	☐	☐	☐	☒

O. TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
7. Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? *(Bicycle Facilities Master Plan)*	☐	☐	☐	☒

Discussion:
The proposed project site is located on the north-eastern portion of SCE-owned property at 251 N. Harbor Boulevard in the City of Oxnard. The proposed site is bounded on the north by the existing Mandalay Power Generation facility, on the west by an existing oil processing facility, on the east by Harbor Boulevard and undeveloped land, and on the south by an access road and oil field with operating well pumps.

Traffic Level of Service (LOS) categories range from "A" (least congested or free-flowing) to "F" (most congested). The City of Oxnard's LOS standard for streets and intersections is to provide LOS D or better. The City's criteria for evaluating project-related impacts at intersections are based on the change in Intersection Capacity Utilization (ICU)/LOS attributable to the project. The impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already at C, D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

The City of Oxnard has an adopted Truck Route System identified in the City's General Plan Background Report. The California Vehicle Code allows trucks to use streets that are not designated as truck routes to access a site in order to conduct business. Once trucks reach a designated truck route, they must stay on a designated truck route to get to and from the 101 Ventura freeway. Pre-approved truck routes in the City of Oxnard are limited to the following roads (See Figure O-1):

North-South Truck Routes:

- Victoria Avenue between Island View Avenue and the northern City limits.
- Ventura Road between Hueneme Road and the northern City limits.
- Harbor Boulevard between Fifth Street and the northern City limits.

- Oxnard Boulevard between Hueneme Road and the northern City limits.
- Rice Avenue between Pleasant Valley Road and Gonzales Road.
- Rose Avenue between Channel Islands Boulevard and the northern City limits.
- Del Norte Boulevard between Fifth Street and the northern City limits.

East-West Truck Routes:

- Gonzales Road between Harbor Boulevard and Rice Avenue.
- Fifth Street between Harbor Boulevard and Ventura Boulevard and between Saviers Road and the eastern City limits.
- Wooley Road between Victoria Avenue and Rice Avenue.
- Channel Island Boulevard between Victoria Avenue and Rice Avenue
- Hueneme Road between the Port of Hueneme and the eastern City limits.

It is expected that most of the truck trips will occur to and from the 101 Ventura freeway. Thus, primary truck routes during construction will include Harbor Boulevard, Fifth Street, Gonzales Road, Victoria Avenue, Ventura Road and Oxnard Boulevard to and from the 101 Ventura freeway.

Truck deliveries typically seek to avoid peak commuting hours to minimize delays for economic reasons. Proposed project truck traffic will be encouraged to do so to minimize traffic impacts as well.

O.1 - 2) Construction activities will occur at the north-eastern portion of SCE-owned property at 251 N. Harbor Boulevard, just below the southern boundary of the existing Mandalay Power Generation station. Construction workers and equipment will be parked and staged within and near this project area on the larger 16-acre SCE property. Project construction-related activities include, but are not limited to, site preparation (demolition and earth work), construction of above/below grade structures, and hardscape construction. Construction of the project is estimated to take three to four months to complete.

Construction activities resulting from implementing the proposed Mandalay Peaker Project are expected to require a maximum of approximately 55-60 temporary construction workers during the seventh and eighth weeks of construction, with the next highest weeks at approximately 50 workers (during weeks five and six of construction). Thus, a maximum of 55-60 inbound worker commuting trips will occur in the morning and 55-60 outbound trips will occur in the afternoon/evening. The shifts are expected to be from 7:00 a.m. to 6:00 p.m., Monday through Saturday. Thus, the workers will arrive before the peak period of 7:00 to 9:00 a.m. and depart after the afternoon/evening peak, which ends at 6:00 p.m. Truck trips are projected to peak at approximately 11 trucks per day during weeks three through six of construction. Most of those trips would occur during the day outside of the peak hours, with an average of less than one truck per hour during construction.

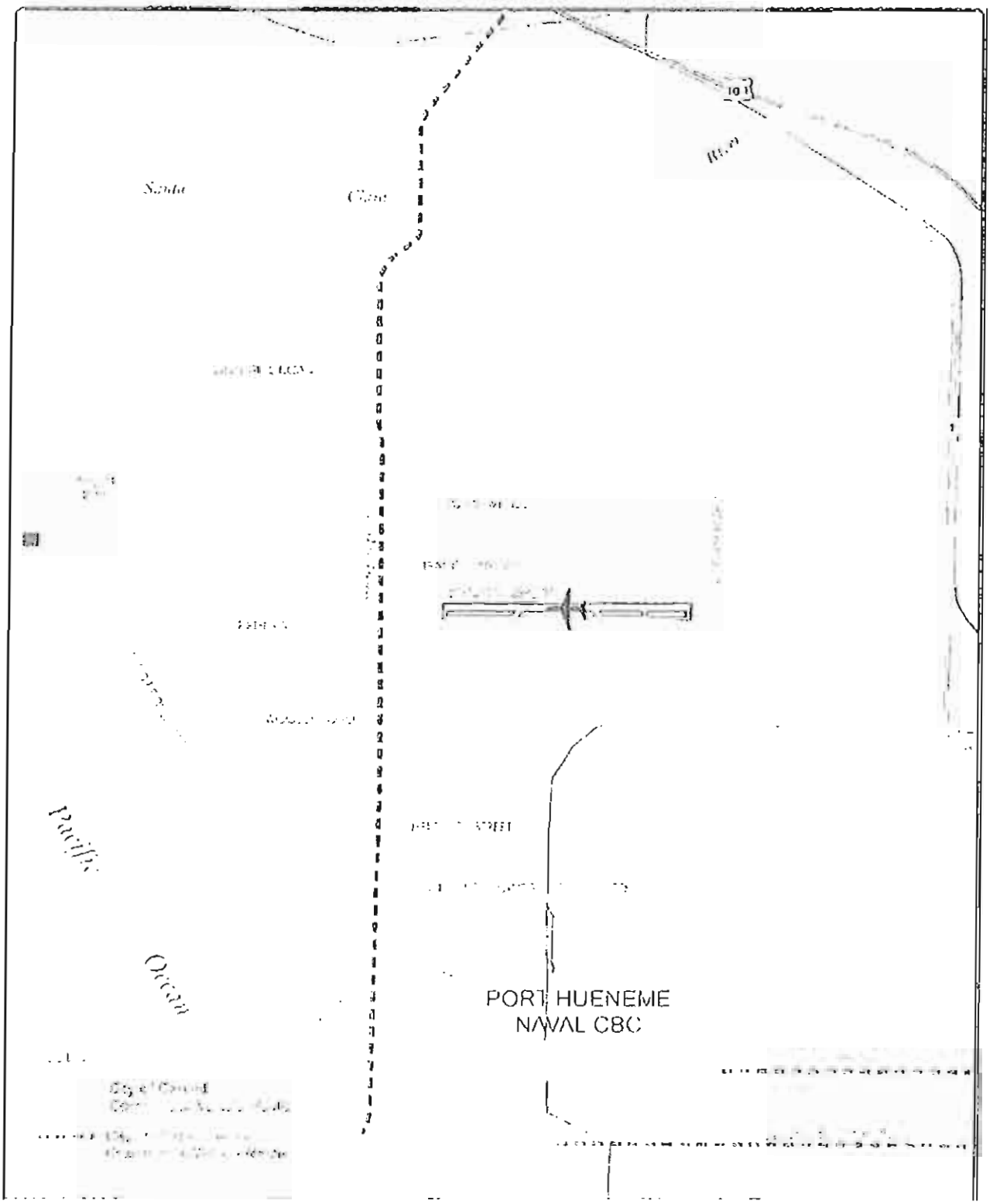

Figure O-1. Truck Routes Near the Project Site

Construction of the water pipeline would occur within the right-of-way for Harbor Boulevard, and may necessitate temporary closure of one lane of traffic within the construction work zone due to trenching and pipeline placement within or adjacent to the roadway. This construction could temporarily affect vehicular traffic flow, bicycle and pedestrian use of the roadway. Potential impacts to traffic flows will be minimized by limiting the construction period from 9:00 a.m. to 3:00 p.m., which is outside the peak commuter periods. Because the length of the water pipeline to be installed within or adjacent to the roadway is very short, this temporary impact is not expected to significantly impact traffic. SCE will implement mitigation measures TT-1 to reduce temporary impacts to traffic due to water pipeline construction, if required.

Construction of the natural gas pipeline would occur within the public right-of-way of Harbor Boulevard, on the east side, for a distance of approximately 1,800 feet, and is anticipated to require a period of approximately seven weeks to complete. Construction may necessitate closure of the northbound lane on Harbor Boulevard. The location of the lane closure will vary as the construction activities proceed along the road. The construction work zone would reduce the capacity of the roadway, a potentially significant short-term impact. However, there are no bicycle lanes, pedestrian walkways, on-road parking, transit stops, or entrances to residences, businesses or sensitive facilities (schools, hospitals, police and fire stations) on Harbor Boulevard along the pipeline route. Therefore, construction of the pipeline will not impact traffic associated with these types of facilities. Potential impacts to traffic flows along the route would be minimized by limiting the construction period to those periods specified by the City in the approved encroachment permit and Traffic Control Plan for the project. SCE will implement mitigation measures TT-1 and TT-2 to reduce the temporary gas pipeline construction-related impacts to less than significant.

Because construction workers are scheduled to arrive/depart before and after the peak traffic periods, there will be no significant traffic impacts from construction worker commuting traffic.

The project is expected to require several truck trips involving oversized loads to the project site. SCE will utilize delivery scheduling, escorts, and traffic management to ensure that potential impacts are at less than significant levels.

The facility will be manned by one to two employees during the operational phase. Up to four ammonia delivery truck trips per year may be required. No other operation-related trips are expected for the project. Therefore, no significant adverse traffic impacts are expected during the operational phase.

O.3) The proposed project will not result in a change in traffic patterns that results in substantial safety risks. The proposed project will have no significant effects on traffic patterns.

O.4) The project will have no impact due to substantially increased hazards due to a design feature such as sharp curves, dangerous intersections, or incompatible uses, because the proposed project will not affect the design of the traffic system.

O.5) The proposed project will have no impact on emergency access to the SCE property or other areas. Emergency access to the new facility will be approved by the City of Oxnard Fire Department as part of its approval of the Coastal Development Permit.

O.6) Construction workers (construction phase) and maintenance workers (operational phase) will park on undeveloped portions of the SCE property while on-site, and therefore, will have no impact on parking capacity in areas near the site.

O.7) The project will have no effect on adopted policies, plans or programs supporting alternative transportation.

Based upon these considerations, significant transportation/traffic impacts are not expected as a result of the proposed project with implementation of Mitigation Measures TT-1 and TT-2.

Mitigation:

TT-1 Should a temporary road and/or lane closure be necessary during construction the contractor will provide traffic control activities and personnel, as necessary, to minimize traffic impacts. This may include scheduling deliveries for off-peak hours and providing escorts for oversized loads, detour signage, cones, construction area signage, flagmen and other measures, as required, for safe traffic handling in the construction zone.

TT-2 Traffic Control Plan. A traffic control plan for the natural gas pipeline construction will be prepared by a registered traffic control engineer. The details of the traffic control plan will be prepared and approved by the affected jurisdictions. The Traffic Control Plan will generally follow the standard set forth by Caltrans. The Traffic Control Plan shall be submitted to the City for approval and will contain the following elements:

- Designate required traffic patterns or temporary road closures for construction;
- Provide construction work zone signs;
- Provide safety measures to separate motorists from the construction workers and the work zone;

In addition to the traffic control plan, the construction methodology along the roadways will:

- Ensure access for emergency vehicles at all times;
- Open lanes as soon as possible to restore normal traffic patterns;
- Notify the public during construction, using methods such as large electronic notification and arrow signs, notification to impacted residents, appropriate detour signs, and notifications to schools and emergency providers;
- Provide a designated traffic control coordinator to ensure compliance with the Traffic Control Plan;

- During construction, cover open trenches within 15 feet of the edge of the pavement with metal plates at the end of the work day; and
- After construction, restore the road to its pre-construction condition.

Monitoring:
SCE and/or Southern California Gas Company will submit the Traffic Control Plan required by TT-2 to the City of Oxnard for approval prior to the start of construction. SCE and/or Southern California Gas Company will maintain records documenting the actions taken to implement the Traffic Control Plan.

Result After Mitigation:
The project will have less than significant impacts to traffic and transportation following mitigation.

P. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)	☐	☐	☒	☐
2. 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? *(2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)*	☐	☐	☐	☒
3. 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? *(2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)*	☐	☐	☐	☒
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? *(2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)*	☐	☐	☒	☐

P. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
5. 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? *(2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)*	☐	☐	☐	☒
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? *(2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)*	☐	☐	☐	☒
7. Comply with federal, state, and local statutes and regulations related to solid waste? (2020 General Plan, VII - Public Facilities Element; FEIR 88-3, 4.6 - Public Utilities, 4.9 - Water Resources)	☐	☐	☐	☒

Discussion:
The construction of the Mandalay Peaker Project will include site preparation and installation of operating and auxiliary components. Water will be used during grading activities to minimize dust emissions; however, the amount of grading required is minimal since the area for the new foundations is already flat. There will also be small volumes of water utilized to conduct hydrostatic testing of system piping and storage, but this water will be re-used several times before being transported offsite or discharged to the City's wastewater treatment system. Therefore, no substantial use of water is required during the construction phase.

P.1 & 5) The proposed project will generate small volumes of wastewater from the evaporative cooler, estimated to be approximately eight gallons per minute (gpm) during unit operation. The wastewater is expected to have elevated levels (1.5 cycles of concentration) of total dissolved solids (TDS), but no other pollutants. For at least the first year of operation, the wastewater will be collected in a tank, and hauled off-site for disposal because there is no sewer system in the site vicinity. SCE expects that a sewer connection will be installed sometime in the future, at which time the wastewater will be discharged to the City's sewer system and will meet the City's pretreatment standards. There will be no effect on the City's physical or biological treatment processes. Currently there is no city waste water system in the vicinity of this site. Therefore, the evaporative coolers will not be used until such time as a waster water line is installed, resulting in a zero discharge facility until city facilities are available.

P.2) The Oxnard Wastewater Treatment Plant (OWTP) has an average dry weather flow (ADWF) design capacity of 31.7 million gallons per day (MGD) with provisions for an ultimate ADWF design

capacity of 39.7 MGD. The OWTP began construction of a new headworks and new influent pump station facility in April 2004. The new headworks facility and influent pump station will be designed to meet the City's ultimate average dry weather flow of 39.6 MGD and ultimate peak wet weather flow of 75.4 MGD. The treatment process includes the use of primary and secondary clarifiers, biofilters, anaerobic digesters, activated sludge treatment and chlorination. Dewatered grit from influent is disposed of at a landfill; dried biosolids is used in land applications; final disinfected water is discharged to the ocean, and methane is recovered from sludge processing to use in generating electricity for the facility. The wastewater flow from the project of eight gpm is insignificant compared to the capacity of the OWTP. The OWTP has the treatment processes in place to treat the project discharge, and elevated TDS levels expected in the wastewater discharge are not expected to have a negative impact on the treatment system.

P.3) Storm water generated around the equipment on the site will be collected, treated as required, and either released or hauled off-site. Storm water flow off-site will not alter or disturb existing drainage patterns or degrade water quality. The proposed project is not expected to alter existing drainage patterns, cause significant erosion or siltation, or affect the operation of existing storm water drainage systems.

P.4) Water will be used for dust control during approximately three to four months of the construction phase for the proposed project. Based on SCE's anticipated excavation schedule for the proposed project construction, a maximum of approximately 1,200 square yards of soil would be disturbed in any one day. Assuming that 0.2 gallon per square yard per hour is required for adequate dust suppression, the water required for dust suppression is approximately 2,500 gallons of water per day.

Overall, the volume of water required to operate this type of power plant is very low; the main water uses are for direct injection into the turbine to control NOx emissions (50 gpm) and spraying a mist into the inlet of the combustion turbine to lower air temperature to improve efficiency (12 gpm). Daily water use during the operational phase is estimated to average 62 gpm during unit operation. If the unit were operated continuously for 24 hours, average water use would total 89,300 gallons per day. However, peaker units are designed to operate intermittently and only during periods of high electricity demand and system imbalance. The anticipated use is 12 hours per day or less.

Oxnard's water is supplied by the Calleguas Municipal Water District and the United Water Conservation District. Calleguas Municipal Water District's historic supply has been 13,742 acre feet (4,478 million gallons) in 2004, 12,447 acre feet (4,056 million gallons) in 2005, and 7,815 acre feet (2,547 million gallons) through August 6 in 2006. United Water Conservation District's Oxnard-Hueneme Delivery System supplies about 13,000 acre feet (4,236 million gallons) of water per year to several agencies in the Oxnard Plain, including the cities of Oxnard and Port Hueneme, two naval bases, and several smaller water companies. The City's potable water supply is sufficient to meet the unit's water requirements.

The project's demand for water during construction and operation is not significant compared to the water supply available in the City of Oxnard.

P.6) Solid waste generated from project construction activities may include scrap lumber, plastic, scrap metal and glass, excess concrete, and empty non-hazardous containers. Management and disposal of these wastes will be the responsibility of the construction contractor(s). Typical management practices for this material include recycling when possible, proper storage of waste to prevent wind dispersion, and routine pick-up and disposal of waste to approved local Class III landfills. Solid wastes from project construction are not expected to significantly impact the capacity of the Class III landfills in Ventura County.

Table P-1 Summary of Construction Waste Streams and Management Methods

Waste Stream and Classification	Origin and Composition	Estimated Amount	Estimated Frequency of Generation	On-site Treatment	Waste Management Method/ Off-site Treatment
Construction waste - Hazardous	Empty hazardous material containers	1 cu yd/wk	Intermittent	None. Accumulate onsite for < 90 days	Return to vendor or dispose at permitted hazardous waste disposal facility
Construction waste - Hazardous	Solvents, used oil, paint, oily rags	175 gallons	Every 90 days	None. Accumulate onsite for <90 days	Recycle or use for energy recovery
Spent batteries - Hazardous	Lead acid, alkaline type	5 units	Intermittent	None. Accumulate onsite for <90 days	Recycle
Construction waste - Nonhazardous	Scrap wood, concrete, steel, glass, plastic, paper	40 cu yd/wk	Intermittent	None	Dispose to Class III landfill
Sanitary waste - Nonhazardous	Portable Chemical Toilets - Sanitary Waste	200 gpd	Intermittent	None	Periodically pumped to tanker truck by licensed contractors, shipped to sanitary wastewater treatment plant
Office waste - Nonhazardous	Paper, aluminum, food	3 cu yd/wk	Intermittent	None	Recycle or dispose to Class III landfill

Non-hazardous solid wastes generated during operation of the power plant will include waste from routine maintenance, such as used air filters, spent demineralizer resins, spent softener resins, used oil, paper, newsprint, aluminum cans, plastic, sanitary waste, and glass containers and other non-hazardous solid waste material. Those maintenance-derived wastes that cannot be recycled will be transported for disposal at a Class III landfill.

Table P-2 Summary of Major Operational Waste Streams and Management Methods

Waste Stream and Classification	Origin and Composition	Estimated Amount	Estimated Frequency of Generation	Waste Management Method	
				On-Site	Off-Site
Spent Demineralizer resin –Nonhazardous	Demineralizer	10 ft^3	Once every 3 yrs	None	Recycle
Spent softener resin - Nonhazardous	Softener	100 ft^3	Once every 3 yrs	None	Recycle
Used air filters - Nonhazardous	Air compressors	10 ft^3	Every 5 yrs	None	Recycle

There is a Class III landfill, a Class II/III landfill and a transfer/processing center in Ventura County, all within less than 40 miles of the proposed project site. The nearest Class III landfill to the proposed project site is the Toland Road Landfill, which is expected to be used for disposal of the project's non-hazardous solid waste during both construction and operation. The Toland Road landfill has sufficient capacity to remain operational until approximately 2027 (CIWMB 2006). The permitted, operating, and remaining capacities of these landfills are described in Table P-3.

Table P-3 Solid Waste Disposal Facilities

Waste Disposal Site	Title 23 Class	Maximum Permitted Capacity	Current Operating Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Toland Road Landfill, Santa Paula, CA	III	30 million cubic yards	1,500 tons/day	20.8 million cubic yards	5/31/2027	None listed
Simi Valley Landfill & Recycling Center, Simi Valley, CA	II, III	43.5 million cubic yards	3,000 tons/day	9.5 million cubic yards	1/1/2034	None listed
Gold Coast Recycling Facility	Transfer/ Processing	-	440 tons/day	--	--	None listed

Source: Integrated Waste Management Broad web site and http://www.ciwmb.ca.gov/SWIS/.

It is anticipated that disposal of non-hazardous solid waste from the project will represent only a minimal increase (a small fraction of one percent) relative to the capacities of the local landfills. Therefore, the quantities of non-hazardous solid waste from the project will not adversely impact available landfill capacity and are considered insignificant.

P. 7) SCE has identified and is committed to comply with all laws ordinances, regulations and statutes related to non-hazardous solid waste management. Non-hazardous solid waste is regulated by the California Integrated Waste Management Act, Public Resources Code, §40000 et seq. The law provides a solid waste management system to reduce, recycle, and reuse solid waste generated in the

State to the maximum extent feasible in an efficient and cost-effective manner to conserve natural resources, to protect the environment, and to improve landfill safety. Local agencies are required to develop and establish recycling programs, reduce paper waste, purchase recycled products, and implement integrated waste management programs that conform to the state's requirements. The County of Ventura Environmental and Energy Resources Division has developed and implemented an integrated waste management program.

Mitigation:
No significant adverse impacts to utilities and service systems are expected to occur as a result of construction and operational activities at the Mandalay site. Since no significant utilities and service systems impacts were identified, no mitigation is required or proposed.

Monitoring:
Mitigation monitoring is not required because no mitigation measures were identified.

Result After Mitigation:
No significant adverse impact on water use is expected due to the proposed project.

Q. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
1. 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 rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
2. 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)?*	☐	☐	☐	☒
3. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Q.1) The proposed project will be constructed and operated on land that is already disturbed as a result of previous electrical utility infrastructure on the site, within the public right-of-way of an existing roadway, and within an existing electrical transmission line corridor. These areas do not contain sensitive habitat or wetlands. While rare or endangered plant or animal species are known to inhabit the general area, none were observed during recent survey of the site, the transmission line corridor and surroundings. Mitigation measures identified in section D of this document are either incorporated into the project or made a part of the Mitigated Negative Declaration. No significant adverse effects are expected to result from the proposed project.

Q.2) SCE is proposing to construct a total of five LM6000 combustion turbine electric generating peaking units along with emergency black start generators at five geographically separated sites within Southern California. No other facility is proposed for Ventura County, as the others are located in Los Angeles, Orange and San Bernardino Counties. No cumulative impacts from these peaker facilities are expected to occur due to the distance between sites.

The only nearby development that SCE is aware of at this time is a future residential development, Northshore at Mandalay Bay, which will be located about 750 feet southeast of the proposed project site. This residential development is currently in the initial stages of grading. However, due to the distance from the proposed project site, no construction related cumulative impacts are expected.

Q.3) The project will not result in environmental impacts that will cause substantial direct or indirect adverse impacts on human beings.

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT

Topic Area	Mitigation Measures	
Aesthetics		None
Agricultural Resources		None
Air Quality	AQ-1	The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
	AQ-2	Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
	AQ-3	Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities: a) If soil is hauled off site, all haul trucks shall be required to cover their loads as required by California Vehicle Code §23114. b) All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
	AQ-4	Graded and/or excavated inactive areas of the construction site shall be monitored by SCE's construction contractor at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT

Topic Area	Mitigation Measures	
	AQ-5	Signs shall be posted on-site limiting traffic to 15 miles per hour or less.
	AQ-6	During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
	AQ-7	Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
	AQ-8	Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.
	AQ-9	Equipment idling time shall be minimized.
	AQ-10	Equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications.
	AQ-11	Alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), electric, or equipment meeting Tier 2 standards, shall be used if feasible.
Biological Resources	BIO-1	A pre-construction survey of the areas to be disturbed by natural gas pipeline and transmission line construction will be conducted by a qualified biologist for Ventura marsh milk-vetch following determination of the final transmission pole layouts. If individual plants are identified in the transmission line corridor, pole placement and site access will be adjusted, as necessary, to avoid impacts to this species. If impacts to the Ventura marsh milk-vetch cannot be avoided during construction, consultation with the California Department of Fish and Game and U.S. Fish and Wildlife Service will be conducted to develop appropriate measures to minimize project impacts to less than significant.

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT

Topic Area	Mitigation Measures	
	BIO-2	A pre-construction survey will be conducted by a qualified biologist for burrowing owls no more than 30 days prior to ground disturbing activities for the natural gas pipeline and transmission line construction following the determination of the final transmission pole layouts. Should any burrows be actively used by owls within the project vicinity, appropriate distances based on current California Department of Fish and Game guidelines will be kept from all occupied burrows, and a qualified biological monitor will be present during construction activities. If burrowing owls cannot be avoided during construction, consultation with the California Department of Fish and Game will be conducted to develop appropriate measures to minimize project impacts on burrowing owls to less than significant.
	BIO-3	A qualified biologist will conduct a pre-construction survey of each construction area to identify occupied nests of native birds prior to grubbing or grading activity. If occupied nests of native birds are observed within the construction zone, a minimum buffer of 100 feet will be established between the nest and limits of construction. Additionally, the construction crew will avoid activities within the buffer zone until the bird nest(s) is/are no longer occupied, per a subsequent survey by the qualified biologist. If work within the established 100 foot buffer cannot be avoided, consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game will be conducted to determine if there are appropriate measures that may be taken to continue work in these areas.
Cultural Resources	CUL - 1	Developer shall contract with a Native American monitor to be present during all subsurface grading, trenching or construction activities on the project site. The monitor shall provide a final report to the Planning Division summarizing the activities during the reporting period. A copy of the contract for these services shall be submitted to the Planning Division Manager for review and approval prior to issuance of any grading permits. The monitoring report(s) shall be provided to the Planning Division prior to approval of final building permit signature.
Geology and Soils		None

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT

Topic Area	Mitigation Measures	
Hazards & Hazardous Materials	HM - 1	During construction, hazardous materials stored on-site will be limited to small quantities of paint, coatings and adhesive materials, and emergency refueling containers. These materials will be stored in their original containers inside a flammable materials cabinet. Fuels, lubricants, and various other liquids needed for operation of construction equipment will be transported to the construction site on an as-needed basis by equipment service trucks.
Hydrology/Water Quality		None
Land Use/Planning	LUP-1	If the Planning Commission finds the proposed use is not consistent with the Coastal Zone designation, the applicant would have to file for a Coastal Land Use Plan amendment to add "non-coastal energy facility" to the approved use list.
Mineral Resources		None
Noise		
Population/Housing		None
Public Services		None
Recreation		None
Transportation/Traffic	TT-1	Should a temporary road and/or lane closure be necessary during construction the contractor will provide traffic control activities and personnel, as necessary, to minimize traffic impacts. This may include scheduling deliveries for off-peak hours and providing escorts for oversized loads, detour signage, cones, construction area signage, flagmen and other measures, as required, for safe traffic handling in the construction zone.

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT

Topic Area	Mitigation Measures	
	TT-2	Traffic Control Plan. A traffic control plan for the natural gas pipeline construction will be prepared by a registered traffic control engineer. The details of the traffic control plan will be prepared and approved by the affected jurisdictions. The Traffic Control Plan will generally follow the standard set forth by Caltrans. The Traffic Control Plan shall be submitted to the City for approval and will contain the following elements: • Designate required traffic patterns or temporary road closures for construction; • Provide construction work zone signs; • Provide safety measures to separate motorists from the construction workers and the work zone; In addition to the traffic control plan, the construction methodology along the roadways will: • Ensure access for emergency vehicles at all times; • Open lanes as soon as possible to restore normal traffic patterns; • Notify the public during construction, using methods such as large electronic notification and arrow signs, notification to impacted residents, appropriate detour signs, and notifications to schools and emergency providers; • Provide a designated traffic control coordinator to ensure compliance with the Traffic Control Plan; • During construction, cover open trenches within 15 feet of the edge of the pavement with metal plates at the end of the work day; and • After construction, restore the road to its pre-construction condition.
Utilities/Service Systems	None	

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Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
ADWF	Average dry weather flow
AP-42	Compilation of Air Pollution Emission Factors
AQIA	Air Quality Impacts Analysis
AQMP	Air Quality Management Plan
ACR	Assigned Commissioners Ruling
Bcf	Billion cubic feet
bgs	Below ground surface
CAISO	California Independent Systems Operator
CalARP	California Accidental Release Prevention
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CATEF	California Air Toxic Emission Factor
CBC	California Building Code
CEC	California Energy Commission
CEMS	Continuous Emissions Control Systems
CEQA	California Environmental Quality Act of 1970
CGS	California Geologic Survey
CHRIS	California Historical Resources Information System
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
CNDDB	California Natural Diversity Data Base
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CPUC	California Public Utilities Commission
CUPA	Certified Unified Program Agency
dBA	Decibels
DOT	U.S. Department of Transportation
EPA	Environmental Protection Agency
ERPG-2	Emergency Response Planning Guideline
°F	degrees Fahrenheit
g	[Acceleration of] gravity
GE	General Electric
gpm	Gallons per minute
HARP	Hot Spots Analysis and Reporting Program
Haz Mat	Hazardous Materials
HI	Hazard Index
HMBP	Hazardous Material Business Plan
Hp	horsepower

Acronyms and Abbreviations

HRA	Health Risk assessment
ICE	Internal Combustion Engine
ICU	Intersection Capacity Utilization
ISO	International Standards Organization
kV	Kilovolt
KW	Kilowatt
LNG	Liquefied Natural Gas
MGD	Million gallons per day
m/s	Meters per second
MW	Megawatts
NAD27	North American Datum 1927
NAHC	Native American Heritage Commission
NH_3	Ammonia
NMC	New Model Colony
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NOx	Nitrogen Oxides
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	U.S. Occupational Safety and Health Administration
OWTP	Oxnard Wastewater Treatment Plant
PERMIT TO CONSTRUCT	Permit to Construct
PM10	Particulate matter with an aerodynamic diameter of 10 microns or less
PM2.5	Particulate matter with an aerodynamic diameter of 2.5 microns or less
PPE	Personal Protective Equipment
ppm	Parts per million
RB1	Single Family Beach
REL	Reference Exposure Level
RMP	Risk Management Plan
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SCR	Selective Catalytic Reduction
SD	Shut down
SIL	Significant impact levels
SP	Specific Plan
SPL	Sound Pressure Level
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
SPCC	Spill Prevention Control and Countermeasures

Acronyms and Abbreviations

SU	Start up
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminant
Tcf	Trillion cubic feet
TDS	Total Dissolved Solids
TIA	Traffic Impacts Analysis
UBC	Uniform Building Code
UFC	Uniform Fire Code
USGS	United Stated Geological Survey
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound
VCAPCD	Ventura County Air Pollution Control District
VCOES	Ventura County Office of Emergency Services