BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION OF THE MAGNOLIA POWER PROJECT BY SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY	**DOCKET NO. 01-AFC-6** APPLICATION ACCEPTED SEPTEMBER 25, 2001

COMMISSION ADOPTION ORDER

This Commission Order adopts the Commission Decision on the Magnolia Power Project. It incorporates the Presiding Member's Proposed Decision (PMPD) in the above-captioned matter and the Committee Errata issued March 4, 2003. The Commission Decision is based upon the evidentiary record of these proceedings (Docket No. 01-AFC-6) and considers the comments received at the March 5, 2003, business meeting. The text of the attached Commission Decision contains a summary of the proceedings, the evidence presented, and the rationale for the findings reached and Conditions imposed.

This ORDER adopts by reference the text, Conditions of Certification, Compliance Verifications, and Appendices contained in the Commission Decision. It also adopts specific requirements contained in the Commission Decision which ensure that the proposed facility will be designed, sited, and operated in a manner to protect environmental quality, to assure public health and safety, and to operate in a safe and reliable manner.

FINDINGS

The Commission hereby adopts the following findings in addition to those contained in the accompanying text:

1. The Magnolia Power Project is sponsored by the Southern California Public Power Authority to meet new demand in the service areas of six participating municipalities (Anaheim, Burbank, Cerritos, Colton, Glendale, and Pasadena).

2. The Conditions of Certification contained in the accompanying text, if implemented by the project owner, ensure that the project will be designed, sited, and operated in conformity with applicable local, regional, state, and federal laws, ordinances, regulations, and standards, including applicable public health and safety standards, and air and water quality standards.

3. Implementation of the Conditions of Certification contained in the accompanying text will ensure protection of environmental quality and assure reasonably safe and reliable operation of the facility. The Conditions of Certification also assure that the project will neither result in, nor contribute substantially to, any significant direct, indirect, or cumulative adverse environmental impacts.

4. Existing governmental land use restrictions are sufficient to adequately control population density in the area surrounding the facility and may be reasonably expected to ensure public health and safety.

5. The evidence of record establishes that no feasible alternatives to the project, as described during these proceedings, exist which would reduce or eliminate any significant environmental impacts of the mitigated project.

6. The evidence of the record does not establish the existence of any environmentally superior alternative site.

7. The Decision contains a discussion of the public benefits of the project as required by Public Resources Code section 25523(h).

8. The Decision contains measures to ensure that the planned, temporary, or unexpected closure of the project will occur in conformance with applicable laws, ordinances, regulations, and standards.

9. The proceedings leading to this Decision have been conducted in conformity with the applicable provisions of Commission regulations governing the consideration of an Application for Certification and thereby meet the requirements of Public Resources Code sections 21000 et seq. and 25500 et seq.

ORDER

Therefore, the Commission ORDERS the following:

1. The Application for Certification of the Magnolia Power Project as described in this Decision, is hereby approved and a certificate to construct and operate the project is hereby granted.

2. The approval of the Application for Certification is subject to the timely performance of the Conditions of Certification and Compliance Verifications enumerated in the accompanying text and Appendices. The Conditions and Compliance Verifications are integrated with this Decision and are not severable therefrom. While the project owner may delegate the performance of a Condition or Verification, the duty to ensure adequate performance of a Condition or Verification may not be delegated.

3. This Decision is final, issued, and effective within the meanings of Public Resources Code sections 25531 and 25901, as well as California Code of Regulations, title 20, section 1720.4, when voted upon by the Commission. Anyone seeking judicial review of the Decision must file a Petition for Review with the California Supreme Court no later than thirty (30) days from March 5, 2003.

4. For purposes of reconsideration pursuant to Public Resources Code section 25530 and California Code of Regulations, title 20, section 1720(a), this Decision is adopted when it is filed with the Commission's Docket Unit. Anyone seeking reconsideration of this Decision must file a petition for reconsideration no later than thirty (30) days from the date the Decision is docketed. The filing of a petition for reconsideration does not extend the 30-day period for seeking judicial review mentioned above, which begins on March 5, 2003.

5. The Commission hereby adopts the Conditions of Certification, Compliance Verifications, and associated dispute resolution procedures as part of this Decision in order to implement the compliance monitoring program required by Public Resources Code section 25532. All conditions in this Decision take effect immediately upon adoption and apply to all construction and site preparation activities including, but not limited to, ground disturbance, site preparation, and permanent structure construction.

6. The Executive Director of the Commission shall transmit a copy of this Decision and appropriate accompanying documents as provided by Public Resources Code section 25537 and California Code of Regulations, title 20, section 1768.

Dated March 5, 2003, at Sacramento, California.

WILLIAM J. KEESE Chairman	*-Absent-* ROBERT PERNELL Commissioner
ARTHUR H. ROSENFELD, Ph.D. Commissioner	JAMES B. BOYD Commissioner
JOHN L. GEESMAN Commissioner	

CALIFORNIA
ENERGY
COMMISSION

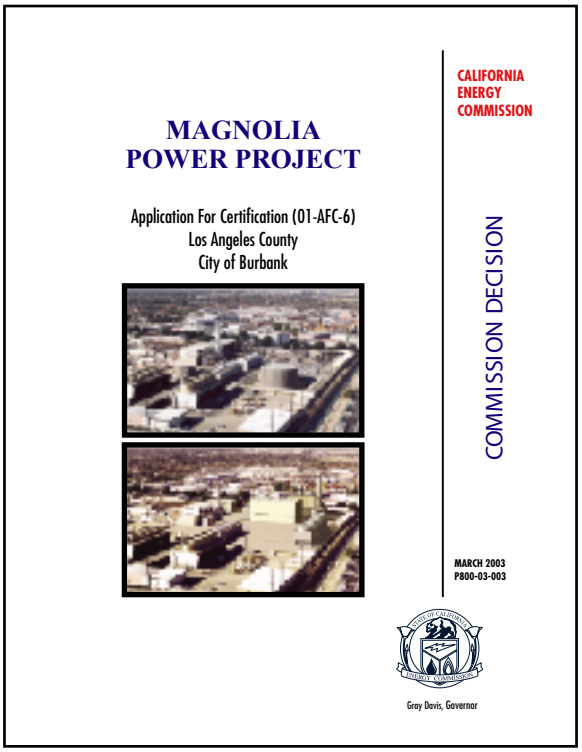
MAGNOLIA POWER PROJECT

Application For Certification (01-AFC-6)
Los Angeles County
City of Burbank

COMMISSION DECISION

MARCH 2003
P800-03-003

Gray Davis, Governor



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Commissioner and Associate Member

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INTRODUCTION

A. SUMMARY OF THE PROPOSED DECISION

This Decision contains our rationale for determining that the Magnolia Power Project complies with all applicable laws, ordinances, regulations, and standards, and may therefore be licensed. It is based exclusively upon the record established during this certification proceeding and summarized in this document. We have independently evaluated the evidence, provided references to the record[1] supporting our findings and conclusions, and specified the measures required to ensure that the Magnolia Power Project is designed, constructed, and operated in the manner necessary to protect public health and safety, promote the general welfare, and preserve environmental quality.

The Southern California Public Power Authority ("Applicant" or SCPPA) filed an application for the Magnolia Power Project (MPP or "project"), a nominally rated 250-megawatt (MW) natural gas-fired power plant with a peaking capacity of 328 MW. The project will be located at 164 West Magnolia Boulevard in the City of Burbank (COB) at the existing site of the Magnolia Power Station, which is owned and operated by the Burbank Water and Power Department. The 23-acre site is bound by Magnolia Boulevard on the north, Lake Avenue on the west, Olive Avenue on the south, and the Western Burbank Flood Control Channel, railway switching yards, and Interstate Highway 5 to the east. The MPP will occupy four acres made available by demolition of the existing Magnolia Units 1 and 2.

The MPP includes a Model 7FA General Electric combustion turbine generator, a heat recovery steam generator with a 150-foot exhaust stack, a steam turbine

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[1] The Reporter's Transcript of the evidentiary hearing conducted on November 18, 2002 is cited as "RT, page (p.) __." The Reporter's Transcript of the February 24, 2003, evidentiary hearing is

generator, switchyard upgrades, two underground 69 kV transmission circuits, a cooling tower, storage tanks, natural gas compressors, makeup water demineralizers, a zero liquid discharge wastewater treatment system, and other ancillary facilities. The combustion turbine will burn only natural gas; no other fuel will be used. The MPP will use reclaimed water from the Burbank Water Reclamation Plant (BWRP) for cooling tower makeup.

The power plant will interconnect onsite to the Olive Substation via the two new underground transmission lines within the existing power station. (RT, p. 9; Ex. 45, p. 3-1.) No new offsite transmission lines, natural gas, water supply, or wastewater pipelines are required. The Olive Substation connects to the COB's transmission and distribution system.

Applicant will begin project construction in the second quarter of 2003 and commence commercial operation by the second quarter of 2005. During the 24-month construction period, the project will provide a maximum of 320 construction jobs. During operation, the project will employ approximately 30 permanent staff, who will be employees of the COB. The facility has a planned life of 25 years. Applicant estimates the capital costs associated with the project will be approximately $225 million.

SCPPA, the project owner, is a consortium of municipalities and an irrigation district established by a Joint Powers Agreement to develop, construct, and operate electric generation projects. The participating member cities in this project (Anaheim, Burbank, Cerritos, Colton, Glendale, and Pasadena) are developing the project to meet new demand in their respective service territories. The COB is the Project Manager and Operator. SCPPA will lease the site from the COB and in turn, the COB will provide utility services related to construction, operation, and maintenance of the project.

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cited as "2/24/03 RT, p. __." The exhibits included in the evidentiary record are cited as "Ex. number." A list of all exhibits is contained in Appendix C of this Decision.

Several local, state, and federal agencies cooperated with the Energy Commission in completing this review process. The Applicant and Commission staff worked with the City of Burbank, the South Coast Air Quality Management District (SCAQMD), the California Air Resources Board (CARB), the U.S. Environmental Protection Agency (USEPA), the California Department of Health Services, the California Department of Toxic Substances Control (DTSC), the Los Angeles Regional Water Quality Control Board, the California Department of Transportation (Caltrans), Southern California Edison, the Los Angeles Department of Water and Power, and the California Independent System Operator (Cal-ISO). California Unions for Reliable Energy (CURE), the only formal intervenor in this case, did not participate in the process.

SCAQMD was responsible for coordinating input from the USEPA and CARB, in consultation with Commission staff, in drafting its Final Determination of Compliance (FDOC) on the project's conformity with state and federal air quality standards. However, the MPP's offset package was not finalized at the conclusion of evidentiary hearings. Section 25523(d)(2) of the Public Resources Code requires a complete offset package prior to certification. The Committee has therefore scheduled a hearing to reopen the record and receive evidence on the final offset package submitted to SCAQMD. The project will use the best available control technology (BACT), as required by SCAQMD, to reduce emissions to levels of insignificance. The limitations on project emissions and the conditions imposed by SCAQMD as well as the mitigation measures recommended by Staff are incorporated into this Decision.

The COB provided a "Will Serve" letter to SCPPA agreeing to meet all of the MPP's water demand. The primary source will be reclaimed water via an existing pipeline from the Burbank Water Reclamation Plant (BWRP). Use of reclaimed water for power plant cooling is a beneficial use consistent with state policy.

The Applicant's initial project design was based on recycling wastewater from cooling tower blowdown to the BWRP for discharge into the Burbank Western Wash, which required a revised National Pollutant Discharge Elimination System (NPDES) permit from the LARWQCB. Delays in obtaining a revised NPDES permit caused delays in the certification review process. Consequently, the Applicant modified the project proposal to include a zero liquid discharge (ZLD) water treatment system that does not result in any wastewater discharge. Instead, the ZLD treatment recycles cooling tower blowdown by removing dissolved and suspended solids that eventually form a solid waste material ("salt cake") that can be deposited at an appropriate landfill.

To ensure that the BWRP will supply sufficient amounts of properly treated reclaimed water, Staff initially proposed Condition of Certification **SOIL and WATER-7**, which would have required the MPP to operate as if the BWRP had completed modifications to its plant to remove certain impurities from reclaimed water delivered to the MPP. Upon agreement of the parties, this proposed Condition was deleted and the Verification was moved to **SOIL and WATER-5** to ensure that the BWRP's planned upgrades are reflected in the project's monthly and annual reports.

Staff's testimony was inconsistent on the amount of "salt cake" from the ZLD process that would be deposited at California landfills. Supplemental testimony submitted at the February 24, 2003, evidentiary hearing, indicated that operation of the ZLD system would generate 9 tons of "salt cake" per day or 3,285 tons per year, which represents less than one percent of remaining Class I or Class III landfill capacity. The evidence establishes that the project's ZLD waste product would have no significant impact on the operation or lifetimes of Class I and Class III landfills in California.

Staff proposed Conditions of Certification **SOIL and WATER-1** through **4 to** require SCPPA to implement mitigation measures identified in its Storm Water

Pollution Prevention Plans and the Erosion and Sedimentation Control Plans. The parties redrafted these Conditions to specify the required mitigation and we have adopted the revised language as stipulated by the parties.

Staff's Environmental Justice (EJ) analysis relied on the 2000 Census to identify minority populations in the project area but initially used 1990 Census data to identify low-income populations. At the February 24, 2003, evidentiary hearing, Staff submitted updated data from the 2000 Census showing that low-income populations in the study area (five-mile radius of the site) are below the 50 percent threshold and do not trigger environmental justice concerns. Further, since the project will not result in significant environmental impacts to any population, we conclude there are no environmental justice issues related to the project.

In its CEQA analysis regarding potential impacts to Public Health, Staff used a 10-in-a-million significance threshold for cancer risk, which is the standard used by several other state and federal regulatory agencies except the Air District. Staff's cancer risk assessment includes emissions from the project's turbines and cooling tower while the Air District's calculations include only the turbines since the cooling tower is not covered by its permit. The District specifies a maximum individual cancer risk (MICR) of one-in-a-million if a project is constructed without T-BACT (toxics best available control technology). Since the MPP will employ an oxidation catalyst, which is considered T-BACT, and the MICR is less than one-in-a-million, the project complies with the District's rules. Staff's cancer risk calculation (including the cooling tower) exceeds the District's MICR but falls below Staff's significance threshold. Consequently, we find the project should not result in adverse effects to public health since it complies with applicable LORS and is therefore presumed consistent with CEQA requirements.

Regarding Transmission System Engineering, Conditions of Certification **TSE-5 and TSE-7** require SCPPA to meet or exceed the requirements of CPUC

General Orders (GO) 95 and 128 or the National Electric Safety Code (NESC) in the design, construction, and operation of its transmission facilities. Staff testimony at the February 24, 2003, hearing, indicated that while SCPPA is not subject to the more stringent GO's (municipal utilities are exempt), it must comply with appropriate industry standards established in the NESC, which ensure the safe and reliable design of transmission facilities. These Conditions provide flexibility to accommodate the COB's existing transmission system.

In its initial testimony on Noise, Staff noted that SCPPA should apply "good community noise control practices" to control construction noise levels. In supplemental testimony, Staff explained this could be accomplished by SCPPA's implementation of the Conditions of Certification related to noise control, which ensure the project will comply with applicable LORS and CEQA requirements.

Section 25523(h) of the Public Resources Code requires a discussion of the project's benefits. We address this issue in the Socioeconomics section of the Decision in which we find that the MPP will provide local economic benefits and electricity reliability to the participating SCPPA municipalities. We conclude that the project will have no unmitigated significant effects on the environment.

B. SITE CERTIFICATION PROCESS

The Magnolia Power Plant and its related facilities are subject to Energy Commission licensing jurisdiction. (Pub. Resources Code, §§ 25500 et seq.). During licensing proceedings, the Commission acts as lead state agency under the California Environmental Quality Act (Pub. Resources Code, §§ 25519 (c), 21000 et seq.). The Commission's process and associated documents are functionally equivalent to the preparation of the traditional Environmental Impact Report. (Pub. Resources Code, § 21080.5.) The process is designed to complete the review within a specified time period; a license issued by the Commission is in lieu of other state and local permits.

The Commission's certification process provides a thorough and timely review and analysis of all aspects of this proposed project. During this process, we conduct a comprehensive examination of a project's potential economic, public health and safety, reliability, engineering, and environmental ramifications.

Specifically, the Commission's process allows for and encourages public participation so that members of the public may become involved either informally or on a more formal level as intervenors with an opportunity to present evidence and cross-examine witnesses. Public participation is encouraged at every stage of the process.

The process begins when an Applicant submits the Application for Certification (AFC). Commission staff reviews the data submitted as part of the AFC and recommends to the Commission whether the AFC contains adequate information to begin the review. Once the Commission determines an AFC contains sufficient analytic information, it appoints a Committee of two Commissioners to conduct the licensing process. This process includes public conferences and evidentiary hearings, where the evidentiary record is developed and becomes the basis for the Presiding Member’s Proposed Decision (PMPD). The PMPD determines a project's conformity with applicable laws, ordinances, regulations, and statutes and provides recommendations to the full Commission.

The initial portion of the certification process is weighted heavily toward assuring public awareness of the proposed project and obtaining such technical information as necessary. During this time, the Commission staff sponsors numerous public workshops at which Intervenors, agency representatives, and members of the public meet with Staff and Applicant to discuss, clarify, and negotiate pertinent issues. Staff publishes its initial technical evaluation of a project in a document called the Preliminary Staff Assessment (PSA), which is made available for public comment. Staff’s responses to public comment on the

PSA and its complete analyses are published in the Final Staff Assessment (FSA).

Following this, the Committee conducts a Prehearing Conference to assess the adequacy of available information, identify issues, and determine the positions of the parties. Based on information presented at this event, the Committee issues a Hearing Order to schedule formal evidentiary hearings. At these hearings, all entities that have formally intervened as parties may present sworn testimony, which is subject to cross-examination by other parties and questioning by the Committee. Members of the public may present comments at these hearings. Evidence adduced during these hearings provides the basis for the Committee's analysis and recommendation to the full Commission.

The Committee's analysis and recommendations appear in the Presiding Member's Proposed Decision (PMPD), which is available for a 30-day public comment period. Depending upon the extent of revisions necessary after considering comments received during this period, the Committee may elect to publish a revised version. If so, this Revised PMPD triggers an additional 15-day public comment period. Finally, the full Commission decides whether to accept, reject, or modify the Committee's recommendations at a public hearing.

Throughout the licensing process, members of the Committee, and ultimately the Commission, serve as fact-finders and decision-makers. Other parties, including the Applicant, Commission staff, and formal intervenors, function independently with equal legal status. An "ex parte" rule prohibits parties from communicating on substantive matters with the decision-makers, their staffs, or assigned hearing officer unless these communications are made on the public record. The Office of the Public Adviser is available to inform members of the public concerning the certification proceedings, and to assist those interested in participating.

C. PROCEDURAL HISTORY

Public Resources Code, sections 25500 et seq. and Commission regulations (20 Cal. Code of Regs., § 1701, et seq.) mandate a public process and specify the occurrence of certain necessary events. The key procedural events that occurred in the present case are summarized below.

On May 14, 2001, SCPPA filed its Application for Certification (AFC) for the Magnolia Power Plant (MPP) under the six-month expedited process established by Public Resources Code section 25550. On September 25, 2001, the Commission accepted the AFC as data adequate in order to commence the 6-month review process.

The Committee published a notice of "Informational Hearing and Site Visit," by notice dated October 3, 2001. The notice was mailed to members of the community who were known to be interested in the proposed project, including the owners of land adjacent to or in the vicinity of the MPP. The notice was also published in a local general circulation newspaper.

The Committee conducted the Informational Hearing and Site Visit in the City of Burbank on October 29, 2001. At that event, the Committee, the parties and other participants discussed the proposal for developing the MPP, described the Commission's review process, and explained opportunities for public participation. The participants also toured the City of Burbank's existing Magnolia Power Station where the MPP will be situated.

Prior to the Informational Hearing, Staff conducted a community outreach meeting in Burbank on October 15, 2001, to discuss the project with the local community and to assess whether there were any environmental justice concerns. Subsequently, Staff scheduled several public workshops in Burbank to discuss project details with the Applicant, governmental agencies, and

members of the public. These workshops were conducted on November 13, 2001, January 23, 2002, and June 11, 2002. Staff issued its initial Staff Assessment on January 9, 2002. The Final Staff Assessment (FSA) was issued on October 3, 2002.

On November 1, 2001, the Committee issued a Scheduling Order, which incorporated a six-month schedule. On February 11, 2002, the Committee issued a Notice of Prehearing Conference and a Revised Scheduling Order extending the schedule by 10 weeks based upon Applicant's request. On March 1, 2002, the Committee issued a Notice Postponing the Prehearing Conference and Notice of Scheduling Conference.

On March 11, 2002, the Committee conducted a Scheduling Conference to review the status of the six-month process and to discuss issues related to the project's wastewater discharge plan and air quality mitigation requirements. Subsequently, on March 29, 2002, as a result of discussions at the Scheduling Conference and briefs submitted by the parties, the Committee issued an Order Approving Stipulations to Remove the AFC from the Six-Month Process and to Adopt a Twelve-Month Schedule. On August 22, 2002, the Committee issued a Second Revised Scheduling Order based upon the parties' stipulations that the project would use zero liquid discharge (ZLD) instead of the proposed wastewater discharge plan. After the ZLD system was included in the project and the Air District issued its FDOC, the parties were able to complete the review process. On October 9, 2002, subsequent to publication of the FSA (October 3, 2002), the Committee issued a Second Notice of Prehearing Conference and Site Visit.

On October 29, 2002, the Committee conducted the Prehearing Conference and toured the site. On November 1, 2002, the Committee issued a Notice of Evidentiary Hearing and Hearing Order. On November 18, 2002, the Committee conducted the Evidentiary Hearing via teleconference in Sacramento. California

Unions for Reliable Energy (CURE), the only formal intervenor in this case, did not participate at any of the workshops or Committee events.

After reviewing the evidentiary record, the Committee published the Presiding Member's Proposed Decision (PMPD) on February 3, 2003. The 30-day comment period on the PMPD ended on March 4, 2003.

On February 3, 2003, the Committee issued a Notice of Hearing to Reopen the Record for Limited Purpose and a Notice of Committee Conference on the PMPD. On February 24, 2003, the Committee conducted an Evidentiary Hearing and Committee Conference to receive supplemental evidence and comments. On March 4, 2003, the Committee issued a list of Errata incorporating the new evidence and comments into the PMPD. On March 5, 2003, the full Commission adopted the PMPD and Errata thereto and certified the MPP for construction and operation as described in the following pages of this Decision.

D. NEED CONFORMANCE

Prior to January 1, 2000, the Public Resources Code directed the Commission to perform an "integrated assessment of need," taking into account 5 and 12-year forecasts of electricity supply and demand, as well as various competing interests, and to adopt the assessment in a biennial electricity report. In order to grant a license, the Commission was required to find that a proposed power plant was in conformance with the adopted integrated assessment of need for new resource additions. (former Pub. Resources Code, §§ 25523 (f) and 25524 (a).)

Effective January 1, 2000, Senate Bill 110 (Stats. 1999, ch. 581) repealed Sections 25523 (f) and 25524 (a) of the Public Resources Code, and amended other provisions relating to the assessment of need for new generation resources. Specifically, this legislation removed the requirement that the

Commission make a finding of need conformance in a certification Decision. Senate Bill (SB) 110 states in pertinent part:

> Before the California electricity industry was restructured, the regulated cost recovery framework for powerplants justified requiring the commission to determine the need for new generation, and site only powerplants for which need was established. Now that powerplant owners are at risk to recover their investments, it is no longer appropriate to make this determination. (Pub. Resources Code, § 25009, added by Stats. 1999, ch. 581, § 1.)

As a result, an AFC that reaches final Commission decision after January 1, 2000, is not subject to a determination of need conformance. Since the final decision on the AFC in this case will occur after January 1, 2000, the Commission is not required to include a need conformance finding.

I. PROJECT PURPOSE AND DESCRIPTION

The Southern California Public Power Authority ("Applicant" or SCPPA) filed an application for the Magnolia Power Project (MPP or "project"), a nominally rated 250-megawatt (MW) natural gas-fired power plant with a peaking capacity of 328 MW. (Ex. 1 § 1.0.) The MPP will be located in the City of Burbank (COB) at the existing Magnolia Power Station, where the COB has operated power generation facilities since 1941.[2]

Project Ownership

SCPPA, the project owner, is a consortium of municipalities and an irrigation district established in 1980 by a Joint Powers Agreement to develop, construct, and operate electric generation projects.[3] The participating member cities in this case (Anaheim, Burbank, Cerritos, Colton, Glendale, and Pasadena) are developing the project to meet new demand in their respective service territories.[4] (Ex. 57) Each will execute a power sales agreement on a "take or pay basis" with SCPPA to purchase electricity produced by the MPP. (Ex. 24, p. 4.) The COB will be the Project Manager and Operator under a Construction

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[2] The power generating complex contains six operating generation units (Magnolia Units 4 and 5, and Olive Units 1, 2, 3, and 4) and three non-operating units (Magnolia Units 1, 2, and 3) along with associated switchgear and substations, cooling towers, fuel storage, and maintenance facilities. (Ex. 1, p. 3.6-1.) The proposed project includes demolition of the remaining components of Magnolia Units 1 and 2, which have been decommissioned. (Ex. 3, p. 3.1-1.)

[3] SCPPA is organized pursuant to provisions contained in the Joint Exercise of Powers Act found in Chapter 5 of Division 7 of Title 1 of the Government Code of California (the "Act"). Its members are municipalities and an irrigation district that supply or intend to supply electricity in the State of California. Pursuant to the terms of the Act, SCPPA has the power to plan, develop, finance, own, acquire, design, construct, operate, maintain and repair electric generation or transmission projects or cause such projects to be planned, developed, financed, designed, constructed, operated, maintained and repaired, and to provide by agreement with a public agency of the State of California to perform such activities. (Ex. 24, p. 4.)

[4] The City of San Marcos was originally included as a participating member but the City of San Marcos Discovery Valley Board of Directors voted unanimously to withdraw from the project on December 11, 2002. (Ex. 57.)

Management and Operating (CMO) Agreement with SCPPA.[5] (RT, pp. 11-19; Ex. 24, p. 4.) SCPPA will lease the site from the COB and in turn, the COB will provide utility services related to construction, operation, and maintenance of the project. (Ex. 16: Site Lease and Services Agreement.)

Power Plant Site and Facilities

The MPP will be located on the 23-acre Magnolia Power Station at 164 West Magnolia Boulevard in Burbank, which is in the northwestern area of Los Angeles County. The site is bound by Magnolia Boulevard on the north, Lake Avenue on the west, Olive Avenue on the south, and the West Burbank Flood Control Channel, railway switching yards, and Interstate 5 to the east. The MPP will occupy 4 acres made available by demolition of Magnolia Units 1 and 2. (RT, p. 9; Ex. 45, p. 3-1.) No new offsite transmission lines, natural gas, water supply, or wastewater pipelines are required. (Ex. 45, p. 3-2.) See Regional Map and Local Map (Applicant's Figure 3.2-1) at the end of this section.

The project includes an offsite construction laydown area on Victory Place adjacent to the railroad tracks between Empire Avenue and Maria Street. This 2.4-acre parcel is about two miles to the northwest of the project site. (Ex. 1, p. 1.1-1.) Equipment and supplies will be delivered to the laydown area by rail and/or truck and transferred to the MPP site by truck. (RT, p. 102.) The laydown area is currently zoned Railroad and would otherwise require a Conditional Use Permit (CUP) for laydown activities if the COB had jurisdiction over the project. The primary parking area, which can accommodate about 300 parking spaces for construction workers, is north of the MPP site on Front Street. The zoning designation for this area is currently Automobile Dealership and would require a CUP for use as a parking lot. A secondary parking area on San Fernando Boulevard between Hollywood Way and Buena Vista Road along the railroad

[5] The CMO had not been executed at the time of the evidentiary hearing. (RT, pp. 14, 16.)

tracks will provide another 100 parking spaces. This area is zoned Railroad and would also require a CUP for use as a parking lot. (Ex. 45, p. 1-4.)

The MPP includes a Model 7FA General Electric (GE) dual-shaft combustion turbine generator (CTG), an Alstrom dual pressure heat recovery steam generator (HRSG) with a 150-foot exhaust stack (Ex. 3, § 3.5.2.), a steam turbine generator (STG), switchyard upgrades to the existing 69 kV Olive switchyard, two underground 69 kV transmission circuits, cooling tower, storage tanks, natural gas compressors, truck mounted makeup water demineralizers with offsite regeneration, a zero liquid discharge (ZLD) wastewater treatment system, and other ancillary facilities. (Ex. 24, p. 2.) The CTG will burn only natural gas; no other fuel will be used. (Ex. 3, § 3.1.)

The CTG is nominally rated at 169 MW. The STG is nominally rated at 85 MW without firing the HRSG and at 147 MW with full firing of the HRSG. Duct firing capability in the HRSG and steam injection capability in the CTG will be available for peaking capacity. An additional 12 MW results from steam injection. (Ex. 45, p. 3-1; see also, Ex. 3, § 3.4-1.) The total net capacity is 245 MW at the design temperature of 77° F, 298 MW with duct firing and no steam injection, and 310 MW with duct firing and steam injection. (Ex. 24, p. 2.) The plant has an overall expected availability rating of up to 95 percent. Combined cycle thermal efficiency should be about 54%. (*Ibid*.; Ex. 45, p. 3-1.)

The project will use Dry Low NOx combusters with selective catalytic reduction (SCR) and oxidizing catalysts to meet the current Best Available Control/Lowest Achievable Emission Rate (BACT/LAER) requirements of the South Coast Air Quality Management District (Air District). Oxides of nitrogen (NOx), volatile organic combustibles (VOC) and carbon monoxide (CO) emissions will be controlled to 2.0 parts per million to comply with Air District requirements. (RT, p. 65; Ex. 24, p. 2.) The Applicant has agreements to purchase all necessary NOx Reclaim Trading Credits (RTCs) and all required CO and VOC Emission

Reduction Credits (ERCs) from appropriate sources in the Air District's jurisdictional area. Applicant will also purchase Priority Reserve Credits from the Air District for the required PM10 and SO2 ERCs. PM10 cooling tower emissions will be offset by removal of the decommissioned cooling towers for Magnolia Units 3 and 4. (Ex. 24, p. 3.)

The MPP will connect to the grid via the existing onsite Olive 69 kV switchyard, which interconnects with the COB transmission system. (EX. 45, pp. 3.1-1, 3.6-1.)

The existing underground SoCalGas pipeline that currently serves the Magnolia Power Station is adequate to deliver natural gas to the project. Maximum demand for gas will be approximately 2,500 MMBtu/hr at a pressure of 350 pounds per square inch gas (psig). The project includes a natural gas compressor to increase gas pressure into the range of 450 to 700 psig needed for the CTG. (Ex. 45, p. 3-2.) New metering and regulator stations will be added. (Ex. 3, § 3.7.2.)

The COB Reclamation Plant will provide up to 6.546 million gallons of water per day for cooling water makeup, and when it is of suitable quality, for HRSG makeup via demineralization. The COB will supply about 2,000 gallons per day of potable water for domestic uses and fire protection. Applicant will convert an existing 2.2-million gallon underground tank on the adjacent Olive power station site to store reclaimed water. The stored reclaimed water and, if necessary, potable water will supplement reclaimed water from the Reclamation Plant when the volume is inadequate or the quality is poor. (Ex. 45, pp. 3-2, 3-3; Ex. 1, § 3.4.7; Ex. 3, § 3.4.7; Ex. 24, p. 3.)

Applicant's initial proposal included a wastewater discharge plan that would have added MPP wastewater to the COB's Outfall 001 that flows to the Burbank Western Channel. The Los Angeles Regional Water Quality Control Board

required a revised National Pollutant Discharge Elimination System (NPDES) permit for the project's wastewater discharge. This NPDES review delayed the Energy Commission's certification process for several months. To avoid further delay, Applicant amended the project to employ a ZLD wastewater treatment system. The ZLD system removes dissolved solids from cooling tower blowdown and recycles the treated water back to the cooling tower. Dry solids are transported to a licensed offsite landfill. Since the ZLD option eliminates wastewater discharge, NPDES review is no longer required. (Ex. 24, p. 3; Ex. 3, § 1.3; Ex. 45, p. 3-3.)

Project Schedule

Applicant will begin project construction in the second quarter of 2003 and commence commercial operation by the second quarter of 2005. (RT, p. 13.) During the 24-month construction period, the project will provide a maximum of 320 construction jobs. During operation, the project will employ approximately 30 permanent staff, who will be employees of the COB. (Ex. 3, §§ 3.8.1.1, 3.9.1; Ex. 45, p. 3-3.) The facility has a planned life of 25 years. (Ex. 3, § 3.10.2.) Applicant estimates the capital costs associated with the project will be approximately $225 million. (Ex. 1, § 6.0.)

FINDINGS AND CONCLUSIONS

1. The project owner, Southern California Public Power Authority (SCPPA) proposes the Magnolia Power Project (MPP), a nominal 250 MW combined cycle natural gas power plant with a peaking capacity of 328 MW.

2. The MPP consists of a power island, other electrical generation and mechanical equipment, transformers, emission control equipment, zero liquid discharge wastewater treatment system, and administrative facilities.

3. The MPP will be located in the City of Burbank (COB) at the existing Magnolia Power Station, owned and operated by the COB.

4. SCPPA and the COB will execute a Construction Management and Operating Agreement, which designates COB as the Project Manager and Operator for the MPP.

5. SCPPA has established site control under terms of a Site Lease and Services Agreement with the COB.

6. No new linear facilities are required.

7. The MPP will interconnect to the COB transmission system.

8. SCPPA will execute “take or pay” power sales agreements with each of the participating member cities (Anaheim, Burbank, Cerritos, Colton, Glendale, and Pasadena) to meet new demand in their respective service areas.

We conclude that SCPPA has described the Magnolia Power Project in sufficient detail to allow review in compliance with the provisions of both the Warren-Alquist Act and the California Environmental Quality Act (CEQA).

II. PROJECT ALTERNATIVES

The California Environmental Quality Act (CEQA) Guidelines and the Energy Commission's regulations require an evaluation of the comparative merits of a range of feasible site and facility alternatives including the "no project" alternative, which would attain the basic objectives of the proposed project but would avoid or substantially lessen potentially significant environmental impacts.[6] (Cal. Code of Regs., tit. 14, §§15126.6(d) and (e); *see also*, tit. 20, §1765.) The range of alternatives is governed by the "rule of reason" and need not include those alternatives whose effects cannot be reasonably ascertained and whose implementation is remote and speculative. (*Id.* at tit. 14, §15126.6(d)(5).

Summary and Discussion of the Evidence

The MPP will be located within the Magnolia Power Station, an existing power-generating site and, therefore, avoids the potential impacts associated with development of a greenfield power plant. Any offsite alternative could potentially result in increased environmental impacts from construction of an alternate power station and the necessary infrastructure. The proposed project includes demolition of the remaining components associated with Magnolia Units 1 and 2 followed by the construction of the MPP in the location of the demolished units. The net output of the station will increase approximately 250 MW with the MPP, not including firing the HRSG or injecting steam into the CTG. (Ex. 3, § 3.11.) Staff characterizes the MPP as a "modification" to an existing facility that makes substantial use of the existing site and infrastructure without requiring new offsite development. (Ex. 45, p. 6-7; Ex. 3, § 3.11.4.)

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[6] Based on the totality of the record and as reflected in our findings for each of the technical topic areas, *infra*, the MPP as mitigated will not result in significant adverse effects on the environment. We include the analysis of project alternatives to ensure that our certification review conforms with requirements of the CEQA Guidelines and the Energy Commission's regulations. (Cal. Code of Regs., tit. 14, §15126.6 and tit. 20, §1765.)

The evidentiary record illustrates the benefits of the Magnolia Power Station site in the discussion of alternative sites and technologies as well as the "no project alternative." (Ex. 3, §3.11; Ex. 45, p. 6-3.)

Methodology

Staff used the following methodology to prepare the alternatives analysis. (Ex. 45, p. 6-3.):

- Identify the basic objectives and potential significant impacts of the project.
- Determine whether there are feasible site alternatives that would meet most of the project objectives and substantially lessen potential adverse impacts.
- Identify and evaluate facility design alternatives.
- Identify and evaluate technical alternatives.
- Evaluate the feasibility and impacts of not constructing the project.

Staff initially found that the project posed potentially significant impacts in the technical areas of air quality, water resources, and visual resources. Applicant agreed to implement measures that would mitigate all potential impacts to insignificant levels. Therefore, the evidentiary record indicates there are no unmitigated impacts to the environment or public health and safety. (Ex. 45, pp. 6-6, 6-7; *see*, the Findings and Conclusions herein for each technical topic.)

PROJECT OBJECTIVES

The participating members of SCPPA are obligated to provide electric power within their respective service territories at a reasonable cost and in a reliable and environmentally acceptable manner. (Ex. 1, § 2.0.) To meet these commitments, SCPPA' s project objectives include the following:

- To locate the project close to the load center of the participating members, to use the existing transmission system, to increase local reliability, and to reduce transmission congestion.

- To locate the project at an existing power generation site to minimize the need for new infrastructure development.
- To select a highly efficient generating unit to maintain a reasonable cost of generation.
- To select tested and reliable technology to assure reliable generation.
- To employ Best Available Control Technology (BACT) to minimize air pollution emissions.
- To assure that the interests of local citizens are addressed.

Alternative Site Location

Locating the MPP at a site currently used for generation minimizes the need for new infrastructure improvements and potentially eliminates new offsite infrastructure such as transmission lines, transmission towers, natural gas lines, water supply lines, wastewater and sewer lines. In addition, locating the site close to the load center of the participating members utilizes the existing transmission system to increase local reliability and reduce transmission congestion and losses. (Ex. 3, § 3.11.9.)

Further advantages of the Magnolia Power Station site include the following:

- Site is willingly offered by a participating member of SCPPA;
- Site is consistent with local land use plans and future growth patterns; and
- Site does not present potentially significant site-related environmental impacts. (Ex. 3, § 3.11.9.)

Of the seven SCPPA participants, only Burbank, Glendale, and Pasadena have sites with existing infrastructure for a unit such as the MPP. Although Glendale has a similar power station site and infrastructure to accommodate the MPP, the City of Glendale has not offered its location as an option nor does it present an environmental advantage over the Burbank location. Pasadena could accommodate the MPP but transmission and water issues require substantial

infrastructure improvements; also, land use goals and area demographics would raise environmental justice concerns. (Ex. 3, p. 3.11-18.)

A greenfield site is available in Colton, one of the participating cities; however, use of that location does not meet the major project objective of minimizing the need for infrastructure improvements and avoiding permanent land disturbance that causes environmental damage. (Ex. 3, § 3.11.9.3.) Thus, Applicant has established that the Magnolia Power Station is the best site to achieve project objectives.

Facility Design Alternatives

The COB property has been fully developed as a generating facility and also provides a centralized general maintenance and administration location for operations. To accomplish the least disruptive site arrangement at the COB power station, the MPP will be installed in the area made available by removing the oldest units on the site, Magnolia Units 1 and 2, which have been decommissioned. (Ex. 3, § 3.11.10.1.) The selection of the site layout was based on the following criteria:

- Physical space requirements and relationships of the major facility components;
- Physical size and shape of the existing site
- Existing topography of the site
- Clearance requirements between buildings, equipment, and structures; and
- Conformance with applicable laws, ordinances, regulations, and standards.

Applicant's testimony indicates that the most compact and economical arrangement of the CTG, HRSG, and stack train is a linear arrangement in an

east-west orientation. The STG will be parallel to the CTG/HRSG train. With this arrangement, the main and auxiliary transformers can be located to the west, which takes advantage of the existing infrastructure and provides the most economical approach. (Ex. 3, § 3.11.10.1.)

Staff considered other design alternatives, including plant configurations and arrangements, other baseload combined cycle equipment, alternative cooling technologies and alternative air emission control technologies. (Ex. 45, p. 6-9.) Based on comparative analysis, Staff concluded that the alternative facility designs are inferior to the proposed design and would not reduce the potential impacts of the project. (*Ibid*.)

Technology Alternatives

California has implemented several energy efficiency and demand side management programs in an effort to reduce electricity demand. However, these conservation programs are not considered in the alternatives analysis because their cumulative effect is not sufficient to provide the additional generation required by the state.[7] (Ex. 45, p. 6-10.)

Staff analyzed the option of renewable technologies, such as geothermal, solar, and wind power scaled to meet project objectives. These non-fossil fuel technologies are more environmentally attractive than a gas-fired facility such as the MPP due to reduced air pollutant emissions. (Ex. 45, p. 6-10.) However, geothermal resources are not available in the Los Angeles area. New centralized solar or wind facilities are not feasible alternatives because they would require large land areas, resulting in significant land use, biological, cultural resource, and visual impacts. (*Ibid*.) Staff concluded, therefore, that

[7] Public Resources Code, section 25305(c) states that conservation, load management, or other demand-reducing measures shall not be considered as alternatives to a proposed facility during the siting process.

renewable technologies are not feasible alternatives to accomplish the objectives of the proposed MPP. (*Ibid.*)

Applicant considered alternative fuels such as biomass and coal or oil. Biomass fuels are not available in sufficient quantities and coal or oil would be detrimental to air quality. Applicant also reviewed alternative generating technologies, including hydroelectric, fuel cells, coal gasification, and nuclear but none of those options were feasible. In addition, Applicant considered a variety of turbine generators, alternative emission control technologies, alternative transmission options, and alternative water supply sources.[8] None of those alternatives proved to be more environmentally or economically advantageous than the proposed MPP. (Ex. 3, §§ 3.11.5 et seq. and 3.11.8 et seq.)

No Project Alternative

The CEQA Guidelines require the "no project" alternative to compare the impacts of approving the project with the impacts of not approving the project. (Cal. Code of Regs., tit. 14, § 15126.6(e).) In this case, the "no project" alternative would mean that Magnolia Units 1 and 2 would remain idle and 250 MW would not be available in the area. Increased demand for electricity would be placed on older, less efficient power facilities, resulting in increased air emissions and natural gas consumption but less reliable electric service to the customers of SCPPA. (Ex. 3, § 3.11.4.)

Staff concluded that the proposed project is environmentally and economically superior to the "no project" alternative because the MPP would reduce reliance on older, more polluting facilities and supply a stable source of electricity to the

[8] Applicant amended the project to include a zero liquid discharge water treatment system instead of the initial plan to discharge project wastewater to the Burbank Water Reclamation Plant Outfall 001. This amendment results in no wastewater discharge and, therefore, the project does not require a revised NPDES permit from the Los Angeles Regional Water Quality Control Board. (Ex. 45, p. 6-6; Ex. 3, § 3.11.7 et seq.)

region. (Ex. 45, p. 6-11.) The use of load-centered generation, which is the purpose of the MPP, would alleviate strain on the transmission system that is already near capacity. (Ex. 3, § 3.11.4.) If the MPP is not built, it is likely that new power plants will be developed in the Los Angeles region to meet demand. According to Staff, "whatever effect new plants might have insulating ratepayers and taxpayers from risk will occur whether or not the proposed plant is included among the new plants actually built." (Ex. 45, p. 6-11.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. Locating the project at a site currently used for generation minimizes the need for new infrastructure development and eliminates the potential environmental effects of developing a greenfield site.

2. Locating the site close to the load center of the participating member cities utilizes the existing transmission system to increase local reliability.

3. All potential adverse environmental effects related to the project will be mitigated to insignificant levels.

4. The evidentiary record contains an adequate review of alternative sites, fuels, technologies, and the "no project" alternative.

5. The MPP site design plan is more efficient and cost-effective than the alternative options.

6. Renewable technology alternatives such as geothermal, solar, or wind resources are either unavailable in the Los Angeles area or not capable of meeting project objectives.

7. The "no project" alternative would not avoid or substantially lessen potentially significant environmental impacts given the increased demand for electric power in the Los Angeles area and the likelihood that the strain on the transmission system will attract other power plant proposals.

8. If all Conditions of Certification contained in this Decision are implemented, construction and operation of the MPP will not create any significant, direct, indirect, or cumulative adverse environmental impacts.

We therefore conclude that the record of evidence contains sufficient analysis of alternatives to comply with the requirements of the California Environmental Quality Act and the Warren-Alquist Act and their respective regulations. No Conditions of Certification are required for this topic.

III. COMPLIANCE and CLOSURE

Public Resources Code section 25532 requires the Commission to establish a post-certification monitoring system. The purpose of this requirement is to assure that certified facilities are constructed and operated in compliance with applicable laws, ordinances, regulations, and standards, as well as the specific Conditions of Certification adopted as part of this Decision.

Summary of the Evidence

The evidence of record contains a full explanation of the purposes and intent of the Compliance Plan (Plan). The Plan is the administrative mechanism used to ensure that the Magnolia Power Project is constructed and operated according to the Conditions of Certification. It essentially describes the respective duties and expectations of the project owner and the Staff Compliance Project Manager (CPM) in implementing the design, construction, and operation criteria set forth in this Decision.

Compliance with the Conditions of Certification contained in this Decision is verified through mechanisms such as periodic reports and site visits. The Plan also contains requirements governing the planned closure, as well as the unexpected temporary and unexpected permanent closure, of the project.

The Compliance Plan is composed of two broad elements. The first element is the "General Conditions". These General Conditions:

- Set forth the duties and responsibilities of the Compliance Project Manager (CPM), the project owner, delegate agencies, and others;
- Set forth the requirements for handling confidential records and maintaining the compliance record;

- Establish procedures for settling disputes and making post-certification changes;

- State the requirements for periodic compliance reports and other administrative procedures necessary to verify the compliance status of all Commission imposed conditions; and

- Establish requirements for facility closure.

The second general element of the Plan contains the specific "Conditions of Certification". These are found following the summary and discussion of each individual topic area in this Decision. The individual conditions contain the measures required to mitigate potentially adverse project impacts associated with construction, operation and closure to an insignificant level. Each condition also includes a verification provision describing the method of assuring that the condition has been satisfied.

The contents of the Compliance Plan are intended to be read in conjunction with any additional requirements contained in the individual Conditions of Certification.

FINDINGS AND CONCLUSIONS

The evidence of record establishes:

1. The Compliance Plan and the specific Conditions of Certification contained in this Decision assure that the Magnolia Power Project will be designed, constructed, operated, and closed in conformity with applicable law.

2. Requirements contained in the Compliance Plan and in the specific Conditions of Certification are intended to be read in conjunction with one another.

We therefore conclude that the compliance and monitoring provisions incorporated as a part of this Decision satisfy the requirements of Public

Resources Code section 25532. Furthermore, we adopt the following Compliance Plan as part of this Decision.

GENERAL CONDITIONS OF CERTIFICATION

DEFINITIONS

To ensure consistency, continuity and efficiency, the following terms, as defined, apply to all technical areas, including Conditions of Certification:

- **Site Mobilization**

Moving trailers and related equipment onto the site, usually accompanied by minor ground disturbance, grading for the trailers and limited vehicle parking, trenching for construction utilities, installing construction utilities, grading for an access corridor, and other related activities. Ground disturbance, grading, etc. for site mobilization are limited to the portion of the site necessary for placing the trailers and providing access and parking for the occupants. Site mobilization is for temporary facilities and is, therefore, not considered construction.

- **Ground Disturbance**

Onsite activity that results in the removal of soil or vegetation, boring, trenching or alteration of the site surface. This does not include driving or parking a passenger vehicle, pickup truck, or other light vehicle, or walking on the site.

- **Grading**

Onsite activity conducted with earth-moving equipment that results in alteration of the topographical features of the site such as leveling, removal of hills or high spots, or moving of soil from one area to another.

- **Construction**

[From section 25105 of the Warren-Alquist Act.] Onsite work to install permanent equipment or structures for any facility. Construction does **not** include the following:

a) the installation of environmental monitoring equipment;

b) a soil or geological investigation;

c) a topographical survey;

d) any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility; or

e) any work to provide access to the site for any of the purposes specified in a., b., c., or d.

- **Start of Commercial Operation**

For compliance monitoring purposes, “commercial operation” is that phase of project development which begins after the completion of start-up and commissioning, where the power plant has reached steady-state production of electricity with reliability at the rated capacity. For example, at the start of commercial operation, plant control is usually transferred from the construction manager to the plant operations manager.

COMPLIANCE PROJECT MANAGER RESPONSIBILITIES

A Compliance Project Manager (CPM) will oversee the compliance monitoring and shall be responsible for:

1. ensuring that the design, construction, operation, and closure of the project facilities are in compliance with the terms and conditions of the Energy Commission Decision;
2. resolving complaints;
3. processing post-certification changes to the conditions of certification, project description, and ownership or operational control;
4. documenting and tracking compliance filings; and
5. ensuring that the compliance files are maintained and accessible.

The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies and the Energy Commission when handling disputes, complaints and amendments.

All project compliance submittals are submitted to the CPM for processing. Where a submittal required by a condition of certification requires CPM approval, the approval will involve all appropriate staff and management.

The Energy Commission has established a toll free compliance telephone number of **1-800-858-0784** for the public to contact the Energy Commission

about power plant construction or operation-related questions, complaints, or concerns.

Pre-Construction and Pre-Operation Compliance Meeting

The CPM may schedule pre-construction and pre-operation compliance meetings prior to the projected start-dates of construction, plant operation, or both. The purpose of these meetings will be to assemble both the Energy Commission's and the project owner's technical staff to review the status of all pre-construction or pre-operation requirements contained in the Energy Commission's conditions of certification to confirm that they have been met, or if they have not been met, to ensure that the proper action is taken. In addition, these meetings shall ensure, to the extent possible, that Energy Commission conditions will not delay the construction and operation of the plant due to oversight and to preclude any last minute, unforeseen issues from arising. Pre-construction meetings held during the certification process must be publicly noticed unless they are confined to administrative issues and processes.

Energy Commission Record

The Energy Commission shall maintain as a public record, in either the Compliance file or Docket file, for the life of the project (or other period as required):

- all documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;
- all monthly and annual compliance reports filed by the project owner;
- all complaints of noncompliance filed with the Energy Commission; and
- all petitions for project or condition changes and the resulting staff or Energy Commission action.

PROJECT OWNER RESPONSIBILITIES

It is the responsibility of the project owner to ensure that the general compliance conditions and the conditions of certification are satisfied. The general compliance conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, compliance conditions, or ownership. Failure to comply with any of the conditions of certification or the general compliance conditions may result in reopening of the case and revocation of Energy Commission certification, an administrative fine, or other action as appropriate. A summary of the General Conditions of Certification is included as **Compliance Table 1** at the conclusion of this section. The designation after each of the following summaries of the General Compliance Conditions (**COM-1, COM-2,** etc.) refers to the specific General Compliance Condition contained in **Compliance Table 1.**

Construction Milestones, COM-1

The following is the procedure for notifying the CPM of applicable construction milestones, or amending previously established milestones, for pre-construction and construction phases of the project. As noted in the **Air Quality** section of this FSA, the applicant may elect to use priority reserve Emission Reduction Credits (ERCs). Use of the priority reserve ERCs would require the project to be fully and legally operational within three years following issuance of a Permit to Construct or Energy Commission certification, whichever is later. Once established, the date established to begin operation is subject to extension consistent with South Coast Air Quality Management District rules. Therefore, construction milestones have been included as noted below and will be applicable should the applicant use priority reserve ERCs. This issue will be revisited in the Presiding Members Final Decision depending on the applicant's final offset strategy. If priority reserve ERCs are used, the milestones and method of verification must be established and agreed upon by the project owner and the CPM no later than 60 days after docketing of the Commission's final decision.

I. ESTABLISH PRE-CONSTRUCTION MILESTONES TO ENABLE START OF CONSTRUCTION WITHIN ONE YEAR OF CERTIFICATION

1. Obtain site control.
2. Obtain financing.
3. Mobilize site.
4. Begin rough grading for permanent structures (start of construction).

II. ESTABLISH CONSTRUCTION MILESTONES FROM DATE OF START OF CONSTRUCTION

1. Begin pouring major foundation concrete.
2. Begin installation of major equipment.
3. Complete installation of major equipment.
4. Begin gas pipeline construction.
5. Complete gas pipeline interconnection.
6. Begin T-line construction.
7. Complete T-line interconnection.
8. Begin commercial operation within three years of the Commission's final decision.

The CPM will negotiate the above-cited pre-construction and construction milestones with the project owner based on an expected schedule of construction. The CPM may agree to modify the final milestones from those listed above at any time prior to or during construction if the project owner demonstrates good-cause for not meeting the originally-established milestones. Otherwise, failure to meet milestone dates without a finding of good cause is considered cause for possible forfeiture of certification or other penalties.

III. A FINDING THAT THERE IS GOOD CAUSE FOR FAILURE TO MEET MILESTONES WILL BE MADE IF ANY OF THE FOLLOWING CRITERIA ARE MET:

1. The change in any milestone does not change the established commercial operation date milestone.

2. The milestone will be missed due to circumstances beyond the project owner's control.

3. The milestone will be missed, but the project owner demonstrates a good-faith effort to meet the project milestone.

4. The milestone will be missed due to unforeseen natural disasters or acts of God which prevent timely completion of the milestones.

5. The milestone will be missed due to requirements of the California ISO to maintain existing generation output.

The project owner has the right to appeal a finding of no good cause, or any recommended remedial action to the full Energy Commission.

Access, COM-2

The CPM, responsible Energy Commission staff, and delegate agencies or consultants, shall be guaranteed and granted unrestricted access to the power plant site, related facilities, project-related staff, and the records maintained on site, for the purpose of conducting audits, surveys, inspections, or general site visits. Although the CPM will normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced visits at any time.

Compliance Record, COM-3

The project owner shall maintain project files onsite or at an alternative site approved by the CPM, for the life of the project unless a lesser period of time is specified by the conditions of certification. The files shall contain copies of all "as-built" drawings, all documents submitted as verification for conditions, and all other project-related documents.

Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files.

Compliance Verification Submittals, COM-4

Each condition of certification is followed by a means of verification. The verification describes the Energy Commission's procedure(s) to ensure post-certification compliance with adopted conditions. The verification procedures, unlike the conditions, may be modified as necessary by the CPM, and in most cases without full Energy Commission approval.

Verification of compliance with the conditions of certification can be accomplished by:

1. reporting on the work done and providing the pertinent documentation in monthly and/or annual compliance reports filed by the project owner or authorized agent as required by the specific conditions of certification;
2. providing appropriate letters from delegate agencies verifying compliance;
3. Energy Commission staff audits of project records; and/or
4. Energy Commission staff inspections of mitigation or other evidence of mitigation.

Verification lead times (e.g., 90, 60 and 30-days) associated with start of construction may require the project owner to file submittals during the certification process, particularly if construction is planned to commence shortly after certification.

A cover letter from the project owner or authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. **The cover letter subject line shall identify the involved condition(s) of certification by condition number and include a brief description of the subject of the submittal**. The project owner shall also identify those submittals **not** required by a condition of certification with a statement such as: "This submittal is for information only and is not required by a specific condition of

certification." When submitting supplementary or corrected information, the project owner shall reference the date of the previous submittal.

The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed by the project owner or an agent of the project owner.

All submittals shall be addressed as follows:

Compliance Project Manager
Magnolia Power Project (01-AFC-6C)
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

If the project owner desires Energy Commission staff action by a specific date, they shall so state in their submittal and include a detailed explanation of the effects on the project if this date is not met.

Pre-Construction Matrix & Tasks Prior to Start of Construction, COM-5

Prior to commencing construction a compliance matrix addressing only those conditions that must be fulfilled before the start of construction shall be submitted by the project owner to the CPM. This matrix will be included with the project owner's **first** compliance submittal or prior to the first pre-construction meeting, whichever comes first. It will be in the same format as the compliance matrix referenced below under General Compliance Conditions **COM-6**.

Construction shall not commence until the pre-construction matrix is submitted, all pre-construction conditions have been complied with, and the CPM has issued a letter to the project owner authorizing construction. Various lead times (e.g., 30, 60, 90 days) for submittal of compliance verification documents to the CPM for conditions of certification are established to allow sufficient staff time to review and comment and, if necessary, allow the project owner to revise the submittal in

a timely manner. This will ensure that project construction may proceed according to schedule.

Failure to submit compliance documents within the specified lead-time may result in delays in authorization to commence various stages of project development.

Project owners frequently anticipate starting project construction as soon as the project is certified. In those cases, it may be necessary for the project owner to file compliance submittals prior to project certification if the required lead-time for a required compliance event extends beyond the date anticipated for start of construction. It is also important that the project owner understand that the submittal of compliance documents prior to project certification is at the owner's own risk. Any approval of pre-certification submittals by Energy Commission staff is subject to change based upon the Final Decision.

Compliance Reporting

There are two different compliance reports that the project owner must submit to assist the CPM in tracking activities and monitoring compliance with the terms and conditions of the Commission Decision. During construction, the project owner or authorized agent will submit Monthly Compliance Reports. During operation, an Annual Compliance Report must be submitted. These reports, and the requirement for an accompanying compliance matrix, are described below. The majority of the conditions of certification require that compliance submittals be submitted to the CPM in the monthly or annual compliance reports.

Compliance Matrix, COM-6

A compliance matrix shall be submitted by the project owner to the CPM along with each monthly and annual compliance report. The compliance matrix is intended to provide the CPM with the current status of all compliance conditions in a spreadsheet format. The compliance matrix must identify:

1. the technical area;
2. the condition number;

3. a brief description of the verification action or submittal required by the condition;
4. the date the submittal is required (e.g., 60 days prior to construction, after final inspection, etc.);
5. the expected or actual submittal date;
6. the date a submittal or action was approved by the Chief Building Official (CBO), CPM, or delegate agency, if applicable;
7. the compliance status of each condition (e.g., "not started," "in progress" or "completed" (include the date); and
8. the project's pre-construction and construction milestones, including dates and status.

Satisfied conditions do not need to be included in the compliance matrix after they have been identified as satisfied in at least one monthly or annual compliance report.

Monthly Compliance Report, COM-7

The first Monthly Compliance Report is due one month following the Energy Commission business meeting date on which the project was approved, unless otherwise agreed to by the CPM. The first Monthly Compliance Report shall include an initial list of dates for each of the events identified on the **Key Events List. The Key Events List Form is found at the end of this section.**

During pre-construction and construction of the project, the project owner or authorized agent shall submit an original and five copies of the Monthly Compliance Report within 10 working days after the end of each reporting month. Monthly Compliance Reports shall be clearly identified for the month being reported. The reports shall contain, at a minimum:

1. a summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;
2. documents required by specific conditions to be submitted along with the Monthly Compliance Report. Each of these items must be identified in the transmittal letter, and should be submitted as attachments to the Monthly Compliance Report;

3. an initial, and thereafter updated, compliance matrix which shows the status of all conditions of certification and pre-construction and construction milestones (fully satisfied conditions do not need to be included in the matrix after they have been reported as closed);
4. a list of conditions and milestones that have been satisfied during the reporting period, and a description or reference to the actions which satisfied the condition;
5. a list of any submittal deadlines that were missed accompanied by an explanation and an estimate of when the information will be provided;
6. a cumulative listing of any approved changes to conditions of certification;
7. a listing of any filings with, or permits issued by, other governmental agencies during the month;
8. a projection of project compliance activities scheduled during the next two months. The project owner shall notify the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification or milestones;
9. a listing of the month's additions to the on-site compliance file; and
10. any requests to dispose of items that are required to be maintained in the project owner's compliance file.

Annual Compliance Report, COM-8

After the air district has issued a Permit to Operate, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports. The reports are for each year of commercial operation and are due to the CPM each year at a date agreed to by the CPM. Annual Compliance Reports shall be submitted over the life of the project unless otherwise specified by the CPM. Each Annual Compliance Report shall identify the reporting period and shall contain the following:

1. an updated compliance matrix which shows the status of all conditions of certification (fully satisfied and/or closed conditions do not need to be included in the matrix after they have been reported as closed);
2. a summary of the current project operating status and an explanation of any significant changes to facility operations during the year;
3. documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter, and should be submitted as attachments to the Annual Compliance Report;
4. a cumulative listing of all post-certification changes approved by the Energy Commission or cleared by the CPM;

5. an explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;
6. a listing of filings made to, or permits issued by, other governmental agencies during the year;
7. a projection of project compliance activities scheduled during the next year;
8. a listing of the year's additions to the on-site compliance file;
9. an evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date [see General Conditions for Facility Closure addressed later in this section]; and
10. a listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved complaints, and the status of any unresolved complaints.

Construction and Operation Security Plan, COM-9

Prior to commencing construction, a site-specific Security Plan for the construction phase shall be developed and maintained at the project site. At least 60 days prior to the initial receipt of hazardous materials on-site, a site-specific Security Plan and Vulnerability Assessment for the operational phase shall be developed and maintained at the project site. The project owner shall notify the CPM in writing that the Plan is available for review and approval at the project site.

Construction Security Plan

The Construction Security Plan must address:

1. site fencing enclosing the construction area;
2. use of security guards;
3. check-in procedure or tag system for construction personnel and visitors;
4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and
5. evacuation procedures.

Operation Security Plan

The Operations Security Plan must address:

1. permanent site fencing and security gate;
2. use of security guards;
3. security alarm for critical structures;
4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;
5. evacuation procedures;
6. perimeter breach detectors and on-site motion detectors;
7. video or still camera monitoring system;
8. fire alarm monitoring system;
9. site personnel background checks; and
10. site access for vendors and requirements for Hazardous Materials vendors to conduct personnel background security checks.

In addition, the project owner shall prepare a Vulnerability Assessment and implement site security measures addressing hazardous materials storage and transportation consistent with US EPA and US Department of Justice guidelines.

The CPM may authorize modifications to these measures, or may require additional measures depending on circumstances unique to the facility, and in response to industry-related security concerns.

Confidential Information, COM-10

Any information that the project owner deems confidential shall be submitted to the Energy Commission's Docket with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505(a). Any information that is determined to be confidential shall be kept confidential as provided for in Title 20, California Code of Regulations, section 2501 et seq.

Department of Fish and Game Filing Fee, COM-11

Pursuant to the provisions of Fish and Game Code Section 711.4, the project owner shall pay a filing fee in the amount of $850. The payment instrument shall

be provided to the Energy Commission's Project Manager (PM), not the CPM, at the time of project certification and shall be made payable to the California Department of Fish and Game. The PM will submit the payment to the Office of Planning and Research at the time of filing of the notice of decision pursuant to Public Resources Code Section 21080.5.

Reporting of Complaints, Notices, and Citations, COM-12

Prior to the start of construction, the project owner must send a letter to property owners living within one mile of the project notifying them of a telephone number to contact project representatives with questions, complaints or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering with date and time stamp recording. All recorded inquiries shall be responded to within 24 hours. The telephone number shall be posted at the project site and made easily visible to passersby during construction and operation. The telephone number shall be provided to the CPM who will post it on the Energy Commission's web page at:

http://www.energy.ca.gov/sitingcases/power_plants_contacts.html

Any changes to the telephone number shall be submitted immediately to the CPM who will update the web page.

In addition to the monthly and annual compliance reporting requirements described above, the project owner shall report and provide copies of all complaint forms, notices of violation, notices of fines, official warnings, and citations, within 10 days of receipt, to the CPM. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the **NOISE** conditions of certification. All other complaints shall be recorded on the complaint form (Attachment A).

FACILITY CLOSURE

At some point in the future, the project will cease operation and close down. At that time, it will be necessary to ensure that the closure occurs in such a way that

public health and safety and the environment are protected from adverse impacts. Although the project setting for this project does not appear, at this time, to present any special or unusual closure problems, it is impossible to foresee what the situation will be in 30 years or more when the project ceases operation. Therefore, provisions must be made that provide the flexibility to deal with the specific situation and project setting that will exist at the time of closure. Laws, ordinances, regulations and standards (LORS) pertaining to facility closure are identified in the sections dealing with each technical area. Facility closure will be consistent with LORS in effect at the time of closure.

There are at least three circumstances in which a facility closure can take place, planned closure, unplanned temporary closure and unplanned permanent closure.

CLOSURE DEFINITIONS

- **Planned Closure**

A planned closure occurs at the end of a project's life, when the facility is closed in an anticipated, orderly manner, at the end of its useful economic or mechanical life, or due to gradual obsolescence.

- **Unplanned Temporary Closure**

An unplanned temporary closure occurs when the facility is closed suddenly and/or unexpectedly, on a short-term basis, due to unforeseen circumstances such as a natural disaster or an emergency.

- **Unplanned Permanent Closure**

An unplanned permanent closure occurs if the project owner closes the facility suddenly and/or unexpectedly, on a permanent basis. This includes unplanned closure where the owner remains accountable for implementing the on-site contingency plan. It can also include unplanned closure where the project owner is unable to implement the contingency plan, and the project is essentially abandoned.

GENERAL CONDITIONS FOR FACILITY CLOSURE

Planned Closure, COM-13

In order to ensure that a planned facility closure does not create adverse impacts, a closure process that provides for careful consideration of available options and applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of closure, will be undertaken. To ensure adequate review of a planned project closure, the project owner shall submit a proposed facility closure plan to the Energy Commission for review and approval at least twelve months prior to commencement of closure activities (or other period of time agreed to by the CPM). The project owner shall file 120 copies (or other number of copies agreed upon by the CPM) of a proposed facility closure plan with the Energy Commission.

The plan shall:

1. identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site;
2. identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;
3. identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and
4. address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

In the event that there are significant issues associated with the proposed facility closure plan's approval, or the desires of local officials or interested parties are inconsistent with the plan, the CPM shall hold one or more workshops and/or the Energy Commission may hold public hearings as part of its approval procedure.

In addition, prior to submittal of the proposed facility closure plan, a meeting shall be held between the project owner and the Energy Commission CPM for the purpose of discussing the specific contents of the plan.

As necessary, prior to or during the closure plan process, the project owner shall take appropriate steps to eliminate any immediate threats to public health and safety and the environment, but shall not commence any other closure activities, until Energy Commission approval of the facility closure plan is obtained.

Unplanned Temporary Closure/On-Site Contingency Plan, COM-14

In order to ensure that public health and safety and the environment are protected in the event of an unplanned temporary facility closure, it is essential to have an on-site contingency plan in place. The on-site contingency plan will help to ensure that all necessary steps to mitigate public health and safety impacts and environmental impacts are taken in a timely manner.

The project owner shall submit an on-site contingency plan for CPM review and approval. The plan shall be submitted no less that 60 days (or other time agreed to by the CPM) prior to commencement of commercial operation. The approved plan must be in place prior to commercial operation of the facility and shall be kept at the site at all times.

The project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM.

The on-site contingency plan shall provide for taking immediate steps to secure the facility from trespassing or encroachment. In addition, for closures of more than 90 days, unless other arrangements are agreed to by the CPM, the plan

shall provide for removal of hazardous materials and hazardous wastes, draining of all chemicals from storage tanks and other equipment and the safe shutdown of all equipment. (Also see specific conditions of certification for the technical areas of **Hazardous Materials Management** and **Waste Management**.)

In addition, consistent with requirements under unplanned permanent closure addressed below, the nature and extent of insurance coverage, and major equipment warranties must also be included in the on-site contingency plan. In addition, the status of the insurance coverage and major equipment warranties must be updated in the annual compliance reports.

In the event of an unplanned temporary closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the circumstances and expected duration of the closure.

If the CPM determines that an unplanned temporary closure is likely to be permanent, or for a duration of more than twelve months, a closure plan consistent with the requirements for a planned closure shall be developed and submitted to the CPM within 90 days of the CPM's determination (or other period of time agreed to by the CPM).

Unplanned Permanent Closure/On-Site Contingency Plan, COM-15

The on-site contingency plan required for unplanned temporary closure shall also cover unplanned permanent facility closure. All of the requirements specified for unplanned temporary closure shall also apply to unplanned permanent closure.

In addition, the on-site contingency plan shall address how the project owner will ensure that all required closure steps will be successfully undertaken in the unlikely event of abandonment.

In the event of an unplanned permanent closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the status of all closure activities.

A closure plan, consistent with the requirements for a planned closure, shall be developed and submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.

CBO DELEGATION and AGENCY COOPERATION

In performing construction and operation monitoring of the project, Commission staff acts as, and has the authority of, the Chief Building Official (CBO). Commission staff may delegate CBO responsibility to either an independent third party contractor or the local building official. Commission staff retains CBO authority when selecting a delegate CBO including enforcing and interpreting state and local codes, and use of discretion, as necessary, in implementing the various codes and standards.

Commission staff may also seek the cooperation of state, regional and local agencies that have an interest in environmental control when conducting project monitoring.

Enforcement

The Energy Commission's legal authority to enforce the terms and conditions of its Decision is specified in Public Resources Code sections 25534 and 25900. The Energy Commission may amend or revoke the certification for any facility, and may impose a civil penalty for any significant failure to comply with the terms or conditions of the Energy Commission Decision. The specific action and amount of any fines the Energy Commission may impose would take into account the specific circumstances of the incident(s). This would include such factors as the previous compliance history, whether the cause of the incident

involves willful disregard of LORS, oversight, unforeseeable events, and other factors the Energy Commission may consider.

Moreover, to ensure compliance with the terms and conditions of certification and applicable LORS, delegate agencies are authorized to take any action allowed by law in accordance with their statutory authority, regulations, and administrative procedures.

Noncompliance Complaint Procedures

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a complaint will be subject to review by the Energy Commission pursuant to Title 20, California Code of Regulations, section 1230 et seq., but in many instances the noncompliance can be resolved by using the informal dispute resolution process. Both the informal and formal complaint procedure, as described in current State law and regulations, are described below. They shall be followed unless superseded by current law or regulations.

Informal Dispute Resolution Procedure

The following procedure is designed to informally resolve disputes concerning the interpretation of compliance with the requirements of this compliance plan. The project owner, the Energy Commission, or any other party, including members of the public, may initiate this procedure for resolving a dispute. Disputes may pertain to actions or decisions made by any party including the Energy Commission's delegate agents.

This procedure may precede the more formal complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1230 et seq., but is not intended to be a substitute for, or prerequisite to it. This informal procedure may not be used to change the terms and conditions of certification as approved by the Energy Commission, although the agreed upon resolution may

result in a project owner, or in some cases the Energy Commission staff, proposing an amendment.

The procedure encourages all parties involved in a dispute to discuss the matter and to reach an agreement resolving the dispute. If a dispute cannot be resolved, then the matter must be referred to the full Energy Commission for consideration via the complaint and investigation process. The procedure for informal dispute resolution is described below.

Request for Informal Investigation

Any individual, group, or agency may request the Energy Commission to conduct an informal investigation of alleged noncompliance with the Energy Commission's terms and conditions of certification. All requests for informal investigations shall be made to the designated CPM.

Upon receipt of a request for informal investigation, the CPM shall promptly notify the project owner of the allegation by telephone and letter. All known and relevant information of the alleged noncompliance shall be provided to the project owner and to the Energy Commission staff. The CPM will evaluate the request and the information to determine if further investigation is necessary. If the CPM finds that further investigation is necessary, the project owner will be asked to promptly investigate the matter and within seven working days of the CPM's request, provide a written report of the results of the investigation, including corrective measures proposed or undertaken, to the CPM. Depending on the urgency of the noncompliance matter, the CPM may conduct a site visit and/or request the project owner to provide an initial report, within 48 hours, followed by a written report filed within seven days.

Request for Informal Meeting

In the event that either the party requesting an investigation or the Energy Commission staff is not satisfied with the project owner's report, investigation of the event, or corrective measures undertaken, either party may submit a written

request to the CPM for a meeting with the project owner. Such request shall be made within 14 days of the project owner's filing of its written report. Upon receipt of such a request, the CPM shall:

1. immediately schedule a meeting with the requesting party and the project owner, to be held at a mutually convenient time and place;
2. secure the attendance of appropriate Energy Commission staff and staff of any other agencies with expertise in the subject area of concern, as necessary;
3. conduct such meeting in an informal and objective manner so as to encourage the voluntary settlement of the dispute in a fair and equitable manner; and
4. after the conclusion of such a meeting, promptly prepare and distribute copies to all in attendance and to the project file, a summary memorandum which fairly and accurately identifies the positions of all parties and any conclusions reached. If an agreement has not been reached, the CPM shall inform the complainant of the formal complaint process and requirements provided under Title 20, California Code of Regulations, section 1230 et seq.

Formal Dispute Resolution Procedure-Complaints and Investigations

If either the project owner, Energy Commission staff, or the party requesting an investigation is not satisfied with the results of the informal dispute resolution process, such party may file a complaint or a request for an investigation with the Energy Commission's General Counsel. Disputes may pertain to actions or decisions made by any party including the Energy Commission's delegate agents. Requirements for complaint filings and a description of how complaints are processed are in Title 20, California Code of Regulations, section 1230 et seq.

The Chairman, upon receipt of a written request stating the basis of the dispute, may grant a hearing on the matter, consistent with the requirements of noticing provisions. The Energy Commission shall have the authority to consider all relevant facts involved and make any appropriate orders consistent with its jurisdiction (Cal. Code Regs., tit. 20, §§ 1232-1236).

POST CERTIFICATION CHANGES TO THE ENERGY COMMISSION DECISION

AMENDMENTS, INSIGNIFICANT PROJECT CHANGES, AND VERIFICATION CHANGES, COM-16

The project owner must petition the Energy Commission, pursuant to Title 20, California Code of Regulations, section 1769, to 1) delete or change a condition of certification; 2) modify the project design or operational requirements; and 3) transfer ownership or operational control of the facility.

A petition is required for **amendments** and for **insignificant project changes**. For verification changes, a letter from the project owner is sufficient. In all cases, the petition or letter requesting a change should be submitted to the Energy Commission's Docket in accordance with Title 20, California Code of Regulations, section 1209.

The criteria that determine which type of change process applies are explained below.

Amendments

A proposed change will be processed as an amendment if it involves a change to the requirement or protocol, or in some cases the verification portion of a condition of certification, an ownership or operator change, or a potential significant environmental impact.

Insignificant Project Change

The proposed change will be processed as an insignificant project change if it does <u>not</u> require changing the language in a condition of certification, have a potential for significant environmental impact, or cause the project to violate laws, ordinances, regulations or standards.

Verification Change

As provided in Title 20, Section 1770 (d), California Code of Regulations, a verification may be modified by staff without requesting an amendment to the decision if the change does not conflict with the conditions of certification.

KEY EVENTS LIST

PROJECT: **Magnolia Power Project**

DOCKET #: 01-AFC-6C

COMPLIANCE PROJECT MANAGER:

EVENT DESCRIPTION	DATE
Certification Date/Obtain Site Control	
Online Date	
POWER PLANT SITE ACTIVITIES	
Start Site Mobilization	
Start Ground Disturbance	
Start Grading	
Start Construction	
Begin Pouring Major Foundation Concrete	
Begin Installation of Major Equipment	
Completion of Installation of Major Equipment	
First Combustion of Gas Turbine	
Start Commercial Operation	
Complete All Construction	
TRANSMISSION LINE ACTIVITIES	
Start T/L Construction	
Synchronization with Grid and Interconnection	
Complete T/L Construction	
FUEL SUPPLY LINE ACTIVITIES	
Start Gas Pipeline Construction and Interconnection	
Complete Gas Pipeline Construction	
WATER SUPPLY LINE ACTIVITIES	
Start Water Supply Line Construction	
Complete Water Supply Line Construction	

TABLE 1
COMPLIANCE SECTION
SUMMARY of GENERAL CONDITIONS OF CERTIFICATION

CONDITION NUMBER	SUBJECT	DESCRIPTION
COM-1	Construction Milestones	The project owner shall establish specific performance milestones for pre-construction and construction phases of the project.
COM-2	Access	The project owner shall grant Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.
COM-3	Compliance Record	The project owner shall maintain project files on-site. Energy Commission staff and delegate agencies shall be given unrestricted access to the files.
COM-4	Compliance Verification Submittals	The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed or the project owner or his agent.
COM-5	Pre-construction Matrix and Tasks Prior to Start of Construction	Construction shall not commence until the all of the following activities/submittals have been completed: • property owners living within one mile of the project have been notified of a telephone number to contact for questions, complaints or concerns, • a pre-construction matrix has been submitted identifying only those conditions that must be fulfilled before the start of construction, • all pre-construction conditions have been complied with, • the CPM has issued a letter to the project owner authorizing construction.
COM-6	Compliance Matrix	The project owner shall submit a compliance matrix (in a spreadsheet format) with each monthly and annual compliance report which includes the status of all compliance conditions of certification.
COM-7	Monthly Compliance Report including a KeEvents List	During construction, the project owner shall submit Monthly Compliance Reports (MCRs) which include specific information. The first MCR is due the month following the Commission business meeting date on which the project was approved and shall include an initial list of dates for each of the events identified on the Key Events List.
COM-8	Annual Compliance Reports	After construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports (ACRs) which include specific information. The first ACR is due after the air district has issued a Permit to Operate.
COM-9	Security Plans	Prior to commencing construction, the project owner shall submit a Construction Security Plan. Prior to commencing operation, the project owner shall submit an Operation Security Plan.
COM-10	Confidential Information	Any information the project owner deems confidential shall be submitted to the Commission's Dockets Unit.
COM-11	Dept of Fish and	The project owner shall pay a filing fee of $850 at the time

CONDITION NUMBER	SUBJECT	DESCRIPTION
	Game Filing Fee	of project certification.
COM-12	Reporting of Complaints, Notices and Citations	Within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.
COM-13	Planned Facility Closure	The project owner shall submit a closure plan to the CPM at least twelve months prior to commencement of a planned closure.
COM-14	Unplanned Temporary Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COM-15	Unplanned Permanent Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned permanent closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COM-16	Post-certification changes to the Decision	The project owner must petition the Energy Commission to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.

ATTACHMENT A

COMPLAINT REPORT/RESOLUTION FORM

PROJECT NAME: **Magnolia Power Project** AFC Number: 01-AFC-6C
COMPLAINT LOG NUMBER _____ Complainant's name and address: Phone number:
Date and time complaint received: Indicate if by telephone or in writing (attach copy if written): Date of first occurrence:
Description of complaint (including dates, frequency, and duration):
Findings of investigation by plant personnel: Indicate if complaint relates to violation of a CEC requirement: Date complainant contacted to discuss findings:
Description of corrective measures taken or other complaint resolution: Indicate if complainant agrees with proposed resolution: If not, explain: Other relevant information:
If corrective action necessary, date completed: Date first letter sent to complainant: _____(copy attached) Date final letter sent to complainant: _____(copy attached)
This information is certified to be correct. Plant Manager's Signature: _____ Date:

(Attach additional pages and supporting documentation, as required.)

IV. ENGINEERING ASSESSMENT

The broad engineering assessment conducted for the Magnolia Power Project consists of separate analyses that examine facility design, engineering, efficiency, and reliability of the project. These analyses include the onsite power generating equipment and project-related facilities (transmission lines, natural gas supply pipeline, zero liquid discharge system, and water supply pipelines).

A. FACILITY DESIGN

The review of facility design covers several technical disciplines, including the civil, electrical, mechanical, and structural engineering elements related to project design, construction, and operation.

Summary and Discussion of the Evidence

The AFC describes the preliminary facility design for the project.[9] The Commission's analysis is limited, therefore, to assessing whether the power plant and linear facilities are described with sufficient detail to assure that the project can be designed and constructed in accordance with applicable engineering laws, ordinances, regulations, and standards (LORS). The analysis also considers whether special design features will be necessary to deal with unique site conditions that could impact public health and safety, the environment, or the operational reliability of the project. (Ex. 45, p. 5.5-1.)

Staff proposed several Conditions of Certification, adopted by the Commission,[10] which establish a design review and construction inspection process to verify compliance with applicable design standards and special design requirements. (Ex. 45, pp. 5.1-4 and 5.1-6 et seq.) The project will be designed and constructed in conformance with the latest edition of the California Building Code

[9] Ex. 1, §§ 3.0, 4.0, 5.3, and 7.0, Appendices A–G; Ex. 2; and Ex. 3, §§ 3.0 and 7.0.

[10] Conditions of Certification **GEN-1** through **GEN-8**.

(currently the 1998 CBC) and other applicable codes and standards in effect at the time design and construction actually begins. (*Id.* at p. 5.1-3.) Condition of Certification **GEN-1** incorporates this requirement.

Staff considered potential geological hazards and reviewed the preliminary project design with respect to site preparation and development; major project structures, systems and equipment; mechanical systems; electrical systems; and related facilities such as the gas pipeline, water pipelines, and underground transmission lines. (Ex. 45, p. 5.1-2 et seq. Ex. 1, §§ 3.0 and 4.0, Appendices A-G; Ex. 3, §§ 3.0 and 4.0.)

The project will employ site preparation and development criteria consistent with accepted industry standards. This includes design practices and construction methods for grading, flood protection, erosion control, site drainage, and site access. (Ex. 1, § 3.4.2, Figure 3.4-1; Ex. 45, p. 5.1-2.) Condition **CIVIL-1** ensures that these activities will be conducted in compliance with applicable LORS.

Major structures, systems, and equipment include those structures and associated components necessary for power production or facilities used for storage of hazardous or toxic materials. (Ex. 1, Appendix F; Ex. 3, § 3.4.3.) Condition **GEN-2** includes a list of the major structures and equipment for the project.

The power plant site is located in Seismic Zone 4, the highest level of potential ground shaking in California. (Ex. 1, § 5.3 et seq. and Appendix G.) The 1998 CBC requires specific “lateral force” procedures for different types of structures to determine their seismic design. (Ex. 1, Appendices A and B; Ex. 45, p. 5.1-3.) To ensure that project structures are analyzed using the appropriate lateral force procedure, Condition **STRUC-1** requires the project owner to submit its proposed

lateral force procedures to the Chief Building Official (CBO)[11] for review and approval prior to the start of construction. (Ex. 1, p. 5.4-1.)

A short onsite high-pressure natural gas pipeline and a new natural gas metering and regulating station are proposed for construction. The new line will connect to the existing SoCalGas line either onsite or adjacent to the site. The existing and proposed lines will be operated and maintained in accordance with federal standards and CPUC General Order (GO) 112-E. (Ex. 45, p. 5.1-3.)

The mechanical systems for the project are designed to the specifications of applicable LORS. Conditions **MECH**-1 through **MECH**-3 ensure that the project complies with these standards.

Major electrical features other than the transmission system include generators, power control wiring, protective relaying, grounding system, cathodic protection system and site lighting. (Ex. 1, Appendix E.) Condition **ELEC-1** ensures that design and construction of these electrical features will comply with applicable LORS.

Ancillary facilities include expansion of the Olive Switchyard at the project site, and the two new underground 69 kV transmission lines that will interconnect the MPP to the Olive Switchyard. The evidentiary record indicates that design and construction of these facilities will comply with applicable LORS. (Ex. 1, § 3.6 et seq.; Ex. 3, § 3.6) *See* Conditions **TSE-1** through **TSE-6** in the **Transmission System Engineering** section of this Decision.

[11] The Energy Commission is the CBO for energy facilities certified by the Commission. We may delegate CBO authority to local building officials to carry out design review and construction inspections. When CBO duties are delegated to local authorities, the Commission requires a Memorandum of Understanding with the delegated CBO to assign the roles and responsibilities described in Conditions of Certification **GEN-1** through **GEN-8**. (Ex. 45, p. 5.1-4.)

The evidence also addresses project closure. (Ex. 45, p. 5.1-5.) To ensure that decommissioning of the facility will conform with applicable LORS to protect the environment and public health and safety, the project owner shall submit a decommissioning plan, which is described in the general closure provisions of the Compliance Monitoring and Closure plan. (*See* the Chapter entitled "General Conditions" in this Decision, *ante*.)

Finally, the Conditions of Certification specify the roles, qualifications, and responsibilities of engineering personnel who will oversee project design and construction. These Conditions require approval of the CBO after appropriate inspections by qualified engineers. No element of construction may proceed without approval of the CBO. (Ex. 45, p. 5.1-4.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The Magnolia Power Project is currently in the preliminary design stage.
2. The evidence of record contains sufficient information to establish that the proposed facility can be designed and constructed in conformity with the applicable laws, ordinances, regulations, and standards (LORS) set forth in the appropriate portions of Appendix A of this Decision.
3. The Conditions of Certification set forth below are necessary to ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety.
4. The Conditions of Certification below and the **General Conditions,** included in a separate Chapter of this Decision, establish requirements to be followed in the event of facility closure.

We therefore conclude that implementation of the Conditions of Certification listed below ensure that the Magnolia Power Project can be designed and constructed in conformance with applicable laws.

CONDITIONS OF CERTIFICATION

GEN-1 The project owner shall design, construct and inspect the project in accordance with the 1998 California Building Code (CBC) and all other applicable engineering LORS in effect at the time initial design plans are submitted to the CBO for review and approval. (The CBC in effect is that edition that has been adopted by the California Building Standards Commission and published at least 180 days previously.) All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

In the event that the initial engineering designs are submitted to the CBO when a successor to the 1998 CBC is in effect, the 1998 CBC provisions identified herein shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

Verification: Within 30 days after receipt of the Certificate of Occupancy, the project owner shall submit to the CPM a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation and inspection requirements of the applicable LORS and the Energy Commission's Decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the Certificate of Occupancy within 30 days of receipt from the CBO [1998 CBC, Section 109–Certificate of Occupancy].

GEN-2 Prior to submittal of the initial engineering designs for CBO review, the project owner shall furnish to the CPM and to the CBO a schedule of facility design submittals, a Master Drawing List and a Master Specifications List. The schedule shall contain a list of proposed submittal packages of designs, calculations and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide specific packages to the CPM when requested.

Verification: At least 60 days (or project owner and CBO approved alternative timeframe) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the Master Drawing List and the Master Specifications List of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in **Facility Design TABLE 1** below. Major structures and equipment shall be added to or deleted from the table only with CPM approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

FACILITY DESIGN
TABLE 1: MAJOR STRUCTURES AND EQUIPMENT LIST

Equipment/System	Quantity (Plant)
Combustion Turbine (CT) Foundation and Connections	1
CT Accessory Packages (Mechanical, Electrical, and Starter) Foundations and Connections	1 Lot
CT Inlet and Filter Structure, Foundation and Connections	1
Combustion Turbine Generator (CTG) Foundation and Connections	1
CTG CO_2 Fire Protection Skid Foundation and Connections	1
Heat Recovery Steam Generator (HRSG) Structure, Foundation and Connections	1
HRSG Exhaust Stack, Foundation and Connections	1
HRSG Transition Duct Burner and Forced Draft Structure, Foundations and Connections	1
HRSG Blowdown Tank Foundation and Connections	1
Selective Catalytic Reduction Unit Structure, Foundation and Connections	1
Steam Turbine Generator (STG) Foundation and Connections	1
STG Building Structure, Foundation and Connections	1
STG Lube Oil Skid Foundation and Connections	1
Condenser Support Structures, Foundations and Connections	1 Lot
Fin Fan Cooler Support Structures, Foundations and Connections	1 Lot
Pipe and Cable Way Structures, Foundations and Connections	1 Lot
4,160V Auxiliary Transformer Foundation and Connections	1
69KV Step Up Transformer Foundations and Connections	2
Switchgear Equipment Foundations and Connections	1 Lot
Power Distribution Center Foundations and Connections	1 Lot
Natural Gas Filter/Separation Foundations and Connections	1 Lot
Natural Gas Separator/Heater Foundations and Connections	1 Lot
Natural Gas Compressor Foundations and Connections	2
Natural Gas Metering and Regulating Station Foundations and Connections	1 Lot
All Building Structures, Foundations and Connections (e.g. Cooling Tower Electrical Building, Fuel Gas Compressor Building, Administration Building Expansion, Control Building Expansion, etc.)	1 Lot
Tank – Ammonia Storage Foundation and Connections	1
Tank – Various Chemical Foundations and Connections	1 Lot
Tank – Oily Water Separator Foundation and Connections	1

Equipment/System	Quantity (Plant)
Tank – Condensate Foundation and Connections	1
Tank – Demineralized Water Foundations and Connections	2
Pump – Boiler Water Feed Pump Foundations and Connections	1 Lot
Pump – Closed Cycle Cooling Water Foundation and Connections	1
Pump – Condensate Pump Foundations and Connections	2
Pump – HP/IP Feed Water Pump Foundations and Connections	2
Pump – Condenser Mechanical Vacuum Pump Foundations and Connections	2
Pump – Circulating Water Pump Foundations and Connections	3
Ammonia Injection Skid Foundation and Connections	1
Air Compressor Foundations and Connections	1 Lot
Waste Water Dechlorination Facility Foundations and Connections	1 Lot
Heat Exchanger – Closed Cycle Cooling Water Foundation and Connections	1Lot
Pipeline – Water Supply and Discharge	1 Lot
Pipeline – Natural Gas	1
Potable Water Systems	1 Lot
Drainage Systems (including sanitary, storm drain, and waste)	1 Lot
Building Energy Conservation Systems	1 Lot
Temperature Control and Ventilation Systems (including water and sewer connections)	1 Lot
High Pressure and Large Diameter Piping	1 Lot
HVAC and Refrigeration Systems	1 Lot
Switchyard and Buses	1 Lot
Electrical Duct Banks, Structures, Foundations and Connections	1 Lot

GEN-3 The project owner shall make payments to the CBO for design review, plan check and construction inspection based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. These fees may be consistent with the fees listed in the 1998 CBC [Chapter 1, Section 107 and TABLE 1-A, Building Permit Fees; Appendix Chapter 33, Section 3310 and Table A-33-A, Grading Plan Review Fees; and Table A-33-B, Grading Permit Fees], adjusted for inflation and other appropriate adjustments; may be based on the value of the facilities reviewed; may be based on hourly rates; or may be as otherwise agreed by the project owner and the CBO.

Verification: The project owner shall make the required payments to the CBO in accordance with the agreement between the project owner and the CBO.

The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next Monthly Compliance Report indicating that the applicable fees have been paid.

GEN-4 Prior to the start of rough grading, the project owner shall assign a California registered architect, structural engineer or civil engineer, as a resident engineer (RE), to be in general responsible charge of the project [Building Standards Administrative Code (Cal. Code Regs., tit.24, § 4-209, Designation of Responsibilities)]. All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

The RE may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project respectively. A project may be divided into parts, provided each part is clearly defined as a distinct unit. Separate assignment of general responsible charge may be made for each designated part.

The RE shall:

1. Monitor construction progress of work requiring CBO design review and inspection to ensure compliance with LORS;
2. Ensure that construction of all the facilities subject to CBO design review and inspection conforms in every material respect to the applicable LORS, these Conditions of Certification, approved plans, and specifications;
3. Prepare documents to initiate changes in the approved drawings and specifications when directed by the project owner or as required by conditions on the project;
4. Be responsible for providing the project inspectors and testing agency(ies) with complete and up-to-date set(s) of stamped drawings, plans, specifications and any other required documents;
5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and
6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests as not conforming to the approved plans and specifications.

The RE shall have the authority to halt construction and to require changes or remedial work, if the work does not conform to applicable requirements.

If the RE or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the resume and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within 5 days of the approval.

If the RE or the delegated engineer(s) are subsequently reassigned or replaced, the project owner has 5 days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within 5 days of the approval.

GEN-5 Prior to the start of rough grading, the project owner shall assign at least one of each of the following California registered engineers to the project: A) a civil engineer; B) a soils engineer, or a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; and C) an engineering geologist. Prior to the start of construction, the project owner shall assign at least one of each of the following California registered engineers to the project: D) a design engineer, who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; E) a mechanical engineer; and F) an electrical engineer. [California Business and Professions Code section 6704 et seq., and sections 6730, 6731 and 6736 require state registration to practice as a civil engineer or structural engineer in California.] All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

The tasks performed by the civil, mechanical, electrical or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer.

The project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all responsible engineers assigned to the project [1998 CBC, Section 104.2, Powers and Duties of Building Official].

If any one of the designated responsible engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration

number of the newly assigned responsible engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

A: The civil engineer shall:

1. Review the Foundation Investigations Report, Geotechnical Report or Soils Report prepared by the soils engineer, the geotechnical engineer, or by a civil engineer experienced and knowledgeable in the practice of soils engineering;
2. Design, or be responsible for design, stamp, and sign all plans, calculations and specifications for proposed site work, civil works and related facilities requiring design review and inspection by the CBO. At a minimum, these include: grading, site preparation, excavation, compaction, construction of secondary containment, foundations, erosion and sedimentation control structures, drainage facilities, underground utilities, culverts, site access roads and sanitary sewer systems; and
3. Provide consultation to the RE during the construction phase of the project and recommend changes in the design of the civil works facilities and changes in the construction procedures.

B: The soils engineer, geotechnical engineer, or civil engineer experienced and knowledgeable in the practice of soils engineering, shall:

1. Review all the engineering geology reports;
2. Prepare the Foundation Investigations Report, Geotechnical Report or Soils Report containing field exploration reports, laboratory tests and engineering analysis detailing the nature and extent of the soils that may be susceptible to liquefaction, rapid settlement or collapse when saturated under load [1998 CBC, Appendix Chapter 33, Section 3309.5, Soils Engineering Report; Section 3309.6, Engineering Geology Report; and Chapter 18, Section 1804, Foundation Investigations];
3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 1998 CBC, Appendix Chapter 33; Section 3317, Grading Inspections; (depending on the site conditions, this may be the responsibility of either the soils engineer or engineering geologist or both); and
4. Recommend field changes to the civil engineer and RE.

   This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform with predicted

conditions used as a basis for design of earthwork or foundations [1998 CBC, section 104.2.4, Stop orders].

C: The engineering geologist shall:

1. Review all the engineering geology reports and prepare final soils grading report; and
2. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 1998 CBC, Appendix Chapter 33; Section 3317, Grading Inspections; (depending on the site conditions, this may be the responsibility of either the soils engineer or engineering geologist or both).

D: The design engineer shall:

1. Be directly responsible for the design of the proposed structures and equipment supports;
2. Provide consultation to the RE during design and construction of the project;
3. Monitor construction progress to ensure compliance with engineering LORS;
4. Evaluate and recommend necessary changes in design; and
5. Prepare and sign all major building plans, specifications and calculations.

E: The mechanical engineer shall be responsible for, and sign and stamp a statement with, each mechanical submittal to the CBO, stating that the proposed final design plans, specifications, and calculations conform with all of the mechanical engineering design requirements set forth in the Energy Commission's Decision.

F: The electrical engineer shall:

1. Be responsible for the electrical design of the project; and
2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible civil engineer, soils (geotechnical) engineer and engineering geologist assigned to the project.

At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of construction, the project owner shall submit to the CBO for review

and approval, resumes and registration numbers of the responsible design engineer, mechanical engineer and electrical engineer assigned to the project.

The project owner shall notify the CPM of the CBO's approvals of the responsible engineers within 5 days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has 5 days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within 5 days of the approval.

GEN-6 Prior to the start of an activity requiring special inspection, the project owner shall assign to the project, qualified and certified special inspector(s) who shall be responsible for the special inspections required by the 1998 CBC, Chapter 17 [Section 1701, Special Inspections; Section 1701.5, Type of Work (requiring special inspection)]; and Section 106.3.5, Inspection and observation program. All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

The special inspector shall:

1. Be a qualified person who shall demonstrate competence, to the satisfaction of the CBO, for inspection of the particular type of construction requiring special or continuous inspection;
2. Observe the work assigned for conformance with the approved design drawings and specifications;
3. Furnish inspection reports to the CBO and RE. All discrepancies shall be brought to the immediate attention of the RE for correction, then, if uncorrected, to the CBO and the CPM for corrective action [1998 CBC, Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector]; and
4. Submit a final signed report to the RE, CBO, and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable provisions of the applicable edition of the CBC.

A certified weld inspector, certified by the American Welding Society (AWS), and/or American Society of Mechanical Engineers (ASME) as applicable, shall inspect welding performed on-site requiring special inspection (including structural, piping, tanks and pressure vessels).

Verification: At least 15 days (or project owner and CBO approved alternative timeframe) prior to the start of an activity requiring special inspection,

the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next Monthly Compliance Report.

If the special inspector is subsequently reassigned or replaced, the project owner has 5 days in which to submit the name and qualifications of the newly assigned special inspector to the CBO for approval. The project owner shall notify the CPM of the CBO's approval of the newly assigned inspector within 5 days of the approval.

GEN-7 If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend the corrective action required [1998 CBC, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The discrepancy documentation shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this Condition of Certification and, if appropriate, the applicable sections of the CBC and/or other LORS.

Verification: The project owner shall transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next Monthly Compliance Report. If any corrective action is disapproved, the project owner shall advise the CPM, within 5 days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.

GEN-8 The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall request the CBO to inspect the completed structure and review the submitted documents. When the work and the "as-built" and "as graded" plans conform to the approved final plans, the project owner shall notify the CPM regarding the CBO's final approval. The marked up "as-built" drawings for the construction of structural and architectural work shall be submitted to the CBO. Changes approved by the CBO shall be identified on the "as-built" drawings [1998 CBC, Section 108, Inspections]. The project owner shall retain one set of approved engineering plans, specifications and calculations at the project site or at another accessible location during the operating life of the project [1998 CBC, Section 106.4.2, Retention of Plans].

Verification: Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM, in the next Monthly Compliance Report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans. After storing final approved engineering plans, specifications

and calculations as described above, the project owner shall submit to the CPM a letter stating that the above documents have been stored and indicate the storage location of such documents.

CIVIL-1 The project owner shall submit to the CBO for review and approval the following:

1. Design of the proposed drainage structures and the grading plan;
2. An erosion and sedimentation control plan;
3. Related calculations and specifications, signed and stamped by the responsible civil engineer; and
4. Soils report, Geotechnical Report or Foundation Investigations Report required by the 1998 CBC [Appendix Chapter 33, Section 3309.5, Soils Engineering Report; Section 3309.6, Engineering Geology Report; and Chapter 18, Section 1804, Foundation Investigations].

Verification: At least 15 days (or project owner and CBO approved alternative timeframe) prior to the start of site grading the project owner shall submit the documents described above to the CBO for design review and approval. In the next Monthly Compliance Report following the CBO's approval, the project owner shall submit a written statement certifying that the documents have been approved by the CBO.

CIVIL-2 The resident engineer shall, if appropriate, stop all earthwork and construction in the affected areas when the responsible soils engineer, geotechnical engineer, or the civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications and calculations to the CBO based on these new conditions. The project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected area [1998 CBC, Section 104.2.4, Stop orders].

Verification: The project owner shall notify the CPM within 24 hours, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, the project owner shall provide to the CPM a copy of the CBO's approval.

CIVIL-3 The project owner shall perform inspections in accordance with the 1998 CBC, Chapter 1, Section 108, Inspections; Chapter 17, Section 1701.6, Continuous and Periodic Special Inspection; and Appendix Chapter 33, Section 3317, Grading Inspection. All plant site-grading operations, for which a grading permit is required, shall be subject to inspection by the CBO.

If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO and the CPM [1998

CBC, Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The project owner shall prepare a written report, with copies to the CBO and the CPM, detailing all discrepancies, non-compliance items, and the proposed corrective action.

Verification: Within 5 days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a Non-Conformance Report (NCR), and the proposed corrective action for review and approval. Within 5 days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCRs, for the reporting month, shall also be included in the following Monthly Compliance Report.

CIVIL-4 After completion of finished grading and erosion and sedimentation control and drainage facilities, the project owner shall obtain the CBO's approval of the final "as-graded" grading plans and final "as-built" plans for the erosion and sedimentation control facilities [1998 CBC, Section 109, Certificate of Occupancy].

Verification: Within 30 days of the completion of the erosion and sediment control mitigation and drainage facilities, the project owner shall submit to the CBO the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with the final approved combined grading plans, and that the facilities are adequate for their intended purposes. The project owner shall submit a copy of this report to the CPM in the next Monthly Compliance Report.

STRUC-1 Prior to the start of any increment of construction of any major structure or component listed in **Facility Design TABLE 1** of Condition of Certification **GEN-2**, above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **TABLE 1**, above):

1. Major project structures;
2. Major foundations, equipment supports and anchorage;
3. Large field fabricated tanks;
4. Turbine/generator pedestal; and
5. Switchyard structures.

Construction of any structure or component shall not commence until the CBO has approved the lateral force procedures to be employed in designing that structure or component.

The project owner shall:

1. Obtain approval from the CBO of lateral force procedures proposed for project structures;
2. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern (i.e., highest loads, or lowest allowable stresses shall govern). All plans, calculations and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations and specifications [1998 CBC, Section 108.4, Approval Required];
3. Submit to the CBO the required number of copies of the structural plans, specifications, calculations and other required documents of the designated major structures at least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation [1998 CBC, Section 106.4.2, Retention of plans; and Section 106.3.2, Submittal documents]; and
4. Ensure that the final plans, calculations and specifications clearly reflect the inclusion of approved criteria, assumptions and methods used to develop the design. The final designs, plans, calculations and specifications shall be signed and stamped by the responsible design engineer [1998 CBC, Section 106.3.4, Architect or Engineer of Record].

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of any increment of construction of any structure or component listed in **Facility Design TABLE 1** of Condition of Certification **GEN-2** above, the project owner shall submit to the CBO, with a copy to the CPM, the responsible design engineer's signed statement that the final design plans, specifications and calculations conform with all of the requirements set forth in the Energy Commission's Decision.

If the CBO discovers non-conformance with the stated requirements, the project owner shall resubmit the corrected plans to the CBO within 20 days of receipt of the non-conforming submittal with a copy of the transmittal letter to the CPM.

The project owner shall submit to the CPM a copy of a statement from the CBO that the proposed structural plans, specifications and calculations have been approved and are in conformance with the requirements set forth in the applicable engineering LORS.

STRUC-2 The project owner shall submit to the CBO the required number of sets of the following documents related to work that has undergone CBO design review and approval:

1. Concrete cylinder strength test reports (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, and mix design designation and parameters);
2. Concrete pour sign-off sheets;
3. Bolt torque inspection reports (including location of test, date, bolt size, and recorded torques);
4. Field weld inspection reports (including type of weld, location of weld, inspection of non-destructive testing (NDT) procedure and results, welder qualifications, certifications, qualified procedure description or number (ref: AWS); and
5. Reports covering other structural activities requiring special inspections shall be in accordance with the 1998 CBC, Chapter 17, Section 1701, Special Inspections; Section 1701.5, Type of Work (requiring special inspection); Section 1702, Structural Observation and Section 1703, Nondestructive Testing.

Verification: If a discrepancy is discovered in any of the above data, the project owner shall, within 5 days, prepare and submit an NCR describing the nature of the discrepancies and the proposed corrective action to the CBO, with a copy of the transmittal letter to the CPM [1998 CBC, Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector]. The NCR shall reference the Condition(s) of Certification and the applicable CBC chapter and section. Within 5 days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM.

The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within 5 days, the reason for disapproval, and the revised corrective action to obtain CBO's approval.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans required by the 1998 CBC, Chapter 1, Section 106.3.2, Submittal documents and Section 106.3.3, Information on plans and specifications, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing.

Verification: On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes, and shall submit the required number of sets of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the Monthly Compliance Report, when the CBO has approved the revised plans.

STRUC-4 Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in Chapter 3, Table 3-E of the 1998 CBC shall, at a minimum, be designed to comply with the requirements of this Chapter.

Verification: At least 30 days (or project owner and CBO approved alternate timeframe) prior to the start of installation of the tanks or vessels containing the above specified quantities of toxic or hazardous materials, the project owner shall submit to the CBO for design review and approval final design plans, specifications and calculations, including a copy of the signed and stamped engineer's certification.

The project owner shall send copies of the CBO approvals of plan checks to the CPM in the following Monthly Compliance Report. The project owner shall also transmit a copy of the CBO's inspection approvals to the CPM in the Monthly Compliance Report following completion of any inspection.

MECH-1 The project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in **Facility Design TABLE 1**, Condition of Certification **GEN-2**, above. Physical layout drawings and drawings not related to code compliance and life safety need not be submitted. The submittal shall also include the applicable QA/QC procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of said construction [1998 CBC, Section 106.3.2, Submittal Documents; Section 108.3, Inspection Requests; Section 108.4, Approval Required; 1998 California Plumbing Code, Section 103.5.4, Inspection Request; Section 301.1.1, Approval].

The responsible mechanical engineer shall stamp and sign all plans, drawings and calculations for the major piping and plumbing systems subject to the CBO design review and approval, and submit a signed statement to the CBO when the said proposed piping and plumbing systems have been designed, fabricated and installed in accordance with all of the applicable laws, ordinances, regulations and industry standards [Section 106.3.4, Architect or Engineer of Record], which may include, but not be limited to:

American National Standards Institute (ANSI) B31.1 (Power Piping Code);

ANSI B31.2 (Fuel Gas Piping Code);

ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code);

ANSI B31.8 (Gas Transmission and Distribution Piping Code);

Title 24, California Code of Regulations, Part 5 (California Plumbing Code);

Title 24, California Code of Regulations, Part 6 (California Energy Code, for building energy conservation systems and temperature control and ventilation systems);

Title 24, California Code of Regulations, Part 2 (California Building Code); and

Specific City/County code.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency [1998 CBC, Section 104.2.2, Deputies].

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of any increment of major piping or plumbing construction listed in **Facility Design TABLE 1**, Condition of Certification **GEN-2** above, the project owner shall submit to the CBO for design review and approval the final plans, specifications and calculations, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

The project owner shall transmit to the CPM, in the Monthly Compliance Report following completion of any inspection, a copy of the transmittal letter conveying the CBO's inspection approvals.

MECH-2 For all pressure vessels installed in the plant, the project owner shall submit to the CBO and California Occupational Safety and Health Administration (Cal-OSHA), prior to operation, the code certification papers and other documents required by the applicable LORS. Upon completion of the installation of any pressure vessel, the project owner shall request the appropriate CBO and/or Cal-OSHA inspection of said installation [1998 CBC, Section 108.3, Inspection Requests].

The project owner shall:

1. Ensure that all boilers and fired and unfired pressure vessels are designed, fabricated and installed in accordance with the appropriate section of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, or other applicable code. Vendor certification, with identification of applicable code, shall be submitted for prefabricated vessels and tanks; and

2. Have the responsible design engineer submit a statement to the CBO that the proposed final design plans, specifications and calculations conform to all of the requirements set forth in the appropriate ASME Boiler and Pressure Vessel Code or other applicable codes.

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of on-site fabrication or installation of any

pressure vessel, the project owner shall submit to the CBO for design review and approval, the above listed documents, including a copy of the signed and stamped engineer's certification, with a copy of the transmittal letter to the CPM.

The project owner shall transmit to the CPM, in the Monthly Compliance Report following completion of any inspection, a copy of the transmittal letter conveying the CBO's and/or Cal-OSHA inspection approvals.

MECH-3 The project owner shall submit to the CBO for design review and approval the design plans, specifications, calculations and quality control procedures for any heating, ventilating, air conditioning (HVAC) or refrigeration system. Packaged HVAC systems, where used, shall be identified with the appropriate manufacturer's data sheets.

The project owner shall design and install all HVAC and refrigeration systems within buildings and related structures in accordance with the CBC and other applicable codes. Upon completion of any increment of construction, the project owner shall request the CBO's inspection and approval of said construction. The final plans, specifications and calculations shall include approved criteria, assumptions and methods used to develop the design. In addition, the responsible mechanical engineer shall sign and stamp all plans, drawings and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications and calculations conform with the applicable LORS [1998 CBC, Section 108.7, Other Inspections; Section 106.3.4, Architect or Engineer of Record].

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of construction of any HVAC or refrigeration system, the project owner shall submit to the CBO the required HVAC and refrigeration calculations, plans and specifications, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the CBC and other applicable codes, with a copy of the transmittal letter to the CPM.

ELEC-1 Prior to the start of any increment of electrical construction for electrical equipment and systems 480 volts and higher, listed below, with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, the project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations [CBC 1998, Section 106.3.2, Submittal documents]. Upon approval, the above listed plans, together with design changes and design change notices, shall remain on the site or at another accessible location for the operating life of the project. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS [1998 CBC, Section 108.4, Approval Required, and Section 108.3, Inspection Requests]. All transmission facilities (lines, switchyards, switching stations and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

A. Final plant design plans to include:

1. one-line diagrams for the 13.8 kV, 4.16 kV and 480 V systems; and
2. system grounding drawings.

B. Final plant calculations to establish:

1. short-circuit ratings of plant equipment;
2. ampacity of feeder cables;
3. voltage drop in feeder cables;
4. system grounding requirements;
5. coordination study calculations for fuses, circuit breakers and protective relay settings for the 13.8 kV, 4.16 kV and 480 V systems;
6. system grounding requirements; and
7. lighting energy calculations.

C. The following activities shall be reported to the CPM in the Monthly Compliance Report:

1. Receipt or delay of major electrical equipment;

2. Testing or energization of major electrical equipment; and

3. A signal statement by the registered electrical engineer.

A signed statement by the registered electrical engineer certifying that the proposed final design plans and specifications conform to requirements set forth in the Energy Commission Decision.

Verification: At least 30 days (or project owner and CBO approved alternative timeframe) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for design review and approval the above listed documents. The project owner shall include in this submittal a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

B. POWER PLANT EFFICIENCY

In accordance with CEQA, the Commission must consider whether the project's consumption of energy (non-renewable fuel) will result in adverse environmental impacts on energy resources. [Cal. Code of Regs., tit. 14, § 15126.4(a)(1), Appendix F.] This analysis reviews the efficiency of project design and identifies measures that prevent wasteful, inefficient, or unnecessary energy consumption.

Summary and Discussion of the Evidence

Pursuant to CEQA Guidelines, Staff assessed whether MPP's use of natural gas would result in (1) an adverse effect on local and regional energy supplies and resources; (2) the need for additional energy supply capacity; (3) noncompliance with existing energy standards; or (4) the wasteful, inefficient, and unnecessary consumption of fuel or energy. (Ex. 45, p. 5.3-2.)

1. Potential Effects on Energy Supplies and Resources

The MPP will burn natural gas at a maximum rate of 44.7 million Btu per day lower heating value (LHV). (Ex. 45, p. 5.3-2; Ex. 1, § 5.2.4.2.1.) According to Staff, this is a substantial rate of energy consumption that could impact energy supplies or resources. (Ex. 45, p. 5.3-2; Tit. 14, Cal. Code of Regs., § 15000 et seq., Appendix F.)

2. Need for Additional Energy Supplies or Capacity

Natural gas for the MPP will be delivered via the existing SoCalGas pipeline infrastructure, which is extensive and provides access to vast reserves through regionally diverse sources in the Southwest, the Rocky Mountains, and Canada. Staff concluded, therefore, that SoCalGas is capable of delivering the required quantity of natural gas. Assuming the existing availability of natural gas and conveyance systems remain stable for the life of the project, it is highly unlikely

that MPP would require development of new fuel supply sources. (Ex. 45, p. 5.3-3; Ex. 1, § 4.2.3.) *See* **Power Plant Reliability**.

3. Compliance with Energy Standards

No standards apply to the efficiency of MPP or other non-cogeneration projects. (Ex. 45, p. 5.3-3.) *See* Public Resources Code section 25134.

4. Alternatives to Wasteful or Inefficient Energy Consumption

Applicant provided information on alternative generating technologies, which were reviewed by Staff. (Ex. 1, § 3.11.3 et seq.; Ex. 45, p. 5.3-5; *See* the **Alternatives** section of this Decision.) Given the project objectives, location, and air pollution control requirements, Staff concluded that only natural gas-burning technologies are feasible. (*Ibid*.)

Under expected project conditions, electricity will be generated at a full load efficiency of approximately 55 percent LHV. (Ex. 45, p. 5.3-2; Ex. 2: EFF-1.) Staff found that the MPP compared favorably with the average fuel efficiency of a typical 30-year old utility baseload plant, which operates at approximately 35 percent LHV. (Ex. 45, p. 5.3-2.)

Project fuel efficiency, and therefore its rate of energy consumption, is determined by the configuration of the power producing system and by selection of generating equipment. (Ex. 45, p. 5.3-3.) MPP is configured as a one-on-one combined cycle power plant. Electricity will be produced by one gas turbine with a steam turbine that operates on heat energy recuperated from gas turbine exhaust. By recovering this heat, which would otherwise be lost up the exhaust stacks, the efficiency of a combined cycle power plant is considerably increased compared with either a gas turbine or a steam turbine operating alone. Staff

concluded that the proposed one-on-one configuration is well suited to the large, steady loads met by a baseload plant. (*Ibid.*)

Project efficiency will also be enhanced by use of inlet air evaporative coolers, steam injection power augmentation capability, dual-pressure HRSG and steam turbine units, the HRSG duct burners, and the circulating water system. Notably, the HRSG duct burners provide important operational benefits such as load following and balancing to optimize the steam turbine cycle. (Ex. 45, pp. 5.3-3 and 5.3-4; Ex. 1, §§ 1.3.2 and 3.4.3; Ex. 2, EFF-1.)

According to Staff, modern gas turbines represent the most fuel-efficient electric generating technology available. The General Electric GE 7FA combustion turbine generator selected by SCPPA is nominally rated at 263 MW and 56.0 percent efficiency LHV at ISO conditions.[12] (Ex. 45, p. 5.3-4; Ex. 1, § 3.4.3.) Other F-class turbines, such as the Alstom Power ABB KA24, may have slightly higher efficiency ratings but the difference in actual operating efficiency is insignificant. New gas turbine designs are available, such as the G-class and H-class machines that claim higher fuel efficiency; however, the lack of a proven performance record for these prototypes led Staff to conclude that SCPPA's selection of the well-known F-class machine is the more reasonable choice. (Ex. 45, p. 5.3-5.)

Staff also analyzed whether the MPP would result in cumulative energy consumption impacts. In addition to the existing Olive and Magnolia units onsite, there are several other large natural gas-fueled power plants proposed in the

[12] International Standards Organization (ISO) standard conditions are 15°C (59°F), 60 percent relative humidity, and one atmosphere of pressure (equivalent to sea level), which represent ideal climatological conditions. The MPP's estimated full load efficiency rating of 55 percent LHV identified on the previous page, *supra*, assumes warmer weather at the site.

greater Los Angeles area.[13] Given the present competitive nature of the deregulated gas industry and its interest in serving the California market, Staff believes there will be no cumulative impacts on fuel supplies due to the MPP.[14] (Ex. 45, p. 5.3-6.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. MPP will not require the development of new fuel supply resources since natural gas resources exceed the fuel requirements of the project.
2. MPP will not consume natural gas in a wasteful, inefficient, or unnecessary manner.
3. The project configuration and choice of generating equipment represent the most feasible combination to achieve project objectives.
4. The project design, incorporating a one-on-one power train and employing the highly efficient F-class turbine, will allow the power plant to generate electricity at full load with optimal efficiency.
5. The anticipated operational efficiency of the project is consistent with that of comparable power plants using similar technology and significantly more efficient than older power plants.

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[13] These projects include the 1056 MW Mountainview Power Plant Project (00-AFC-2); the 450 MW Huntington Beach Modernization Project (00-AFC-13); and the 630 MW El Segundo Power Redevelopment Project (00-AFC-14). In addition, the City of Vernon has proposed the 134 MW Malburg Generating Station (01-AFC-25).

[14] *See* "Natural Gas Infrastructure Issues," California Energy Commission Final Report, October 2001 (Publication No. P200-01-001) and on our Website at: http://www.energy.ca.gov/reports/2001-10-16_200-01-001.PDF

See also "Natural Gas Supply and Infrastructure Assessment," Energy Commission Staff Report, December 2002 (Publication No. P700-02-006F) and on our Website at: http://www.energy.ca.gov/reports/2002-12-12_700-02-006F.PDF

The Commission therefore concludes that MPP will not cause any significant direct or indirect adverse impacts upon energy resources. The project will conform with all applicable laws, ordinances, regulations, and standards relating to fuel efficiency as identified in the pertinent portions of APPENDIX A of this Decision. No Conditions of Certification are required for this topic.

C. POWER PLANT RELIABILITY

The Warren-Alquist Act requires the Commission to examine the safety and reliability of the proposed power plant, including provisions for emergency operations and shutdowns. [(Pub. Resources Code, § 25520(b).] There are presently no laws, ordinances, regulations, or standards (LORS) that establish either power plant reliability criteria or procedures for attaining reliable operation. However, the Commission must determine whether the project will be designed, sited, and operated to ensure safe and reliable operation. [(Cal. Code of Regs., tit. 20, § 1752(c)(2).]

In California's restructured electric power market, the California Independent System Operator, (Cal-ISO) has the primary responsibility for maintaining system reliability. To provide an adequate supply of reliable power, Cal-ISO has imposed certain requirements on power plants selling ancillary services and holding reliability must-run contracts, such as: (1) filing periodic reports on reliability; (2) reporting all outages and their causes; and (3) scheduling all planned maintenance outages with the Cal-ISO. However, neither Cal-ISO nor other power grid operators have established clear guidelines for reliability standards. While we acknowledge the evolving nature of state policy on power production and distribution, our findings in this case are limited to the evidence of record. The Commission believes that power plant owners should continue to maintain the same levels of reliability that the power industry has achieved in recent years.

Summary and Discussion of the Evidence

Staff examined the project's design criteria to determine whether it will be built in accordance with typical power industry norms for reliable electricity generation. (Ex. 45, p. 5.4-3 et seq.) According to Staff, project safety and reliability are

achieved by ensuring equipment availability, plant maintainability, fuel and water availability, and adequate resistance to natural hazards. *(Ibid.*)

1. Equipment Availability

SCPPA will ensure equipment availability by use of quality assurance/quality control programs (QA/QC), which include inventory review, and equipment inspection and testing on a regular basis during design, procurement, construction, and operation. Condition of Certification **MECH-1** requires SCPPA to include applicable QA/QC procedures in the final design specifications for the project. Qualified vendors of plant equipment and materials will be selected based on past performance and independent testing contracts to ensure acquisition of reliable equipment. (Ex. 45, p. 5.4-3.)

2. Plant Maintainability

The evidentiary record indicates that project design includes sufficient redundancy of equipment to ensure continued operation in the event of equipment failure. (Ex. 45, p. 5.4-3; Ex. 1, § 4.2.2 et seq., Appendix F.) Project maintenance will be typical of the industry, including preventive and predictive techniques. Any necessary maintenance outages will be planned for periods of low electricity demand. (Ex. 1, § 3.9 et seq,)

3. Fuel and Water Availability

Reasonable long-term availability of fuel and water is necessary to ensure project reliability. As discussed in the Chapter on **Power Plant Efficiency**, SoCalGas will supply natural gas to the MPP through the existing supply pipelines near the project site. The SoCalGas system represents a resource of considerable capacity, which can provide adequate natural gas supply and pipeline capacity to meet project needs. (Ex. 45, p. 5.4-4.)

The MPP will obtain reclaimed water from the COB Water Reclamation Plant for use as makeup water for the facility's evaporative cooling tower. Potable water from the COB will be used for domestic uses and fire protection, as well as feedwater for other plant processes. These sources represent a reliable supply of water to meet the project's operating needs. (Ex. 45, p. 5.4-4; Ex. 3, Appendix V: "Will Serve Letter"; *See* **Soil and Water Resources**.)

4. Natural Hazards

The site is located in Seismic Zone 4 where several active earthquake faults create the potential for seismic shaking to threaten reliable operation. (Ex. 45, p. 5.4-5; *See* **Geology and Paleontology**.) MPP will be designed and constructed to comply with current applicable LORS for seismic design that improve seismic stability compared with older power plants.[15] The Conditions of Certification in the **Facility Design** section of this Decision ensures that the project will conform with seismic design LORS. There are no special concerns about flooding events that would affect reliability since the site is outside the 500-year flood plain and site grading contours will ensure control of storm water drainage and channeling of runoff flows. (*Ibid*.; *See* **Soil and Water Resources**.)

5. Availability Factors

SCPPA predicts the project will have an annual availability factor above 90 percent. (Ex. 1, § 4.2.1 et seq.) Industry statistics for power plant availability, which are compiled by the North American Electric Reliability Council (NERC), show an availability factor of 91.49 percent for combined cycle units of all sizes. (Ex. 45, p. 5.4-5.) According to Staff, the project's predicted 90 percent availability factor is reasonable since the GE 7 FA turbine chosen by SCPPA has

[15] Staff expects the project, designed to current seismic standards, will perform at least as well as or better than existing plants in a seismic event. Staff noted that California's electric system has typically been reliable during seismic events. (Ex. 45, p. 5.4-5.)

been on the market for several years and exhibits typically high availability and reliability compared with the older machines included in NERC statistics. (Ex. 45, p. 5.4-6.) Staff also notes that the project's distributed control and monitoring systems include redundant computer-based safeguards that ensure reliable operation consistent with industry norms. (*Ibid*.; Ex. 1, § 3.9.2.6 et seq.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The Magnolia Power Project (MPP) will ensure equipment availability by implementing quality assurance/quality control (QA/QC) programs and by providing adequate redundancy of auxiliary equipment to prevent unplanned off-line events.

2. MPP's project design incorporates distributed control and monitoring systems to provide inherent reliability.

3. Planned maintenance outages will be scheduled during times of low electricity demand.

4. There is adequate water availability for project operations.

5. The project is designed to withstand seismic shaking that would compromise project safety and reliability.

6. The project's estimated 90 percent availability factor is consistent with industry norms for power plant reliability.

7. The SoCalGas distribution system has access to adequate natural gas supply and pipeline capacity to meet the project's needs.

We therefore conclude that the project will be constructed and operated in accordance with typical power industry norms for reliable electricity generation. No Conditions of Certification are required for this topic. To ensure implementation of the QA/QC programs and conformance with seismic design criteria as described above, appropriate Conditions of Certification are included in the **Facility Design** portion of this Decision.

D. TRANSMISSION SYSTEM ENGINEERING

The Commission's jurisdiction includes "…any electric power line carrying electric power from a thermal power plant …to a point of junction with an interconnected transmission system." (Pub. Resources Code, § 25107.) The Commission assesses the engineering and planning design of new transmission facilities associated with a proposed project to ensure compliance with applicable law. The record indicates that the Applicant in this case accurately identified all interconnection facilities for Commission review.

SCPPA initially filed its AFC under the expedited six-month process described in Section 25550 of the Warren-Alquist Act. (Pub. Resources Code, § 25550.) Commission regulations pertaining to the six-month process require the AFC to include:

- An Interconnection Study identifying the electrical system impacts and a discussion of the mitigation measures proposed to maintain conformance with North American Electric Reliability Council (NERC), Western Systems Coordinating Council (WSCC), and California Independent System Operator (Cal-ISO) standards, or other appropriate planning criteria; and

- A full description of the facilities, if any, that are required for interconnection, including facilities beyond the point where the outlet line joins with the interconnected system. [(Cal. Code of Regs., tit. 20, § 2022(b)(3).]

Although the AFC was subsequently converted to the twelve-month review process, SCPPA submitted an Interconnection Study (IS) in conformance with Section 2022(b)(3) of the regulations. (Ex. 1, Appendix Q; Ex. 2, revised Appendix Q.) Cal-ISO reviewed the IS and concluded there would be no impacts on facilities under Cal-ISO control.[16] (Ex. 47; RT, p. 28.) The project will

[16] Cal-ISO is responsible for system reliability of the electricity transmission grid owned by the participating transmission owners (PG&E, SCE, and SDG&E). Cal-ISO Reliability Criteria establish guidelines for the adequacy and security of the transmission system, and require Cal-ISO approval of mitigation measures to reduce congestion impacts resulting from the interconnection of new facilities to the Cal-ISO grid. (Ex. 45, p. 5.5-2.)

interconnect to the COB transmission grid, which is not part of the Cal-ISO grid. Electricity produced by the MPP will be delivered to transmission facilities owned by the COB, the City of Glendale, LADWP, and Southern California Edison (SCE), which is part of the Cal-ISO system. To ensure compliance with the Energy Commission's regulations, the IS includes the planning criteria for the COB, LADWP, and SCE systems, as well as reliability criteria established by Cal-ISO and NERC/WSCC. (Ex. 1, § 3.6.4.1; Ex. 1, Appendix Q, § Q.2.1.)

Summary and Discussion of the Evidence

MPP will generate 250 MW (nominal) with a peaking capacity of 328 MW. The project will interconnect at the existing COB Olive 69 kV switchyard. The Olive Switchyard is located within the COB Magnolia Power Station complex in the southwest corner of the site. The MPP, which replaces Magnolia Units 1 and 2 in the northeast corner of the site, will be connected to the Olive Switchyard via two 69 kV underground outlet lines. (Ex. 1, § 3.6.) Existing offsite 69 kV transmission lines will move the power from the Olive Switchyard through the COB and LADWP grids to the participating municipal utilities. The project will not require the upgrade of any existing transmission lines beyond the project site. (*Ibid.*)

Interconnection Facilities

All construction and operation of electrical interconnection facilities associated with the MPP will occur on COB property. A double-circuit 69 kV underground transmission line (about 1,380 feet) will connect the CTG to the Olive Switchyard and another double-circuit 69 kV underground line (about 1,240 feet) will connect the STG to the switchyard. (Ex. 1, § 3.6.2.1.) Parallel dielectric insulated cables with a minimum of 1,500-kcmil copper (or equivalent) conductor will be required for the underground transmission lines. (Ex. 1, §3.6.2; Ex. 45, p. 5.5-4.) The switchyard, which is arranged in a double-bus, single-breaker configuration with twelve existing bays, will be expanded to include the addition of two new bays

and communication system revisions necessary to accommodate the new generation. (*Ibid*.)

No transmission structures will be required other than the transition structures at the CTG and STG step-up transformers and the termination/riser structures in the expanded switchyard. The termination structures will be approximately 11 feet high and will be situated behind the existing 12-foot architectural wall along Olive Avenue. (Ex. 1, p. 3.6-4.)

Staff reviewed the proposed engineering design for the transmission facilities and determined that the project would comply with standard industry requirements. Conditions of Certification **TSE-1** through **TSE-7** apply to the design, construction, and operation of the new facilities and ensure that the project will conform with applicable laws, ordinances, regulations, and standards (LORS). (Ex. 45, p. 5.5-7.)

Conditions of Certification **TSE-5** and **TSE-7** require SCPPA to meet or exceed the requirements of CPUC General Orders (GO) 95 and 128 or the National Electric Safety Code (NESC) in the design, construction, and operation of its transmission facilities. Staff testimony at the February 24, 2003, hearing, indicated that while SCPPA is not subject to the more stringent GO's (municipal utilities are exempt), it must comply with appropriate industry standards established in the NESC, which ensure the safe and reliable design of transmission facilities. These Conditions provide flexibility to accommodate the COB's existing transmission system. (Ex. 58, pp. 8-9; 2/24/03 RT.)

Potential Impacts on System Reliability

A system reliability study was included in the IS to analyze the effects of connecting the new power plant to the existing electric grid, including whether the project would cause thermal overloads, voltage violations, and/or electric system instability. (Ex. 45, p. 5.5-4.) The reliability study contains technical analyses

regarding powerflow base cases, powerflow contingency analysis, post-transient studies, transient stability studies, and short circuit studies. (Ex. 2, Appendix Q.)

The MPP will serve the participating member cities of SCPPA. The City of Glendale's share of project capacity will be delivered to the interconnection point between the COB and LADWP at the Toluca Substation (Receiving Station E) and then via LADWP 230-kV facilities or via two 69-kV lines between the Burbank and Glendale systems. The capacity shares of the other participating members will be delivered via facilities owned by COB, LADWP and/or SCE interconnection points owned by LADWP. (Ex. 2, Appendix Q; Ex. 45, p. 5.5-3.)

Powerflow analyses were conducted for both 250 MW and 328 MW scenarios. Under normal operating and contingency conditions, the interconnection of a 250 MW project with the Burbank system would have no impacts on the internal system, the external systems (Glendale, LADWP, and SCE), or when the Burbank-Glendale 69-kV ties are closed. Likewise, under normal operating conditions, the interconnection of a 328 MW project would have no impacts on the external systems; however, under contingency conditions, two internal system overloads were noted:

- Overloads of 20% were identified on one of the MPP-Olive 69-kV lines after an outage of the other MPP-Olive 69-kV line.

- If Burbank-Glendale 69-kV ties are closed, overloads of 19% were identified on 69-kV facilities supporting the Burbank-Glendale ties for various contingency conditions. (Ex. 2, Appendix Q; Ex. 45, p. 5.5-6.)

To address potential system overloads at 328 MW, SCPPA will install the underground 69-kV cables with sufficient capacity (greater than 2,000 amps) to mitigate the loss of one of the two lines. Since the impacted facilities are within the COB system, COB will design a Remedial Action Scheme (RAS) for approval by SCPPA to open the overloaded Burbank-Glendale tie line. Condition of Certification **TSE-5g** requires a Generator Special Facilities Agreement (GSFA)

that includes the RAS specifications.[17] (Ex. 45, p. 5.5-6; Ex. 47; Ex. 2, Appendix Q, p. Q-2.)

Short circuit studies related to impacts of the 328 MW scenario were included in the IS. The results of separate short circuit studies conducted by LADWP and SCE will be incorporated into final design plans for the project. If circuit breaker replacements or upgrades are required, the improvements will occur inside the fence lines of existing substations and will not cause any environmental impacts. (Ex. 45, p. 5.5-6.) Condition of Certification **TSE-5f** ensures that all existing equipment shall be within short circuit ratings with the addition of the project.

According to Staff, the COB and LADWP control the parallel operation of generating stations. To ensure backup or other power service during extended periods of non-operation or closure, Staff believes the Applicant should execute a Generator Special Facilities Agreement (GSFA) with COB and LADWP to codify procedures for planned, unexpected temporary, and permanent closure of the MPP. (Ex. 45, pp. 5.5-7 and 5.5-8.) We agree this agreement is necessary to satisfy Condition of Certification **TSE-5g**. At the February 24, 2003, hearing, SCPPA proposed that it execute separate GSFA's with the respective transmission system operators. (2/24/03 RT.) Since MPP is interconnecting to COB, we modified Staff's proposed Verification to the Condition to require SCPPA to execute a GSFA with COB and a separate GSFA with LADWP. Additionally, since the MPP may affect SCE's system at the Sylmar substation, we have also required SCPPA to enter into a GSFA with SCE.

[17] Staff indicated that the COB and LADWP would execute a GSFA to ensure electric system safety and reliability during periods when parallel generating facilities are offline. (Ex. 45, p. 5.5-8.) See discussion on the GSFA, *infra*.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The Magnolia Power Project (MPP) will interconnect with the City of Burbank (COB) electrical grid at the existing onsite Olive Switchyard.

2. All construction and operation of electrical interconnection facilities associated with the MPP will occur on COB property.

3. SCPPA performed an Interconnection Study (IS) that includes planning criteria for the COB, LADWP, and SCE systems, as well as reliability criteria established by Cal-ISO and NERC/WSCC.

4. Cal-ISO reviewed the IS and indicated there would be no impacts to facilities under Cal-ISO control.

5. Under normal operating and contingency conditions for the project's 250 MW scenario, interconnection with the COB grid will have no impacts on the internal system, the external systems (Glendale, LADWP, and SCE), or when the Burbank-Glendale 69-kV ties are closed.

6. Under normal operating conditions, the interconnection of the 328 MW scenario will have no impacts on the external systems but under contingency conditions, internal system overloads will occur.

7. To mitigate overloads on the MPP-Olive lines, the underground 69 kV cables between the MPP and the Olive Substation will have sufficient capacity (greater than 2,000 amps) to compensate for the loss of one of the MPP-Olive lines.

8. A Remedial Action Scheme (RAS) will be developed to mitigate the overload on the Burbank-Glendale 69 kV ties when operated in a closed fashion.

9. The project owner will submit separate Generator Special Facilities Agreements with COB, LADWP, and SCE that include procedures for planned, unexpected temporary, and permanent closure of the MPP as well as any necessary RAS.

10. Mitigation for short circuit impacts, such as replacing or upgrading circuit breakers, would occur at existing substations and would therefore avoid environmental impacts.

11. The Conditions of Certification ensure that the transmission interconnection facilities will be designed, constructed, and operated in a manner consistent with all applicable laws, ordinances, regulations, and standards (LORS).

The Commission therefore concludes that implementation of the measures specified in the Conditions of Certification listed below will ensure compliance with all applicable laws, ordinances, regulations, and standards (LORS) related to transmission system engineering as identified in **APPENDIX A** of this Decision.

CONDITIONS OF CERTIFICATION

TSE-1 The project owner shall furnish to the CEC CPM and to the CBO a schedule of transmission facility design submittals, a Master Drawing List, a Master Specifications List, and a Major Equipment and Structure List. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested.

Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction, the project owner shall submit the schedule, a Master Drawing List, and a Master Specifications List to the CBO and to the CEC CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for equipment (see a list of major equipment in **Table 1: Major Equipment** below). Additions and deletions shall be made to the table only with CPM and CBO approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

Table 1: Major Equipment

DESCRIPTION
Circuit breakers
Surge arresters
Switchyards
Buses
Underground cables
Disconnect switches
Take off facilities
Overhead lines
Switchyard control building
Step-up transformers
Instrument transformers
Grounding system

TSE-2 Prior to the start of construction the project owner shall assign an electrical engineer and at least one of each of the following to the project: A) a civil engineer; B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer, who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; or D) a mechanical engineer. [California Business and Professions Code, section 6704 et seq., and sections 6730 and 6736, require state registration to practice as a civil engineer or structural engineer in California.]

The tasks performed by the civil, mechanical, electrical or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The civil, geotechnical or civil and design engineer assigned in conformance with Facility Design condition **GEN-5**, may be responsible for design and review of the TSE facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes; if site conditions are unsafe or do not conform to predicted conditions used as a basis for design of earthwork or foundations.

The electrical engineer shall:

1. Be responsible for the electrical design of the power plant switchyard, outlet and termination facilities; and

2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within five days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

TSE-3 The project owner shall keep the CBO informed regarding the status of engineering design and construction. If any discrepancy in design and/or construction is discovered, the project owner shall document the discrepancy and recommend the corrective action required. The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this condition of certification.

Verification: The project owner shall submit monthly construction progress reports to the CBO and CEC CPM to be included in response to **TSE-3**. The project owner shall transmit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CEC CPM within 15 days. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action to obtain CBO's approval.

TSE-4 For the power plant switchyard, outlet line and termination, the project owner shall not begin any increment of construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report:

a) receipt or delay of major electrical equipment;
b) testing or energizing of major electrical equipment; and
c) the number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications and calculations for equipment and systems of the power plant switchyard, outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and send the CEC CPM a copy of the transmittal letter in the next Monthly Compliance Report.

TSE-5 The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to all applicable LORS, including the requirements listed below. The substitution of Compliance Project Manager (CPM) and CBO approved "equivalent" equipment and equivalent substation configurations is acceptable. The project owner shall submit the required number of copies of the design drawings and calculations as determined by the CBO.

a) The power plant switchyard and outlet line shall meet or exceed the electrical, mechanical, civil and structural requirements of CPUC General Order 95 or National Electric Safety Code (NESC), CPUC General Order 128, Title 8 of the California Code of Regulations (Title 8), Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", National Electric Code (NEC) and related industry standards.

b) Breakers and buses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.

c) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner's standards.

d) Termination facilities shall comply with applicable interconnection standards.

e) Each plant interconnection circuit shall be sized to accommodate the maximum output from the plant and necessary ampacity provided for an outage of the other interconnection circuit.

f) All existing equipment shall be within short circuit ratings upon the addition of the project.

g) The project owner shall provide an executed Generator Special Facilities Agreement.

Verification: At least 60 days prior to the start of construction of each of the following: 1) transmission facilities necessary to interconnect with the COB system; 2) transmission facilities necessary to mitigate impacts to the LADWP

system at Receiving Station E; and 3) transmission facilities necessary to mitigate impacts to the SCE system at Sylmar Substation, the project owner shall submit to the CEC CPM and the CBO for approval:

a) Design drawings, specifications and calculations conforming with CPUC General Order (GO) 95 or NESC, Title 8, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", NEC, CPUC GO-128 (where applicable), applicable interconnection standards and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, underground cables, grounding systems and major switchyard equipment.

b) For each element of the transmission facilities identified above, the submittal package to the CEC CPM and CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"[18] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or NESC, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", NEC, CPUC GO-128 (where applicable), applicable interconnection standards, and related industry standards.

c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements **TSE-5** a) through g) above.

d) Each of the interconnection or Generator Special Facilities Agreements executed between SCPPA and COB, LADWP, and SCE, respectively, and signed letters from the project owner stating that any required mitigation is acceptable, including a remedial action scheme if necessary, shall be provided to the CEC CPM and the CBO. Substitution of equipment and substation configurations shall be identified and justified by the project owner for CEC CPM and CBO for approval.

TSE-6 The project owner shall inform the CPM and CBO of any impending changes, which may not conform to the requirements **TSE-5** a) through g), and have not received CPM and CBO approval, and request approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or substation configurations shall not begin without prior written approval of the changes by the CBO and the CPM.

[18] Worst-case conditions for the foundations would include for instance, a dead-end or angle pole.

Verification: At least 60 days prior to the construction of transmission facilities, the project owner shall inform the CBO and the CPM of any impending changes which may not conform to requirements of **TSE-5** and request approval to implement such changes.

TSE-7 The project owner shall be responsible for the inspection of the transmission facilities during and after project construction, and any subsequent CPM and CBO approved changes thereto, to ensure conformance with CPUC GO-95 or NESC, Title 8, CCR, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", applicable interconnection standards, CPUC GO-128, NEC and related industry standards. In case of non-conformance, the project owner shall inform the CPM and CBO in writing, within 10 days of discovering such non-conformance and describe the corrective actions to be taken.

Verification: Within 60 days after first synchronization of the project, the project owner shall transmit to the CPM and CBO:

a) "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", CPUC GO-128, and applicable interconnection standards, NEC, related industry standards, and these conditions shall be provided concurrently.

b) An "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. "As built" drawings of the mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the "Compliance Monitoring Plan".

A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in responsible charge.

E. TRANSMISSION LINE SAFETY AND NUISANCE

The project's transmission lines must be constructed and operated in a manner that protects environmental quality, assures public health and safety, and complies with applicable law. This chapter reviews the potential impacts of the transmission lines on aviation safety, radio-frequency interference, fire hazards, nuisance shocks, hazardous shocks, and electric and magnetic field exposure.

Summary and Discussion of the Evidence

1. Description of Transmission Lines

The MPP will interconnect to the COB grid at the existing 69 kV Olive Switchyard via two new underground 69 kV outlet lines. The new underground lines will be located entirely onsite within the COB power plant complex and routed to avoid existing structures and other underground facilities. The line to the switchyard from the combustion turbine generator (CTG) will be 1,380 feet. The line to the switchyard from the steam turbine generator (STG) will be 1, 240 feet. The lines will traverse an area that already contains a variety of electricity generating facilities, related equipment, and overhead and underground transmission lines. The site is bordered on all sides by industrial properties. (Ex. 45, p. 4.10-3.)

2. Potential Impacts

a. Electric and Magnetic Field Exposure

The possibility of deleterious health effects from exposure to electric and magnetic fields (EMF) has raised public health concerns about living near high-voltage lines. (Ex. 1, § 5.16.3.) Since the MPP site is distant from residential areas and inaccessible to the public, concerns about long-term residential EMF exposure are not applicable in this case. The only EMF exposure of potential significance would be short-term onsite exposure to plant workers or visitors at the site (Ex. 45, pp. 4.10-3 and 4.10-4.)

The underground lines will consist of three individual cables per circuit in PVC conduit encased within concrete duct banks and installed four feet below ground. This design will prevent any exposure to electric field levels at the surface. Some magnetic fields emanating from the cables, however, will be measurable at the surface above the cables. (Ex. 1, § 3.6.4.3.) Since existing electrical facilities at the project site already produce measurable EMF levels, ambient EMF levels can be measured and projected magnetic fields can be calculated after final design plans are approved. (*Ibid*.) According to Staff, the use of underground lines provides the most effective mitigation for potential EMF exposure since line conductors can be placed closely together to achieve maximum field cancellation without affecting line safety, efficiency, and reliability. (Ex. 45, p. 4.10-5.)

CPUC General Order (GO) 128 establishes specific design and operational requirements for managing the EMF levels of new transmission facilities. (Ex. 45, p. 4.10-5.) Condition of Certification **TLSN-1** requires SCPPA to comply with GO-128 to ensure proper implementation of EMF-reduction measures.[19]

b. Aviation Safety

The Federal Aviation Administration (FAA) requires notification of any construction taller than 200 feet or any construction within restricted airspace in the approach to airports. Since the transmission lines are underground, there is no collision hazard to area aircraft.[20] (Ex. 45, p. 4.10-4.)

c. Interference with Radio-Frequency Communication

Federal Communications Commission (FCC) regulations prohibit operation of devices that interfere with radio communications even if such devices are not intentionally designed to produce radio-frequency energy. Since electric fields

[19] At the evidentiary hearing, the parties agreed to modify Staff's proposed Condition **TLSN-1** to require SCPPA to show compliance with GO-128 prior to any transmission line related ground disturbance. (RT, pp. 30-32.) We have adopted the modified language.

[20] The tallest structure associated with the MPP is the 150-foot tall HRSG stack. (*See* **Project Description**.)

from underground lines cannot penetrate the soil or other materials (unlike magnetic fields), there is no potential for interference with radio frequency communications. (Ex. 45, p. 4.10-4.)

d. Fire Hazards

The underground lines are located away from combustible materials and do not pose a significant fire hazard in the area. (Ex. 45, p. 4.10-4.)

e. Nuisance and Hazardous Shocks

Nuisance or hazardous shocks can result from direct or indirect contact with an energized line or metal objects located near the line. Compliance with the requirements of CPUC GO-128 will reduce the risk of nuisance and hazardous shocks to insignificant levels. Condition **TLSN-1** ensures compliance with the applicable design requirements. (Ex. 45, p. 4.10-4.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The MPP will interconnect to the COB's electric grid at the existing 69 kV Olive Substation via two underground transmission lines located entirely onsite.

2. SCPPA will design the underground transmission lines in conformance with the requirements of CPUC General Order GO 128 to reduce the potential for electric and magnetic field exposure and to reduce the risk of shock hazards to insignificant levels.

3. The underground transmission lines will not result in significant adverse environmental impacts to public health and safety nor cause impacts in the areas of aviation safety, radio frequency communication, fire hazards, nuisance or hazardous shocks, or electric and magnetic field exposure.

We therefore conclude that implementation of the Condition of Certification, below, will ensure that the project complies with all applicable laws, ordinances,

regulations, and standards relating to transmission line safety and nuisance as identified in the pertinent portions of **APPENDIX A** of this Decision.

CONDITION OF CERTIFICATION

TLSN-1 The project owner shall construct and operate the underground transmission lines according to the requirements of CPUC's General Order GO-128 for underground lines.

Verification: At least 30 days before any transmission line related ground disturbance, the project owner shall submit to the Commission's Compliance Project Manager (CPM) a letter from SCPPA stating that its design for the underground transmission lines complies with the requirements of CPUC GO-128.

V. PUBLIC HEALTH AND SAFETY ASSESSMENT

Operation of the Magnolia Power Plant will create combustion products and utilize certain hazardous materials that could expose the general public and workers at the facility to potential health effects. The following sections describe the regulatory programs, standards, protocols, and analyses that address these issues.

A. AIR QUALITY

This section examines the potential adverse impacts of criteria air pollutant emissions resulting from project construction and operation. The Commission must find that the project complies with all applicable laws, ordinances, regulations, and standards related to air quality. National ambient air quality standards (NAAQS) have been established for six air contaminants identified as "criteria air pollutants." These include sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), lead (Pb), and particulate matter less than 10 microns in diameter (PM_{10}). Also included in this review are the precursor pollutants for ozone, which are nitrogen oxides (NO_x) and volatile organic compounds (VOC), and the precursors for PM_{10}, which are NO_x, VOC, and sulfates (SO_x). (Ex. 1, § 5.2.1.3.)

The federal Clean Air Act[21] requires new major stationary sources of air pollution to comply with federal requirements in order to obtain authority to construct permits. The U.S. Environmental Protection Agency (USEPA), which administers the Clean Air Act, has designated all areas of the United States as attainment (air quality better than the NAAQS) or nonattainment (worse than the NAAQS) for criteria air pollutants. (Ex. 45, p. 4.1-1 et seq.) There are two major components of air pollution law: New Source Review (NSR) for evaluating pollutants that

[21] Title 42, United States Code, section 7401 et seq.

violate federal standards and Prevention of Significant Deterioration (PSD) to evaluate those pollutants that do not violate federal standards. Enforcement of NSR and PSD rules is typically delegated to local Air Districts that are established by federal and state law. (*Ibid*.; Ex. 1, § 5.2.3.2.) The Magnolia Power Plant MPP is also subject to the federal New Source Performance Standards (NSPS), which are delegated to the local Air District; however local emissions limitation rules are more restrictive than NSPS requirements. (Ex. 45, p. 4.1-2.)

Both USEPA and the California Air Resources Board (CARB) have established allowable maximum ambient concentrations for the six criteria pollutants identified above. The California standards (CAAQS) are typically more stringent than federal standards. Federal and state ambient air quality standards are shown in **Air Quality Table 1**.

AIR QUALITY Table 1

Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone (O_3)	1 Hour	0.12 ppm (235 μg/m^3)	0.09 ppm (180 μg/m^3)
	8 Hour	0.08 ppm (160 μg/m^3)	—
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual Average	0.053 ppm (100 μg/m^3)	—
	1 Hour	—	0.25 ppm (470 μg/m^3)
Sulfur Dioxide (SO_2)	Annual Average	0.03 ppm (80 μg/m^3)	—
	24 Hour	0.14 ppm (365 μg/m^3)	0.04 ppm (105 μg/m^3)
	3 Hour	0.5 ppm (1300 μg/m^3)	—
	1 Hour	—	0.25 ppm (655 μg/m^3)
Respirable Particulate Matter (PM_{10}) [a]	Annual Geometric Mean	—	30 μg/m^3
	24 Hour	150 μg/m^3	50 μg/m^3
	Annual Arithmetic Mean	50 μg/m^3	—
Fine Particulate Matter ($PM_{2.5}$) [a]	Annual Arithmetic Mean	—	15 μg/m^3
	24 Hour	—	65 μg/m^3
Sulfates (SO_4)	24 Hour	—	25 μg/m^3
Lead	30 Day Average	—	1.5 μg/m^3
	Calendar Quarter	1.5 μg/m^3	—
Hydrogen Sulfide (H_2S)	1 Hour	—	0.03 ppm (42 μg/m^3)
Vinyl Chloride (chloroethene)	24 Hour	—	0.010 ppm (26 μg/m^3)
Visibility Reducing Particulates	1 Observation (8 hour)	—	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.

Source: Ex. 45, p. 4.1-9, Air Quality Table 1.

a. The State of California is currently in the process of revising its annual PM_{10} ambient air quality standard and in the process of enacting $PM_{2.5}$ ambient air quality standards. The standards proposed as of September 26, 2002, were as follows:

PM_{10} – 20 ug/m^3 (annual standard - arithmetic mean)

$PM_{2.5}$ – 12 ug/m^3 (annual standard - arithmetic mean)

$PM_{2.5}$ – 25 ug/m^3 (24-hour standard)

Summary of the Evidence

The project site is located in the South Coast Air Quality Management District (SCAQMD or Air District). Air quality in the district is in attainment with federal and state standards for SO_2 and NO_2, and nonattainment for ozone, CO, and PM_{10}. (Ex. 1, p. 5.2-5.) The Air District's attainment status for each criteria pollutant is shown below in **Air Quality Table 2**.

AIR QUALITY Table 2
Federal and State Attainment Status for the South Coast Air Basin

Pollutants	Federal Classification	State Classification
Ozone	Extreme Non-Attainment	Extreme Non-Attainment
PM_{10}	Serious Non-Attainment	Non-Attainment
CO	Serious Non-Attainment	Non-Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Source: Ex. 45, p. 4.1-10, Air Quality Table 2.

1. SCAQMD'S Final Determination of Compliance

On July 19, 2002, SCAQMD released its Final Determination of Compliance (FDOC) for public comment. It was subsequently filed with the Commission on October 9, 2002.[22] The FDOC concludes that MPP will comply with all applicable air quality requirements, and imposes certain conditions necessary to ensure compliance.[23] (Ex. 10) Pursuant to the Commission's regulations, the conditions

[22] The FDOC is issued as part of the certification process in lieu of the Air District's Authority to Construct permit. The FDOC evaluates whether and under what conditions the MPP will comply with the District's rules and regulations. (Ex. 45, p. 4.1-3.) Public comments on the FDOC and the Air District's responses were incorporated into the record. (Ex. 10; Ex. 48.)

[23] Title V of the Clean Air Act requires the states to implement an operating permit program to ensure that large sources comply with federal regulations. The USEPA has delegated to SCAQMD the authority to implement the federal PSD, nonattainment NSR, and Title V programs. SCAQMD adopted regulations, approved by USEPA, to implement these programs. MPP is subject to SCAQMD rules and regulations, in particular Regulation XIII (NSR), which defines requirements for Best Available Control Technology (BACT), offsets, and emission calculation procedures.

contained in the FDOC are incorporated into this Decision. (Cal. Code of Regs., tit. 20, §§ 1744.5, 1752.3.)

2. California Environmental Quality Act (CEQA) Requirements

In addition to reviewing Air District requirements, the Commission also evaluates potential air quality impacts according to CEQA requirements. CEQA Guidelines provide a set of significance criteria to determine whether a project will: (1) conflict with or obstruct implementation of the applicable air quality plan; (2) violate any air quality standard or contribute substantially to an existing or projected air quality violation; (3) result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment for state or federal standards; (4) expose sensitive receptors to substantial pollutant concentrations; and (5) create objectionable odors affecting a substantial number of people. (Cal. Code Regs., tit. 14, § 15000 et seq., Appendix G.)

The following discussion provides an overview of air quality conditions in the Los Angeles area and describes the conclusions reached by Staff in consultation with SCAQMD.

3. Ambient Air Quality

The Applicant used data from the Burbank West Palm Avenue air monitoring station (one-half mile southwest of the site) to characterize ambient air quality near the site. (Ex. 1 p. 5.2-5.) Applicant also relied on data from the Los Angeles North Main Boulevard (9 miles southeast) and Pasadena South Wilson (11 miles southeast) monitoring stations to identify area-wide trends.

Historical air quality data for the project location recorded at the Burbank monitoring station for ozone, NO_2, CO, SO_2, and PM_{10} are shown in **Air Quality Table 3**.

AIR QUALITY Table 3
Ambient Air Quality Monitoring Data
Burbank, West Palm Avenue

Pollutant	Standard	1995	1996	1997	1998	1999	2000	Most Restrictive Ambient Air Quality Standard
Ozone	Maximum 1-hr Average (ppm)	0.165	0.142	0.134	0.177	0.120	0.125	0.09 (CAAQS)
	# of days exceeding CAAQS	58	31	15	33	13	16	—
	Maximum 8-hr Average (ppm)	0.115	0.116	0.103	0.124	0.099	0.118	0.08 (NAAQS)
	# of days exceeding NAAQS	29	11	6	13	3	11	—
PM_{10}	Maximum 24-hr Average ($\mu g/m^3$)	135	110	92	75	82	74	50.0 (CAAQS)
	# of days exceeding CAAQS*	87	87	102	54	126	84	—
	Annual Geometric Mean ($\mu g/m^3$)	37.18	37.58		32.78	40.59	36.1	30 (CAAQS)
	Annual Arithmetic Mean ($\mu g/m^3$)	42.60	41.34	44.98	36.15	43.73	39.1	50 (NAAQS)
NO_2	Maximum 1-hr Average (ppm)	0.187	0.197	0.200	0.143	0.179	0.163	0.25 (CAAQS)
	Average annual concentration (ppm)	0.045	NA	0.042	0.041	0.045	0.041	0.053 (NAAQS)
CO	Maximum 1-hr Average (ppm)	12.5	11.6	8.8	8.1	9.2	7.7	20 (CAAQS)
	Maximum 8-hr Average (ppm)	11.80	9.23	7.26	7.33	8.93	6.24	9 (CAAQS)
SO_2	Maximum 24-hr Average (ppm)	0.005	0.006	0.006	0.007	0.003	0.004	0.04 (CAAQS)
	Annual Average (ppm)	0.001	0.001	0.002	0.001	0.000	0.001	0.03 (NAAQS)

Source: (CARB 2000)* Days above the state standard (calculated): PM_{10} is generally monitored once every six days, so the potential number of violation days is normally calculated by multiplying the actual number of days of violations by six. However, the multiplier may vary year-to-year depending on the actual sampling frequency.

Source: Ex. 45, p. 4.1-10, Air Quality Table 3.

Ozone Violations. Ozone is not directly emitted from stationary or mobile sources, but is formed as the result of chemical reactions in the atmosphere between directly emitted air pollutants when nitrogen oxides (NO_x) and hydrocarbons volatile organic compounds (VOCs) interact in the presence of sunlight to form ozone. Long-term trends in reduced emissions of ozone precursors have led to reduced ozone formation in the Burbank area; however, South Coast air basin remains classified as an *extreme* nonattainment area for ozone for both federal and state standards. (Ex. 45, p. 4.1-12.)

Carbon Monoxide. Carbon monoxide (CO) is considered a local pollutant since it is found in high concentrations near the source of emission, i.e., cars and trucks. Peak CO concentrations occur during rush hour traffic in the morning and afternoon. Notably, CO concentrations in Los Angeles County and the rest of the state have declined significantly due to two state-wide programs: (1) the 1992 wintertime oxygenated gasoline program, and (2) Phases I and II of the reformulated gasoline program. New vehicles with oxygen sensors and fuel injection systems have also contributed to the decline in CO levels in the state. Stationary sources, including industrial sources, cause less than one percent of CO emissions in Los Angeles County. According to the data recorded at the Burbank air monitoring station, there have been no violations of the one-hour or eight-hour federal or state CO standards since 1995. (Ex. 45, pp. 4.1-12 and 4.1-13.) The Air District is classified nonattainment for state and federal CO standards.

Nitrogen Dioxide (NO_2). The maximum one-hour and annual concentrations of NO_2 recorded at the Burbank air monitoring station are below state and federal standards. (Ex. 45, pp. 4.1-12 and 4.1-13.) Approximately 90 percent of the NO_x emitted from combustion sources is NO and the balance is NO_2. NO is oxidized in the atmosphere to NO_2 but some level of photochemical activity is needed for this conversion. In the summer, although conversion rates are high, the warm temperatures and windy conditions (atmospheric unstable conditions) disperse

pollutants, preventing the accumulation of NO_2 to levels approaching the 1-hour ambient air quality standard. (*Ibid*.) The Air District is designated attainment for state and federal NO_2 standards.

Sulfur Dioxide (SO_2). Sulfur dioxide is emitted by combustion of sulfur-containing fuel. Since natural gas contains little sulfur, natural gas combustion emits very low amounts of SO_2. The Air District is designated attainment for state and federal standards for SO_2. (Ex. 45, p. 4.1-17.)

Inhalable Particulate Matter (PM_{10}). The project area experiences a number of yearly violations of the state 24-hour PM_{10} standard.[24] The highest violations of the state 24-hour standard occur during the winter from October through January. (Ex. 45, p. 4.1-14.) PM_{10} can be emitted directly or formed many miles downwind from emission sources when various precursor pollutants interact in the atmosphere. Under certain meteorological conditions, gaseous emissions of NO_x, SO_x and VOC from turbines and ammonia from NO_x control equipment can result in particulate matter in the form of nitrates (NO_3), sulfates (SO_4), and organic particles. These pollutants are known as secondary particulates because they are not directly emitted but formed through complex chemical reactions in the atmosphere. (Ex. 45, p. 4.1-14.)

Air Quality Table 7 replicated from Staff's testimony identifies the number of state PM_{10} violations recorded in the project area from 1992-2000.

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[24] PM nitrate (mainly ammonium nitrate) is formed in the atmosphere from the reaction of nitric acid and ammonia. Nitric acid originates from NO_x emissions of combustion sources. The nitrate ion concentrations during the wintertime are a significant portion of the total PM_{10}, and a greater contributor to particulate matter of less than 2.5 microns ($PM_{2.5}$). The air agencies in California have deployed $PM_{2.5}$ ambient air quality monitors throughout the state and, if needed, $PM_{2.5}$ ambient air quality attainment plans will be submitted to the EPA by 2005. (Ex. 45, p. 4.1-15.) According to Staff, data from existing PM2.5 monitoring stations in the Air District (North Long Beach and Azusa) show that the 98th percentile 24-hour average and annual average $PM_{2.5}$ concentration levels have been declining since 1991 but remain above the proposed NAAQS of 15 $\mu g/m^3$. The Air District is expected to be nonattainment for $PM_{2.5}$ in the future when the EPA makes the attainment designation for the South Coast basin. (Id. at p. 4.1-16.)

AIR QUALITY Table 7
PM_{10} Air Quality Summary, 1992-2000

Year	Burbank, West Palm Avenue			Los Angeles, North Main Street		
	Days Above State Standard* (calculated)	Maximum Daily Average (µg/m^3)	Month of Maximum Daily Level	Days Above State Standard* (calculated)	Maximum Daily Average (µg/m^3)	Month of Maximum Daily Level
1992	108	222.0	Jan.	132	137.0	Apr.
1993	111	93.0	Jan.	156	104.0	Nov.
1994	66	114.0	Jan.	120	122.0	Jan.
1995	87	135.0	Nov.	84	141.0	Nov.
1996	87	110.0	Jan.	66	138.0	Jan.
1997	102	92.0	Oct.	90	102.0	Oct.
1998	54	75.0	Jan.	66	80.0	Apr.
1999	126	82.0	Sep.	114	88.0	Jan.
2000	54	70.0	Jan.	60	61.0	Mar.

California Ambient Air Quality Daily Standard: 50 µg/m^3
National Ambient Air Quality Daily Standard: 150 µg/m^3
Source: CARB web site, http://www.arb.ca.gov/adam/, Accessed June 2001.

***** Days above the state standard (calculated): Because PM_{10} is monitored approximately once every six days, the potential number of violation days is calculated by multiplying the actual number of days of violations by six.

Source: Ex. 45, p. 4.1-15, Air Quality Table 7.

3. Baseline Ambient Conditions

Staff used the background ambient air concentrations shown below in **Air Quality Table 10** for modeling and evaluating the MPP's potential air quality impacts. Staff asserted that 3 years of complete monitoring data (1998-2000) from the nearby Burbank monitoring station provided the most accurate baseline for determining ambient conditions at the site.[25] (Ex. 45, p. 4.1-18.) To establish the worst-case concentration levels, Staff used the maximum value in any of the three years, except for CO, for which the highest single 8-hour average

[25] Staff believes that data from other monitoring stations used by Applicant to determine worst-case background concentrations were not pertinent given the close proximity of the Burbank station to the site. (Ex. 45, pp. 4.1-18; 4.1-29.)

concentration in each year was averaged to account for expected reductions in future CO concentrations.[26] (*Ibid.*)

AIR QUALITY Table 10
Staff Recommended Background Concentrations

Pollutant	Averaging Time	Concentration ($\mu g/m^3$)	Concentration (ppm)
Ozone	1 Hour	354	0.177
Particulate Matter	Annual Geometric Mean	40.59	---
	Annual Arithmetic Mean	43.73	---
	24 Hour	82	---
Carbon Monoxide	8 Hour	8,333	7.5
	1 Hour	10,580	9.2
Nitrogen Dioxide	Annual Average	84.9	0.045
	1 Hour	336	0.179
Sulfur Dioxide	Annual Average	3.1	0.0012
	24 Hour	18.3	0.007
	3 Hour	23.6	0.009
	1 Hour	26.2	0.010

Source: Ex. 45, p. 4.1-18, Air Quality Table 10.

4. Potential Impacts

Methodology. Applicant used USEPA-approved air dispersion modeling to calculate the worst case turbine configuration that would result in the highest emission impacts.[27] The results were included in a more refined modeling analysis using meteorological and ambient air data from the Burbank monitoring station. (Ex. 1, § 5.2.1.3 et seq.; Ex. 4; Ex. 6; Ex. 7; Ex. 8, Attachment 2; Ex. 45, pp. 4.1-21 et seq., 4.1-29 et seq.)

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[26] Staff noted that this anticipated reduction in future CO concentrations was demonstrated in 2001, when the maximum 8-hour CO monitored in Burbank was only 5.0 ppm. (Ex. 45, p. 4.1-18.)

[27] SCAQMD has specific rules for sources such as the MPP that have the potential to emit criteria pollutants in excess of specified levels. Potential to emit is the emission rate resulting from operation, when the effect of control measures and enforceable limits such as hours of operation are considered. The potential to emit for MPP was based on worst-case emissions information provided by the gas turbine vendor for the General Electric 7 FA. (Ex. 8, Attachment 2.)

Construction. The primary emission sources during construction are diesel exhaust from heavy equipment and fugitive dust from disturbed areas at the site. (Ex. 1, Appendix H.3, p. H-74.) Modeling results indicate that under worst-case conditions these emissions would cause violations of the state 1-hour NO_2 standard and the state and federal 24-hour and annual PM_{10} standards. (*Id.,* at § H.3.5.2; Ex. 45, p. 4.1-31.) However, potential impacts are temporary and limited to the project site.[28] Staff proposed several mitigation measures including fugitive dust control, use of low-sulfur diesel fuel, and installation of oxidizing soot filters to reduce potential construction-related impacts to insignificant levels. We have included these mitigation measures in Conditions **AQ-C2** through **AQ-C4**.

Operation. Project emissions of criteria pollutants during operation will result from combustion of natural gas in the CTG, which includes dry low NOx combustors to reduce NO_x emissions and in the HRSG, which includes supplemental duct burners and an integral SCR and an oxidation catalyst to control NOx, CO, and VOC emissions from the CTG. (Ex. 45, p. 4.1-19.) The SCR uses aqueous ammonia to further reduce NOx but ammonia slip contributes to air quality degradation. Cooling tower emissions of PM_{10} will be controlled by mist drift eliminators.[29] (*Id*. at p. 4.1-21 et seq.)

Maximum hourly emissions for the CTG and cooling tower were modeled for each pollutant to determine the short-term impacts (1-hour, 3-hour, 8-hour and 24-hour) for load following startup (cold and warm) and shutdown with duct firing and without duct firing. The maximum hourly, daily, and annual emissions for baseload operation were also modeled to determine the daily and annual

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[28] The highest PM10 impacts are predicted to occur at the fence line during the initial site preparation phase. The potential for violation of the NO2 standard is limited to four hours in a year at the fence line. (*Id*. at pp. 4.1-31 and 4.1-32.)

[29] According to Applicant, almost 100 tons of fine particulate from cooling tower emissions would deposit on the site but the high walls surrounding the site would limit offsite deposition. (Ex. 45, p. 4.1-23 et seq.) Staff was concerned about the accuracy of this assertion and remodeled cooling tower emissions assuming that all cooling tower emissions would be PM10 to establish worst-case offset requirements. (*Ibid*.)

impacts. Staff's **Air Quality Table 17** shows the estimated maximum ground level impacts compared with the most restrictive state and national ambient air quality standards. The results indicate that project operation would not cause any new violations of attainment pollutants, but would have the potential to exacerbate existing violations of PM_{10} standards. (Ex. 45, p. 4.1-33.)

AIR QUALITY Table 17

MPP Ambient Air Quality Impacts
Applicant Operation ISC Modeling Results

Pollutant	Averaging Period	Project Impact [a] ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Limiting Standard ($\mu g/m^3$)	Type of Standard	Percent of Standard (%)
NO_2	1-Hour	38.5	336	374.5	470	CAAQS	80
	Annual	0.28	84.9	85.18	100	NAAQS	85
PM_{10} [b]	24-Hour	3.28	**82**	**85.3**	50	CAAQS	**171**
	Annual Geometric	0.30	**40.59**	**40.89**	30	CAAQS	**136**
CO	1-Hour	171	10,580	10,751	23,000	CAAQS	47
	8-Hour	29	8,333	8,362	10,000	CAAQS	84
SO_2	1-Hour	1.13	26.2	27.33	655	CAAQS	4
	3-Hour	0.95	23.6	24.55	1300	NAAQS	2
	24-Hour	0.23	18.3	18.53	105	CAAQS	18
	Annual	0.024	3.1	3.12	80	NAAQS	4

Source: Ex. 45, p. 4.1-33.

Note(s):
a. MPP facility including combustion turbine, duct burner, and cooling tower.
b. Modeling results reflect Staff's correction of cooling tower emissions: Applicant's results for project impact using the lower cooling tower emission value are 2.27 ug/m^3 (24-hour) and 0.20 ug/m^3 (annual).

According to Staff, the PM_{10} 24-hour predicted concentration is the maximum amount found any time during the year and most likely does not correspond to the same day as the maximum PM_{10} background concentration shown in the table. Additionally, ambient conditions that normally cause high PM_{10} concentrations (high winds during dry periods or low inversion conditions during cold periods) are not the same as the conditions under which maximum PM_{10} impacts from the project would occur. Because the Air District is classified nonattainment for PM_{10} and violations of the state and federal ambient air quality standards continue to occur, the project PM_{10} emissions impacts would be significant without appropriate mitigation. Operating impacts would not cause

any new violations of the NO_2, CO or SO_2 ambient air quality standards. Offsets will be provided for the net increase in PM_{10} emissions from the project. (Ex. 45, p. 4.1-34.)

Staff noted the potential for higher short-term pollutant concentrations during "fumigation" conditions, which are caused by the rapid mixing of the plume to ground level. (Ex. 45, p. 4.1-34.) Inversion fumigation conditions occur at sunrise when sunlight heats ground-level air, causing high concentrations of pollutants at ground level for 30-90 minutes. Staff accepts Applicant's analysis, which indicates that fumigation impacts will not exceed applicable state 1-hour standards.[30] (*Ibid*.)

Initial "commissioning" operation of the power plant starts with the first firing of fuel in the gas turbines and HRSGs to test equipment and emission control systems. Staff reviewed the modeling results provided by Applicant and found that potential impacts during commissioning would not exceed applicable state or federal standards and are, therefore, insignificant. (Ex. 45, p. 4.1-35.) Condition **AQ-11** requires the project owner to calculate emission limits for CO during the commissioning period.

5. Mitigation

BACT. The project's emission control equipment is consistent with the Air District's Best Available Control Technology (BACT) requirements.[31] The following BACT emission rates during normal operation, excluding startup, shut down, and commissioning periods, are guaranteed for the CTG.

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[30] Staff believes that Applicant's fumigation analysis overstates potential impacts since there is no approved urban fumigation modeling technique so Applicant relied on the model used for rural settings.

[31] For facilities that emit nonattainment pollutants, USEPA requires LAER, which is even more stringent than federal BACT. In California, however, state BACT is equivalent to federal LAER limits. (Ex. 1, § 5.2.2.1.)

The following BACT emission rates during normal operation, excluding turbine startup, shutdown and commissioning periods, are guaranteed for the CTG (Ex. 45, p. 4.1-37 to 38; RT, p. 65; Ex. 10, p. 44.)

NO_x Emissions: ≤ 2.0 ppmvd @ 15%O_2 (3-hr average)
CO Emissions: ≤ 2.0 ppmvd @ 15%O_2 (1-hr average)
VOC Emissions: ≤ 2.0 ppmvd @ 15%O_2 (1-hr average)
PM_{10} Emissions: ≤ 18 lb/day (duct firing) and 12 lb/day (without duct firing)
SO_x Emissions: ≤ 1.71 lb/hr (duct firing) and 1.31 lb/hr (without duct firing)
NH_3 Emissions: ≤ 5 ppmvd @ 15%O_2 (1-hour average)

Cooling tower drift eliminators guarantee a drift rate efficiency of 0.0006 percent to reduce PM_{10} emissions. (*Ibid*.; Ex. 4, p. AQ-5 et seq.; Ex. 5., p. AQ-2 et seq.)

Emission Offsets.

Under the Air District's Regulation XIII for New Source Review, Applicant must provide emission offsets for NO_x, CO, SO_2, PM_{10} and VOC emissions. To comply with the NO_x emissions offset requirement, Applicant will purchase RECLAIM Trading Credits. To comply with CO and VOC emissions offset requirements, Applicant will purchase emission reduction credits (ERCs) from the open market. To comply with SO_2 and PM_{10} emissions offset requirements, the Applicant will purchase emission credits from the Air District's Priority Reserve in accordance with Rule 1309.1.[32] (Ex. 45, p. 4.1-38; Ex. 38, pp. 2-4.)

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[32] Credits from the Priority Reserve are available to electric generating facilities that submit applications to the District in 2000 through 2003 provided the proposed facility: (1) complies with BACT requirements for pollutants received from the Priority Reserve for all existing sources under common ownership with the District; (2) pays the specified mitigation fee for each pound per day of pollutant received from the Priority Reserve; (3) conducts due diligence effort to secure and/or generate ERCs for each requested Priority Reserve pollutant; (4)

Staff's **Air Quality Table 20** shows the project's emission liabilities that must be mitigated under SCAQMD's rules.

AIR QUALITY Table 20
MPP Emission Liability

Pollutant	Emissions Increase	Offset Ratio	Emission Reduction Credits Required	Source of Offsets
NO_x, lb/yr [a]	119,198	1.0	119,198	RTCs
CO, lb/day [b]	266	1.2	319	ERCs
VOC, lb/day [b]	121	1.2	145	ERCs
PM_{10}, lb/day [b]	336	1.0	336	Priority Reserve
SO_x, lb/day [b]	35	1.0	35	Priority Reserve

Source: Ex. 45, p. 4.1-39; Ex. 10, p. 20.
Note(s):
a. NO_x RTC requirement is calculated for the first year of operation assuming the following: 636 hours of commissioning and baseload operations.
b. Non-RECLAIM pollutant requirements are calculated assuming the following: CO base on load following operations and all other pollutants based on baseload operations. Daily requirements are estimated assuming 30 days per month. As per District policy, the daily emissions are 30-day average emissions. PM_{10} emissions shown above do not include the emissions from the cooling tower, which do not need to be offset per District rules, but will need to be offset to satisfy CEQA requirements.

Calculations of the required ERCs are based on the distance of the project from the different sources of offsets. The Air District requires a 1.2:1 offset ratio for offsite ERCs. RECLAIM Trading Credits (RTCs) [33] and Priority Reserve offsets[34] are provided at an offset ratio of 1:1. (Ex. 45, p. 4.1-39.) Applicant has purchased sufficient RTCs in first year contracts and has entered into

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has the new source fully and legally operational at the rated capacity within 3 years; and (5) for non-municipal utilities, enters into a long-term contract with the State of California to sell at least 50% of the portion of power which it has generated using the Priority Reserve credits. (Ex. 45, p. 4.1-38; SCAQMD Rule 1309.1).

[33] RTCs are allocated to a facility on a pounds per year basis. They may be purchased on the open RECLAIM market for a period of one year or multiple years, commonly referred to as an "RTC stream." (Ex. 38, p. 3; RT, p. 68.)

[34] According to Staff, used of Priority Reserve credits will provide $8,700,000 for SCAQMD's emission reduction programs. To mitigate the project most effectively, Staff recommends that the Air District fund local Burbank area emission reduction targets such as the Burbank Airport with the funding provided by the MPP. (Ex. 45, p. 4.1-42.)

subsequent forward contracts to comply with Air District requirements. (RT, p. 68; Ex. 38, Attachment 1.)

Additional PM_{10} emissions from the cooling tower will be offset using the emission reductions that occur from the shutdown of Magnolia 3 and 4 cooling towers. Since these offsets are available onsite, they represent an offset ratio that could be as high as 2:1 to 4:1 to offset the MPP's cooling tower PM_{10} emissions. (Ex. 45, p. 4.1-41.) Staff's proposed Conditions **AQ-35** and **AQ-36** require quarterly cooling tower recirculating water quality testing reports and establish a cooling tower PM_{10} emissions limit of 30.25 lbs/day. (Ex. 45, p. 4.1-42.) Staff's proposed Condition **AQ-37** requires the project owner to document demolition of the decommissioned Magnolia 3 and 4 cooling towers, and to provide assurance that the emission reductions from the shutdown of these units will not be used for any other purpose than to offset the MPP cooling tower PM_{10} emissions. Applicant agreed to these conditions and we adopt them as part of this Decision. (Ex. 38, p. 2.)

The following Table summarizes Applicant's offset package as we understand it, which was submitted to the Air District in compliance with SCAQMD Regulation XIII. According to SCAQMD Rule 2005(b)(2), the project cannot begin operation unless it holds sufficient RTCs to offset the total facility emissions for the first year of operation at a 1-to-1 ratio and the RTCs are procured from the proper trading zone, i.e., Zone 1. (Ex. 44, p. 1.)

SUMMARY OF APPLICANT'S OFFSET PACKAGE

(Source: Exhibits 23, 33, 45, 49, 52, 53 and 54; Air Quality Tables 21 and 22)

Offset Source	Type of Credit	Credit Number[2]	Pollutant				
			NOx (lb/year)	CO (lb/day)	VOC (lb/day)	PM10 (lb/day)	SO2 (lb/day)
Coastal Zone 2004 Vintage	RTC[1]	---	90,000	---	---	---	---
Coastal Zone 2005 Vintage	RTC[1]	---	32,000	---	---	---	---
220101 Golden West Street, Huntington Beach	ERC	AQ004297	---	307	---	---	---
1801 S Atlantic Blvd, Monterey Park	ERC	AQ004573	---	12	---	---	---
Various Locations in SCAQMD, Vernon	ERC	AQ004744	---	---	111	---	---
5440 Southern Avenue, South Gate	ERC	AQ004290	---	---	123	---	---
Various Locations in SCAQMD	Priority Reserve ERC[2]	---	---	---	---	336	---
Magnolia 3 and 4 Cooling Tower Shutdown	CEQA ERC[3]	---	---	---	---	33	---
Avalon	ERC	AQ004604	---	---	---	---	14
Various Locations in SCAQMD	Priority Reserve ERC[2]	---	---	---	---	---	23
Total Provided	---	---	**122,000**	**319**	**234**	**369**	**37**
Total Required[4]	---	---	119,198	319	145	366	37[6]
Difference[5]	---	---	2,802	0	89	3	0

1 - For initial source permitting RTCs are only required for the first year of operation. RTCs will be required to be obtained for each subsequent year of operation.

2 - The Credit Numbers for CO and VOC are the current credit numbers as owned by the Applicant. The VOC Credit Numbers may be revised prior to licensing as the Applicant intends to sell unnecessary VOC credits. VOC Credit Number AQ004744 is in the process of being revised as part of the most recent transaction which has left its total value at 111 lbs/day. The Credit Number for the SO2 credit is the current owners credit number and will be revised when the purchase transaction to the Applicant is completed.

3 - Priority Reserve ERCs are purchased from the District, prior to the issuance of an Authority to Construct, at a cost of $25,000/lb for PM10 and $8,900/lb for SO2. The funds obtained from the priority reserve are provided to SCAQMD's Technical Advancement Office (TAO) for use in emission reduction programs, such as the Carl Moyer diesel replacement retrofit program and other mobile and stationary source emission reduction programs. Current SCAQMD emission reduction programs can be found at the following website address http://www.aqmd.gov/tao/.

3 - The Magnolia 3 and 4 cooling tower shutdown is being used to offset the MPP cooling tower emissions.

4 - The total required ERCs are based on the average daily facility emissions times an offset ratio of 1.2/1 for traditional ERCs, and a offset ratio of 1:1 for Priority Reserve ERCs, and CEQA ERCs. The total required RTCs are based on an estimate of the NOx emissions during the first year of operation.

5 - A zero balance means full mitigation, a negative balance indicates an offsets deficit, and a positive balance indicates offsets are available in excess of required offset levels.

6 - The SO2 ERC requirement has been recently revised as the Applicant, during their due diligence search, found 14 lbs/day of available SO2 credits. This means that the ERC requirements are 14 lbs/1.2 offset ratio for traditional ERCs + 23 lbs/day/1.0 offset ratio of priority reserve ERCs, or 37 lbs/day of ERCs to offset MPP's 35 lbs/day of emissions.

SCAQMD has certified complete emissions offsets have been identified and will be obtained for the MPP within the time required by SCAQMD rules and regulations.[35] (Ex. 54.)

6. Cumulative Impacts

Staff conducted a cumulative air quality impact analysis of five facilities in the local area including the MPP to determine whether the addition of the MPP would result in cumulative impacts to the air basin. The analysis considered the Glendale Power Plant about 2.5 miles southeast of the MPP, the new LADWP turbine about 6.0 miles to the northwest; two new boilers at Children's Hospital of Los Angeles about 5.5 miles southeast; the COB's new LM6000 turbine on the same site as the MPP' and the MPP. (Ex. 45, p. 4.1-43 et seq.) Results of the analysis are summarized in Staff's **Air Quality Table 23**.

AIR QUALITY Table 23
MPP Cumulative Modeling Analysis Maximum Impacts

Pollutant	Averaging Period	Cumulative Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Limiting Standard ($\mu g/m^3$)	Type of Standard	Percent of Standard (%)
NO_2	1-Hour	53.19	336	389	470	CAAQS	83
	Annual	1.21	84.9	86.1	100	NAAQS	86
PM_{10}	24-Hour	3.18	82	85.2	50	CAAQS	170
	Annual Geometric	0.30	40.59	40.9	30	CAAQS	136
CO	1-Hour	107.44	10,580	10,687.4	23,000	CAAQS	46
	8-Hour	37.72	8,333	8,370.7	10,000	CAAQS	84
SO_2	1-Hour	1.36	26.2	27.6	655	CAAQS	4
	3-Hour	1.23	23.6	24.8	1300	NAAQS	2
	24-Hour	0.28	18.3	18.6	105	CAAQS	18
	Annual	0.033	3.1	3.13	80	NAAQS	4

Source: Ex. 45, p. 4.1-44, Air Quality Table 23.

[35] Public Resources Code section 25523(d)(2) states: "(2) The commission may not find that the proposed facility conforms with applicable air quality standards pursuant to paragraph (1) unless the applicable air pollution control district or air quality management district certifies, prior to the licensing of the project by the commission, that complete emissions offsets for the proposed facility have been identified and will be obtained by the Applicant within the time required by the District's rules…" (Emphasis added)

As can be seen from the modeling results provided in **Table 23**, with the exception of 24-hour and annual PM_{10} violations, impacts are expected to be below the state and national standards. However, the state 24-hour and annual PM_{10} standards and the national annual PM_{10} standard are exceeded in the absence of cumulative emissions from the MPP. Also a comparison of **Air Quality Table 23** with **Table 17**, supra, shows that the cumulative PM_{10} impacts, (the impacts that exceed the project's direct impacts) are minimal. Because the Air District is classified as non-attainment for PM_{10} and violations of the state and federal ambient air quality standards continue to occur, the project's PM_{10} emissions impacts would be significant without appropriate mitigation. (Ex. 45, pp. 4.1-44 and 4.1-45.)

Staff found, however, that the PM_{10} ERCs from the Priority Reserve, the PM_{10} mitigation derived from shutting down the existing cooling towers, and the PM_{10} precursor (NO_x and SO_x) ERCs and RTCs would mitigate all project impacts (implicitly including cumulative impacts) to less than significant levels. (Ex. 45, p. 4.1-42.)

7. Environmental Justice

The evidentiary record includes a discussion of local demographics to identify potential environmental justice concerns. *See* the Socioeconomics section of this Decision. Since there are no significant unmitigated air quality impacts resulting from construction and operation of the MPP, there is no evidence of *disproportionate* air quality impacts on minority/low income populations. (Ex. 45, p. 4.1-44.) Therefore, we find there are no environmental justice issues that would require additional analysis.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. National ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) have been established for six air contaminants identified as criteria air pollutants, including sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), lead (Pb), and particulate matter less than 10 microns in diameter (PM_{10}).

2. The Magnolia Power Plant (MPP) is located in the South Coast Air Quality Management District (Air District).

3. The Air District is a nonattainment area for state and federal 1-hour ozone standards, state and federal PM_{10} standards, and state and federal CO standards; the Air District is in attainment for state and federal NO_2 and SO_2 standards.

4. Construction and operation of the project will result in emissions of criteria pollutants and their precursors.

5. Potential impacts from construction-related activities will be mitigated to insignificant levels with implementation of a Fugitive Dust Mitigation Plan and a Diesel Construction Equipment Mitigation Plan.

6. The Air District issued a Final Determination of Compliance that finds the MPP will comply with all applicable District rules for project operation.

7. The MPP will employ the best available control technology (BACT) to limit pollutant emissions by installing dry low NOx combustors, SCR technology, an oxidation catalyst, and cooling tower mist drift eliminators.

8. Project NOx emissions are limited to 2.0 parts per million (ppmvd) corrected at 15 percent oxygen over a three-hour rolling average.

9. Project CO and VOC emissions are limited to 2.0 ppmvd corrected at 15 percent oxygen over a one-hour rolling average.

10. Project ammonia slip emissions resulting from use of SCR are limited to 5 ppm.

11. Project PM_{10} emissions are limited to 18 lb/day with duct firing and 12 lb/day without duct firing.

12. Project SO_x emissions are limited to 1.71 lb/hr with duct firing and 1.31 lb/hr without duct firing.

13. To mitigate the project's violations of state and federal PM_{10} standards, the project owner has purchased SCAQMD Priority Reserve emission reduction credits (ERCs) in accordance with Rule 1309.1.

14. To mitigate cooling tower PM_{10} emissions, the project owner has purchased ERCs available from shutdown of the decommissioned Magnolia Units 3 and 4 cooling towers.

15. To mitigate the project's NOx emissions, the project owner has purchased RECLAIM Trading Credits (RTCs) and has secured forward contracts for future RTCs.

16. The Applicant's complete offset package complies with Public Resources Code, section 25523(d)(2).

17. Implementation of the Conditions of Certification, below, ensures that MPP will not result in any direct, indirect, or cumulative significant adverse impacts to air quality.

The Commission therefore concludes that implementation of the Conditions of Certification, below, and the mitigation measures described in the evidentiary record, ensures the Magnolia Power Project will conform with all applicable laws, ordinances, regulations, and standards relating to air quality as set forth in the pertinent portions of **Appendix A** of this Decision.

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CONDITIONS OF CERTIFICATION

Subsequent to issuance of the Final Determination of Compliance (FDOC), the Air District's permit numbering format was revised and some of the Conditions were resequenced. (*See* Ex. 44.) The new format is shown in the Table below. The text of the Conditions contained in the FDOC remains the same and is incorporated herein.

CALIFORNIA Energy Commission ~ SCAQMD
Conditions of Certification ~ Permit Conditions

California Energy Commission Conditions of Certification	South Coast AQMD Old permit numbering	South Coast AQMD New permit numbering
AQ-1	1-2	C1.1
AQ-2	1-3	C1.2
AQ-3	12-1	D12.1
AQ-4	12-2	D12.2
AQ-5	12-3	D12.3
AQ-6	29-1	D29.2
AQ-7	29-2	D29.1
AQ-8	29-3	D29.3
AQ-9	40-1	K40.1
AQ-10	57-1	E57.1
AQ-11	63-1	A63.1
AQ-12	67-1	K67.2
AQ-13	73-1	E73.1
AQ-14	82-1	D82.1
AQ-15	82-2	D82.2
AQ-16	99-1	A99.1
AQ-17	99-2	A99.2
AQ-18	99-4	A99.3
AQ-19	179-1	E179.1
AQ-20	179-2	E179.2

CALIFORNIA Energy Commission ~ SCAQMD Conditions of Certification ~ Permit Conditions (Continued)		
California Energy Commission Conditions of Certification	South Coast AQMD Old permit numbering	South Coast AQMD New permit numbering
AQ-21	193-2	E193.2
AQ-22	195-1	A195.2
AQ-23	195-2	A195.3
AQ-24	195-3	A195.1
AQ-25	195-6	A195.4
AQ-26	232-1	D232.1
AQ-27	296-1	I296.1
AQ-28	327-1	A327.1
AQ-29	144-1	E144.1
AQ-30	157-1	C157.1
AQ-31	193-1	E193.1
AQ-32	F9-1	F9.1
AQ-33	F24-1	F24.1

AQ-C1 The project owner/operator shall submit the resume(s) of each individual proposed to fill the Construction Mitigation Manager (CMM) position to the CEC Compliance Project Manager (CPM) for approval. One or more individuals may hold this position. The owner/operator shall be responsible for funding the costs of the CMM, however the CMM shall report directly to the CPM. The CMM shall preferably have a minimum of eight years experience as follows, however the CPM shall consider all resumes submitted regardless of experience:

- five years construction experience as a subcontractor or general contractor.
- An engineering degree or an additional five years construction experience.
- one year construction project management experience.
- two years air quality assessment experience.

The project owner/operator shall make available an onsite dedicated office for the CMM. The CMM shall be responsible for implementing all mitigation measures related to construction equipment combustion emissions, construction monitoring and enforcing the effectiveness of construction mitigation measures as outlined in Conditions of Certification **AQ-C2, AQ-C3** and **AQ-C4**. The CMM shall be onsite during all construction activities, until no longer deemed necessary by the CPM. The CMM shall be granted access to all areas of the main and linear facility construction sites. The CMM shall have the authority to stop specific construction activities on either the main or the linear facility construction sites as specified in Condition AQ-C3 (3) below. The CMM may not be terminated prior to the cessation of construction activities unless approval is granted by the CPM.

Verification: The project owner/operator shall submit the CMM resume(s) to the CPM for approval at least 60days prior to site mobilization.

AQ-C2 The project owner shall ensure that the CMM prepares and submits to the CPM for approval, a Fugitive Dust Mitigation Plan (FDMP) that specifically identifies all fugitive dust mitigation measures that will be employed during the construction of the facility. The FDMP shall be administered on site by the full-time CMM.

The FDMP shall include a schedule of each operation planned for the first two months of the project that may result in the generation of fugitive dust, including location, source(s) of fugitive dust, and proposed mitigation measures specific to each operation/source.

The construction mitigation measures that shall be addressed in the FDMP include, but are not limited to, the following:

- Identification of the employee parking area(s) and surface composition of those parking area(s)
- The frequency of watering of unpaved roads and all disturbed areas
- Application of chemical dust suppressants
- Gravel in high traffic areas
- Paved access aprons
- Sandbags to prevent run off
- Posted speed limit signs
- Wheel washing areas prior to large trucks leaving the project site
- Methods that will be used to clean tracked-out mud and dirt from the project site onto public roads

- For any transportation of solid bulk material
    1. Vehicle covers
    2. Wetting of the transported material
    3. Appropriate freeboard
- Methods for the stabilization of storage piles and disturbed areas
- Windbreaks at appropriate locations
- Additional mitigation measures to be implemented at the direction of the CMM in the event that the standard measures fail to completely control dust from any activity and/or source
- The suspension of all earth moving activities under windy conditions
- On-site monitoring devices

Protocol: In monitoring the effectiveness of all mitigation measures included in the FDMP, the CMM shall take into account the following, at a minimum:

a. Onsite spot checks of soil moisture content at locations where soil disturbance, movement and/or storage is occurring; and

b. Visual observations of all construction activities.

Protocol: The CMM shall implement the following procedures for additional mitigation measures if the CMM determines that the existing mitigation measures are not resulting in effective mitigation:

1. The CMM shall direct more aggressive application of the existing mitigation methods within 15 minutes of making such a determination.

2. The CMM shall direct implementation of additional methods of dust suppression if step #1 specified above, fails to result in adequate mitigation within 30 minutes of the original determination.

3. The CMM shall direct a temporary shutdown of the source of the emissions if step #2 specified above fails to result in adequate mitigation within one hour of the original determination. The activity shall not restart until one full hour after the shutdown. The owner/operator may appeal to the CPM any directive from the CMM to shutdown a source, provided that the shutdown shall go into effect within one hour of the original determination unless overruled by the CPM before that time.

Verification: At least 30 days prior to site mobilization, the project owner/operator shall provide the CPM with a copy of the FDMP for approval. Site mobilization shall not commence until the project owner/operator receives approval of the FDMP from the CPM.

AQ-C3 The project owner shall ensure that the CMM prepares and submits to the CPM for approval, a Diesel Construction Equipment Mitigation Plan (DCEMP) that will specifically identify diesel engine mitigation measures that will be employed during the construction phase of the main and related linear construction sites. The project owner shall ensure that the CMM will be responsible for directing implementation of and compliance with all measures identified in the DCEMP. The DCEMP shall address, at a minimum, the following mitigation measures:

- Catalyzed diesel particulate filters (CDPF)
- CARB certified ultra low sulfur diesel fuel, containing 15ppm sulfur or less (ULSD)
- Diesel engines certified to meet EPA and/or CARB 1996 or better off-road equipment emission standards
- Restricting diesel engine idle time, to the extent practical, to no more than ten minutes

The DCEMP shall include the following:

1. A list of all diesel-fueled, off-road, stationary or portable construction-related equipment to be used either on the main or the related linear construction sites. This list will initially be estimated and then subsequently be updated as specific contractors become identified. Prior to a contractor gaining access to the main or related linear construction sites, the project owner shall ensure that the CMM submits to the CPM for approval, an update of this list including all of the new contractor's diesel construction equipment.

2. Each piece of construction equipment listed under item #1 of this condition must demonstrate compliance according to the following mitigation requirements, except as noted in items #3, #4 and #5 of this condition:

Engine Size (BHP)	1996 CARB or EPA Certified Engine	Required Mitigation
< 100	NA	ULSD
> or = 100	Yes	ULSD
> or = 100	No	ULSD and CDPF, if suitable as determined by the CMM

3. If the construction equipment is intended to be on-site for ten days or less, then none of the mitigation measures identified in item #2 of this condition are required.

4. The CPM may grant relief from the mitigation measures listed in item #2 of this condition for a specific piece of equipment if the CMM can demonstrate that they have made a good faith effort to comply with the mitigation measures and that compliance is not possible.

5. Any implemented mitigation measure in item #2 of this condition may be terminated immediately if one of the following conditions exists, however the CPM must be informed within ten working days of the termination:

   5.1 The measure is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in back pressure.

   5.2 The measure is causing or is reasonably expected to cause significant engine damage.

   5.3 The measure is causing or is reasonably expected to cause a significant risk to workers or the public.

   5.4 Any other seriously detrimental cause which has approval by the CPM prior to the termination being implemented.

6. All contractors must agree to limit diesel engine idle time on all diesel-powered equipment to no more than ten minutes, to the extent practical.

Verification: The project owner shall ensure that the CMM submits a DCEMP to the CPM for approval at least 30 days prior to site mobilization. The CMM will update the initial DCEMP (if necessary), no less than ten days prior to a specific contractor gaining access to either the main or related linear construction sites. The project owner shall ensure that the CMM notifies the CPM of any emergency termination within ten working days of the termination.

AQ-C4 In addition to the above mitigation measures, the following additional mitigation measures shall be employed, as practical, during construction:

- Stepwise operation, with not all of the equipment operating at the same time wherever feasible and practical
- Construction management techniques to minimize emissions will be employed and may include the following:
- Increasing distance between emission sources;
- Phased schedule for construction activities ;

- Utilizing existing power poles rather than temporary internal combustion engine power generators; and
- Equipment may employ high pressure fuel injection system or engine timing retardation

The above mitigation measures are in addition to AQ-C2 and AQ-C3. These measures should only be used when they do not conflict with the requirements of AQ-C2 and AQ-C3, and/or to the extent that they provide additional emissions mitigation beyond that required by AQ-C2 and AQ-C3.

Verification: The project owner shall include a discussion of the implementation of these and any other emission reduction methods not specified in AQ-C2 and AQ-C3 with the Construction Fugitive Dust Mitigation Plan and the Diesel Construction Equipment Mitigation Plan as appropriate (see Verification for AQ-C2 and AQ-C3).

AQ-C5 The project owner shall ensure that the CMM submits directly to the CPM for approval (and a copy to the project owner) a report of all compliance actions taken germane to Conditions of Certification **AQ-C2**, **AQ-C3** and **AQ-C4**. The report shall include, at a minimum, the following elements::

Fugitive Dust Mitigation Monthly Report
(see Condition of Certification AQ-C2 and AQ-C4)

- A summary of each of the operation(s) planned for the following two months which may result in the generation of fugitive dust. Each description shall include a schedule, on-site location details and a list of proposed fugitive dust mitigation measures.
- A summary of all mitigation activities implemented for each fugitive dust generating operation identified in a previous report. This report should provide a summary description of the operation, the mitigation measures implemented and the estimated effectiveness of each mitigation measure.
- Details of all operation(s) requiring fugitive dust mitigation that are not identified in the previous report or the FDMP. Details shall include (at a minimum) a description of the operation, the date, duration, mitigation measures implemented, and an explanation for not reporting the operation in a previous report (or in the FDMP).
- Identification of any failures of mitigation measures and details of the actions taken to reduce the identified impacts and prevent future failures of those mitigation measures.
- Identification of any observation by the CMM of dust plumes beyond the property boundary of the main construction site or beyond an acceptable distance from the linear construction site and what actions (if any) where taken to abate the plume.

Diesel Construction Equipment Mitigation Monthly Report
(see Condition of Certification AQ-C3 and AQ-C4)

- Identification of any changes, as approved by the CPM, to the Diesel Construction Equipment Mitigation Plan from the initial report or the last monthly report including any new contractors and their diesel construction equipment.
- A copy of all receipts or other documentation indicating types and amounts of fuel purchased, from whom, where delivered and on what date for the main and related linear construction sites.
- Identification and verification of all diesel engines required to meet EPA or CARB 1996 off-road diesel equipment emission standards.
- The suitability of the use of a catalyzed diesel particulate filter for a specific piece of construction equipment is to be determined by a qualified mechanic or engineer who must submit a report through the CMM to the CPM for approval. The identification of any suitability report initiated or pursued, or the completed report, should be included in the monthly report (in the month that it was completed) as should the verification of any subsequent installation of a catalyzed diesel particulate filter.
- Identification of any observation by the CMM of exhaust plumes emanating from diesel-fired construction equipment beyond the property boundary of the main construction site or beyond an acceptable distance from the linear construction site and what actions (if any) where taken to abate the plume or future expected plumes.

Verification: The project owner shall ensure that the CMM submits directly to the CPM for approval (and a copy to the project owner), a monthly report of all compliance actions taken germane to Conditions of Certification **AQ-C2**, **AQ-C3** and **AQ-C4**. The report is due within ten working days after the end of each reporting month.

DISTRICT FINAL DETERMINATION OF COMPLIANCE CONDITIONS

1,787 MMBtu/hr Gas Turbine (ID No. D4) (A/N 386305) No. 1 GE Model PG7241FA with Dry Low NO_x combustors connected directly to a 181.1 MW Electric Generator (ID No. B5) and Heat Recovery Steam Generator (ID No. B7) with 583 MMBtu/hr Duct Burners (ID No. D6) connected to a 142 MW Steam Turbine (ID No. B8). Selective Catalytic Reduction (ID No. C10) (A/N 386306) with 1,100 cubic feet of total volume, 67 feet height, 1.33 feet long, 26 feet wide with an ammonia injection grid (ID No. B11) and CO oxidation catalyst (ID No. C9) with 360 cubic feet of total volume connected to an exhaust stack (ID No. S12) (A/N 386306) No. 1.

AQ-1 The project owner shall limit the fuel usage for the duct burner to no more than 572 MM cubic feet per year.

Verification: The project owner shall submit the fuel use data to the District and the CPM in Quarterly Operation Reports.

AQ-2 The project owner shall limit the fuel usage for the duct burner to no more than 6.86 MM cubic feet per day.

Verification: The project owner shall submit the fuel use data to the District and the CPM in Quarterly Operation Reports.

AQ-3 The project owner shall install and maintain a flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH_3).

The project owner shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-4 The project owner shall install and maintain a temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor. The project owner shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-5 The project owner shall install and maintain a pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column. The project owner shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-6 The project owner shall conduct source test(s) for the pollutant(s) identified below.

Pollutant	Method	Averaging Time	Test Location
NO_x	District Method 100.1	1 hour	Outlet of the SCR
CO	District Method 100.1	1 hour	Outlet of the SCR
SO_x	District Approved Method	District Approved Avg. Time	Fuel Sample
ROG	District Approved Method	1 hour	Outlet of the SCR
PM	District Approved Method	District Approved Avg. Time	Outlet of the SCR
NH_3	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of the SCR
Acetaldehyde	District Approved Method	District Approved Avg. Time	Outlet of the SCR
Benzene	District Approved Method	District Approved Avg. Time	Outlet of the SCR
Formaldehyde	District Approved Method	District Approved Avg. Time	Outlet of the SCR
PAH	District Approved Method	District Approved Avg. Time	Outlet of the SCR

The test shall be conducted after District approval of the source test protocol, but no later than 180 days after initial startup. The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine and steam turbine generating output in MW.

The test shall be conducted in accordance with a District approved source test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the District before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted for all pollutants 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input. In addition, tests shall be conducted when the gas turbine is operating alone at loads of 75 and 50 percent of maximum heat input for the NO_x, CO, VOC and NH_3 tests.

Verification: The project owner shall submit the proposed protocol for the initial source tests 45 days prior to the proposed source test date to the AQMD engineer, and also to the California Energy Commission Compliance Project Manager (CPM) for approval. The project owner shall notify the District and the CPM no later than 10 days prior to the proposed initial source test date and time.

AQ-7 The project owner shall conduct source test(s) for the pollutant(s) identified below.

Pollutant	Method	Averaging Time	Test Location
NH_3	District Method 207.1 and 5.3 or EPA Method 17	1 hour	SCR Outlet

The test shall be conducted and the results submitted to the District within 60 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NO_x concentration, as determined by the certified CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable or not yet certified, a test shall be conducted to determine the NO_x emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

Verification: The project owner shall submit test results to the District and CPM no later than 60 days following the source test date and notify the District and CPM no later than 7 days prior to the source test date and time.

AQ-8 The project owner shall conduct source test(s) for the pollutant(s) identified below.

Pollutant	Method	Averaging Time	Test Location
SO_x	District Approved Method	District Approved Avg. Time	Fuel Sample
ROG	District Approved Method	1 hour	SCR Outlet
PM	District Approved Method	District Approved Avg. Time	SCR Outlet

The test(s) shall be conducted at least once every three years.

The test shall be conducted and the results submitted to the District within 60 days after the test date. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.
The test shall be conducted 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration and/or monthly emissions limit.

Verification: The project owner shall submit test results to the District and CPM no later than 60 days following the source test date and notify the District and CPM no later than 10 days prior to the source test date and time.

AQ-9 The project owner shall provide to the District a source test report in accordance with the following specifications:

- Source test results shall be submitted to the District no later than 60 days after the source test was conducted.
- Emission data shall be expressed in terms of concentration (ppmv), corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM cubic feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.
- All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).
- All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.
- Source test results shall also include the oxygen levels in the exhaust, the fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

Verification: The project owner shall submit test results to the District and CPM no later than 60 days following the source test date.

AQ-10 The project owner shall vent this equipment to the CO oxidation and SCR control whenever this equipment is in operation. This condition shall not apply during the turbine commissioning period.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-11 The project owner shall limit emissions from this equipment as follows:

Contaminant	Emissions Limit
CO	7,988 LBS IN ANY 1 MONTH
PM_{10}	10,080 LBS IN ANY 1 MONTH
VOC	3,638 LBS IN ANY 1 MONTH
SO_x	1,039 LBS IN ANY 1 MONTH

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from the gas turbine and duct burner.

The project owner shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM_{10} with duct firing 7.89 lbs/MMscf, PM_{10} without duct firing 6.86 lbs/MMscf, VOC with duct firing 2.63 lbs/MMscf,

VOC without duct firing 2.62 lbs/MMscf, VOC startups 30 lbs/event, VOC shutdowns 17 lbs/event, SO_x 0.75 lbs/mmscf.

The project owner shall calculate the emission limit(s) for CO, during the commissioning period, using fuel use data and the following emission factors: 228 lbs/MMscf during the no load and part load tests when the turbine is operating at or below 60 percent load, and 14 lbs/MMscf during the mid load and full load tests when the turbine is operating at greater than 60 percent load.

The project owner shall calculate the emission limit(s) for CO, after the commissioning period and prior to the CO CEMS certification, using fuel use data and the following emission factors: 500 lbs/event for cold startups, 300 lbs/event for warm startups, 285 lbs/event for hot startups, 120 lbs/event for shutdowns, and 4.58 lbs/MMscf for all other operations.

The project owner shall calculate the emission limit(s) for CO, after the CO CEMS certification, based on readings from the certified CEMS. In the event the CO CEMS is not operating or the emissions exceed the valid upper range of the analyzer, the emissions shall be calculated in accordance with the approved CEMS plan.

Verification: The project owner shall submit the monthly fuel use data and emissions calculations to the District and the CPM in Quarterly Operation Reports.

AQ-12 The project owner shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Natural gas fuel use during the commissioning period.

Natural gas fuel use after the commissioning period and prior to CEMS certification.

Natural gas fuel use after CEMS certification.

Verification: The project owner shall report natural gas fuel use to the District and CPM in Quarterly Operation Reports.

AQ-13 The project owner may, at his discretion, choose not to use ammonia injection if any of the following requirement(s) are met:

The inlet exhaust temperature to the SCR is 450 degrees F or less, not to exceed 4 hours during a cold startup, 2.1 hours during a warm startup, 1.5 hours during a hot startup, and 0.5 hours during a shutdown.

Verification: The project owner shall submit the ammonia injection data to the District and the CPM in Quarterly Operation Reports.

AQ-14 The project owner shall install and maintain a CEMS to measure the following parameters:

- CO concentration in ppmv.
- Concentrations shall be corrected to 15 percent oxygen on a dry basis.
- The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.
- The CEMS shall be installed and operated, in accordance with an approved AQMD Rule 218 CEMS plan application. The project owner shall not install the CEMS prior to receiving initial approval from AQMD.
- The CEMS shall be installed and operated to measure CO concentration over a 15 minute averaging time period.
- The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-15 The project owner shall install and maintain a CEMS to measure the following parameters:

- NO_x concentration in ppmv.
- Concentrations shall be corrected to 15 percent oxygen on a dry basis.
- The CEMS shall be installed and operating no later than 12 months after initial startup of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial startup and the provisional certification date of the CEMS, the project owner shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). At least 14 days prior to the turbine startup date, the project owner shall provide written notification to the District of the exact date of startup.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission. The project owner shall provide written notification of startup date to the District and CPM within 14 days prior to the turbine startup date.

AQ-16 The 2.0 PPM NO_x emission limit(s) shall not apply during turbine commissioning, startup, and shutdown periods. Startup time shall not exceed 4 hours per startup and the number of startups shall not exceed one per day. Shutdown time shall not exceed 30 minutes per shutdown and the number of shutdowns shall not exceed one per day. The commissioning period shall not exceed 636 operating hours from the date of initial startup. The project owner shall provide the AQMD with written notification of the startup date. Written

records of commissioning, startups, and shutdowns shall be maintained and made available upon request from AQMD.

Verification: The project owner shall maintain records of NO_x emission limits during commissioning, startups, and shutdowns for inspection by representatives of the District, CARB, EPA and the Commission. The project owner shall provide written notification of startup date to the District and CPM within 14 days of the turbine startup date.

AQ-17 The 2.0 PPM CO emission limit(s) shall not apply during turbine commissioning, startup, and shutdown periods. Startup time shall not exceed 4 hours per startup and the number of startups shall not exceed one per day. Shutdown time shall not exceed 30 minutes per shutdown and the number of shutdowns shall not exceed one per day. The commissioning period shall not exceed 636 operating hours from the date of initial startup. The project owner shall provide the AQMD with written notification of the initial startup date. Written records of commissioning, startups, and shutdowns shall be maintained and made available upon request from AQMD.

Verification: The project owner shall maintain records of CO emission limits during commissioning, startups, and shutdowns for inspection by representatives of the District, CARB, EPA and the Commission. The project owner shall provide written notification of startup date to the District and CPM within 14 days of the turbine startup date.

AQ-18 The 37.15 LBS/MMCF NO_x emission limit(s) shall only apply during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from the initial startup date.

Verification: The project owner shall report the turbine loading conditions (as a percent of maximum), duration of loading conditions (hours), and total NO_x emissions during loading conditions (lbs) from initial commissioning to the District and CPM no later than 10 days following the termination of initial commissioning period. The project owner shall submit total NO_x emissions reports to the District and CPM in Quarterly Operation Reports.

AQ-19 For the purpose of the following condition number(s) continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

- Condition **AQ-3**
- Condition **AQ-4**

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-20 For the purpose of the following condition number(s) continuously record shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

- Condition **AQ-5**

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-21 This equipment must be fully and legally operational at the rated capacity within three years of the Permit to Construct issuance date, unless extended in writing by the Executive Officer, or otherwise the PM_{10} ERCs in the amount of 336 lbs/day shall revert back to the AQMD Priority Reserve account and the project owner shall not operate this equipment until PM_{10} ERCs are provided by the project owner to the AQMD in the amount of 403 lbs/day.

Verification: Within 15 days prior to becoming fully and legally operational, the project owner shall submit to the District and CPM documentation substantiating that the date of becoming fully operational will be within 3 years of obtaining the Permit to Construct; or shall otherwise provide the required PM_{10} ERCs to the District, and documentation of these ERCs to the CPM prior to becoming fully and legally operational.

AQ-22 The 2.0 PPMV NO_x emission limit is averaged over 3 hours at 15 percent oxygen, dry.

Verification: The project owner shall submit to the District and CPM CEMS data and emissions calculations to demonstrate compliance for the NO_x limits in Quarterly Operation Reports.

AQ-23 The 2.0 PPMV CO emission limit is averaged over 1 hour at 15 percent oxygen, dry.

Verification: The project owner shall submit to the District and CPM CEMS data and emissions calculations to demonstrate compliance for the CO limits in Quarterly Operation Reports.

AQ-24 The 5 PPMV NH_3 emissions limit is averaged over 1 hour at 15 percent oxygen, dry.

Verification: The project owner shall submit to the District and CPM emissions calculations to demonstrate compliance for the NH_3 limits in Quarterly Operation Reports.

AQ-25 The 2.0 PPMV VOC emission limit is averaged over 60 minutes at 15 percent oxygen, dry.

Verification: The project owner shall submit to the District and CPM emissions calculations to demonstrate compliance for the VOC limits in Quarterly Operation Reports.

AQ-26 The project owner shall install, operate, and maintain an approved Continuous Emission monitoring Device, approved by the District's Executive Officer, to monitor and record ammonia concentrations, and alert the project owner (via audible or visible alarm) whenever ammonia concentrations are near, at, or in excess of the permitted ammonia limit of 5 ppmv, corrected to 15% oxygen. It shall continuously monitor, compute and record the following parameters;

- Ammonia concentration, uncorrected in ppmv.
- Oxygen concentration in percent.
- Ammonia concentration in ppmv, corrected to 15% oxygen.
- Date, time, extent (in time) of all excursions above 5 ppmv, corrected to 15% oxygen.

The Continuous Emission Monitoring Device described above shall be operated and maintained according to a Quality Assurance Plan (QAP) approved by the Executive Officer. The QAP must address contingencies for monitored ammonia concentrations near, at or above the permitted compliance limit, and remedial actions to reduced ammonia levels once an exceedance has occurred.

The Continuous Emission Monitoring Device may not be used for compliance determination or emission information determination without corroborative data using an approved reference method for the determination of ammonia.

The Continuous Emission Monitoring Device shall be installed and operating no later than 90 days after initial startup of the turbine.

Verification: The project owner shall submit to the District and CPM emissions calculations to demonstrate compliance for the ammonia limits in Quarterly Operation Reports.

AQ-27 This equipment shall not be operated unless the project owner demonstrates to the District's Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the project owner demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

Verification: The project owner shall submit to the District and CPM records of all RTCs held for the Magnolia Power Project facility prior to first fire and then annually in the fourth Quarterly Operation Report.

AQ-28 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

Verification: The project owner shall to the District and CPM submit combustion contaminant emissions (concentration and mass rate) in the Quarterly Operation Reports.

The following Conditions of Certification pertain to the following equipment: 12,000 gallon Ammonia Storage Tank (ID No. D1) (A/N 386307)

AQ-29 The project owner shall vent this equipment, during filling, only to the vessel from which it is being filled.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-30 The project owner shall install and maintain a pressure relief valve set at 25 psig.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

The following Conditions of Certification applies to all permit units.

AQ-31 The project owner shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Final Energy Commission Decision for 01-AFC-6.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

The following Conditions of Certification are Facility Conditions

AQ-32 Except for open abrasive blasting operations, the project owner shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the Commission.

AQ-33 Accidental release prevention requirements of Section 112(r)(7):

a) The project owner shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the District's Executive Officer, as part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).
b) The project owner shall submit any additional relevant information requested by the District's Executive Officer or designated agency.

Verification: The project owner shall submit to the District and the CPM the documents listed above in (a) and (b) as part of an annual compliance certification.

OPERATION CONDITIONS

AQ-34 The project owner shall provide emission reduction credits to offset turbine and duct burner CO, VOC, SO_2 and PM_{10} emissions as specified by the District. Additionally, the project must be fully and legally operational at the rated capacity within three years of the Permit to Construct issuance date, unless extended in writing by the Executive Officer, or otherwise any SO_2 priority reserve ERCs shall revert back to the AQMD Priority Reserve account and the project owner shall not operate this equipment until SO_2 ERCs are provided by the project owner to the AQMD in the amount of 42 lbs/day.

Verification: The project owner shall submit to the CPM records showing that the project's District regulated emission reduction credit requirements have been met 15 days prior to initiating construction for Priority Reserve emission reduction credits, and 30 days prior to turbine first fire for traditional emission reduction credits.

AQ-35 The project owner shall perform quarterly cooling tower recirculating water quality testing for total solids content (total dissolved and undissolved solids). The project owner shall also provide a flow meter to determine the daily cooling tower circulating water flow.

Verification: The project owner shall submit to the CPM cooling tower recirculating water quality tests and daily recirculating water flow in the Quarterly Operation Reports.

AQ-36 The cooling tower daily PM_{10} emissions shall be limited to 30.25 lbs/day. The project owner shall estimate daily PM_{10} emissions from the cooling tower using the water quality testing data and daily recirculating water flow data. The emission calculation used to show compliance with this condition will be based on the following equation:

DWRR x TSC x 0.000006 drift frac. x 8.34 lbs/gallon / 1,000,000 = Daily PM_{10} Emissions

Where: DWRR = Daily Water Recirculation Rate (gallons)
TSC = Total Solids Content (TSS + TDS in ppm by weight)

Verification: The project owner shall submit to the CPM daily cooling tower PM_{10} emission estimates in the Quarterly Operation Reports.

AQ-37 The project owner shall provide, for CEQA mitigation, an assurance from the City of Burbank, a SCPPA member, that they will not seek to use the emission reductions resulting from the shutdown of the Magnolia 3 and 4 cooling towers in any form other than for the CEQA mitigation for the MPP cooling tower. Additionally, the project owner shall provide documentation assuring that the Magnolia 3 and 4 cooling towers have been removed and not replaced by other cooling tower(s) that would serve the existing City of Burbank power boilers and turbines.

Verification: The project owner shall provide, to the CPM 15 days prior to initiating construction, a letter from the City of Burbank documenting that the Magnolia 3 and 4 cooling towers have been removed from the Magnolia site, that these cooling towers have not been replaced by other cooling tower(s) at the site, and that they will not use the emission reductions resulting from the shutdown from the Magnolia 3 and 4 cooling towers for any other purpose than the CEQA mitigation proposed for the MPP cooling tower.

AQ-38 The project owner shall compile quarterly operating reports containing the operating and emission estimation data as required in Conditions **AQ-1** through **AQ-37**.

Verification: The project owner will submit to the District and the CPM the Quarterly Operation Reports within 30 calendar days of the end of each calendar quarter.

AQ-39 The project owner shall submit to the CPM for review and approval any modification proposed by either the project owner or issuing agency to any project air permit.

Verification: The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The

project owner shall submit all modified air permits to the CPM within 15 days of receipt.

B. PUBLIC HEALTH

The public health analysis supplements the previous discussion on air quality and considers the potential public health effects from project emissions of toxic air contaminants. In this analysis, the Commission determines whether such emissions will result in significant adverse public health impacts that violate standards for public health protection.[36]

Summary and Discussion of the Evidence

Project construction and operation will result in routine emissions of toxic air contaminants (TACs). These substances are categorized as noncriteria pollutants because there are no ambient air quality standards established to regulate their emissions.[37] In the absence of standards, state and federal regulatory programs have developed a health risk assessment procedure to evaluate potential health effects from TAC emissions.[38] The Air Toxics "Hot Spots" Information and Assessment Act requires the quantification of TACs from specified facilities that are categorized according to their emissions levels and proximity to sensitive receptors. (Health and Safety Code, § 44360 et seq.)

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[36] This Decision addresses other potential public health concerns in the following sections. The accidental release of hazardous materials is discussed in **Hazardous Materials Management** and **Worker Safety and Fire Protection**. Electromagnetic fields are discussed in the section on **Transmission Line Safety and Nuisance**. Potential impacts to soils and surface water sources are discussed in the **Soil and Water Resources** section. Hazardous and non-hazardous wastes are described in **Waste Management**.

[37] Criteria pollutants are discussed in the Air Quality section. They are pollutants for which ambient air quality standards have been established by local, state, and federal regulatory agencies. The emission control technologies that the project owner will employ to mitigate criteria pollutant emissions are considered effective for controlling noncriteria pollutant emissions from the same source. (Ex. 1, §§ 5.16.2.5. and 5.16.2.7.)

[38] The health risk assessment protocol is set forth in the Air Toxics "Hot Spot" Program Risk Assessment Guidelines developed by the California Air Pollution Control Officers Association (CAPCOA) pursuant to the Air Toxics "Hot Spots" Information and Assessment Act, AB 2588 (Health and Safety Code, § 44360 et seq.). (Ex. 1, § 5.16.2.2.)

1. Health Risk Assessment

Applicant performed a health risk assessment that was reviewed by Staff and the South Coast Air Quality Management District (Air District). Applicant's risk assessment employed scientifically accepted methodology that is consistent with the CAPCOA Guidelines and with methods developed by the California Office of Environmental Health Hazard Assessment (OEHHA). (Ex. 1, § 5.16.2.2.2 et seq.; Ex. 45, p. 4.7-13.) This approach emphasizes a worst-case "screening" analysis to evaluate the highest level of potential impact. Applicant included the following steps in its analysis:

- A hazard identification was performed to determine pollutants of concern associated with the turbine operations;
- An exposure assessment was performed that included toxic air contaminant emission calculations and the simulation of pollutant transport using atmospheric dispersion modeling; and
- A risk characterization was performed analyzing potential health risks from these calculated exposures, which included identifying the location of maximum cancer and non-cancer health risks.

Subsequent to identifying the locations of maximum impact, a multi-pathway analysis was performed for the maximum impact and sensitive receptor locations. The multi-pathway analysis included the inhalation pathway, dermal (skin) absorption, ingestion of soil with deposited pollutants, and exposure to pollutants potentially in mother's milk. (Ex. 1, § 5.16.2.2.3.)

The risk assessment addresses three categories of health impacts: acute (short-term), chronic (long-term), and carcinogenic health effects. (Ex. 1, § p. 5.16-3 et seq.; Ex. 45, p 4.7-4.)

Regulatory agencies use the hazard index method to assess the likelihood of acute or chronic non-cancer effects. In this approach, the hazard index is a numerical representation of the likelihood of significant health impacts at the

reference exposure levels (RELs) expected for the source in question. After calculating the hazard indices for the individual pollutants,[39] these indices are added together to obtain a total hazard index. A total hazard index of 1.0 or less is considered an insignificant effect. (Ex. 45, p. 4.7-4, Ex. 1, p. 5.16-6.)

Potential cancer risk is calculated by multiplying the exposure estimate by the potency factors for the individual carcinogens involved.[40] The chief exposure assumption is one of continuous exposure (at maximum emission rates) over a 70-year period at each identified receptor location. When combined with EPA-approved dispersion modeling methodologies, the use of OEHHA cancer potency factors and OEHHA and CAPCOA RELs, this provides an upper bound estimate of the potential risks. Actual risks are not expected to be any higher than the predicted risks and are likely substantially lower. (Ex. 3, §§ 5.16.2.2.3 and 5.16.2.4; Ex. 1, p. 5.16-11.) Project emissions were calculated based on the Air District's updated air toxic emission factors, which were developed for AB 2588 Toxic "Hot Spots" source test data.[41] (Ex. 1, p. 5.16-7; Ex. 3, § 5.16.2.4.) Energy Commission staff considers a potential cancer risk of ten in a million as the level of significance.[42] (Ex. 45, p. 4.7-4; RT, pp. 87-88.) Since Staff calculated a

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[39] The project's noncriteria pollutants that were considered in analyzing non-cancer effects include: ammonia, used for the SCR system for NOx control, acetaldehyde, acrolein, benzene, 1,3 butadiene; ethylbenzene, formaldehyde, hexane, naphthalene, polycyclic aromatic hydrocarbons (PAHs), propylene oxide, toluene, and xylenes. (Ex. 1, § 5.16, Table 5.16-1 as revised in Ex. 3; Ex. 45, p. 4.7-10.)

[40] The following noncriteria pollutants were considered with regard to possible cancer risk: acetaldehyde, benzene, 1,3 butadiene, formaldehyde, PAHs and propylene oxide. (Ex. 1, § 5.16, Table 5.16-1.)

[41] The AFC Supplement (Exhibit 3) indicates that the Air District's guidance for gas turbine emission factors had changed since completion of Applicant's initial HRA in the original AFC. Exhibit 3 incorporates the updated emission factors.

[42] Under the Air Toxics "Hot Spots" and the Proposition 65 programs, a risk of 10 in a million is considered significant and used as a threshold for public notification. The Proposition 65 significance level applies separately to each cancer-causing substance, whereas Staff determines significance based on the total risk from all cancer-causing chemicals. The Air District allows an incremental risk of 10 in a million for a source such as MPP where the best available control technology for air toxics (T-BACT) is used. (Ex. 45, p. 4.7-4; Ex. 1, p. 5.16-6.)

maximum cancer risk for the MPP of 1.15 in a million, the risk from project operation was determined to be less than significant since it is below Staff's significance threshold level. Staff notes that its total project cancer risk includes the risk not only from combustion products, but also from the cooling tower. (Ex. 58, p. 3.)

2. Potential Impacts

Applicant used a five-mile radius of the site to locate sensitive receptors (schools, day care centers, hospitals). (Ex. 1, Appendix P.) Applicant then applied the USEPA-approved ISCST3 air dispersion model to identify ground-level concentrations in all terrain settings based on one year of meteorological data. To identify points of maximum impact, Applicant employed a multi-scale grid of receptors. Near the MPP site, receptors were placed along the property boundary at 25-meter increments. Additional receptors were placed in 50-meter increments to a distance of approximately one kilometer and at 250-meter increments to a distance of 10 kilometers. (Ex. 1, p. 5.16-11.) The modeling results were incorporated into the health risk analysis established in the AB 2588 model. (*Ibid*.)

The Air District's Rule 1401 specifies limits for maximum individual cancer risk (MICR) from a project. Section 1401(d)(1) establishes an MICR of 1.0×10^{-6} in a million for sources without T-BACT, which applies only to those sources that are permitted by the District. The project's MICR as calculated by the District is $.93 \times 10^{-6}$ (this calculation includes the project's oxidation catalyst, which is T-BACT, but does not include the cooling tower since it is not permitted by the District). Thus, MPP would comply with Rule 1401 without further mitigation. Staff maintains that its significance threshold of 10.0×10^{-6} is consistent with the District's rules because Staff's level includes all sources with T-BACT. (Ex. 58, pp. 3-4.) Since the project complies with Rule 1401, we are satisfied that potential cancer risks from the project are not significant.

a. Construction Phase

The construction phase is expected to take approximately 24 months.[43] Potential construction-related public health impacts are due to (1) windblown dust from site grading and other construction-related activities, and (2) diesel fuel emissions from heavy equipment and vehicles used in construction. (Ex. 45, pp. 4.7-13 and 4.7-14; Ex. 1, § 5.16.2.1.) Since the L.A. air basin experiences violations of the state 24-hour PM10 standard as described in the **Air Quality** section, Condition of Certification **AQ-C3** requires the project owner to use low-sulfur diesel fuel and to install soot filters on stationary diesel equipment to reduce particulate matter, carbon monoxide, and hydrocarbon emissions. Use of low-sulfur diesel fuel and soot filters will minimize the potential for adverse health effects during construction activities. Condition **AQ-C2** requires the project owner to implement a Fugitive Dust Mitigation Plan to reduce the potential for adverse health effects from dust inhalation.

Applicant's Limited Phase II Environmental Site Assessment (ESA) revealed contaminated soils where the site will be excavated for the project. (Ex. 45, p. 4.7-7; *see* **Waste Management** section.) SCPPA has entered in a Voluntary Clean-up Agreement (VCA) with the DTSC and Condition of Certification **WASTE-5** requires the project owner to prepare a Preliminary Endangerment Assessment prior to site mobilization and implement Further Action as required by DTSC. (Ex. 55; Ex. 56) These mitigation measures reduce to insignificant levels the potential for adverse health effects from exposure to contaminated soils. (Ex. 45, pp. 4.7-8 and 4.7-9.)

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[43] According to Applicant, no significant public health effects are expected during construction since construction-related emissions are temporary and localized. (Ex. 1, § 5.16.2.1.) All predicted maximum concentrations of pollutants from construction vehicles and equipment will

b. Operation

TACs emitted in combustion byproducts from the project's exhaust stacks have the potential to cause adverse health effects. TACs from the cooling tower originate from contaminants in the cooling source water (reclaimed water from the BWRP) that become entrained in liquid water droplets emitted as cooling tower drift. Public concern about viruses and bacteria in reclaimed water is also a factor. (Ex. 45, pp. 4.7-9 and 4.7-10.) Staff confirmed that the MPP would follow regulatory protocol for use of reclaimed water in cooling towers, which requires: (1) use of disinfected tertiary recycled water; (2) installation of a drift eliminator; and (3) a chlorine or other biocide to treat the circulating water to minimize the growth of micro-organisms. (*Id*. at pp. 4.7-11 and 4.7-12; Tit. 20 Cal. Code Regs., § 60306.)

At the February 24, 2003, hearing, Staff filed Supplemental Testimony concerning potential impacts from the growth of Legionella bacteria and other micro-organisms in cooling tower operations. Legionella is a type of bacteria that grows in water and causes Legionellosis (Legionnaires' disease) Emissions from untreated or inadequately treated cooling systems have been correlated with outbreaks of Legionellosis. (Ex. 59, p. 2.) The California Department of Health Services requires the use of biocides to reduce the growth of Legionella and other bacteria in cooling systems using recycled water. (Tit. 22 Cal. Code of Regs., § 60306) To minimize risk from Legionella, Staff proposed a Condition of Certification that would require the project owner to implement a Cooling Water Management Plan consistent with the recommendations of the Cooling Technology Institute. (Ex. 59, p. 3.) We agree with these concerns and have adopted Condition of Certification **Public Health-1**, which incorporates Staff's proposal. SCPPA has no objection to the new Condition. (2/24/03 RT.)

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occur at locations along the immediate property boundary, resulting in no long-term impacts to the public. (*Ibid*.)

Applicant calculated a *chronic* non-cancer hazard index of 0.02 for all project emissions at the maximum impact location approximately 1.8 kilometers northwest of the site. (Ex. 3, § 5.16.2.3.2; Ex. 1, § 5.16.2.3.1.) Applicant calculated an *acute* non-cancer hazard index for all project emissions of 0.095 at the same maximum impact location. (*Ibid*.)

The evidence establishes that these indices are below the levels of potential health significance, indicating that no significant adverse health effects would likely be associated with the project's noncriteria pollutants. (Ex. 1, § 5.16.2.3.2.) The highest incremental lifetime cancer risk from all project sources was estimated at 1.15 in a million at the maximum impact location. (Ex. 3, § 5.16.2.3.1.) This risk value is below Staff's significance level. It is also below the Air District's acceptable significance level for sources such as MPP. In compliance with the Air District's requirements, Applicant also modeled emission sources separately. The calculated cancer risk from the combustion turbine and the cooling tower are 0.93 in a million and 0.28 in a million, respectively. (*Ibid*.)

The health risk assessment results are shown below in Applicant's Table 5.16-2, which includes all project emissions plus those resulting from the zero liquid discharge process, as incorporated in the AFC Supplement (Exhibit 3.)

Table 5.16
Health Risk Assessment Results

Health Effects	**Total Project Emissions**	**Combustion Turbine**	**Cooling Tower**
Maximum Cancer Risk	1.15 in one million	0.93 in one million	0.284 in one million
Maximum Chronic Hazard Index	0.0197	0.0196	0.000105
Maximum Acute Hazard Index	0.0952	0.0952	0.000223

Source: Ex. 3, p. 5.16-5, Table 5.16-2.

3. Cumulative Impacts

When toxic pollutants are emitted from multiple sources within a given area, the cumulative or additive impacts of such emissions could lead to significant health impacts, even when such pollutants are emitted at insignificant levels from the individual sources involved. Analyses of such emissions have shown, however, that the peak impacts of such toxic pollutants are normally localized within relatively short distances from the source. Toxic pollutant levels beyond the point of maximum impact normally fall within ambient background levels.

In this case, the maximum cancer risk is 1.15 in one million at a location about 1.8 kilometers from the site. By comparison, the Air District estimated that the Los Angeles Basin average lifetime cancer risk for inhalation of ambient air is 1,400 in one million based on 1998-1999 ambient average concentration data. (Ex. 45, p. 4.7-15; RT, p. 86.) According to Staff, the modeled MPP-related health risks were lower at all other locations and actual risks are expected to be even lower since worst-case estimates are based on conservative assumptions. (Ex. 45, p. 4.7-15.) Staff therefore concluded that the incremental impact of the health risk potential posed by the MPP would not be significant or cumulatively considerable. (*Ibid*.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. Potential construction-related adverse health effects from contaminated soils, diesel emissions, and fugitive dust will be mitigated to insignificant levels.

2. Normal operation of the project will result in the routine release of criteria and noncriteria pollutants that have the potential to adversely impact public health.

3. Emissions of criteria pollutants, which are discussed in the Air Quality section of this Decision, will be mitigated to levels consistent with applicable standards.

4. Applicant performed a health risk assessment, using well-established scientific protocol, to analyze potential adverse health effects of noncriteria pollutants emitted by MPP.

5. There are sensitive receptors within a five-mile radius of the project site.

6. The point of maximum impact for toxic contaminant dispersion is located about 1.8 kilometers northwest of the site.

7. Acute and chronic non-cancer health risks from project emissions during construction and operational activities are insignificant.

8. With implementation of the required T-BACT mitigation measures for air toxics, the potential risk of cancer from project emissions is insignificant.

9. The project owner will implement a Cooling Water Management Plan in accordance with applicable LORS to minimize the potential for growth of Legionella bacteria and other micro-organisms in cooling tower emissions.

10. Project emissions will not result in adverse effects to public health since the project is designed to comply with applicable LORS and is therefore presumed consistent with CEQA requirements.

11. There is no evidence of cumulative public health impacts from project emissions.

The Commission therefore concludes that project emissions of noncriteria pollutants do not pose a significant direct, indirect, or cumulative adverse public health risk. All Conditions of Certification that control project emissions are specified in the **Air Quality** section of this Decision, except for Condition of Certification **Public Health-1**, below. Compliance with Condition of Certification **Public Health-1** will minimize the potential risk of bacterial exposure from cooling tower emissions to insignificant levels.

CONDITIONS OF CERTIFICATION

Public Health-1 The project owner shall develop and implement a Cooling Water Management Plan to minimize the potential for bacterial growth in cooling water. The

Plan may include weekly monitoring of biocide and chemical biofilm prevention agents, periodic maintenance of the cooling water system to remove bio-film buildup, and testing to determine the concentrations of Legionella bacteria in the cooling water.

Verification: At least 60 days prior to the commencement of cooling tower operations, the Cooling Water Management Plan shall be submitted to the CPM for review and approval.

C. WORKER SAFETY AND FIRE PROTECTION

Industrial workers are exposed to potential health and safety hazards on a daily basis. This analysis reviews whether Applicant's proposed health and safety plans are designed to protect industrial workers and provide adequate fire protection and emergency response in accordance with all applicable laws, ordinances, regulations, and standards (LORS).

Summary and Discussion of the Evidence

1. Potential Impacts to Worker Safety

During construction and operation, workers may be exposed to chemical spills, hazardous wastes, fires, gas explosions, moving equipment, live electric conductors, confined space entry and egress problems, and exposure to contaminated soils.[44] (Ex. 1, Table 5.17-1; Ex. 45, p. 4.14-4.) Exposure to these hazards can be minimized through adherence to appropriate design criteria and administrative controls, use of personal protective equipment (PPE), and compliance with applicable LORS.[45] (Ex. 1, § 5.17.2.1.)

2. Mitigation Measures

Applicant will develop and implement a "Demolition and Construction Safety and Health Program" and an "Operation Safety and Health Program," both of which

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[44] The project owner has finalized a Voluntary Cleanup Agreement with DTSC and will complete a Preliminary Endangerment Assessment, which will be reviewed by DTSC to determine the necessary Further Action prior to site mobilization consistent with Condition **WASTE-5** in the Waste Management section of this Decision. (Ex. 55; Ex.56)

[45] California Occupational Health and Safety Administration (Cal/OSHA) regulations (Cal. Code of Regs., tit. 8, § 1500 et seq.) and other applicable federal, state, and local laws affecting industrial workers are identified in Appendix A of this Decision. (*See* Ex. 45, pp. 4.14-1 through 4.14-3 and 4.14-5 et seq.; Ex. 1, Appendix M.)

must be reviewed by the appropriate agencies prior to project demolition/construction and operation. (Ex. 1, §§ 5.17.2.1.1, 5.17.2.1.2; Ex. 45, pp. 4-14-5 et seq.) Separate Injury and Illness Prevention Programs, Personal Protective Equipment Programs, Exposure Monitoring Programs, Emergency Action Plans, Fire Protection and Prevention Plans, and other general safety procedures will be prepared for both the demolition/construction and operation phases of the project. (*Ibid.*; Ex. 1, Appendix M.) These comprehensive programs will contain more specific plans dealing with the site and ancillary facilities, such as the Emergency Action Plan, as well as additional programs under the General Industry Safety Orders, Electrical Safety Orders, and Unfired Pressure Vessel Safety Orders. (*Ibid.*) Conditions **Worker Safety-1** and **Worker Safety-2** require the project owner to consult with Cal/OSHA, as appropriate, and the City of Burbank (COB) Fire Department to ensure that these programs comply with applicable LORS.

3. Fire Protection and Prevention Plans

The project will include comprehensive onsite fire protection and suppression systems as first line defense in the event of fire. (Ex. 1, § 3.4.10 and p. 5.17-6 et seq.) To ensure that the fire protection and suppression systems comply with current standards, the City of Burbank Fire Department must approve the project's Demolition and Construction Fire Protection and Prevention Plan prior to the start of demolition activities. (Ex. 1, p. 5.17-14 et seq.; Ex. 45, p. 4.14-10.) *See* Condition **Worker Safety-1.** The Fire Department will also conduct the final inspection when construction is complete as well as periodic fire and safety inspections thereafter. (*Ibid.*) In addition, the project's insurance carrier will provide annual inspections by a fire protection specialist. (*Ibid.*) Condition **Worker Safety-2** requires the project owner to provide a Fire Safety and Prevention Program for the COB Fire Department review prior to the start of project operation.

The COB Fire Department will provide fire and emergency services for major fires as described in the Fire Protection and Prevention Plans. First responder fire suppression support will be provided by COB Fire Station 11 on Orange Grove Avenue less than one mile from the project site, with an expected response time of 3 minutes. Additional fire suppression support will be provided by COB Fire Station 14, located in the 2300 block of Burbank Boulevard about 1.5 miles from the site with a response time of 4 minutes, and Station 15 at 1420 W. Vertigo Street with a response time of 3 to 4 minutes. The project owner will provide information to the local fire response units regarding the type and location of potential fire hazards at the site. (Ex. 1, p. 5.17-8; Ex. 45, p. 4.14-4.)

The fire response units also need first responder hazardous materials (HAZMAT) capabilities in the event of releases or potential releases of hazardous substances. Staff's expert witness reported that COB Fire Station 12, located at 644 North Hollywood Way with a response time of 5 to 6 minutes, is the assigned HAZMAT first responder. (Ex. 45, p. 4.14-4.) Station 12 has 24-hour HAZMAT capabilities, a HAZMAT engine, and trained personnel. In the event of a major HAZMAT catastrophe, the Los Angeles County Hazardous Materials Programs Division would be contacted by the Fire Department to provide support. (*Ibid.*)

Staff reviewed the potential for MPP-related activities to result in cumulative impacts on the response capabilities of the COB Fire Department. (Ex. 45, p. 4.14-10.) The Fire Department indicated that its staffing and equipment are adequate to respond to any incident at the MPP without affecting service to other facilities in the area. Staff therefore concluded that the project would not cause any significant incremental burden on the Fire Department's emergency response capabilities. (*Ibid.*)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. Industrial workers are exposed to potential health and safety hazards on a daily basis.

2. To protect workers from job-related injuries and illnesses, the project owner will implement comprehensive Safety and Health Programs for both the demolition/construction and operation phases of the project; each of the programs will include an Injury/Illness Prevention Program, a Personal Protective Equipment Program, an Exposure Monitoring Program, an Emergency Action Plan, a Fire Protection and Prevention Plan, and other general safety procedures.

3. The MPP will include onsite fire protection and suppression systems for first line defense in the event of fire.

4. The City of Burbank (COB) Fire Department will provide fire protection and emergency response services to the project.

5. COB Fire Station 11, located about one mile from the project site, is the assigned first responder to the MPP with a response time of about 3 minutes. COB Fire Stations 14 and 15 will provide backup emergency response to the MPP site with 3-to-4 minute response times.

6. COB Fire Station 12 is the assigned HAZMAT first responder with a response time of 5 to 6 minutes.

7. Existing fire and emergency service resources are adequate to meet project needs.

8. The MPP will not result in cumulative impacts to the COB Fire Department's emergency response capabilities.

9. Implementation of the Conditions of Certification, below, and the mitigation measures described in the evidentiary record will ensure that the project conforms with all applicable laws, ordinances, regulations, and standards on industrial worker health and safety as identified in the pertinent portions of **Appendix A** of this Decision.

The Commission therefore concludes that implementation of the project owner's Safety and Health Programs and Fire Protection measures will reduce potential adverse impacts on the health and safety of industrial workers to levels of insignificance.

CONDITIONS OF CERTIFICATION

WORKER SAFETY-1 The project owner shall submit to the Compliance Project Manager (CPM) a copy of the Project Demolition and Construction Safety and Health Program, containing the following:

Demolition and Construction Injury and Illness Program;
Demolition and Construction Personal Protective Equipment Program;
Demolition and Construction Exposure Monitoring Program;
Demolition and Construction Emergency Action Plan; and
Demolition and Construction Fire Protection and Prevention Plan.

The Injury and Illness Program, the Personal Protective Equipment Program, and the Exposure Monitoring Program shall be submitted to the CPM for review and comment concerning compliance of the program with all applicable Safety Orders. The Demolition and Construction Fire Protection and Prevention Plan and Emergency Action Plan shall be submitted to the City of Burbank Fire Department for review and comment prior to submittal to the CPM.

Verification: At least 30 days prior to the start of demolition, the project owner shall submit to the Cal/OSHA Consultation Service, for review and comment and shall submit to the CPM for review and approval a copy of the Project Demolition and Construction Safety and Health Program. The project owner shall provide a letter from the City of Burbank Fire Department stating that they have reviewed and commented on the Demolition and Construction Fire Protection and Prevention Plan Emergency Action Plan.

WORKER SAFETY-2 The project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety and Health Program containing the following:

Operation Injury and Illness Prevention Plan;
Emergency Action Plan;
Hazardous Materials Management Program;
Fire Protection and Prevention Program (8 CCR § 3221); and
Personal Protective Equipment Program (8 CCR §§ 3401-3411).

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the Cal/OSHA Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Operation Fire Protection Plan and the Emergency Action Plan shall also be submitted to the City of Burbank Fire Department for review and comment.

Verification: At least 30 days prior to the start of operation, the project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety & Health Program.

D. HAZARDOUS MATERIALS MANAGEMENT

This analysis considers whether the construction and operation of the Magnolia Power Project will create significant impacts to public health and safety resulting from the use, handling, or storage of hazardous materials at the facility. Related issues are addressed in the **Waste Management**, **Worker Safety**, and **Traffic and Transportation** portions of this Decision.

Summary and Discussion of the Evidence

Several locational factors affect the potential for project-related hazardous materials to cause adverse impacts, including local meteorological conditions, terrain characteristics, any special site factors, and the proximity of population centers and sensitive receptors. The evidence of record incorporates these factors in the analysis of potential impacts. (Ex. 1, § 5.15.2.4.3 et seq.; Ex. 45, p. 4.4-4.)

1. Potential Impacts

Staff's Appendix B (AFC Table 5.15-1) appended to Condition of Certification **HAZ-1** lists the hazardous materials that will be used and stored onsite including aqueous ammonia, sulfuric acid, hydrochloric acid (aqueous sodium hypochlorite), and cyclohexylamine (neutralizing amine), which are deemed *acutely hazardous*. None of these materials, however, will be used or stored in excess of regulated threshold quantities under the California Accidental Release Prevention (CalARP) Program[46] except for aqueous ammonia. (Ex. 1, § 5.15.2.3.2.) The other substance of concern is natural gas, which will be used in

[46] The CalARP Program includes both federal and state programs established to prevent accidental release of regulated toxic and flammable substances. (CA Health & Safety Code, § 25531 et seq.; Cal. Code of Regs., tit. 19, § 2720 et seq.) Regulated substances are those stored or used in amounts exceeding threshold planning quantities (TPQs) that would require the filing of a Risk Management Plan under the CalARP program. (Ex. 1, § 5.15.2.3.2.).

large quantities but not stored onsite. (*Id*., § 5.15.3.1.) Potential impacts from other gases currently stored onsite are not considered significant since quantities are limited, incompatible gases are stored separately, and appropriate storage containers are maintained in accordance with applicable law. No significant changes are expected with the addition of the MPP. (*Ibid.*)

Hazardous substances used or stored onsite in small quantities, such as mineral and lubricating oils, scale inhibitors, solvent, and water conditioners do not create the potential for significant offsite impacts due to their limited quantities, relatively low toxicity, and/or low environmental mobility. (Ex. 45, p. 4.4-6; Ex. 1, §§ 5.15.2.2, 5.15.2.2.3, 5.15.3.1.) Diesel fuel, which will be present in large quantities during construction, exhibits very low volatility and impacts from accidental spills are expected to remain onsite. Sodium hypochlorite, used for cooling water treatment, will be stored onsite as an aqueous mixture to reduce volatility. The potential for accidental spills during transfer from delivery vehicles to storage tanks will be reduced to insignificance by implementation of the Safety and Management Plan required by Condition of Certification **HAZ-3**. (Ex. 45, p. 4.4-6.)

Condition of Certification **HAZ-1** prohibits the project owner from using any hazardous materials not listed in Appendix B or in greater quantities than those identified in Appendix B without prior approval of the Energy Commission's Compliance Project Manager.

a. Aqueous Ammonia

Aqueous ammonia is used in the Selective Catalytic Reduction (SCR) process to control NOx emissions from combustion of natural gas in the facility. The

accidental release of aqueous ammonia without proper mitigation can result in hazardous downwind concentrations of ammonia gas.[47] (Ex. 45, p.4.4-7.)

Applicant performed an Off-Site Consequences Analysis (OCA) to evaluate potential public health impacts in a "worst case scenario" resulting from an accidental release during truck unloading. (Ex. 1, § 5.15.2.4 et seq.) Staff considers the threshold significance level to be a one-time exposure to 75 parts per million (ppm) of ammonia gas.[48] (Ex. 45, p. 4.4-8.) Applicant's OCA results for the worst case scenario (including worst case meteorological conditions) estimated that ammonia concentrations exceeding 75 ppm would be confined almost completely to the project site and would not affect any public receptor. (Ex. 1, § 5.15.2.4.5 et seq.)

Based on these modeling results, Applicant and Staff concluded that no significant offsite public health consequences would result from an accidental ammonia release. (Ex. 1, § 5.15.2.4.5; Ex. 45, p.4.4-8.)

Plant workers in the vicinity of the ammonia truck unloading area could be exposed to harmful concentrations of ammonia due to accidental release. (Ex. 1, p. 5.15-14.) The project includes several design features to reduce the likelihood and consequences of an ammonia release. A double-walled 12,000-gallon ammonia storage tank, providing passive containment in the event of cracking or other structural damage, will be incorporated into a combined delivery and storage facility. Delivery trucks will be unloaded inside the delivery bay, which has a sloped floor with a 10-inch opening to facilitate the gravity flow of any spillage into an underground containment vault. The underground vault is designed to hold the entire contents of an 8,000-gallon delivery truck plus the

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[47] The choice of aqueous ammonia significantly reduces the risk that is associated with the more hazardous anhydrous form, which is stored as a liquid gas. (Ex. 45, pp. 4.4-7 and 4.4-8.)

[48] Staff's Appendix A, Table 1, replicated at the end of this section, shows the acute ammonia exposure guidelines for different sectors of the population.

wash water used to dilute any spills. (Ex. 1, pp. 5.15-18 and 5.15-19; Ex. 45, pp. 4.4-8 and 4.4-11.)

To ensure implementation of these design plans, Condition **HAZ-3** requires the project owner to provide a Safety Management Plan for ammonia deliveries. Condition **HAZ-4** requires the ammonia storage tank to be constructed according to industry specifications. Condition **STRUC-4** in the **Facility Design** section of this Decision requires compliance with seismic design specifications for storage facilities.

Staff believes that transportation of aqueous ammonia poses significant risk of exposure in the event of an accidental release on public roads. According to Staff's expert witness, compliance with the extensive federal and state regulatory programs that apply to shipment of hazardous materials will ensure safe handling of ammonia shipments. (Ex. 45, p. 4.4-9 et seq.) Condition **HAZ-5** requires that ammonia deliveries be made in an appropriate tanker, which meets or exceeds regulatory specifications.[49]

b. Natural Gas

The project requires large amounts of natural gas, which creates a risk of both fire and explosion. (Ex. 45, p. 4.4-7.) This risk will be reduced to insignificant levels through adherence to applicable codes and the implementation of effective safety management practices. (*Ibid*.) The National Fire Protection Association (NFPA) Code 85A requires: 1) the use of double block and bleed valves for fast shut-off; 2) automated combustion controls; and 3) burner management systems. These measures significantly reduce the likelihood of an explosion. Additionally,

[49] At the evidentiary hearing, the parties agreed to modify the verifications for Conditions **HAZ-2** through **HAZ-5** to require the project owner to submit safety management, delivery, and storage plans to the Compliance Project Manager 60 days prior to *first* delivery of ammonia and sodium hypocholorite to the MPP. (RT, pp. 35-41, Ex. 30.)

start-up procedures will require air purging of gas turbines and combustion equipment to prevent build-up of an explosive mixture. (*Ibid.*)

Natural gas will not be stored onsite; rather, it will be continuously delivered via the project's gas pipeline facilities described in the **Facility Design** section of this Decision. Since the MPP does not require the installation of new gas pipelines offsite, impacts from a potential break in the pipeline is limited to the existing pieplines already in use in the area. (Ex. 45, p.4.4-7; Ex. 1, § 5.15.2.3.1.) Condition **MECH-1** ensures that any new onsite gas pipeline connection complies with applicable safety requirements.

2. Mitigation

Personnel working with hazardous materials will receive appropriate training to avoid and respond to accidental releases.[50] Safety equipment will be provided and several safety programs will be implemented in this regard. (Ex. 1, §§ 5.15.3.1 and 5.15.3.2.) These programs include the Hazardous Materials Business Plan, the Risk Management Plan, and the Safety Management Plan required by Conditions **HAZ-2** and **HAZ-3**. See also, the **Worker Safety** section of this Decision.

3. Closure

The requirements for handling hazardous materials remain in effect until such materials are removed from the site regardless of closure. In the event that the project owner abandons the facility in a manner that poses a risk to surrounding populations, emergency action will be coordinated by federal, state, and local

[50] Onsite spill response procedures will be established and emergency response agencies will be contacted as necessary. (Ex. 1, § 5.15.3.1 and p. 5.15-19.) COB Fire Station 12 is the assigned HAZMAT first responder. (*See* **Worker Safety** section of this Decision.)

agencies to ensure that any unacceptable risk to the public is eliminated. (Ex. 45, p. 4.4-13.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The MPP will use hazardous materials during construction and operation, including the *acutely hazardous* aqueous ammonia, sulfuric acid, hydrochloric acid (aqueous sodium hypochlorite), cyclohexylamine (neutralizing amine), and natural gas.

2. The major public health and safety hazards associated with these hazardous materials include the accidental release of aqueous ammonia and aqueous sodium hypochlorite, and fire and explosion from natural gas.

3. The Off-Site Consequences Analysis indicated that no significant offsite public health consequences would result from an accidental ammonia release during the delivery process.

4. Compliance with appropriate engineering and regulatory requirements for safe transportation, delivery, and storage of ammonia and sodium hypochlorite will reduce potential risks of accidental release to insignificant levels.

5. The risk of fire and explosion from natural gas will be reduced to insignificant levels through adherence to applicable codes and the implementation of effective safety management practices.

6. Potential impacts from the other hazardous substances used onsite are not considered significant since quantities will be limited and appropriate storage will be maintained in accordance with applicable law.

7. The project owner will submit an approved Safety Management Plan for handling aqueous ammonia and aqueous sodium hypochlorite, an approved Hazardous Materials Business Plan, and an approved Risk Management Plan prior to delivery of any hazardous materials to the site.

8. Implementation of the mitigation measures described in the evidentiary record and contained in the Conditions of Certification, below, ensures

that the project will not cause significant impacts to public health and safety as the result of handling hazardous materials.

9. With implementation of the Conditions of Certification, below, the MPP will comply with all applicable laws, ordinances, regulations, and standards related to hazardous materials management as identified in the evidentiary record and in the pertinent portion of **Appendix A** of this Decision.

The Commission concludes, therefore, that the use of hazardous materials by the Magnolia Power Project will not result in any significant adverse public health and safety impacts.

CONDITIONS OF CERTIFICATION

HAZ-1 The project owner shall not use any hazardous materials not listed in Appendix B, below, or in greater quantities than those identified by chemical name in Appendix B, below, unless approved in advance by the CPM.

Verification: The project owner shall provide to the Compliance Project Manager (CPM), in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.

HAZ-2 The project owner shall concurrently provide a Business Plan and a Risk Management Plan (RMP) to the Certified Unified Program Authority - CUPA (the Los Angeles County Fire Department) and the CPM for review at the time the RMP is first submitted to the U.S. Environmental Protection Agency (EPA). The project owner shall reflect all recommendations of the CUPA and the CPM in the final documents. Copies of the final Business Plan and RMP, reflecting all comments, shall be provided to the CPM.

Verification: At least 60 days prior to first receiving any hazardous material on the site, the project owner shall provide a copy of a final Business Plan to the CPM. At least 60 days prior to first delivery of aqueous ammonia to the site, the project owner shall provide the final EPA-approved RMP, to the CUPA, and the CPM.

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of aqueous ammonia and aqueous sodium hypochlorite. The plans shall include procedures, protective equipment requirements, training and a checklist. It shall also include a section describing all measures to be implemented to prevent mixing of these chemicals with incompatible hazardous materials.

Verification: At least 60 days prior to the first delivery of aqueous ammonia or aqueous sodium hypochlorite to the facility, the project owner shall provide the plan to the CPM.

HAZ-4 The aqueous ammonia storage facility shall be designed to either the ASME Pressure Vessel Code and ANSI K61.6 or to API 620. In either case, the storage tank shall be protected by a secondary containment basin capable of holding 150% of the storage volume plus the volume associated with 24 hours of rain assuming the 25-year storm. The final design drawings and specifications for the ammonia storage tank and secondary containment basins shall be submitted to the CPM.

Verification: At least 60 days prior to first delivery of aqueous ammonia to the facility, the project owner shall submit final design drawings and specifications for the ammonia storage tank and secondary containment basin to the CPM for review and approval.

HAZ-5 The project owner shall direct each and every vendor delivering aqueous ammonia to the site to use only transport vehicles, which meet or exceed the specifications of DOT Code MC-307.

Verification: At least 60 days prior to first receipt of aqueous ammonia from any vendor to the site, the project owner shall submit copies of the notification letter to supply vendors indicating the transport vehicle specifications to the CPM for review and approval.

HAZARDOUS MATERIAL MANAGEMENT
APPENDIX A TABLE 1

Acute Ammonia Exposure Guidelines

Guideline	Responsible Authority	Applicable Exposed Group	Allowable Exposure Level	Allowable* Duration of Exposures	Potential Toxicity at Guideline Level/Intended Purpose of Guideline
IDLH[2]	NIOSH	Workplace standard used to identify appropriate respiratory protection.	300 ppm	30 min.	Exposure above this level requires the use of "highly reliable" respiratory protection and poses the risk of death, serious irreversible injury or impairment of the ability to escape.
IDLH/10[1]	EPA, NIOSH	Work place standard adjusted for general population factor of 10 for variation in sensitivity	30 ppm	30 min.	Protects nearly all segments of general population from irreversible effects
STEL[2]	NIOSH	Adult healthy male workers	35 ppm	15 min. 4 times per 8 hr day	No toxicity, including avoidance of irritation
EEGL[3]	NRC	Adult healthy workers, military personnel	100 ppm	Generally less than 60 min.	Significant irritation but no impact on personnel in performance of emergency work; no irreversible health effects in healthy adults. Emergency conditions one time exposure
STPEL[4]	NRC	Most members of general population	50 ppm 75 ppm 100 ppm	60 min. 30 min. 10 min.	Significant irritation but protects nearly all segments of general population from irreversible acute or late effects. One time accidental exposure
TWA[2]	NIOSH	Adult healthy male workers	25 ppm	8 hr.	No toxicity or irritation on continuous exposure for repeated 8 hr. work shifts
ERPG-2[5]	AIHA	Applicable only to emergency response planning for the general population (evacuation) (not intended as exposure criteria) (see preface attached)	200 ppm	60 min.	Exposures above this level entail** unacceptable risk of irreversible effects in healthy adult members of the general population (no safety margin)

1) (EPA 1987) 2) (NIOSH 1994) 3) (NRC 1985) 4) (NRC 1972) 5) (AIHA 1989)

* The (NRC 1979), (WHO 1986), and (Henderson and Haggard 1943) all conclude that available data confirm the direct relationship to increases in effect with both increased exposure and increased exposure duration.

** The (NRC 1979) describes a study involving young animals, which suggests greater sensitivity to acute exposure in young animals. The (WHO 1986) warns that the young, elderly, asthmatics, those with bronchitis and those that exercise should also be considered at increased risk based on their demonstrated greater susceptibility to other non-specific irritants.

References for Appendix A, Table 1

AIHA. 1989. American Industrial Hygienists Association, Emergency Response Planning Guideline, Ammonia, (and Preface) AIHA, Akron, OH.

EPA. 1987. U.S. Environmental Protection Agency, Technical Guidance for Hazards Analysis, EPA, Washington, D.C.

NRC. 1985. National Research Council, Criteria and Methods for Preparing Emergency Exposure Guidance Levels (EEGL), short-term Public Emergency Guidance Level (SPEGL), and Continuous Exposure Guidance Level (CEGL) Documents, NRC, Washington, D.C.

NRC. 1972. Guideline for short-term Exposure of The Public To Air Pollutants. IV. Guide for Ammonia, NRC, Washington, D.C.

NIOSH. 1994. National Institute of Occupational Safety and Health, Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, Washington D.C., Publication numbers 94-116.

WHO. 1986. World health Organization, Environmental Health Criteria 54, Ammonia, WHO, Geneva, Switzerland.

Abbreviations for Appendix A, Table 1

ACGIH, American Conference of Governmental and Industrial Hygienists
AIHA, American Industrial Hygienists Association
EEGL, Emergency Exposure Guidance Level
EPA, Environmental Protection Agency
ERPG, Emergency Response Planning Guidelines
IDLH, Immediately Dangerous to Life and Health Level
NIOSH, National Institute of Occupational Safety and Health
NRC, National Research Council
STEL, Short Term Exposure Limit
STPEL, Short Term Public Emergency Limit
TLV, Threshold Limit Value
WHO, World Health Organization

HAZARDOUS MATERIALS MANAGEMENT
APPENDIX B

Hazardous Materials Use and Storage (Page 1 of 2)

Material	Purpose	Usage/Day	Maximum Storage	Storage Type
Acetylene	Welding	As needed	270 cf.	Cylinder
Ammonium bifluoride (NH_4HF_2)	Chemical cleaning of HRSG	As needed	Temporary only	Portable vessel
Aqueous ammonia ([19%] NH_4 (OH))	NOx emissions control	300 lbs/day	12,000 gal.	Underground tank
Argon	Welding	As needed	270 cf.	Cylinder
Betz PL 1200 P	Oxygen Scavenger	5 gal.	275 gal.	Drums
Betz Steamate NA 0160	Organic amine type corrosion inhibitor for steam	As needed	0	Portable vessel
Betz NA 0240	Organic amine type corrosion inhibitor for steam	2 gal.	250 gal.	Portable vessel
Betz Optisperse	Boiler feedwater pH adjustment	As needed	110 gal.	Drums
Betz Spectrus OX1201	Cooling tower biocide, oxidizing type	2 gal.	400 gal.	Portable vessel
Betz Foamtrol 4440	Cooling tower antifoam	2 gal.	110 gal.	Portable vessel
Betz AZ8104	Cooling water copper inhibitor	25 gal.	275 gal.	Portable vessel
Betz Dianodic DN 2301	Cooling water scale and deposit control	10 gal.	600 gal.	Portable vessel
Betz 3200	Recirculating cooling water molybdate type corrosion inhibitor	10 gal.	40 gal.	Carboy
Citric acid	Chemical cleaning of HRSG, feedwater systems	As needed	Temporary only	Portable vessel
Diesel fuel oil	Emergency generator	As needed	2,000 gal.	Tank, UL C.S.
EDTA chelant	Chemical cleaning of HRSG, feedwater systems	As needed	Temporary only	Portable vessel
Hydrochloric acid (HCl)	Chemical cleaning of HRSG	As needed	Temporary only	Portable vessel
Lubricating oil	--	As needed	10,000 gal.	Lubricating sumps of turbine and combustion and steam
Mercury	Instruments and controls	As needed	0	Bottle
Mineral oil	Transformers	As needed	1,000 gal.	Transformers
Nitrogen	Transformers	As needed	275 cf.	Cylinder
Oxygen scavenger solution	Feedwater oxygen control	6 lb	300 gal.	Portable vessel
Oxygen-gaseous	Welding operation	As needed	275 cf.	Cylinder

HAZARDOUS MATERIALS MANAGEMENT
APPENDIX B

Hazardous Materials Use and Storage (Page 2 of 2)

Material	Purpose	**Usage/Day**	**Maximum Storage**	Storage Type
Paint	Paint shack	25 gal.	100 gal.	Can
Sodium hydroxide	Spill neutralization	As needed	2 gal.	Carboy
Sodium hypochlorite (12% wt NaOCl)	Biocide for condenser cooling water system water treatment	109 gal.	7,500 gal.	Aboveground storage tank, plastic
Sodium nitrite ($NaNO_2$)	Chemical cleaning of HRSG	As needed	Temporary only	Portable vessel
Sulfuric acid for station batteries	Electrical/ctrl. Bldg., Combustion turbine	As needed	100 gal.	Battery
Hydrated Lime	ZLD	1,010 lbs	20 to 40 tons	Silo
Soda Ash	ZLD	4,012 lbs	20 to 40 tons	Silo
Ferric Sulfate, $Fe_2(SO_4)_3$	ZLD	144 lbs	1,500 lbs	Bags
Cationic Polymer	ZLD	5 lbs	1,500 lbs	Bags
Antiscalant	ZLD	14 lbs	1,500 lbs	Bags
Sulfuric acid, H_2SO_4, 93%	ZLD	3.5 gal.	110 gal.	Drums
Caustic NaOH, 50%	ZLD	61 gal.		Storage tank

Source: Ex. 1, Tables 3.4-6 and 5.15-1; Ex. 3, Table 3.4-8; Ex. 6, Data Response 180.

E. WASTE MANAGEMENT

The project will generate hazardous and non-hazardous wastes during demolition of Units 1 and 2, and construction and operation of the MPP. This section reviews the Applicant's waste management plans for reducing the risks and environmental impacts associated with the handling, storage, and disposal of project-related wastes.[51]

Federal and state laws regulate the management of hazardous waste. Hazardous waste generators must obtain EPA identification numbers, and only use permitted treatment, storage, and disposal facilities. Registered hazardous waste transporters must handle the transfer of hazardous waste to disposal facilities. (Ex. 45, p. 4.12-9.)

Summary and Discussion of the Evidence

1. Site Excavation

Applicant prepared a Phase I Environmental Site Assessment (ESA) in accordance with procedures established by the American Society for Testing and Materials (ASTM) to identify Recognized Environmental Conditions (RECs) at the MPP site.[52] (Ex. 1, Appendix O.) The Phase 1 ESA reported significant past use of hazardous materials and the potential for soil contamination due to hazardous wastes. Based on the findings, Applicant's consultants conducted a Limited Phase II ESA in February 2001, which found contaminated soils in areas where

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[51] This section also includes procedures for disposal of solid waste resulting from the Zero Liquid Discharge water treatment system.

[52] RECs identified at the site included: (1) hazardous materials and waste storage areas; (2) drains and sumps; (3) power blocks, cooling towers, and surrounding areas: (4) transformers and bedding material; and (5) aboveground storage tanks (ASTs). (Ex. 1§ 5.14.1.1.)

excavation and construction will occur.[53] (Ex. 11; Ex. 45, p. 4.12-3.) The Limited Phase II ESA recommended that SCPPA prepare a Soil Management Plan to specify appropriate measures for identifying, handling, and managing contaminated soils encountered during excavation and construction activities. (Ex. 11, § 4.3)

Staff proposed that SCPPA agree to a Voluntary Cleanup Agreement (VCA) with the Department of Toxic Substances Control (DTSC), prepare a Remedial Action Plan (RAP), and implement cleanup activities prior to site mobilization. (Ex. 45, p. 4.2-13.) According to Staff, site cleanup is necessary to protect construction workers from exposure to hazardous soils and the general public from potential offsite migration of soil contaminants. (RT, pp. 47-48.) SCPPA agreed to enter into a VCA and confirmed that the timeframe for the VCA would be no later than 30 days after certification. (Ex. 31; RT, p. 50.) .)

After the November 18, 2002, evidentiary hearing, SCPPA entered into a VCA with DTSC. (Ex. 55). Additionally, DTSC provided a letter clarifying the process for implementing the VCA (Ex. 56). Specifically, DTSC requires SCPPA to prepare a Preliminary Endangerment Assessment (PEA) and upon review, DTSC will determine whether Further Action such as site characterization, preparation of a Removal Action Workplan (RAW), or a Remedial Action Plan (RAP) will be required. (Ex. 56.) Condition of Certification **WASTE-5** requires SCPPA to prepare a PEA as described in Exhibit 56 and prohibits SCPPA from commencing site mobilization activities until the DTSC has reviewed the PEA

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[53] Staff's testimony indicated that the Limited Phase II ESA was not performed according to standard ASTM procedures. (Ex. 45, p. 4.12-3.) According to Staff's expert witness: a Limited Phase II ESA does not comply with ASTM guidelines because (1) the ASTM guidelines don't allow for a Limited Phase II ESA, and (2) the limited investigations resulted in an inadequate site characterization. (RT, pp. 45-48.) However, the issue became moot due to Applicant's agreement to implement Condition of Certification **WASTE-5**. (*See, infra*.) Staff raised the issue about non-compliance with ASTM guidelines to ensure that acceptance of the Limited Phase II ESA would not be precedential. (RT, p. 47.) We affirm that acceptance of the Limited Phase II ESA in this case shall not be precedential. Future applicants shall submit necessary Phase II ESAs in accordance with ASTM requirements.

and has determined what Further Action, if any, is required. **WASTE-5** also requires SCPPA to implement Further Action as directed by the DTSC.

2. Demolition

Demolition of Units 1 and 2 will generate non-hazardous solid wastes that include paper, wood, glass, concrete foundations, concrete stacks, asphalt, lumber, plastic, insulation, and empty containers. These wastes will be segregated for recycling, where practical. Non-recyclable waste will be placed in a covered dumpster and removed to a Class III (non-hazardous) landfill. (Ex. 1, § 5.14.2.1.1.) Generation of hazardous waste associated with asbestos-containing materials (ACMs), regulated building materials (RBMs) such as lead-based paint, and contaminated subsurface soil, will occur during demolition activities. ACMs and RBMs will be removed at the beginning of demolition and transported to an appropriate Class I (hazardous) or Class III landfill. (*Ibid.*; Ex. 45, p. 4.12-4.) Condition of Certification **WASTE-5** requires that identification and disposal of these materials be included in the VCA with DTSC.

3. Construction

a. Non-hazardous Waste

During construction, the primary waste stream will be solid, non-hazardous materials such as paper, wood, glass, scrap metal, plastics from packaging, waste lumber, insulation, and nonhazardous chemical containers. These wastes will be recycled, where practical, with the remainder deposited at a Class III landfill. (Ex. 1, § 5.14.2.1.2.) Waste metal generated during construction includes steel from welding/cutting, packing materials, and empty chemical containers; aluminum wastes from packing materials; and electrical wiring. Metals that cannot be salvaged/recycled will be removed for disposal at a Class III landfill. Applicant estimates that 20 to 40 cubic yards of these types of waste

will be generated on a weekly basis. (*Ibid*.) Applicant's Table at the end of this section, lists the estimated amounts of the non-hazardous waste stream and proposed management methods.

b. Hazardous Wastes

Hazardous wastes generated during construction will include used oil and grease, paint, used batteries, spent solvent, welding materials, and chemical cleaning solutions. All such hazardous wastes will be recycled with the remainder removed on a regular basis by a certified waste handling contractor for disposal at a licensed Class I hazardous waste treatment or disposal facility. (Ex. 1, § 5.14.2.1.2.) Applicant estimates that a total of one cubic yard of hazardous wastes will be generated per week; additionally, about 55 gallons of solvents, used oil, paints, and oily rags along with an estimated 200,000 gallons of HRSG cleaning waste (some hazardous and some non-hazardous) per cleaning will be generated. (*Ibid*.) Applicant's Table 5.14-2, at the end of this section, lists the estimated amounts of the hazardous waste stream and proposed management methods.

4. Operation

a. Non-hazardous Waste

Non-hazardous waste generated during project operation includes trash, office wastes, empty containers, broken or used parts, used packaging, and used filters. Nonhazardous solid waste will be recycled with the remainder deposited at a Class III landfill. (Ex. 1, § 5.14.2.2.1.) *See* Applicant's Table 5.14-3, at the end of this section, which shows the operating waste streams and management methods.

b. Hazardous Waste

Hazardous wastes include spent air pollution control catalysts, used oil and filters, used cleaning solvents, used oil absorbent, and hydraulic fluids, which if not recycled will be removed and transported by a certified hauler to a Class I landfill. (Ex. 1, § 5.14.2.2.1.) Applicant's Table 5.14-3, at the end of this section, identifies the project's hazardous wastes. Periodic turbine cleaning will generate contaminated wash water that will be analyzed for appropriate disposal. HRSG cleaning solutions will be removed by the licensed contractor conducting the cleaning. (*Ibid.*)

5. Potential Impacts on Waste Disposal Facilities

Applicant's Table 5.14-1, at the end of this section, shows local Class III landfills and identifies soil treatment and recycling facilities that will accept non-hazardous soils. Most of the non-hazardous waste produced during project construction and operation will be recyclable. According to Applicant, non-recyclable project wastes will be insignificant relative to current disposal volumes at the local Class III landfills: El Sobrante, Simi Valley, and Frank R. Bowerman in Orange County. (Ex. 1, § 5.14.1.3.) Staff's analysis concurred that disposal of project-related wastes will not have any significant direct or cumulative impacts on the capacities of local Class III landfill facilities. (Ex. 45, pp. 4.12-7 and 4.12-8.)

Three Class I landfills in California, i.e., Chemical Waste Management Landfill in Kings County, Laidlaw Environmental Landfill in Kern County, and Laidlaw Environmental Landfill in Imperial County, have permits to accept hazardous waste. In total, there is in excess of 20 million cubic yards of remaining hazardous waste disposal capacity at these landfills, with remaining operating lifetimes up to the year 2078. (Ex. 45, p. 4.12-7.) Staff concluded that the amount of project-related hazardous waste is less than one percent of existing

capacity and will not significantly impact the capacity or remaining life of any of California's Class I landfills. (*Ibid*.) *See* Table 5.14-1, at the end of this section.

6. Zero Liquid Discharge

The MPP wastewater management system provides for collection, treatment, and disposal of wastewater produced from the generating equipment and facilities. Process wastewater, consisting primarily of cooling tower blowdown will be handled onsite by the Zero Liquid Discharge (ZLD) water treatment system and will not be discharged. (Ex. 3, § 5.14.) Industrial wastewater, consisting of oil-water separator effluent will be discharged to the Burbank Water Reclamation Plant (BWRP). Sanitary drains will be directed to the COB sewer line, which is capable of handling the domestic wastewater flows from the facility. (*Ibid*.)

The ZLD system removes hardness minerals from cooling tower blowdown before it is processed in the brine concentrator (evaporator) to reduce liquid by 90 percent. The resultant decant is recycled to the cooling tower, and the brine is further treated in a crystallizer to remove the dissolved and suspended solids. The solids ("salt cake") will be transported to an appropriate landfill. (Ex. 3, § 5.14; Ex. 45, p. 4.12-5.) Applicant estimates that operation of the ZLD system will generate approximately 9 tons of salt cake waste per day (3,285 tons per year). (Ex. 58, p. 3.) A sampling program, using the procedures specified in the "Testing Methods for Evaluating Solid Waste, Physical/Chemical Methods" will be implemented to determine baseline characterization of the waste.[54] (*Id*. at pp. 5.14-3 and 5.14-4.) Condition of Certification **WASTE-6** ensures that the testing of salt cake is done appropriately.

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[54] Cited as SW-846, 3rd Edition, USEPA, revised 1986, 1996.

Although the salt cake may not be classified as hazardous waste, it could be considered a California-designated waste due to high salt content. The designated waste category includes non-hazardous material containing pollutants that under ambient environmental conditions at a waste management facility could be released in concentrations that exceed acceptable water quality levels. (Ex. 45, p. 4.12-6.) Designated wastes are handled at Class I disposal sites. Whether test results identify the salt cake as non-hazardous or designated waste, impacts on Class I or Class III landfills would be de minimis.[55] (*Ibid*.)

The ZLD process is exempt from DTSC permit requirements as long as the effluent from the brine concentration is recycled onsite and does not contain hazardous constituent levels. (Ex. 45, p. 4.12-6.) Condition of Certification **WASTE-7** requires testing of the effluent to determine whether it should be considered hazardous waste. If it is determined to be hazardous, SCPPA must apply for a recycling exemption from DTSC. (*Ibid*.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The project will generate hazardous and non-hazardous wastes during demolition of Units 1 and 2, and construction and operation of the MPP.

2. Applicant's Phase I Environmental Site Assessment (ESA) identified Recognized Environmental Conditions indicating potential for contaminated soils.

3. Applicant's Limited Phase II ESA found contaminated soils in areas where excavation and construction will occur.

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[55] Staff testimony indicates there are more than 21.9 million cubic yards of remaining hazardous waste disposal capacity at California's Class I (hazardous) landfills, with remaining operating lifetimes up to the year 2078. Thus, even if 3,285 tons of salt cake require disposal on an annual basis at hazardous waste landfills, this represents less than one percent of remaining Class I capacity. (Ex. 58, p. 3.)

4. The project owner has entered into a Voluntary Cleanup Agreement (VCA) with the Department of Toxic Substances Control (DTSC) to prepare a Preliminary Endangerment Assessment (PEA) prior to site mobilization and to implement cleanup activities as directed by DTSC.

5. The VCA will include plans for identification and disposal of asbestos-containing materials (ACMs) and regulated building materials (RBMs) encountered during demolition activities.

6. The project will recycle hazardous and non-hazardous wastes to the extent possible and in compliance with applicable law.

7. Hazardous wastes that cannot be recycled, will be transported by registered hazardous waste transporters to an appropriate Class I landfill.

8. Non-hazardous wastes that cannot be recycled will be deposited at Class III landfills in the local area.

9. Salt cake from the ZLD water treatment process will be tested and disposed appropriately either as non-hazardous waste or as California-designated waste.

10. Effluent from the ZLD process will be tested to determine whether it is subject to a DTSC recycling exemption for hazardous waste treatment.

11. Disposal of project wastes will not result in any significant direct or cumulative impacts to existing waste disposal facilities.

12. The Conditions of Certification, below, and the waste management practices described in the evidentiary record will reduce potential impacts to insignificant levels and ensure that project wastes are handled in an environmentally safe manner.

The Commission therefore concludes that the management of project wastes will comply with all applicable laws, ordinances, regulations, and standards related to waste management as identified in the pertinent portion of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

WASTE-1 The project owner shall provide the resume of a Registered Professional Engineer or Geologist, who shall be available for consultation during soil excavation and grading activities, to the CPM for review and approval. The resume shall show experience in remedial investigation and feasibility studies.

The Registered Professional Engineer or Geologist shall be given full authority to oversee any earth moving activities that have the potential to disturb contaminated soil.

Verification: At least 30 days prior to the start of site mobilization the project owner shall submit the resume to the CPM.

WASTE-2 If additional contaminated soil, not discovered by implementation of Condition of Certification **WASTE-5**, is unearthed during excavation at the site as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the Registered Professional Engineer or Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and file a written report to the project owner and CPM stating the recommended course of action. Depending on the nature and extent of contamination, the Registered Professional Engineer or Geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the Registered Professional Engineer or Geologist, significant remediation may be required, the project owner shall contact representatives of the City of Burbank, DTSC, the LARWQCB (if appropriate) and the LA County Fire Department, Hazardous Materials Division for guidance and possible oversight.

Verification: The project owner shall submit any reports filed by the Registered Professional Engineer or Geologist to the CPM within 5 days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

WASTE-3 Upon becoming aware of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

Verification: The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.

WASTE-4 The project owner shall prepare a Construction Waste Management Plan and an Operation Waste Management Plan for all wastes generated during construction and operation of the facility, respectively, and shall submit both plans to the CPM for review and approval. The plans shall contain, at a minimum, the following:

- A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and

- Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit the Construction Waste Management Plan to the City of Burbank for review and the CPM for approval.

The Operation Waste Management plan shall be submitted to the City of Burbank for review and the CPM for approval no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions within 20 days of notification by the CPM.

In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to the planned management methods.

WASTE-5 The project owner shall prepare a Preliminary Endangerment Assessment (PEA) that addresses the presence and remediation of Asbestos-Containing Materials (ACM), Regulated Building Materials (RBM) that contain lead-based paint, and contaminated soil and groundwater at the site, as described in the Limited Phase II ESA. The PEA shall be submitted to the Department of Toxic Substances Control (DTSC) for review and approval, the LARWQCB (if appropriate), the City of Burbank, and the LA County Fire Department, Hazardous Materials Division for review and comment, and to the CEC CPM for review and approval. No site mobilization shall take place until the PEA has been approved by DTSC and the CPM and Further Action, if required by DTSC, is identified and a schedule for performance is developed. Further Action may include additional site characterization, a Removal Action Workplan (RAW) or a Remedial Action Plan (RAP). The project owner shall provide the results of all baseline and confirmatory sampling and analysis to the City of Burbank, DTSC, the LARWQCB (if appropriate), the LA County Fire Department, Hazardous Materials Division, and to the CEC CPM for review and guidance.

Verification: The project owner shall submit the PEA prior to the initiation of remedial action if necessary, according to the schedule to be determined by DTSC. No site mobilization shall take place until the PEA has been approved by DTSC and the CPM and any Further Action required by DTSC is identified and a schedule for performance is developed. Copies of the PEA, including sampling and analysis results, and evidence of any Further Action required by DTSC shall be submitted to the LARWQCB (if appropriate), the City of Burbank, the LA County Fire Department, Hazardous Materials Division, and the CEC CPM, no less than 5 days after submittal to DTSC.

WASTE-6 The project owner shall test the salt cake product from the crystallizer for the presence of hazardous levels of metals (as described in Exhibit 3, AFC Supplement on ZLD, Section 5.14). If levels are below ten times the Soluble Threshold Level Concentration as listed in Title 22, California Code of Regulations, section 66261.24, then future testing is not required unless there is a substantial change in the wastewater treatment process. If not classified as a hazardous waste, the project owner shall manage the salt cake product appropriately as a non-hazardous or designated waste unless it is sold as a commercial product.

Verification: As soon as practicable but no later than 30 days after the initial generation of salt cake, the project owner shall notify the CPM of the test results and the planned disposal method.

WASTE-7 The project owner shall test representative samples of the effluent from the brine concentrator for the presence of hazardous levels of metals. If test results indicate that the effluent is classified as hazardous, then the project owner shall apply to DTSC for a recycling exemption for hazardous waste treatment as provided for in Health and Safety Code section 25143.2(c)(2).

Verification: Within 60 days of beginning commercial operation, the project owner shall notify the CPM of the test results for the brine concentrator effluent. If applicable, the project owner shall include a copy of the DTSC application, and shall notify the CPM upon receipt of the exemption from DTSC.

TABLE 5.14-1

WASTE RECYCLING/DISPOSAL FACILITIES

Solid Recycling/Waste Disposal Site	Title 23 Class	Permitted Capacity	Operating Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
El Sobrante Landfill (Solids Disposal) 10910 Dawson Canyon Rd. Corona, California 92883	Class III	4,000 tons per day	4,000 tons per day	50 years	2050	No
Simi Valley Landfill (Solids Disposal) 2801 Madera Rd. Simi Valley, California 93065	Class III	4,000 tons per day	4,000 tons per day	20 to 50 years	2020 - 2050	No
Frank R. Bowerman Landfill 11002 Bee Canyon Access Road Irvine, California 92602	Class III	117 million cubic yards/year	8,500 tons per day	25 years	2024	Yes
Chemical Waste Management Kettleman Hills Landfill (Solids Disposal) 36251 Old Skyline Rd. Kettleman City, California 93239	Class I	10.7 million cubic yards/year	Current Operating Capacity not Available	8 million cubic yards	2037 – 2038	No
Laidlaw Buttonwillow Landfill (Solids Disposal) Kern County, California	Class I	13 million cubic yards/year	130,000 – 150,000 cubic yards/year	11 million cubic yards	2068 – 2078	No
Laidlaw Imperial County Landfill (Solids Disposal) Imperial County, California	Class I	4 million cubic yards/year	110,000 cubic yards/year	2.9 million cubic yards	2021	No
Thermal Remediation Solutions (Solids Recycling) 1211 West Gladstone Ave. Azusa, California 91702	Class III	200,000 tons per year	2,000 tons per day	Not Applicable	Not Applicable	No

TABLE 5.14-1 (CONTINUED)

WASTE RECYCLING/DISPOSAL FACILITIES

Solid Recycling/Waste Disposal Site	Title 23 Class	Permitted Capacity	Operating Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
TPS Technologies, Inc. (Soil Recycling) 12328 Hibiscus Ave. Adelanto, California 92301	Not Applicable	Not Applicable	350,000 tons per year	Not Applicable	Not Applicable	No outstanding previous violations
Bradley Landfill (Solids Disposal) 9227 Tujunga Avenue Sun Valley, California 91352	Class III	Not Applicable	8,200 tons per day	5 million cubic yards	2003	No
American Remedial Technologies (Solids Recycling) 2680 Seminole Ave. Lynwood, California 90262	Class III	200,000 tons per year	19,900 tons per month	Not Applicable	Not Applicable	One Notice of Violation pertaining to odor in Year 2000
Liquid Recycling/Waste Disposal Site						
DeMenno/Kerdoon (Liquids Recycling) 2000 N. Alameda St. Compton, California 90222	Not Applicable	84.1 million gallons per year of oily water and 123 million gallons per year of waste oil	Approximately 30,000,000 gallons per year	Not Applicable	Not Applicable	Not from lead agency in past 2 years and no outstanding previous violations

TABLE 5.14-2

SUMMARY OF CONSTRUCTION WASTE STREAMS AND MANAGEMENT METHODS[1]

Waste Stream	Waste Classification	Amount	Treatment
Scrap wood, steel, glass, plastic, paper, calcium, silicate insulation, mineral wood insulation, asphalt, concrete	Non-hazardous	20-40 cubic yards/wk	Waste disposal facility
Empty hazardous material containers – drums	Hazardous, recyclable	One cubic yard/wk	Recondition or recycle
Used and waste lube oil during CTG and STG Lube Oil Flushes	Hazardous, recyclable	<55 gallons per flush period, approximately three week duration	Recycle
Oil absorbent mats from CTG and STG lube oil flushes and normal construction	Non-hazardous	1,000 sq. ft. per month, as needed	Waste disposal facility or laundry permitted to wash rags
Oily rags generated during normal construction activities, lube oil flushes	Non-hazardous	Three to four 55 gallon drums a month	Waste disposal facility or laundry permitted to wash rags
Spent batteries; lead acid	Hazardous	Two batteries/year	Recycle
Spent batteries; alkaline type, sizes AAA, AA, C and D	Hazardous, recyclable	60 batteries/month	Recycle
HRSG and preboiler piping cleaning waste	Hazardous	200,000 gal per cleaning	Hazardous waste disposal facility or recycle
Used oil from oil/water separator	Hazardous[2], recyclable	<1,000 gal per year	Recycle
Sanitary waste-portable chemical toilets and construction office holding tanks	Sanitary	600 gpd	Pumped by licensed contractors and transported to sanitary water treatment plant
Soil	Non-hazardous, recyclable; hazardous classification TBD[3]	20,000 cubic yards	Soil recycling facility or Class I or III facility

1 All numbers are estimates.
2 Under California regulations.
3 TBD = to be determined.

TABLE 5.14-3

OPERATING WASTE STREAMS AND MANAGEMENT METHODS[1]

Waste Stream	Waste Classification	Amount	Treatment
Used hydraulic fluids, oils, grease, oily filters	Recyclable hazardous	< 5 gallons/day	Recycle
Spent batteries; lead acid	Recyclable, hazardous	2 batteries/year	Recycle
SCR catalyst	Recyclable, hazardous	50 cubic meters every 3 to 5 years	Recycle
Oxidation Catalyst	Recyclable, hazardous	50 cubic meters every 3 to 5 years	Recycle
Used oil from oil/water separator	Recyclable, hazardous[2]	50 gallons/year	Recycle
Oily rags	Non-hazardous	55 gallons/2months	Laundry permitted to wash oil rags
CTG used air filters	Non-hazardous	<1,000 filters	Recycle
CTG water wash	Non-hazardous	7,200 gallons/year	Waste disposal facility
HRSG periodic operational chemical cleaning	Hazardous	50,000 gallons per HRSG cleaning (Approximately 2 cleanings every 5 years)	Hazardous waste disposal facility (transport by licensed subcontractors)
Zero Discharge Salt Cake	Non-hazardous or Designated Waste	22 tons/year	Disposal to non-hazardous waste disposal facility or Class II waste treatment site

1 All numbers are estimates.

2 Under California regulations.

VI. ENVIRONMENTAL ASSESSMENT

Under its statutory mandate, the Commission must evaluate a project's potential effect upon the environment. The specific topics under review include biological resources, soil and water resources, cultural resources, and geological and paleontological resources to determine whether project-related activities will result in adverse impacts to the natural and human environment.

A. BIOLOGICAL RESOURCES

The Commission must consider the potential impacts of project-related activities on biological resources, including state and federally listed species, species of special concern, wetlands, and other topics of critical biological interest such as unique habitats. The following review describes the biological resources of the project site and offsite laydown and parking areas, assesses the potential for adverse impacts on biological resources, and determines whether mitigation measures are necessary to ensure compliance with applicable laws, ordinances, regulations, and standards.

Summary and Discussion of the Evidence

Los Angeles County is considered the regional setting for the project site. Various remnants of native habitats, such as hillside and canyon areas, wetland habitats, beaches, and marine habitats exist in the region. The County General Plan designates several Significant Ecological Areas (SEAs) in the region to preserve biotic diversity. (Ex. 45, p. 4.2-2.) Two areas near the MPP site are identified as SEAs: Griffith Park (1.75 miles to the south) and the Verdugo Mountains (1.5 miles to the northeast). The Los Angeles River runs along the southern boundary of Burbank parallel with Highway 134. Most of the river is a concrete-lined conveyance channel, but retains a few areas of natural and landscaped vegetation in "spreading basins" such as the one found south of the

project site (1.75 miles) near Mount Sinai Memorial Park. Currently, the wildlife observed in the Los Angeles Basin is restricted to species that can tolerate and exploit the urban environment. (*Id.*, pp. 4.2-5 and 4.2-6.) **Biological Resources Table 1**, below, shows regionally occurring species observed during surveys of the project area conducted by the Applicant's biologists in February 2001. (*See* Ex. 1 § 5.6.1.) Sensitive species and habitat not recorded within one-mile of the site, but observed in Griffith Park and Verdugo Mountains in the 1980s, are shown below in **Biological Resources Table 2**. Most sensitive species native to the Los Angeles region have likely been extirpated due to urban development. (*Ibid.*)

Biological Resources Table 1: Regionally Occurring Wildlife and Plant Species that were Observed During Reconnaissance Surveys Conducted on the Project Area and Surrounding Area*

Plant Species	
Horseweed	(*Conyza canadensis)*
Cudweed everlasting	(*Gnaphalium luteo-album*)
Black mustard	(*Brassica nigra*)
Lamb's quarters	(*Chenopodium album*)
Russian thistle	(*Salsola tragus*)
Black walnut (as landscaping)	(*Juglans californica*)
Fremont cottonwood	(*Populus fremontii*)
Nightshade	(*Solanum* sp.)
Date palm	(*Phoenix canariensis*)
Fountaingrass	(*Pennisetum setaceum*)
Wildlife Species	
American kestrel	(*Falco sparverius*)
Western gull	(*Larus occidentalis)*
Pigeon	(*Columba livia*
Mourning dove	(*Zenaida macroura*)
Hummingbird	(*Calypte sp.)*
California towhee	(*Pipilo crissalis*)
House finch	(*Carpodacus mexicanus*)
House sparrow	(*Passer domesticus)*
Western fence lizard	(*Sceloporus occidentalis*)

***Note:** List does not include the many species of plants that are part of a xeriscape demonstration garden facing Magnolia Boulevard.
Source: Ex. 45, Biological Resources Table 1 at p. 4.2-5.

Biological Resources Table 2: Regionally Occurring Special Status Plant and Animal Species with the Potential to Occur.

Wildlife	Status (Federal/State/ CNPS)*	Habitat	Occurrence
Coastal California gnatcatcher (*Polioptila californica*)	FT/CSC	Coastal sage scrub below 2,500 feet in elevation	Last seen in 1991 at Verdugo Mountain Park in Sun Valley
Southwestern pond turtle (*Clemmys marmorata pallida*)	__/CSC	Permanent or nearly permanent bodies of water below 6,000 feet in elevation	Last seen in 1987 in Los Angeles, possibly extirpated; location suppressed

Plant Species	Status (Federal/State/ CNPS)*	Habitat	Occurrence
Davidson's bush mallow (*Malacothamnus davidsonii*)	__/__/1B	Sandy washes	Last seen in 1987 in lower Cabrini Canyon
Nevin's barberry (*Berberis nevinii*)	FE/SE/1B	Occurring in sandy gravelly soil on north chaparral slopes or in sandy washes	Last seen in 1986 at Griffith Park on Vista del Valle Road
Parish's brittlescale (*Atriplex parishii)*	FSC/__/1B	Under vernally-flooded conditions in playa and vernal-pool habitats	Last seen north of Griffith Park; date unknown
San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*)	FC/SC/1B	Occurring in sandy soil in coastal scrub	Last seen in 1890 in the vicinity of West Hollywood; possibly extirpated
Slender-horned spineflower (*Dodecahema leptoceras*)	FE/SE/1B	Occurring in alluvial-fan habitats on flood deposited terraces and washes	Last seen in 1916 in the vicinity of La Crecenta; possibly extirpated

Source: Ex. 45, Biological Resources Table 2, at p. 4.2-6.
Status key:

Federal
FE =Federally listed as Endangered
FT =Federally listed as Threatened
FC =Federal Candidate Species
FSC =Federal Special Concern species

State
SE =State-listed as Endangered
SC =State candidate for Listing
CSC =California Special Concern Species
=No Status

CNPS (California Native Plant Society)
1A: Extinct
1B: Rare

Locally, the City of Burbank is a mixture of industrial, residential, and commercial districts. The project site is completely surrounded by industrial uses and is located within an electric power generating station with asphalt and concrete surfaces and no vegetation other than an occasional scattered ruderal plant.[56] Construction of the MPP and its underground transmission lines will occur within the already disturbed boundaries of the power plant complex. The offsite parking and laydown areas will also be located on previously disturbed sites with no known biological resources. Therefore, project construction will not result in a net increase in impervious surfaces or loss of native vegetation or native habitat. (Ex. 1, § 5.6.2.1 et seq.; Ex. 45, p. 4.2-7.)

Applicant and Staff also analyzed the potential for direct or indirect impacts on sensitive biological resources in surrounding areas that may support natural habitat. (Ex. 45, p. 4.2-7 et seq.) Tall structures such as the HRSG exhaust stack could pose aviary collision hazards although there is no evidence of previous collisions with existing onsite structures. The MPP's tallest structure, the 150-foot HRSG stack, will be the same height as the existing Magnolia Unit 3 and 4 stack. Since there is no suitable bird habitat in the area, the potential for bird collisions is insignificant. (Ex. 1, p. 5.6-8; Ex. 4, Data Response 21.)

Project lighting has the potential to disorient migrating birds flying at night, or attract wildlife such as insects and insect-eaters. Surveys conducted by the Applicant's biologists did not detect any sensitive wildlife species flying in the area that could be affected by increased lighting at the site and, therefore, no impacts to sensitive species are expected to occur from nighttime lighting related to the MPP. (Ex. 45, p. 4.2-11.) Likewise, since there are no known sensitive species in the immediate vicinity, project-related construction and operation noise would have no impact on biological resources. (*Ibid*.)

[56] The COB staff maintains a self-contained xeriscape demonstration garden near the administration building facing Magnolia Boulevard, which will not be affected by the MPP. (Ex. 1, § 5.6.1.2; Ex. 45, p. 4.2-7.)

Stormwater at the site is routed and discharged to the Burbank Western Channel, which empties into the Los Angeles River where beneficial uses include warm freshwater habitat, wildlife habitat, and wetland habitat. Applicant will employ Best Management Practices during construction and operation of the MPP to ensure that the release of stormwater to the channel will not result in significant impacts to biological resources. (Ex. 45, p. 4.2-10.) See Conditions of Certification **SOIL and WATER-1** through **4** in the **Soil and Water Resources** section of this Decision.

The project's combustion of natural gas will result in a nitrogen deposition rate that could potentially affect ecosystem structure and diversity. Applicant's modeling of the deposition plume indicates that deposition rates are reduced to nearly undetectable levels within 1,000 feet of the source. Any nitrogen deposition related to the MPP would therefore occur over an urban landscape and not reach any areas that support sensitive biological resources. (Ex. 1, p. 5.6-8.)

With respect to potential cumulative impacts of the MPP in conjunction with the development of other industrial, commercial, or residential projects in the Los Angeles region, none of the known prospective projects are in the immediate vicinity of the MPP site.[57] Many of the other projects are planned in areas of high urban development and would not result in incremental losses to habitat or taking of species when constructed within the same timeframe as the MPP. (Ex. 45, p. 4.2-13.) Eventual closure of the MPP would have no effect on biological resources since the surrounding area is expected to remain industrial. (*Ibid*.)

Applicant and Staff agree that no specific mitigation measures related to biological resources are necessary. (Ex. 45, p. 4.2-13.)

[57] New large power plants in the Los Angeles region include: Huntington Beach Unit 4; City of Vernon's Malburg Generating Station, and El Segundo Power Redevelopment Project. Other development projects in Burbank include: La Dolce Vita Senior Artist Colony; Burbank Empire Center, Burbank Entertainment Village, and the Marriot Residence Inn. (Ex. 45, p. 4.2-13.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, we make the following findings and conclusions:

1. There are no sensitive species or suitable habitat for sensitive species at the project site, the construction parking and laydown areas, or in the surrounding industrial areas.

2. The MPP will not result in any potential direct, indirect, or cumulative impacts to biological resources.

3. With implementation of the Conditions of Certification listed in the **Soil and Water Resources**, **Air Quality**, **Noise**, and **Visual Resources** sections of this Decision, the MPP will conform with all applicable laws, ordinances, regulations, and standards related to biological resources as identified in the pertinent portions of **APPENDIX A** of this Decision.

We therefore conclude that the project owner's implementation of the Conditions of Certification contained in the **Soil and Water Resources**, **Air Quality**, **Noise**, and **Visual Resources** sections of this Decision will ensure the project conforms with all applicable laws, ordinances, regulations, and standards related to biological resources. No specific Conditions of Certification are required for this topic.

B. SOIL AND WATER RESOURCES

This section focuses on the soil and water resources associated with the project, specifically the project's potential to induce erosion and sedimentation, adversely affect water supplies, and degrade water quality. The analysis also considers the potential cumulative impacts to water quality in the project vicinity. To prevent or reduce any potential adverse impacts, several mitigation measures are included in the Conditions of Certification to ensure that the project will comply with all applicable federal, state, and local LORS.

Summary and Discussion of the Evidence

1. Erosion Prevention and Storm Water Management

Soils underlying the Burbank area consist of sand, silt, silty sand, and silty clay. The area surrounding the site is characterized by an impervious asphalt and concrete surface due to urban development. (Ex. 45, p. 4.13-4.) Increased storm water runoff occurs where impervious surfaces predominate. (*Ibid*.)

Excavation at the site during construction can induce soil erosion from ground moving activities involved in clearing, grading, and soil stockpiling. Ground disturbance makes soil particles vulnerable to detachment by wind, rainfall, and storm water runoff. As a result, sediment discharged from the site could be carried into downstream receiving waters and contribute to degradation of water quality. After construction, erosion potential at the site will be minimal due to the flat grades, paved surfaces, and existing storm water conveyance systems. (Ex. 45, p. 4.13-16.)

The only surface water feature of significance near the site is the Burbank Western Channel, which is highly polluted.[58] Surface water from the site is

[58] The Western Burbank Channel is on the 1998 State Water Resources Control Board 303(d) list as an impaired water body containing ammonia, cadmium, trash, odors, algae, and unnatural scum/form. (Ex. 2, Data Response Water-5.)

currently collected through a system of drop inlets and storm drainpipes to a 36-inch storm drain line that discharges to the Burbank Western Channel. (Ex. 1, § 5.5.1.1.2.) The MPP site drainage will connect with the existing system.[59] (Ex. 2, Data Response Water-9.)

Storm water runoff patterns and volumes at the site will not be significantly changed by the MPP since there will not be a significant increase in impervious surfaces or runoff volumes. (Ex. 2, Data Response Water-9.) According to Staff, however, the existing drainage system used by the COB at the site may be undersized relative to newer standards for similar systems. (Ex. 45, pp. 4.13-16 and 4.13-20.)

The federal Clean Water Act requires an NPDES permit for municipal storm sewer discharges to surface waters. The City of Burbank is covered by the General NPDES Storm Water Construction Activity Permit (No. CAS614001) administered by the Los Angeles Regional Water Quality Control Board (LARWQCB), which covers 85 municipalities in Los Angeles County. As part of the municipal storm water program, LARWQCB adopted the Standard Urban Storm Water Mitigation Plan (SUSMP) to address storm water pollution caused by new development. The SUSMP requires new projects to incorporate Best Management Practices (BMPs) for source control, structural, and treatment control. (Ex. 1, p. 5.5-14.)

To minimize potential impacts from erosion and pollution due to storm water runoff and/or flooding, the LARWQCB requires the MPP to prepare Storm Water Pollution Prevention Plans (SWPPP) and Erosion Sedimentation Control Plans (ESCP) for both construction and operation. The preliminary design of the MPP indicates that storm water from areas with potential oil contamination will be

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[59] The existing storm water runoff system at the equipment laydown area flows directly to the Burbank Western Channel and will remain in place during the construction period. (Ex. 2, Data Response Water-9.) To reduce exposure to pollutants from onsite fueling and lubrication related

directed to oil and water separators before discharge into the sewer system. All inlets impacted by the new project will utilize storm drain filter inserts in accordance with the SUSMP. No significant impacts are expected from storm water runoff if the SWPPP and ESCP plans are properly implemented. (Ex. 45, pp. 4.13-17 and 4.13-20.) Conditions of Certification **SOIL and WATER-1**, **2**, **3**, and **4** require the project owner to submit SWPPP and ESCP plans consistent with the County SUSMP and to document that project storm water drainage facilities have adequate capacity.

2. Water Sources

The MPP will use a combination of sources for its water supply. The primary source will be reclaimed water delivered to the site via an existing 24-inch pipeline from the Burbank Water Reclamation Plant (BWRP) for use in the cooling tower and for demineralized makeup water when quality is sufficient. Other water sources include potable and non-potable sources provided by the COB.[60] (Ex. 3, §§ 3.4.7, 5.5.2.4.) The first priority for backup supply would be from local groundwater wells.[61] Additional supply will be available from the State Water Project (SWP) or Colorado River. Potable water from the COB will be used regularly for domestic purposes and in the Fire Protection System. (*Id*., at §5.5.1.1.1.) The COB provided a "Will Serve" letter to the Applicant, agreeing to meet all MPP water demands with available supplies from any source. (*Id.*, Appendix V, dated May 3, 2002.)[62]

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to laydown activities, fueling and lubrication will be done only in designated areas and equipment will be inspected for leaks. (*Ibid*.)

[60] The backup water supply will be used only when the BWRP experiences an upset or shutdown for a period greater than 24 hours. (Ex. 3, § 5.5.1.1.1.)

[61] Groundwater beneath the site, accessible to the COB from two onsite wells, is contaminated by the Lockheed Superfund site and treated for use at the power station. (Ex. 1, § 5.5.2.1.2; Ex. 3, p. 5.5-15; Ex. 7.) The onsite wells will provide the primary supplemental water supply for the MPP. The existing water treatment system at the site removes pollutants from contaminated well water and will be upgraded as necessary. Waste generated from well water treatment is disposed in the same manner as the ZLD waste streams discussed below. (Ex. 3, p. 5.5-8.)

During normal operations, the BWRP will divert a portion of the reclaimed water that is ultimately discharged to Outfall 001 and deliver it to the MPP. (Ex. 3, § 3.4.7.1.) To manage diurnal fluctuations in the available volume of reclaimed water, MPP will incorporate an influent reclaimed water storage tank. MPP will use an existing 2.2-million gallon tank located beneath the Olive 2 cooling tower, which was formerly used to store fuel oil. The storage tank has been drained, cleaned, and decommissioned and MPP will add a lining to make it suitable for reclaimed water. During peak reclaimed water flows, the tank will be filled to create a reserve, which will allow MPP to operate at peak load for 24 hours without delivery of reclaimed water from the BWRP. This reserve also reduces reliance on supplemental non-reclaimed water sources. (*Ibid*.)

3. Water Supply Requirements

Applicant's **Table 3.4-1**, replicated below, presents the estimated average and maximum daily water demands for the MPP. These estimates assume that 100 percent of the non-potable water demands will be met by reclaimed water. Average daily demand of 1,269,000 gallons per day (gpd) was calculated assuming an average ambient air temperature of 64°F and plant operation at full load, with steam injection and power produced by HRSG duct firing for 1,000 hours/year.[63] The maximum daily demand of 1,850,000 gpd assumed an ambient air temperature of 81°F and plant operations at full load, duct fired for 12 hours per day. (Ex. 3, § 3.4.7.2.)

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[62] The COB provided an earlier Will Serve letter dated May 4, 2001, which was updated by the May 3, 2002, letter. (Ex. 2, Data Response Water-6.5, dated May 4, 2001.)

[63] Applicant indicated an intention to limit steam injection to no more than 200 hours per year. (Ex. 3, § 3.4.7.4.2).

Table 3.4-1
MPP COOLING AND PROCESS WATER DEMANDS
(gal/day)

Cooling and Process Water Demand	Average Day (1)	Maximum Day (2)
Cooling Water Makeup	1,112,00	1,520,000
Cycle Makeup Treatment System	111,000	229,000
Plant & Equipment Drains	11,000	11,000
Evaporative Cooler	35,000	90,000
Chemical Drains	0	0
TOTAL	1,269,000	1,850,000
Domestic Water (Potable & Sanitary Uses)	2,000	2,000

Source:Ex. 3, Table 3.4-1
1. Average daily demands are based on 64°F ambient air temperature (day average).
2. Maximum daily demands are based on 81°F ambient air temperature (day average). Plant operating at full load with duct firing for 12 hrs/day.

The BWRP has a capacity of 9.0 million gallons per day (mgd) and 12.0 mgd instantaneous peak, but the current average daily flow is about 8.0 mgd. Thus, according to the Applicant, the BWRP demonstrates capacity to produce reclaimed water at a rate equivalent to about 4 percent of the overall water supply for the COB.[64] Over the past five years, the average annual reclaimed water usage in acre-feet (AFY) was 464 AFY for irrigation use and 355 AFY for the existing power plant. All excess reclaimed water production (5,674 AFY) was wasted to the Burbank Western Channel that discharges to the Pacific Ocean via the Los Angeles River. (Ex. 3, pp. 5.5-11 and 5.5.36.) Use of reclaimed water for power plant cooling needs is a beneficial use consistent with state policy.[65] (Ex. 3, § 5.5.4.2; Ex. 45, p. 4.13-21.) Staff reviewed the data presented by Applicant and agreed that production of reclaimed water by the BWRP is

[64] Applicant conducted an alternatives analysis to identify other sources of reclaimed water and determined that other sources were either economically or logistically infeasible. (Ex. 3, § 5.5.2.1.3.)

[65] *See* California State Water Resources Control Board Resolution No. 75-58; Water Control Policy on the Use and Disposal of Inland Waters Used for Power Plant Cooling, June 19, 1975.

adequate to supply the MPP and other existing irrigation uses.[66] (Ex. 45, p. 4.13-12.)

3. Wastewater Treatment and Disposal: Zero Liquid Discharge

The MPP's Zero Liquid Discharge (ZLD) water treatment system will result in no liquid discharge of cooling tower blowdown.[67] (Ex. 3, §5.5.2.1.6.) In the ZLD system, wastewater will be pretreated to remove hardness. After that, a brine concentrator will be used to reduce the volume of wastewater by about 90 percent. The resultant decant will be recycled to the cooling tower, and the brine will be further treated in a crystallizer to remove the dissolved and suspended solids. The resultant decant from the crystallizer will be recycled to the cooling tower and solids ("salt cake") will be transported to an appropriate landfill for final disposal.[68] (*See* **Waste Management** in this Decision.) During an outage of the ZLD crystallizer, the concentrated brine will be accumulated in the ZLD Feed Tank. If the tank is full, cooling tower blowdown will be accumulated in a storage tank for treatment. These two tanks provide more than six days of storage. (*Ibid*.)

The only wastewater discharge from the plant will consist of sanitary and oily wastewater discharged to the BWRP. Oily wastewater will be treated to remove

[66] Applicant indicated that the BWRP would be upgraded to meet new effluent limits, which includes removal of biological nutrients, other constituents, and implementation of pumping improvements. (Ex. 3, p. 5.5-11.)

[67] Applicant initially proposed to discharge cooling tower blowdown via the existing BWRP wastewater discharge pipeline, which would have required a revised NPDES permit. Since the NPDES review process delayed this proceeding, Applicant substituted its ZLD proposal in the project description. By choosing the ZLD option, Applicant is precluded from reviving its original proposal for wastewater discharge since it is not supported in the evidentiary record. *See* **Waste Management**.

[68] ZLD solid waste constituents are shown in Exhibit 3, Tables 5.5-7A and 5.5-7B.

the oil before discharge. Higher quality wastewater such as HRSG blowdown, plant drains without oil contamination, and CTG inlet air evaporative cooler blowdown will be recycled and reused as supplemental makeup in the cooling tower. (Ex. 3, p. 5.5-24.) The MPP will discharge about 2,000 gpd (2.2 AFY) of domestic wastewater to the existing sanitary sewer. Combined wastewater from miscellaneous plant drains will average 11,000 gpd (13 AFY) and also be discharged to the sanitary sewer. (Ex. 3, § 5.5.2.3.2.) This volume is well within the COB's sewage capacity. (Ex. 3, Table 5.5-8.)

4. Cumulative Impacts

Staff found that no erosion or sedimentation impacts are expected to contribute to significant cumulative impacts with implementation of the BMPs. (Ex. 45, p. 4.13-17.) The project will consume about 25 percent of the currently available reclaimed water from the BWRP. Although the wastewater discharge to the West Burbank Channel will be reduced by the same amount, it is unlikely that changes in either the temperature or chemistry of the discharge will be adversely affected by the MPP. Staff's testimony indicates that landfill disposal of 9 tons per day of salt cake will be required as a result of the ZLD system. (See the **Waste Management** section in the decision) Use of the ZLD system will result in an efficient use of reclaimed water and other backup water supplies. The quantity of water that will be consumed by MPP is within the normal range for a gas-fired power plant this size. (*Ibid*.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, we make the following findings and conclusions:

1. Soils at the project site are susceptible to erosion during excavation and construction.

2. Storm water runoff due to impervious paved surfaces at the site has potential to pollute surface water bodies in the project area.

3. The project owner will prepare Storm Water Pollution Prevention Plans (SWPPP) and Erosion Sedimentation Control Plans (ESCP) for the construction and operation phases of the project.

4. The SWPPP and ESCP plans will be consistent with the LARWQCB's requirements, including the Standard Urban Storm Water Mitigation Plan (SUSMP) and Best Management Practices (BMPs).

5. The primary source of water for the project will be reclaimed water supplied by the Burbank Water Reclamation Plant (BWRP) for use in the cooling tower and for demineralized makeup water when quality is sufficient.

6. Production of reclaimed water by the BWRP is adequate to supply the MPP and other existing irrigation uses.

7. Backup water supply will be available from two onsite groundwater wells, and potable water from the State Water Project and Colorado River.

8. The COB operates a water treatment system to remove pollutants from contaminated well water at the onsite groundwater wells.

9. MPP will employ a Zero Liquid Discharge (ZLD) water treatment system to recycle cooling tower blowdown and avoid wastewater discharge.

10. No adverse impacts to water quality will result from the project because the ZLD process eliminates wastewater discharge of cooling tower blowdown and the SWPPP and ESCP plans ensure that project-related storm water runoff will not pollute surface waters.

11. No adverse cumulative impacts to soils or water resources were identified in the evidentiary record.

12. Implementation of the Conditions of Certification, below, ensures that the project will conform with all applicable laws, ordinances, regulations, and standards (LORS) related to soil and water resources as identified in the pertinent portions of **Appendix A** attached to this Decision.

We therefore conclude that the project will not cause any significant adverse direct, indirect, or cumulative impacts to soil or water resources, and will comply with all applicable laws, ordinances, regulations, and standards (LORS).

CONDITIONS OF CERTIFICATION

SOIL and WATER 1: Prior to any site mobilization, demolition, and construction activities, including linear facilities, the Project Owner shall develop a Storm Water Pollution Prevention Plan (SWPPP) as required under the General NPDES Storm Water Construction Activity Permit for the project. The plan shall be approved by the CPM prior to any site mobilization activities. The SWPPP shall include final drainage and facility design for all onsite and offsite project facilities. This includes final site drainage plans, showing all of the detail necessary to evaluate the impacts of storm water run-on and run-off at the site and associated offsite facilities. The SWPPP shall include any modifications to the existing storm water system that are necessary to prevent significant on-site flooding and the potential for significant impacts to adjacent off-site areas. This plan shall demonstrate that the existing storm water control system to be used by MPP has adequate capacity. The final plan shall also be consistent with all other permit and design documents, including any Standard Urban Storm Water Mitigation Plan (SUSMP) requirements. The project owner shall include in this plan the installation of oil/water separators and storm drain water quality inlet inserts to treat runoff prior to discharge from the site, and shall provide manufacturers data sheets and any necessary calculations to support the sizing of the separators.

Verification: At least 60 days prior to site mobilization the project owner shall submit to the Energy Commission Compliance Project Manager (CPM) a copy of the Storm Water Pollution Prevention Plan (SWPPP) for the construction phase of the MPP for review and approval by the CPM. Site mobilization shall not begin prior to approval of the plan.

SOIL and WATER 2: Prior to site mobilization, demolition, and/or construction related ground disturbance activities, including linear facilities, the project owner shall develop an Erosion and Sedimentation Control Plan (ESCP) for the construction phase of the project. A copy of the ESCP for construction shall be provided to the CPM for review and approval. The ESCP shall address the actual drainage and facility design for all on- and off-site MPP project facilities for construction, and shall include any modifications to the existing storm water system that are necessary to prevent significant onsite flooding and the potential

for significant impacts to adjacent offsite areas. The ESCP shall demonstrate compliance with all applicable SUSMP requirements.

Verification: At least 60 days prior to the start of any site mobilization activities and/or ground disturbing activities associated with demolition or construction of the project or any linear element, the project owner shall submit the ESCP to the CPM for review and approval. The ESCP must be approved by the CPM prior to the start of site mobilization activities.

SOIL and WATER 3: Prior to power plant operation, the project owner shall develop a SWPPP as required under the NPDES Storm Water Discharge Permit for operation of the project. The SWPPP shall include the actual drainage and facility design for all onsite and offsite MPP project and linear facilities showing the details of the storm water and sediment run-off and run-on to the MPP project facilities during operation. The SWPPP shall include any modifications to the existing storm water system that are necessary to prevent significant onsite flooding and the potential for significant impacts to adjacent offsite areas. This plan shall document that the existing and proposed project storm water facilities have adequate capacity. The SWPPP shall be consistent with all other permit and design documents, and shall demonstrate compliance with all applicable SUSMP requirements. The project owner shall submit the operational SWPPP to the CPM for review and approval. The operational SWPPP shall be approved by the CPM prior to the start of operation.

Verification: At least 60 days prior to the start of operation the project owner shall submit a copy of the SWPPP to the CPM for review and approval. The SWPPP must be approved by the CPM prior to power plant operation.

SOIL and WATER 4: Prior to power plant operation, the owner shall develop an Erosion and Sedimentation Control Plan (ESCP) for the operational phase of the project. The ESCP shall include the actual drainage and facility design for all on- and off-site MPP project and linear facilities showing all of the details of storm water and sediment run-off and run-on to the MPP project facilities during operation. The ESCP shall include any modifications to the existing storm water system that are necessary to prevent significant onsite flooding and the potential for significant impacts to adjacent offsite areas. The SWPPP shall be consistent with all other permit and design documents, and shall demonstrate compliance with all applicable SUSMP requirements. The project owner shall submit the operational ESCP to the CPM for review and approval. The operational ESCP shall be approved by the CPM prior to the start of operation.

Verification: At least 60 days prior to the start of operation the project owner shall submit a copy of the ESCP to the CPM for review and approval. The ESCP must be approved by the CPM prior to power plant operation.

SOIL and WATER 5: Reclaimed water from the Burbank Water Reclamation Project (BWRP) shall be the primary water supply source for MPP,

including cooling (inlet and condensing/heat rejection) and process water, and shall be used to the maximum extent possible when available except as allowed under **SOIL and WATER 6**. All reclaimed water supplied by COB to the MPP shall conform to all applicable LORS, including Title 22 California Code of Regulations. The following reporting shall continue for the life of the project.

Annual BWRP Standard Report

(1) The project owner shall calculate and report the BWRP failure rate to the Compliance Project Manager (CPM) in the Annual Compliance Report. The failure rate shall be reported as the percentage of hours per month that the supply of reclaimed water from the BWRP is not adequate for MPP's operational needs, and shall be reported by individual month and with the averages for the previous one, three, and five years of operation.

(2) Should the average failure rate for the year exceed 5 percent, the project owner shall include in the Annual Compliance Report an explanation of the reason(s) for the exceedance and the measure(s) taken or planned by MPP and COB to bring the BWRP reclaimed water supply failure rate to within 5 percent or less.

BWRP Threshold Failure Report

(1) The BWRP Threshold Failure Report shall be filed if the following values are exceeded:

- For the one-year (12-month) moving average, a BWRP failure rate exceeding 15 percent;
- For the three-year (36-month) moving average, a BWRP failure rate exceeding 10 percent; and
- For the five-year (60-month) moving average, a BWRP failure rate exceeding 7.5 percent.

(2) Should any of these threshold failure values be exceeded, the project owner shall notify the CPM by letter at the time the threshold exceedance is determined. Following the initial notification, the project owner shall file a BWRP Threshold Failure Report with the CPM within 60-days of the date of determination that explains why the failure rate exceeded any threshold level, explains why the failure could not have been controlled or avoided, and demonstrates that the project can and shall be

operated in a manner consistent with the project design, operational plan, and the Conditions of Certification.

(3) The CPM shall assess the need for any additional information. During the interval this evaluation is being conducted, the project shall continue to operate in manner as consistent with these conditions as possible. A schedule shall be developed by the project owner and the CPM that shall either bring the project into compliance with these conditions, or that shall result in the applicant filing an amendment with a modified project design and/or operational plan that shall conform with all applicable LORS and have no unmitigated significant impacts.

Verification:

A. **Annual BWRP Standard Report**

The project owner shall include the Annual BWRP Standard Report in the Annual Compliance Report to the Compliance Project Manager (CPM) for review and approval. The project owner shall calculate the 12-, 36-, and 60-month moving average BWRP failure rates on a monthly basis and shall include them in the Annual Compliance Report.

B. **BWRP Threshold Failure Report**

The project owner shall submit to the CPM a threshold exceedance notification letter within 30 days of the end of the month in which the failure rate threshold for the 12-, 36-, or 60-month moving average has been exceeded. The project owner shall submit the **BWRP Threshold Failure Report** to the CPM for review and approval within 60 days of the date the exceedance is determined. The evaluation and determination of the need for a project amendment shall be conducted by the CPM as expeditiously as possible.

C. **BWRP Upgrades: Biological Nutrient Removal Project and Chemical, Electrical and Pumping Improvements Project**

The project owner shall provide monthly progress updates as part of the Monthly Compliance Report and a final report on the BWRP upgrades to the CPM in the Annual Compliance Report.

SOIL and WATER 6: Only potable water from the COB, recycled water from the BWRP, or contaminated groundwater from beneath the MPP site for which COB has an adjudicated groundwater right shall be used by the project. The primary water supply shall be reclaimed water provided by the BWRP. The BWRP reclaimed water backup water supply shall be COB potable water (containing at least 25 percent properly treated contaminated groundwater) or properly treated contaminated water from beneath the project site. The project owner shall confirm that COB potable water used for backup purposes contains

at least 25 percent properly treated contaminated groundwater in the Annual Compliance Report.

Properly treated groundwater obtained from the municipal potable water supply shall consist of groundwater treated in a manner consistent with the Second Consent Decree between the COB and the USEPA entered in Federal Court on June 22, 1998, and any subsequent Consent Decrees. The project owner shall comply with the Consent Decree, which requires the removal of all volatile organic compounds to less than Federal Drinking Water Standards. Additionally, properly treated groundwater shall be consistent with the treatment facilities' operating permit issued by California Department of Health Services, Drinking Water Division, that requires the treated groundwater to meet all State drinking water standards except for nitrate. Non-potable backup water supplied to MPP from the wells located on the project site shall be treated to remove volatile organic carbons (VOCs) to concentrations less than State drinking water standards (Tit. 22, Cal. Code of Regs., § 60301 et seq.)

The project shall be allowed a maximum of 200 acre-feet per year (AFY) COB potable water for all routine sanitary, domestic, and demineralizer feed water purposes. This 200 AFY shall not be considered or reported as part of the backup water supply. Any potable water used in excess of this amount shall be reported as a backup water supply use.

The project owner shall install onsite metering and recording devices and record on a monthly basis all water used by the MPP (primary and backup), the amount of reclaimed and non-reclaimed water used by the project, with the source and amount of all reclaimed and non-reclaimed water identified. The annual summary shall include the monthly range, monthly average, and total amounts of reclaimed and non-reclaimed water identified by amount and source used by the project in both gallons-per-minute and acre-feet. Following the first year of operation the annual summary shall also include the yearly range and yearly average of reclaimed and non-reclaimed water identified by amount and source used by the project. This information shall be supplied to the CPM in the Annual Compliance Report for review and approval.

Verification: At least 60 days prior to the start of operation of MPP, the project owner shall submit to the CPM evidence that metering devices have been installed and are operational on the pipelines serving and within the project. These metering devices shall be capable of recording the quantities in gallons of water delivered to MPP and differentiate between uses of these supplies by MPP in order to report water demand. The project owner shall provide a report on the servicing, testing and calibration of the metering devices and operation in the annual compliance report.

The project owner shall submit the required water use summary to the CPM for review and approval as part of the Annual Compliance Report for the life of the project.

SOIL and WATER 7: DELETED BY STIPULATION OF THE PARTIES

SOIL and WATER 8: The project shall operate with a Zero Liquid Discharge (ZLD) water treatment system. Liquid wastewater discharge from cooling water blowdown is not included in the certification license and shall not be considered part of the project. The project owner shall provide the final design details and operational parameters of the ZLD system to the CPM prior to the start of commercial operation.

Verification: At least 30 days prior to the start of commercial operation, the project owner shall provide the required information on the ZLD system to the CPM

C. CULTURAL RESOURCES

Cultural resource materials such as artifacts, structures, or land modifications reflect the history of human development. Certain places that are important to Native Americans or local national/ethnic groups are also considered valuable cultural resources. This topic analyzes the structural and cultural evidence of human development in the project vicinity, where cultural resources could be disturbed by project excavation and construction. Federal and state laws require a project developer, such as SCPPA, to implement mitigation measures that minimize potential adverse impacts to *significant* cultural resources.

Summary and Discussion of the Evidence

The term "cultural resource" is used broadly to include the following categories of resources: buildings, sites, structures, objects, and historic districts. When a cultural resource is determined to be significant, it is eligible for inclusion in the California Register of Historic Resources (CRHR). (Pub. Resources Code, § 5024.1; Cal. Code of Regs., tit. 14, § 4850 et seq.) An archaeological resource that does not qualify as an historic resource may be considered a "unique" archaeological resource under CEQA. (*See* Pub. Resources Code, § 21083.2.)

1. Background

Throughout California, significant archaeological and historic artifacts related to Native American cultures, Spanish and Mexican settlements, and/or American frontier settlements, could be discovered during development and construction activities. In addition, structures older than 50 years could be considered for listing as significant historic structures.[69]

[69] Although Applicant used 50 years as the standard, the Office of Historic Preservation recommends 45 years in the publication Instructions for Recording Historical Resources (1995). Staff reviews cultural resources 45 years or older for CRHR eligibility. Cultural Resources that are considered exceptional even if they are less than 45 years old may be recommended as eligible for CRHR listing. (Ex. 58, p. 11.)

The town site for Burbank was laid out in the 1860s partially in response to the new Santa Fe Railroad that passed through the area. Industrialization of the area began in the early 1900s and the City of Burbank (COB) was incorporated in 1911. In the 1930s, the COB acquired the 23-acre parcel, where the MPP will be located, for use as a corporation yard. Development of the site accelerated in 1941 with construction of the first Magnolia power plant unit. Activities related to wartime production and the Works Progress Administration were conducted at the site. A natural stream that bisected the site in the early years of development was moved to its present location as a concrete-lined channel along the eastern border of the site and became part of the Burbank Western Flood Control Channel. Over the next two decades, the COB built the central administration building, additional Magnolia and Olive power plants, and expanded the plants in the 1970s and 1980s. Currently, there are 38 structures on the parcel: 15 were built prior to 1952 and 23 were built after 1952. (Ex. 1, p. 5.7-13; Ex. 45, p. 4.3-5.)

2. Methodology

To determine whether significant cultural resources exist in the project vicinity, Applicant conducted a records search and literature review at the South Central Coast Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) at California State University at Fullerton. The MPP site was searched within a one-mile wide area for reports of archaeological resources and a ¼-mile wide study area for historic structures and buildings. The research included the primary offsite parking area but not the laydown area or backup parking lot since no ground disturbance is anticipated at those locations. (Ex. 1, § 5.7.1.11.) No previously recorded archaeological resources were reported within the search radius. One National Register-listed historic

structure (the downtown Burbank U. S. Post Office) is present within ¼-mile of the site but separated from the site by Interstate 5, an elevated freeway.[70] (*Ibid*.)

The Applicant's cultural resource consultants also conducted field surveys in the Area of Potential Effect (APE), which includes the project footprint and adjacent parcels on all sides of the MPP. The consultant's study area covers a one-mile radius of the project site and the primary offsite parking area. (Ex. 1, § 5.7.1.12.1 et seq. and Appendix J.) The existing 23-acre power plant complex was evaluated as a whole to determine if the site itself qualifies for listing in the NRHP or CRHR. It was concluded that the COB power complex is not historically significant. Although the complex contains structures and buildings older than 50 years, none are considered eligible historic resources. The consultants found that many buildings in the APE were less than 50 years old and not considered eligible for CRHR listing. Some of the buildings older than 50 years had some historic importance in the war production effort and some architectural merit. However, those buildings did not retain sufficient integrity for recommendation to the CRHR. (Ibid.; Ex. 45, p. 4.3-6.)

The consultants identified onsite remnants of a wall built in 1940 by the Works Progress Administration but no mitigation is necessary because the wall does not meet the criteria for the National Register or the CRHR. (Ex. 4, Data Response 31.) There is potential for buried archaeological resources located near the banks of the stream channel previously located in the vicinity of the MPP site. (*Id*., Data Response 28.) The Conditions of Certification require monitoring of subsurface excavation activities to ensure that any cultural resources encountered during construction will be evaluated and mitigated, if necessary, to avoid significant impacts. (Ex. 45, p. 4.3-6.)

[70] The National Registry (NRHP) is established under the National Historic Preservation Act (NHPA) and its implementing regulations. (16 U.S.C 470, § 106; 36 C.F.R., §§ 60.4 and 800.) Since no federal land is involved in this project, no federal permits are required; therefore, no component of the MPP would trigger compliance with Section 106 of the NHPA, unless an unknown cultural resource eligible for the NRHP is discovered as a result of implementation the

3. The California Native American Heritage Commission

The Native American Heritage Commission (NAHC) maintains records and maps of traditional resource sites and sacred lands located throughout the state. Applicant's review of the NAHC records did not indicate the presence of sacred lands in the project area. (Ex. 1, § 5.7.1.9.) To obtain further information about Native American resources near the site, Applicant sent letters and maps to groups and individuals identified by the NAHC but no responses were received. (*Ibid*.) Condition **CUL-7** requires SCPPA to implement a monitoring program consistent with NAHC guidelines.

4. Cumulative Impacts

The evidentiary record indicates there are no potential cumulative impacts because the project will not affect any known cultural resources. (Ex. 45, p. 4.3-7.) Should any cultural resources be identified during construction, implementation of the Conditions of Certification will reduce impacts to insignificance. (*Ibid*.)

5. Mitigation

According to Staff, the preferred mitigation is avoidance of known resources. If avoidance cannot be achieved, then surface collection, subsurface testing, and data recovery will be implemented (Ex. 45, p. 4.3-6 et seq.) To prevent adverse impacts to known or unknown resources, Applicant proposed a cultural resource-monitoring program for areas of high sensitivity. (Ex. 1, § 5.7.3.1 et seq.) The six-step program outlined below is incorporated and explained in the Conditions of Certification:

- Avoidance
- Physical Demarcation and Protection

Applicant's Cultural Resources Monitoring and Mitigation Plan. (Ex. 4, Data Response 25; Ex. 58, p. 11.) (Ex. 4, Data Response 25.)

- Worker Education
- Archeological Monitoring
- Native American Monitoring
- Significance Review

Condition **CUL-3** requires the project owner to develop and implement a Cultural Resource Monitoring and Mitigation Plan (CRMMP). If cultural resources are encountered during construction activities, the totality of mitigation measures contained in the Conditions of Certification will ensure that the resources are protected. Condition **CUL-1** requires the project owner to designate a qualified cultural resource professional to be responsible for implementing the CRMMP.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. There are no known archaeological or historic resources within or adjacent to the critical Area of Potential Effect (APE) or study area except for the downtown Burbank U.S. Post Office building that is separated from the site by I-5.
2. The Native American Heritage Commission has not recorded any Native American sacred properties within the APE or study area.
3. The potential for impacts to unknown cultural resources may not be discovered until subsurface soils are exposed during excavation and construction.
4. The mitigation measures contained in the Conditions of Certification below ensure that any direct, indirect, or cumulative adverse impacts to cultural resources resulting from project-related activities will be insignificant.

The Commission therefore concludes that with implementation of the Conditions of Certification below, the project will conform with all applicable laws, ordinances, regulations, and standards relating to cultural resources as set forth in the pertinent portions of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

CUL-1 Prior to the start of ground disturbance, the project owner shall submit the resume of the proposed Cultural Resources Specialist (CRS), and one alternate CRS, if an alternate is proposed, to the CPM for review and approval. The CRS shall be responsible for implementation of all cultural resources conditions of certification and may obtain qualified cultural resource monitors (CRMs) to monitor as necessary on the project.

Protocol: 1. The resume for the CRS and alternate, shall include information that demonstrates that the minimum qualifications specified in the U.S. Secretary of Interior Guidelines, as published by the CFR 36, CFR Part 61 are met. In addition, the CRS shall have the following qualifications:

a. The technical specialty of the CRS shall be appropriate to the needs of the project and shall include, a background in anthropology, archaeology, history, architectural history or a related field; and

b. At least three years of archaeological or historic, as appropriate, resource mitigation and field experience in California.

The resume shall include the names and phone numbers of contacts familiar with the work of the CRS on referenced projects and demonstrate that the CRS has the appropriate education and experience to accomplish the cultural resource tasks that must be addressed during ground disturbance, grading, construction and operation. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed CRS or alternate has the appropriate training and background to effectively implement the conditions of certification.

2. CRMs shall meet the following qualifications:

a. A BS or BA degree in anthropology, archaeology, historic archaeology or a related field and one year experience monitoring in California; or

b. An AS or AA in anthropology, archaeology, historic archaeology or a related field and four years experience monitoring in California; or

c. Enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historic archaeology or a related field and two years of monitoring experience in California.

The project owner shall ensure that the CRS completes any monitoring, mitigation and curation activities necessary; fulfills all the requirements of these conditions of certification; ensures that the CRS obtains technical specialists, and CRMs, if needed; and that the CRS evaluates any cultural resources that are newly discovered or that may be affected in an unanticipated manner for eligibility to the California Register of Historic Resources (CRHR).

Verification: The project owner shall submit the resume for the CRS at least 45 days prior to the start of ground disturbance.

At least 10 days prior to a termination or release of the CRS, the project owner shall submit the resume of the proposed new CRS.

At least 20 days prior to ground disturbance, the CRS shall submit written notification identifying anticipated CRMs for the project stating they meet the minimum qualifications required by this condition. If additional CRMs are needed later, the CRS shall submit written notice one week prior to any new CRMs beginning work.

At least 10 days, prior to the start of ground disturbance, the project owner shall confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement the cultural resources conditions of certification.

CUL-2

1. Prior to the start of ground disturbance, the project owner shall provide the CRS and the CPM with maps and drawings showing the footprint of the power plant and all linear facilities. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting individual artifacts. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM.
2. If the footprint of the power plant or linear facilities changes, the project owner shall provide maps and drawings reflecting these changes, to the CRS and the CPM for approval. Maps shall identify all areas of the project where ground disturbance is anticipated.
3. If construction of the project would proceed in phases, maps and drawings, not previously provided, shall be submitted prior to the start of each phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.
4. At a minimum, the CRS shall consult weekly with the project construction manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

5. The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification: 1. The project owner shall submit the subject maps and drawings at least 40 days prior to the start of ground disturbance.

2. If there are changes to any project related footprint, revised maps and drawings shall be provided at least 15 days prior to start of ground disturbance for those changes.

3. If project construction is phased, if not previously provided, the project owner shall submit the subject maps and drawings 15 days prior to each phase.

4. A current schedule of anticipated project activity shall be provided to the CRS on a weekly basis during ground disturbance and also provided in each Monthly Compliance Report (MCR).

The project owner shall provide written notice of any changes to scheduling of construction phases within 5 days of identifying the changes.

CUL-3 Prior to the start of ground disturbance, the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by the CRS, to the CPM for approval. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Copies of the CRMMP shall reside with the CRS, alternate CRS, each monitor, and the project owner's on-site manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless specifically approved by the CPM.

Protocol: The CRMMP shall include, but not be limited to, the following elements and measures.

1. A brief proposed general research design that includes a discussion of research questions and testable hypotheses applicable to the project area. A refined research design shall be prepared for any resource where data recovery is required.
2. A discussion of the requirement that all cultural resources encountered shall be recorded on a DPR form 523 and mapped (may include photos). In addition, all archaeological materials collected as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with The State Historical Resources Commission's "Guidelines for the Curation of Archaeological Collections," into a retrievable storage collection in a public repository or museum. The public repository or museum must meet the standards and requirements for the

curation of cultural resources set forth at Title 36 of the Federal Code of Regulations, Part 79.

3. A discussion of any requirements, specifications, or funding needed for curation of the materials to be delivered for curation and how requirements, specifications and funding shall be met. The name and phone number of the contact person at the institution. Indication the project owner pays all curation fees and that any agreements concerning curation shall be retained and available for audit for the life of the project.
4. A discussion of the proposed Cultural Resource Report (CRR) which shall be prepared according to Archaeological Resource Management Report (ARMR) Guidelines.

Verification: The project owner shall submit the subject CRMMP at least 30 days prior to the start of ground disturbance. Per ARMR Guidelines the author's name shall appear on the title page of the CRMMP. Ground disturbance activities may not commence until the CRMMP is approved. A letter shall be provided to the CPM indicating that the project owner would pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall be written by the CRS and shall be provided in the ARMR format. The CRR shall report on all field activities including dates, times and locations, findings, samplings and analysis. All survey reports, DPR 523 forms and additional research reports not previously submitted to the California Historic Resource Information System (CHRIS) shall be included as an appendix to the CRR.

Verification: The project owner shall submit the subject CRR within 90 days after completion of ground disturbance (including landscaping). Within 10 days after CPM approval, the project owner shall provide documentation to the CPM that copies of the CRR have been provided to the State Historic Preservation Officer (SHPO), the CHRIS and the curating institution (if archaeological materials were collected),

CUL-5 A Worker Environmental Awareness Program (WEAP) shall be provided, on a weekly basis, to all new employees starting prior to and for the duration of, ground disturbance. The training may be presented in the form of a video.

The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. Samples or visuals of artifacts that might be found in the project vicinity;

3. Information that the CRS, alternate CRS, and CRMs have the authority to halt construction to the degree necessary, as determined by the CRS, in the event of a discovery or unanticipated impact to a cultural resource;
4. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources find, and shall contact their supervisor and the CRS or CRM; redirection of work would be determined by the construction supervisor and the CRS.
5. An informational brochure that identifies reporting procedures in the event of a discovery;
6. An acknowledgement form signed by each worker indicating that they have received the training; and
7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: The project owner shall provide in the Monthly Compliance Report the WEAP Certification of Completion form of persons who have completed the training in the prior month and a running total of all persons who have completed training to date.

CUL-6 The CRS, alternate CRS and the CRMs shall have the authority to halt construction if previously unknown cultural resource sites or materials are encountered, or if known resources may be impacted in a previously unanticipated manner. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event resources are found or impacts can be anticipated, the halting or redirection of construction shall remain in effect until all of the following have occurred:

1. the CRS has notified the project owner, and the CPM has been notified within 24 hours of the find description and the work stoppage.;
2. The CRS, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed; and
3. Any necessary data recovery and mitigation has been completed.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM with a letter confirming that the CRS, alternate CRS and CRMs have the authority to halt construction activities in the vicinity of a cultural resource find, and that the CRS or project owner shall notify the CPM immediately (within 24 hours, and no later than the following morning of the incident or Monday morning in the case of a weekend) of any halt of construction activities, including the circumstance and proposed mitigation

measures. The project owner shall provide the CRS with a copy of the letter granting the authority to halt construction.

CUL-7 1. The project owner shall ensure that the CRS, alternate CRS, or monitors shall monitor ground disturbance full time in areas where excavation has the potential to exceed previous fill and in the northeast quadrant of the project site. In other areas, monitoring shall occur at the discretion of the CRS, during initial ground disturbance, to ensure there are no impacts to undiscovered cultural resources. In the event that the CRS determines that full-time monitoring is not necessary in the identified locations, a letter or e-mail providing a detailed justification for the decision to reduce the level of monitoring shall be provided to the CPM for review and approval prior to any reduction in monitoring.

2. CRMs shall keep a daily log of any monitoring or cultural resource activities and the CRS shall prepare a weekly summary report on the progress or status of cultural resources-related activities. The CRS may informally discuss cultural resource monitoring and mitigation activities with Energy Commission technical staff.

3. The CRS shall notify the project owner and the CPM, by telephone or e-mail, of any incidents of non-compliance with any cultural resources conditions of certification within 24 hours of becoming aware of the situation. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the conditions of certification.

   Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these conditions of certification.

4. If Native American artifacts are discovered, A Native American monitor shall be obtained to monitor ground disturbance in conjunction with cultural resources monitoring, in areas where Native American artifacts have been discovered or where there is a potential for encountering additional artifacts. Informational lists of concerned Native Americans and Guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored.

Verification: 1. During the ground disturbance phases of the project, if the CRS wishes to reduce the level of monitoring occurring at the project, a letter identifying the area(s) where the CRS recommends the reduction and justifying

the reductions in monitoring shall be submitted to the CPM for review and approval.

2. During the ground disturbance phases of the project, the project owner shall include in the MCR to the CPM copies of the weekly summary reports prepared by the CRS regarding project-related cultural resources monitoring. Copies of daily logs shall be retained and made available for audit by the CPM.

3. Within 24 hours of recognition of a non-compliance issue, the CRS shall notify the CPM by telephone or e-mail of the problem and of s teps being taken to resolve the problem. The initial telephone call or e-mail shall be followed by an e-mail or fax detailing the non-compliance issue and the measures necessary to achieve resolution of the issue.

4. Daily logs shall include forms detailing any instances of non-compliance with conditions of certification. In the event of a non-compliance issue, a report written no sooner than two weeks after resolution of the issue that describes the issue, resolution of the issue and the effectiveness of the resolution measures, shall be provided in the next MCR.

5. No later than one week after obtaining the services of a Native American monitor, the project owner shall send notification to the CPM identifying the person(s) retained to conduct Native American monitoring. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM who shall initiate a resolution process.

D. GEOLOGICAL AND PALEONTOLOGY

In this section, we discuss the project's potential impacts on significant geological and paleontological resources, and surface water hydrology. We also evaluate whether project-related activities could result in public exposure to geological hazards; and if so, whether proposed mitigation measures will adequately protect public health and safety.

Summary and Discussion of the Evidence

The MPP site is located in the southwest portion of the San Fernando Valley at the foot of the Verdugo Mountains in Los Angeles County. The site is about 1/8 mile west of Interstate 5 and about 1½ miles north of the Los Angeles River. A channel runs along the northeast property boundary, and is referred to as the Burbank Western Channel by the U.S. Geological Survey. Applicant conducted a Geotechnical Investigation (GI) to assess potential geological hazards at the MPP site. (Ex. 2, Geotechnical Investigation, § 2.1.)

1. Potential for Seismic Events

The site is situated in the eastern end of the San Fernando Basin, a portion of the Transverse Range Geomorphic province in Southern California. This province is one of the most seismically active areas in the state and consists of east-west trending mountain ranges separated by a number of structurally controlled basins, including the San Fernando Basin. The eastern portion of the Basin lies between the Santa Monica Mountains to the south and the Verdugo Mountains to the north. The San Fernando Basin is underlain by a thick sequence of unconsolidated, mostly marine sediments. This area is designated Seismic Zone 4 for the highest level of earthquake activity. At least 14 active earthquake faults, including the well-known San Andreas fault, lie within a 30-mile radius of the site. (Ex. 2, GI, § 4.2; Ex. 45, p. 5.2-3.)

Although the faults identified in the GI have the potential to cause ground shaking at the MPP site; there are no known active faults that cross the site or come within one mile of the site.[71] (Ex. 2, GI, §4.4; Ex. 1, § 5.3.1.5 et seq.; Ex. 2, Ex. 45, p. 5.2-3.) The project will be designed to withstand strong seismic ground shaking in accordance with California Building Code (CBC) standards for Seismic Zone 4. (Ex. 1, § 5.3.5; Ex. 2, Geotechnical Investigation, § 6.2; *See* Conditions of Certification **GEN-2** and **STRUC-1** through **STRUC-4** in the **Facility Design** section of this Decision.)

The GI contains a site-specific study, which assessed the potential for ground rupture, liquefaction, hydrocompaction, landslides, expansive soils, and subsidence in soils beneath or adjacent to project components that would present potential hazards associated with strong seismic shaking and/or unusual water infusion. (Ex. 2, GI, § 4.5.) Staff reviewed the GI and concluded that the potential for such seismic hazards would not be significant. (Ex. 45, p. 5.2-4 et seq.) The final project design will incorporate measures to mitigate any potential seismic damage resulting from these geological phenomena. (Ex. 1, §§ 5.3.3 and 5.3.4.) Conditions of Certification **GEN-2** and **CIVIL-1** in the **Facility Design** section of this Decision require the project owner to submit the appropriate design calculations and specifications, the soil erosion control plan, and the required CBC geotechnical reports.

2. Potential for Flooding

Flood hazards include storm-induced flooding and floods caused by earthquakes such as earthquake-induced dam failure. The project site is located outside the

[71] The California Division of Mines and Geology (CDMG) defines an "active" fault as one that has evidence of surface displacement within Holocene time and a "sufficiently active" fault when there is evidence of displacement along one or more of its branches. The DMCG delineates Earthquake Fault Zones near active faults under the Alquist-Priolo Earthquake Fault Zoning Act. The MPP site does not fall within an Earthquake Fault Zone. (Ex. 2, GI, § 4.4.)

500-year flood zone and presents minimal potential for storm-induced flooding.[72] In addition, potential flooding areas in Los Angeles County are sufficiently channelized to prevent flooding. (Ex. 1, § 5.3.1.6.5; Ex. 45, p. 5.2-5.) The site is located within a potential flood inundation area, which could result from catastrophic damage to the Hansen Dam about 7 miles upstream of the MPP. Since the Hansen Dam is a flood control structure that impounds water only during very intense storms, there is a low probability of an earthquake occurring while the dam is full. (*Ibid*.) Condition **CIVIL-1** requires Applicant's grading and drainage plan to comply with CBC standards.

3. Surface Water Hydrology

Ground elevation at the site is about 560 feet above mean sea level and the ground surface descends uniformly down to the southeast at a grade of about 0.5 percent. (Ex. 1, § 5.3.1.2.) Annual rainfall is about 15 inches, primarily during the winter and spring months. Surface water drainage is currently collected by engineered swales and storm drains, and discharged into the Burbank Western Channel. (Ex. 45, pp. 5.2-2 and 5.2-6.) The Applicant will control surface run-off at the MPP site by a combination of site grading and subsurface drainage system tying into the existing onsite storm drain. (*Ibid*.) Condition **CIVIL-1** in the **Facility Design** section and Conditions **SOIL and WATER 1** through **4** in the **Water Resources** section ensure that surface water impacts will be mitigated to insignificant levels.

4. Potential Impacts to Geological/Paleontological Resources

Applicant submitted a confidential Paleontological Resources Technical Report. (Ex. 1, Appendix K.) No geological resources were identified at the site and no in-situ paleontological resources were found during the course of Applicant's field surveys. (Ex. 1, § 5.8 and Appendix K; Ex. 45, p. 5.2-5.) The MPP site has been

[72] This designation is determined by the Federal Emergency Management Agency (FEMA). *See* also, the Flood Inundation Hazard Map for the Los Angeles County Safety Element (1990). (Ex. 1, § 5.3.1.6.5.)

severely disturbed by placement of 18 feet or more of artificial fill, structures, and pavements. Underlying native soils most likely consist of a veneer of young (Holocene age) sediments that are considered to be of limited paleontological interest. Deeper materials of older (Quaternary age) alluvium are too deep to be disturbed by construction activities, with the possible exception of deeply placed foundations, which would disturb only very localized areas. The overlying older alluvium materials have been assigned a moderate to high sensitivity rating for any excavations beneath existing asphalt and artificial fill at the site and the off-site laydown and parking areas. (Ex. 45, p. 5.2-6.) Conditions **PAL-1** through **PAL-7** ensure that potential impacts on paleontological resources will be reduced to insignificant levels should they be encountered during project-related activities. These conditions require the project owner to implement a Paleontological Resources Monitoring and Mitigation Plan to minimize impacts to undiscovered fossil materials at the site and along the linear alignments.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The project is located in Seismic Zone 4, which presents significant earthquake hazards.
2. The project will be designed to withstand strong earthquake shaking in accordance with the California Building Code.
3. Final project design will include measures to mitigate potential risk from ground rupture, liquefaction, hydrocompaction, landslides, expansive soils, and subsidence associated with strong seismic shaking.
4. There is low probability of flooding at the site from earthquake-induced dam failure.
5. The potential for storm-induced flooding is minimal and will be mitigated by drainage measures incorporated into project design.
6. There is no evidence the project would cause significant adverse impacts to surface water hydrology.

7. There is no evidence of geological or paleontological resources at the project site.

8. To prevent impacts to unknown sensitive paleontological resources, the project owner will implement a Paleontological Resources Monitoring and Mitigation Plan.

With implementation of the Conditions of Certification, the project will conform with all applicable laws, ordinances, regulations, and standards relating to geological and paleontological resources as identified in the pertinent portions of **Appendix A** of this Decision.

The Commission therefore concludes that implementation of the Conditions of Certification, below, ensure that project activities will not cause adverse impacts to either geological or paleontological resources or expose the public to geological hazards.

CONDITIONS OF CERTIFICATION

PAL-1 The project owner shall provide the CPM with the resume and qualifications of its Paleontological Resource Specialist (PRS) and Paleontological Resource Monitors (PRMs) for review and approval. If the approved PRS or one of the PRMs is replaced prior to completion of project mitigation and report, the project owner shall obtain CPM approval of the replacement.

The resume shall include the names and phone numbers of contacts. The resume shall also demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the required paleontological resource tasks.

As determined by the CPM, the PRS shall meet the minimum qualifications for a vertebrate paleontologist as described in the Society of Vertebrate Paleontology (SVP) guidelines of 1995. The experience of the PRS shall include the following:

- institutional affiliations or appropriate credentials and college degree;
- ability to recognize and recover fossils in the field;
- local geological and biostratigraphic expertise;
- proficiency in identifying vertebrate and invertebrate fossils;

- publications in scientific journals; and
- the PRS shall have at least three years of paleontological resource mitigation and field experience in California, and at least one year of experience leading paleontological resource mitigation and field activities.

The project owner shall ensure that the PRS obtains qualified paleontological resource monitors to monitor as necessary on the project. Paleontologic resource monitors (PRMs) shall have the equivalent of the following qualifications:

- BS or BA degree in geology or paleontology and one year experience monitoring in California; or
- AS or AA in geology, paleontology or biology and four years experience monitoring in California; or
- Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.

Verification: (1) At least 60 days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work. (2) At least 20 days prior to ground disturbance, the PRS or project owner shall provide a letter with resumes naming anticipated monitors for the project and stating that the identified monitors meet the minimum qualifications for paleontological resource monitoring required by the condition. If additional monitors are obtained during the project, the PRS shall provide additional letters and resumes to the CPM for approval. The letter shall be provided to the CPM no later than one week prior to the monitor beginning on-site duties. (3) Prior to the termination or release of a PRS, the project owner shall submit the resume of the proposed new PRS to the CPM for review and approval.

PAL-2 The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant and all linear facilities. Maps shall identify all areas of the project where ground disturbance is anticipated. If the PRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan and the plan and profile drawings for the utility lines would normally be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and can be 1 inch = 40 feet to 1 inch = 100 feet range. If the footprint of the power plant or linear facility changes, the project owner shall provide maps and drawings reflecting these changes to the PRS and CPM.

If construction of the project will proceed in phases, maps and drawings may be submitted prior to the start of each phase. A letter identifying the proposed schedule of each project phase shall be provided to the PRS and CPM. Prior to

work commencing on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes.

At a minimum, the project owner shall ensure that the PRS consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

Verification: (1) At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings. (2) If there are changes to the footprint of the project, revised maps and drawings shall be provided at least 15 days prior to the start of ground disturbance. (3) If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within 5 days of identifying the changes.

PAL-3 The project owner shall ensure that the PRS prepares, and the project owner shall submit to the CPM for review and approval, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting and sampling activities and may be modified with CPM approval. This document shall be used as a basis for discussion in the event that on-site decisions or changes are proposed. Copies of the PRMMP shall reside with the PRS, each monitor, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the Society of the Vertebrate Paleontologists (SVP, 1995) and shall include, but not be limited to, the following:

1) Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation will be performed according to the PRMMP procedures;
2) Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and all conditions for certification;
3) A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units;
4) An explanation of why, how, and how much sampling is expected to take place and in what units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained beds;

5) A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed schedule for the monitoring;

6) A discussion of the procedures to be followed in the event of a significant fossil discovery, including notifications;

7) A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;

8) Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meets the Society of Vertebrate Paleontology standards and requirements for the curation of paleontological resources; and

9) Identification of the institution that has agreed to receive any data and fossil materials salvaged, requirements or specifications for materials delivered for curation and how they will be met, and the name and phone number of the contact person at the institution; and,

10) A copy of the paleontological conditions of certification.

Verification: At least 30 days prior to ground disturbance, the project owner shall provide a copy of the PRMMP. The PRMMP shall include an affidavit of authorship by the PRS, and acceptance of the project owner evidenced by a signature.

PAL-4 Prior to ground disturbance and for the duration of construction, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for all project managers, construction supervisors and workers who operate ground disturbing equipment or tools. Workers to be involved in ground disturbing activities in sensitive units shall not operate equipment prior to receiving worker training. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

The Worker Environmental Awareness Program (WEAP) shall address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. In-person training shall be provided for each new employee involved with ground disturbing activities, while these activities are occurring in highly sensitive geologic units, as detailed in the PRMMP. The in-person training shall occur within four days following a new hire for highly sensitive sites and as established by the PRMMP for sites of moderate, low, and zero sensitivity. Provisions will be made to provide the WEAP training to workers not fluent in English.

The training shall include:

1) A discussion of applicable laws and penalties under the law;
2) For training in locations of high sensitivity, the PRS shall provide good quality photographs or physical examples of vertebrate fossils that may be expected in the area;
3) Information that the PRS or PRM has the authority to halt or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;
4) Instruction that employees are to halt or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM;
5) An informational brochure that identifies reporting procedures in the event of a discovery;
6) A Certification of Completion of WEAP form signed by each worker indicating that they have received the training; and
7) A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: (1) At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP including the brochure with the set of reporting procedures the workers are to follow. (2) At least 30 days prior to ground disturbance, the project owner shall submit the script and final video to the CPM for approval if the project owner is planning on using a video for interim training. (3) If an alternate paleontological trainer is requested by the owner, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval. Alternate trainers shall not conduct training prior to CPM authorization. (4) The project owner shall provide in the Monthly Compliance Report the WEAP copies of the Certification of Completion forms with the names of those trained and the trainer for each training offered that month. The Monthly Compliance Report shall also include a running total of all persons who have completed the training to date.

PAL-5 The project owner shall ensure that the PRS and PRM(s) monitor consistent with the PRMMP, all construction-related grading, excavation, trenching, and augering in areas where potentially fossil-bearing materials have been identified. In the event that the PRS determines full time monitoring is not necessary in locations that were identified as potentially fossil-bearing in the PRMMP, the project owner shall ensure that the PRS notify and seek the concurrence of the CPM.

The project owner shall ensure that the PRS and PRM(s) have the authority to halt or redirect construction if paleontological resources are encountered. The

project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows:

1) Any change of monitoring different from the accepted schedule presented in the PRMMP shall be proposed in a letter from the PRS and the project owner to the CPM prior to the change in monitoring. The letter shall include the justification for the change in monitoring and submitted to the CPM for review and approval.

2) The project owner shall ensure that the PRM(s) shall keep a daily log of monitoring of paleontological resource activities. The PRS may informally discuss paleontological resource monitoring and mitigation activities with the CPM at any time.

3) The project owner shall ensure that the PRS immediately notify the project owner and the CPM of any incidents of non-compliance with any paleontological resources conditions of certification. The PRS shall recommend corrective action to resolve the issues or achieve compliance with the conditions of certification.

4) For any significant paleontological resources encountered, either the project owner or the PRS shall notify the CPM immediately (no later than the following morning after the find, or Monday morning in the case of a weekend) of any halt of construction activities.

The project owner shall ensure that the PRS prepares a summary of the monitoring and other paleontological activities that will be placed in the Monthly Compliance Reports. The summary will include the name(s) of PRS or monitor(s) active during the month, general descriptions of training and construction activities, and general locations of excavations, grading, etc. A section of the report will include the geologic units or subunits encountered, descriptions of sampling within each unit, and a list of fossils identified in the field. A final section of the report will address any issues or concerns about the project relating to paleontologic monitoring including any incidents of non-compliance and any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the project shall include a justification in summary as to why monitoring was not conducted.

Verification: The project owner shall ensure that the PRS submit the summary of monitoring and paleontological activities in the Monthly Compliance Report.

PAL-6 The project owner, through the designated PRS, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during the

monitoring, data recovery, mapping, and mitigation activities related to the project.

Verification: The project owner shall maintain in their compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved Paleontological Resources Report. The project owner shall be responsible to pay curation fees for fossils collected and curated as a result of paleontological monitoring and mitigation.

PAL-7 The project owner shall ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS. The PRR shall be prepared following completion of the ground disturbing activities. The PRR shall include an analysis of the salvaged fossil materials and related information and submitted to the CPM for review and approval.

The report shall include, but not be limited to, a description and inventory of salvaged fossil materials; a map showing the location of paleontological resources encountered; determinations of sensitivity and significance; and a statement by the PRS that project impacts to paleontological resources have been mitigated.

Verification: Within 90 days after completion of ground disturbing activities, including landscaping, the project owner shall submit the Paleontological Resources Report under confidential cover.

Certification of Completion of Worker Environmental Awareness Program

MAGNOLIA POWER PROJECT (DOCKET #01-AFC-06)

This is to certify these individuals have completed a mandatory California Energy Commission-approved Worker Environmental Awareness Program (WEAP). The WEAP includes pertinent information on Cultural, Paleontology & Biology Resources for all personnel (i.e. construction supervisors, crews and plant operators) working on-site or at related facilities. By signing below, the participant indicates that they understand and shall abide by the guidelines set forth in the Program materials. Please include this completed form in your Monthly Compliance Report.

No.	Employee Name	Company	Signature
1.			
2.			
3.			
4.			
5.			
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19.			
20.			

Cul Trainer: _____ Signature:_____ Date: ___/___/____

Paleo Trainer:_____ Signature:_____ Date: ___/___/____

Bio Trainer: _____ Signature:_____ Date: ___/___/____

VII. LOCAL IMPACT ASSESSMENT

All aspects of a power plant project affect to some degree the community in which it is located. The impact on the local area depends upon the nature of the community and the extent of the associated impacts. Technical topics discussed in this portion of the Decision consider issues of local concern, including land use, traffic and transportation, visual resources, noise, and socioeconomics.

A. LAND USE

The land use analysis focuses on two main issues (1) whether the project is consistent with local land use plans, ordinances, and policies; and (2) whether the project is compatible with existing and planned land uses.

Summary and Discussion of the Evidence

The City of Burbank (COB) General Plan Land Use Element, the COB Municipal Code, which includes the Zoning Ordinance, and the COB's Redevelopment Plan for the South San Fernando Redevelopment Project are the local ordinances and policies relevant to the MPP. (Ex. 45, pp. 4.5-1 and 4.5-2.)

1. The Site

The project site is located in the City of Burbank within Los Angeles County at the eastern portion of the San Fernando Valley. Burbank is bordered by the City of Glendale to the south and east, and the City of Los Angeles to the north and west. The MPP will be built within the COB's existing 23-acre generating station at 164 Magnolia Boulevard, which is west of Interstate Highway 5 between Magnolia and Olive Avenue, and east of Victory Street.[73] The site vicinity is

[73] Township 1 North, Range 14 West on the USGS Burbank Quadrangle; assessors parcel number (APN) 2451-011-902. (Ex. 1, § 5.9.1.2.)

predominantly industrial, characterized by manufacturing, processing, and fabricating facilities, trucking, distribution, and warehouse facilities, commercial land uses, and various business park developments. Some residential zoning occurs within a one-mile radius of the site. (Ex. 45, pp. 4.5-3 and 4.5-4; Ex. 1, § 5.9.1.2, Figure 5.9-4.)

Applicant and Staff agreed that the MPP is consistent with the COB's existing and planned uses and zoning designations for the site and surrounding area. (Ex. 45, pp. 4.5-8 and 4.5-9.) The existing site is designated General Manufacturing and the existing power station is designated Public Facility in the Land Use Element of the Burbank General Plan.[74] The zoning designation is M-2 General Industrial Zone, which is intended for manufacturing process, fabrication, and assembly of goods and materials. Public utility facilities are a permitted use in the M-2 district. (Ex. 1, § 5.9.1.3.) The project will be built entirely within the power station. Existing perimeter chain-link fences enclose the 23-acre parcel. (Ex. 45, p. 4.5-4.)

The site falls within the South San Fernando Redevelopment Project Area, which was established to revitalize the area, eliminate physical and economic blight, promote job opportunities, and improve underutilized properties. The evidentiary record indicates that MPP is compatible with the Redevelopment Plan. The project will enhance economic development by delivering needed power to the participating cities, creating new employment opportunities, and using a currently underutilized property without introducing additional industrial development into the urban area. (Ex. 1, § 5.9.2.1.)

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[74] The Land Use Element states that public facilities should be located in areas of compatible land use and the location should reflect the policy of distributing service facilities equitably throughout the community. (Ex. 1, p. 5.9-4.)

2. Conditional Use Permit Findings

The project requires a temporary offsite staging area during construction to provide a field office location, equipment laydown area, and storage area. The proposed 2.4-acre staging area, located along Victory Place adjacent to the railroad tracks between Empire Avenue and Maria Street, is zoned Railroad. Use of this area for laydown activities would therefore require a Conditional Use Permit (CUP) from the COB if the COB had jurisdiction over the project.[75] Likewise, two offsite areas proposed as parking lots for construction workers would require CUPs: (1) the primary parking area located north of the site on Old Front Street, which can accommodate 300 parking spaces, is zoned Automobile Dealership; and (2) the second designated parking lot, a paved area between Hollywood Way and Buena Vista along the railroad tracks, is zoned Railroad. (Ex. 1, § 5.9.1.4.)

Since the COB did not prepare CUP findings for the temporary non-conforming uses of these properties, Staff reviewed the applicable "findings" required by the COB Municipal Code:[76]

- The uses applied for at these locations are subject to CUP review;
- The uses are not detrimental to existing uses in the zoning area;
- The uses are compatible with other uses on the same lot and the general area;
- The sites are adequate in size to accommodate the use, including setbacks and other features required to adjust the existing use to the proposed new use;
- The sites are located near streets and highways to accommodate the type and quantity of traffic generated by the proposed use; and

[75] The Energy Commission has exclusive jurisdiction to license the MPP; therefore, Applicant did not request the City of Burbank to make CUP findings. (Pub. Resources Code, § 25500 et seq.; Ex. 6, Data Response 170.)

[76] *See* COB Municipal Code, Chap. 31, Art. 19, Div. 4, § 31-1934 et seq.

- The conditions imposed are necessary to protect the public health, convenience, safety, and welfare.

Based on this review, Staff concluded that temporary use of the offsite locations for equipment storage and parking is compatible with other uses in the surrounding Industrial District. (Ex. 45, p. 4.5-11.) The City of Burbank concurred with Staff's analysis and agreed that the Conditions of Certification proposed by Staff would satisfy the COB's requirements associated with land use entitlements. (Ex. 22; Ex. 43; Ex. 35, p. 2; RT, pp. 110-114.) Accordingly, we have adopted Condition of Certification **LAND-1** to ensure that the project owner will comply with design and performance standards for the Industrial (M-2) District as required by the COB Zoning Ordinance. Condition **LAND-2** requires the project owner to comply with all applicable parking standards established by the Zoning Ordinance. Condition **LAND-3** ensures that any signs erected by the project owner shall comply with the Zoning Ordinance. Condition **LAND-4** ensures that any public art display or any in lieu fee shall comply with the Zoning Ordinance.

Staff also found that the MPP's proposed 150-foot tall HRSG exhaust stack would exceed the 70-foot height limitation established by the Zoning Ordinance.[77] (Ex. 45, p. 4.5-10; Ex. 1, § 5.9.2.1.) A CUP would have been necessary for the stack height allowance. The applicable Municipal Code findings require a non-conforming tall structure to be more than 500 feet from a residential zone district lot line and located in an adopted specific planning or redevelopment planning area. (Ex. 45, p. 4.5-10.) Staff determined that a CUP would have been granted if the COB had issued the findings since the 150-foot stack is more than 500 feet from a residential zone and is located in the South San Fernando Redevelopment Project Area. (*Ibid*.) Condition **LAND-1** ensures that the project owner will comply with design requirements regarding the stack height exemption.

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[77] *See* COB Municipal Code, Chap. 31, Art. 8, Div. 1, § 31-812(a).

3. Potential Impacts

The evidentiary record indicates that the MPP has no potential to physically divide an existing community since it is located entirely on COB property and neither the size nor nature of the project would alter any land use patterns in the area. (Ex. 45, p. 4.5-8.)

Staff found the project is consistent with the COB's long-range land use policies for the Industrial Corridor as expressed in the General Plan and the South San Fernando Redevelopment Plan. (Ex. 45, p. 4.5-11.) Since the project is consistent with the long-range policies, there is no evidence of potential cumulative land use impacts. (*Id*. at pp. 4.5-8 and 4.5-11.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The project site is located in the City of Burbank (COB) within Los Angeles County at the eastern portion of the San Fernando Valley.

2. The MPP will be built entirely within the COB's existing 23-acre power station at 164 Magnolia Boulevard, which is located in the COB's General Industrial District (M-2). The COB power station is designated Public Facility, a permitted use in the M-2 district.

3. The project is compatible with the COB's existing and planned uses and zoning designations for the site and surrounding area.

4. The project is consistent with the applicable land use requirements, including the findings necessary for Conditional Use Permits (CUPs) related to the use of the proposed offsite laydown and parking areas.

5. The project complies with the CUP findings necessary for the HRSG stack height allowance.

6. There is no potential for the MPP to physically divide the community nor is there evidence of potential cumulative impacts.

7. The Conditions of Certification, listed below, ensure that the MPP will comply with the relevant land use requirements in accord with all applicable laws, ordinances, regulations, and standards (LORS) identified in the evidentiary record and included in the pertinent portion of **Appendix A** of this Decision.

We therefore conclude that construction and operation of the MPP will not result in direct, indirect, or cumulative land use impacts. Implementation of the Conditions of Certification, below, ensures that the MPP will comply with all applicable laws, ordinances, regulations, and standards (LORS) related to land use.

CONDITIONS OF CERTIFICATION

LAND-1 The project owner shall comply with the minimum design and performance standards for the Industrial (M-2) District set forth in the City of Burbank Zoning Ordinance (City of Burbank Municipal Code, Chapter 31, Article 8, Division 2, §31-808 et seq.).

Verification: At least 30 `days prior to site mobilization of the MPP project, the project owner shall submit written evidence to the Energy Commission Compliance Project Manager (CPM) that the project conforms to all applicable design and performance standards for the Industrial (M-2) District set forth in the City of Burbank Zoning Ordinance. The submittal to the CPM shall include evidence of review by the City of Burbank.

LAND-2 The project owner shall comply with the parking standards established by the City of Burbank Zoning Ordinance (City of Burbank Municipal Code, Chapter 31, Article 14, Division 1-4, § 31-1401-1422).

Verification: At least 30 days prior to site mobilization, the project owner shall submit written evidence to the Energy Commission Compliance Project Manager (CPM) that the project conforms to all applicable parking standards as established by the City of Burbank Zoning Ordinance. The submittal to the CPM shall include evidence of review by the City.

LAND-3 The project owner shall ensure that any signs erected (either permanent or for construction only) comply with the outdoor advertising regulations

established by the City of Burbank Zoning Ordinance (City of Burbank Municipal Code, Chapter 13, Article 10, §31-1008).

Verification: At least 30 days prior to start of commercial operation, the project owner shall submit written evidence to the CPM that both permanent and temporary signs will conform to the City of Burbank Zoning Ordinance. The submittal to the CPM shall include evidence of review by the City.

LAND-4 The project owner shall ensure that any public art erected shall comply with the Municipal Code, Chapter 31 regulations established by the City of Burbank Zoning Ordinance (City of Burbank Municipal Code, Article 11, § 31-1114).

Verification: At least 30 days prior to start of commercial operation, the project owner shall submit written evidence to the CPM that the public art display or the payment of an in lieu fee will conform to the City of Burbank Zoning Ordinance. The submittal to the CPM shall include evidence of review by the City.

B. TRAFFIC AND TRANSPORTATION

Construction and operation of the project have the potential to adversely impact the transportation system in the vicinity. During the construction phase, large numbers of workers arriving and leaving during peak traffic hours and the delivery of large pieces of equipment could increase roadway congestion and affect traffic flow. During plant operation, there is reduced potential for impacts due to the limited number of vehicles involved; operations and maintenance traffic will be minimal but a slight increase in deliveries of hazardous materials is expected. In all cases, transportation of hazardous materials must comply with federal and state laws.

The evidentiary record contains a review of the relevant roads and routings in the vicinity; the potential traffic problems associated with those routes; the anticipated number of deliveries of oversized/overweight equipment; the anticipated encroachments upon public rights-of-way; the frequency of and routes associated with the delivery of hazardous materials; and the availability of alternative transportation methods.

Summary and Discussion of the Evidence

The project site is located one-eighth of a mile west of Interstate Highway 5 (I-5) at 164 Magnolia Boulevard in the City of Burbank. A rail yard is directly to the northeast, Olive Avenue to the southeast, Lake Street to the southwest, and Magnolia Boulevard to the northwest. The Regional Intermodal Transportation Center (RITC), which serves the intercity passenger rail system, is located to the northeast. Primary access to the site will be off Magnolia Boulevard through an existing gate and off Olive Avenue at the south gate entrance. The site also has emergency ingress/egress through three gates on Lake Street. (Ex. 45, p. 4.9-4.)

Highway I-5 is an eight-lane, north-south freeway that provides access from northern California to Los Angeles and San Diego. Magnolia Boulevard is a major four-lane arterial with a center left turn lane that provides northeast-southwest access through Burbank. Olive Avenue is also a four-lane arterial with a center left turn lane that provides northeast-southwest access through Burbank. On-street parking is available on both sides of Olive Avenue, except for the overpass and along the train tracks. Lake Street is adjacent to the site on the west and is a two-lane collector street with parking on both sides of the street. Burbank Boulevard is a major four lane northeast-southwest arterial about one mile north of the site. First Street, located three blocks from the site, is a four-lane collector with a center lane that runs northwest-southeast, on the east side of I-5. First Street provides access to I-5 via Verdugo Avenue, Olive Avenue, and Orange Grove. (Ex. 1, p. 5.11-2; Ex. 45, p. 4.9-4)

TRAFFIC AND TRANSPORTATION Table 5.11-2, replicated from Applicant's testimony, below, identifies the annual average daily traffic (ADT), annual average peak-hour traffic, annual average percent of truck traffic, highway capacity in vehicles per day, and level of service (LOS) for highways in the vicinity of the project.[78] These traffic estimates are presented for various road segments between mileposts or junctions on each road. LOS levels refer to the average vehicle capacity and the flow of traffic. LOS A denotes free flow of traffic while LOS E and F mean that there is a congested flow. According to Caltrans policy, LOS D is acceptable for planning purposes, whereas LOS E and F are considered unacceptable. As shown in **Table 5.11-2**, many of the routes potentially affected by the MPP are operating at LOS F. (Ex. 45, pp. 4.9-9 and 4.9-10; Ex. 1, § 5.11.1.2.)

[78] The criteria for LOS on highways are established by Caltrans. These criteria take into account numerous variables such as annual average daily traffic, capacity, grade, environment, and other relevant information. (Ex. 1, § 5.11.1.2.)

TRAFFIC AND TRANSPORTATION Table 5.11-2
Existing Roadway Information and LOS

Roadway Segment	Classification	Existing Lanes	Existing Roadway Capacity (Vehicles Per Day)	Existing Average Daily Traffic (ADT) (1998) (1)	Peak Hour (2)	Existing Percentage of Trucks (3)	LOS
I-5 (Golden State Freeway)							
Alameda to Olive	Freeway	**8 Lanes**	**110,000**	**216,000**	**NA**	**10.5**	**F**
Olive to Burbank	Freeway	**8 Lanes**	**110,000**	**200,000**	**NA**	**10.5**	**F**
Burbank to Victory	Freeway	**8 Lanes**	**110,000**	**186,000**	**NA**	**10.5**	**F**
Victory to Buena Vista	Freeway	**8 Lanes**	**110,000**	**169,000**	**NA**	**10.5**	**F**
Buena Vista to Hollywood	Freeway	**8 Lanes**	**110,000**	**170,000**	**NA**	**10.5**	**F**
Olive Avenue							
Victory to Lake	Major Arterial	**4 Lanes**	**25,000**	**NA**	**2,100**	**<1**	**-**
Lake to Front	Major Arterial	**4 Lanes**	**25,000**	**23,800**	**2,000**	**<1**	**E**
Front to San Fernando	Major Arterial	**4 Lanes**	**25,000**	**21,234**	**1,500**	**<1**	**D**
Magnolia Boulevard							
Victory to Front	Major Arterial	**4 Lanes**	**25,000**	**19,200**	**NA**	**NA**	**C**
Front to San Fernando	Major Arterial	**4 Lanes**	**25,000**	**17,423**	**NA**	**NA**	**B**
Burbank Boulevard							
Victory to Front	Major Arterial	**4 Lanes**	**25,000**	**24,600**	**2,800**	**<1**	**E**
Front to San Fernando	Major Arterial	**4 Lanes**	**25,000**	**37,730**	**2,600**	**1.4**	**F**
Victory Boulevard							
Olive to Magnolia	Major Arterial	**4 Lanes**	**25,000**	**26,600**	**2,200**	**1.5**	**F**
Magnolia to Burbank	Major Arterial	**4 Lanes**	**25,000**	**24,800**	**2,200**	**4.0**	**E**
Victory Place							
Burbank to Empire	Arterial	**4 Lanes**	**25,000**	**7,300**	**550**	**6.1**	**A**
Empire to San Fernando/ Buena Vista	Arterial	**4 Lanes**	**25,000**	**5,800**	**NA**	**NA**	
First Street/ Grinnell Drive							
San Fernando to Magnolia	Collector	**4 Lanes**	**10,000**	**17,423**	**1,100**	**1.5**	**F**
Magnolia to Verdugo	Collector	**4 Lanes**	**10,000**	**18,084**	**750**	**1.4**	**F**
Flower Street							
Alameda to Olive	Collector	**2 Lanes**	**<4,000**	**3,230**	**NA**	**NA**	**D**

Source: Ex. 1, Table 5.11-2, p. 5.11-4.

(1) Counts provided by the COB, 1998 data. I-5 data is 1999 by Caltrans
(2) Based on February 2001 peak hour counts by Accutel.
(3) Level of Service, determined on basis of Volume to Capacity (V/C) Ratio, describes operating conditions on the roadway. LOS "A" is generally free flowing, LOS E indicates that the roadway limit has reached its capacity. LOS C and D are typical in urban conditions. LOS F represents severe congestion.

NA – Not available.

Truck volumes are heaviest on I-5, where truck traffic accounts for 10.5 percent of the total traffic volume. On local COB streets, truck traffic ranges from 1 to 6 percent, serving existing industries adjacent to the site. COB's designated truck routes follow the arterial street system; major intersections are controlled by traffic signals. (Ex. 45, p. 4.9-6.)

Based on the site location, construction circulation, and consultation with the COB, Applicant determined that the intersections identified below in **Table 5.11.1** would most likely experience impacts due to project-related traffic.

TRAFFIC AND TRANSPORTATION TABLE 5.11.1
Summary of Existing Intersection LOS

Intersection	AM Peak Hour LOS	PM Peak Hour LOS
Burbank Boulevard/Victory Boulevard	F	F
Burbank Boulevard/Front Street	A	A
Olive Avenue/Victory Boulevard	D	D
Olive Avenue/First Street	C	C
Verdugo Avenue/First Street	B	C

Source: Ex. 1, Table 5.11-1, p. 5.11-3.

1. Construction Impacts

Construction of the MPP will occur over an estimated 24-month period and will require a total average daily construction workforce of 145 workers, assuming a single shift and a 12-hour, six day work week. During the peak construction period, an estimated 319 workers will be required daily. Work hours will be 7 a.m. to 7 p.m. (Ex. 45, p. 4.9-10; Ex. 1, p. 5.11-9.)

A worst case commute scenario assumes that during the peak construction period all construction workers will drive to work individually, generating 638 vehicle trips to and from the site each day. (Ex. 45, p. 4.9-10.) The workforce is expected to come from local communities. Applicant estimated the following traffic pattern distribution for the commuting workforce: 20 percent from the north; 20 percent from the west; 30 percent from the east; and 30 percent from the

south. (Ex. 1, p. 5.11-8.) The roads most likely to be traveled by workers to the employee parking lots are I-5, Burbank Boulevard, San Fernando Boulevard, Front Street, First Street and North Victory Boulevard. Peak traffic will generally occur between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. (*Ibid.*)

Applicant identified the following construction truck routes to minimize impacts to local roadways. Trucks will exit from I-5 either at Burbank Boulevard, head south on Victory, east on Olive to the south gate entrance or exit at Alameda Avenue, head north on Flower, east on Olive to the south gate. Vehicles from the laydown area will travel south on North Victory to Olive and then to the south gate. (Ex. 1, p. 5.11-8.)

The combination of commuter traffic and truck deliveries will result in a daily maximum of 642 trips in the 15th month of construction. (Ex. 45, p. 4.9-12.) Using the traffic pattern assumptions described above, Applicant and Staff agreed that these trips would cause minimal, if any, change to existing LOS at the intersections. The only measurable decrease in the LOS would occur at the intersection of Verdugo and First Streets during the a.m. peak hours, where the LOS decreases from B to C. (*Ibid.*) *See* Applicant's **Table 5.11-4** below.[79]

TRAFFIC AND TRANSPORTATION TABLE 5.11-4
Summary of Existing Intersection LOS

Intersection	AM Peak Hour LOS	PM Peak Hour LOS
Burbank Boulevard/Victory Boulevard	F(F)	F(F)
Burbank Boulevard/Front Street	A(A)	A(A)
Olive Avenue/Victory Boulevard	D(D)	D(D)
Olive Avenue/First Street	C(C)	C(C)
Verdugo Avenue/First Street	C(B)	C(C)

Source: Ex. 1, Table 5.11-4, page 5.11-9.

[79] The LOS of F for the Victory/Burbank intersection is not an acceptable level and would otherwise require mitigation; however, according to Staff, the COB reconfigured the intersection in 2001 (subsequent to Applicant's analysis) to relieve current congestion and as a result, MPP-related traffic will not cause a negative traffic impact at this intersection. (Ex. 45, p. 4.9-12.)

To ensure that construction traffic does not significantly affect area traffic, Condition of Certification **TRANS-4** requires the project owner to develop a traffic control plan during the construction period. Since traffic congestion is already a factor in the project vicinity, Staff proposed traffic mitigation measures to prevent additional congestion. These measures include off-peak arrival and departure times, maintaining the physical condition of the roadways, off-street employee parking in designated parking lots, timing of equipment deliveries, traffic control signage, temporary lane closure, and emergency access. We have incorporated these measures in Conditions of Certification **TRANS-3, TRANS-4**, and **TRANS-6**. In addition, Condition **TRANS-1** requires all project-related truck traffic to comply with vehicle size and weight limitations established by state and local jurisdictions.

Area rail service is provided by Union Pacific Railroad. MPP will use the rail line for delivery of heavy equipment and materials to the laydown area located next to the Union Pacific tracks, at Magnolia to the south, the Burbank Western Channel to the east, and Union Pacific Railroad tracks to the west and north. (Ex. 45, p. 4.9-23.) Condition of Certification **TRANS-5** requires the project owner to make all necessary arrangements to allow use of the rail line for deliveries.[80] The equipment and supplies delivered to the laydown area will be transferred by truck to the project site. These truck deliveries are included in the analysis shown above in **Table 5.11-4**. (Ex. 45, p. 4.9-11.)

2. Operational Impacts

Transportation of hazardous substances to the site during project construction and operation will increase potential roadway hazards. (Ex. 45, p. 4.9-18; Ex. 1, § 5.11.2.2.) Condition **TRANS-2** requires the project owner to identify a truck

[80] Applicant and Staff agreed to modify the verification to Condition **TRANS-5** to require an agreement prior to first use of the rail line. (Ex. 32, pp. 1-2; Ex. 46.)

route for hazardous materials deliveries and to ensure that appropriate permits and licenses are obtained by the subcontractors responsible for the deliveries.

Traffic impacts associated with project operation consist of incremental commute trips by new employees and periodic truck deliveries. The project will add 15 new full-time employees; therefore, worker commute trips would be insignificant, constituting less than one percent change in current traffic flows. (Ex. 3, § 5.11.2.2.) Likewise, truck traffic including deliveries and removal of materials from the site would not change the LOS on local roadways.[81] (*Ibid.*)

Staff modeled potential vapor plume emissions from the HRSG stack and cooling towers to determine whether resulting fog could affect traffic safety on the surrounding roadways. Staff concluded that the frequency of the plumes would fall below the significance threshold for a potential significant impact. (Ex. 45, pp. 4.9-15 and 4.9-16.) However, to ensure that vapor plumes do not create visual impairment on elevated roadways such as Olive and Magnolia Boulevards, Condition of Certification **TRANS-7** requires the project owner to meet with appropriate jurisdictions to determine the placement of warning signs regarding possible ground fog. (*Id*. at p. 4.9-17.) Condition **VIS-6** in the **Visual Resources** section of this Decision requires the project owner to incorporate design measures to limit plume size.

3. Cumulative Impacts

Based on current and future traffic characteristics of the area, congestion associated with the operation of the project is nominal and regional and local roadways will have adequate capacity to accommodate project construction traffic.

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[81] Applicant submitted an analysis of potential traffic impacts due to operation of the zero liquid discharge (ZLD) system, which requires at least 3 truck trips per week for removal of solid waste. There are no additional traffic impacts connected with the ZLD system. (Ex. 3, p. 5.11-2.)

Applicant identified 22 projects within a five-mile radius of the site that could create a cumulative impact on the area if combined with project traffic. (Ex. 1, § 5.18; Table 5.18-1.) Since only 8 of the 22 projects are near the MPP and most are located east of I-5, they would have minimal impact on the roadways used by MPP-related traffic. With respect to the potential for cumulative traffic impacts on I-5, Staff concluded that the impacts would be insignificant since MPP's construction workers will be required to travel at off-peak times. (Ex. 45, p. 4.9-19.) Impacts associated with the construction phase are short-term and operational phase impacts will be insignificant due to the slight increase in employees and minimal increase in truck traffic. Thus, the record does not indicate a potential for significant cumulative impacts on traffic conditions in the project vicinity. (*Ibid*.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. Roadways in the project vicinity currently experience high levels of traffic congestion.

2. Commuter and truck traffic during construction will not change the LOS at local intersections near the site except for the intersection at Verdugo and First Streets during the morning peak hours when the LOS decreases from B to C, which is an acceptable level.

3. The project owner will implement a Construction Traffic Control Plan that includes mitigation measures to prevent additional congestion in the area, including off-peak commuter arrival and departure times, maintaining the physical condition of the roadways, off-street employee parking in designated parking lots, timing of equipment deliveries, traffic control signage, temporary lane closure, and emergency access.

4. The Construction Traffic Control Plan will ensure that roadways in the local and regional areas will not be significantly impacted by increased construction-related traffic.

5. Commuter and truck traffic during project operations will not result in any significant impacts on local or regional traffic.

6. Vapor emissions from the HRSG stack and cooling towers will not result in significant ground level fogging that would cause traffic hazards on local roadways; however, the project owner will install roadway signage to notify drivers of the possibility of ground fog.

7. Potential adverse impacts associated with the transportation of hazardous materials during construction and operation of the project will be mitigated to insignificance by compliance with applicable laws.

8. Potential cumulative impacts to traffic and transportation resulting from construction and operation of the project will be insignificant.

9. Implementation of the Conditions of Certification, below, will ensure that both construction and operation of the project comply with all applicable laws, ordinances, regulations, and standards on traffic and transportation as identified in the pertinent portions of **Appendix A**.

The Commission therefore concludes that construction and operation of the project, as mitigated herein, will not result in any significant, direct, indirect, or cumulative adverse impacts to the local or regional traffic and transportation system.

CONDITIONS OF CERTIFICATION

TRANS-1 The project owner shall comply with California Department of Transportation (Caltrans) and other relevant jurisdictions' limitations on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

Verification: In the Monthly Compliance Reports, the project owner shall submit copies of any permits received during the reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-2 The project owner shall ensure that all permits and/or licenses are secured from the California Highway Patrol, Caltrans, and other relevant state or federal regulatory agencies for the transport of hazardous materials and that appropriate routes for transporting such materials are identified.

Verification: The project owner shall include in its Monthly Compliance Reports, copies of all permits/licenses acquired by the project owner and/or

subcontractors concerning the transport of hazardous materials and the agreed upon routes for transporting such materials upon consultation with the appropriate jurisdictions.

TRANS-3 During construction of the power plant and all related facilities, the project shall develop a parking and staging plan for all phases of project construction to require that all project-related parking shall occur on-site or in designated off-site parking areas.

Verification: At least 60 days prior to start of site mobilization, the project owner shall submit the plan to the City of Burbank for review and comment, and to the CPM for review and approval.

TRANS-4 The project owner shall consult with the City of Burbank and County of Los Angeles and prepare and submit to the CPM for approval a construction traffic control plan and implementation program which addresses the following issues:

- Timing of heavy equipment and building materials deliveries;
- Redirecting construction traffic with a flagperson;
- Signing, lighting, and traffic control device placement if required;
- Need for construction work hours and arrival/departure times outside of peak traffic periods;
- Ensure access for emergency vehicles to the project site;
- Temporary travel lane closure;
- Establishment of construction work hours outside of peak traffic periods; and
- Access to adjacent residential and commercial property during the construction of all linears.

Verification: At least 30 days prior to site mobilization, the project owner shall provide to the CPM a copy of the construction traffic control plan and implementation program.

TRANS-5 Prior to use of the laydown area, the project owner shall make all necessary arrangements to allow the use of the existing rail line for delivery of construction material and heavy equipment.

Protocol: The project owner shall reach an agreement with the owner of the rail line to permit the use of the line for the purpose described above.

Verification: At least 60 days prior to first use of the existing rail line for project-related deliveries, the project owner shall reach an agreement with the owner of the rail line for use of the line for the purpose described above.

TRANS-6 Following construction of MPP project, the project owner shall meet with the CPM and the COB to determine if any action is necessary and develop a schedule to complete the repair of any roadways damaged due to project construction.

> Protocol: Prior to start of construction, the project owner shall photograph, videotape or digitally record images of the roadways directly adjacent to the project site and between the laydown area and project site. This would include the following roadway segments: Olive Avenue between Victory and San Fernando Boulevard, Magnolia between Victory to San Fernando, and Victory Boulevard between Magnolia Boulevard and Olive Avenue. The project owner shall provide the Compliance Project Manager (CPM) and the City of Burbank with a copy of these images. Prior to start of construction, the project owner shall also notify the City of Burbank about the schedule for project construction. The purpose of this notification is to postpone any planned roadway resurfacing and/or improvement projects until after the project construction has taken place and to coordinate construction related activities associated with other projects.

Verification: Within 30 days after completion of project construction, the project owner shall meet with the CPM and the City of Burbank to determine and receive approval for the actions necessary and schedule to complete the repair of identified sections of public roadways to original or as near original condition as possible. Following completion of any regional road improvements, the project owner shall provide to the CPM a letter from the City of Burbank stating its satisfaction with the road improvements.

TRANS-7 Before start up of MPP, the project owner shall meet with the CPM, the COB, and other relevant jurisdictions to determine the type and placement of warning signage to inform motorists about the possibility of ground level fog on Olive Avenue and Magnolia Boulevard.

Verification: At least 30 days prior to project start up, the project owner shall meet with the CPM, the City of Burbank and other relevant jurisdictions to determine and receive approval for the placement of warning signage and the installation date to inform motorists about the possibility of ground level fog.

C. VISUAL RESOURCES

Visual resources are the natural and cultural features of the landscape that contribute to the visual character or quality of the environment. CEQA requires an examination of a project's visual impacts on the environment which, in this case, would focus on the project's potential to cause substantial degradation to the existing visual character of the site and its surroundings. (Cal. Code of Regs., tit. 14, § 15382, Appendix G.)

Summary and Discussion of the Evidence

The site is located in a predominantly industrial setting of low visual sensitivity. From nearby viewpoints to the north, east, and south, views of the site are characterized by a highly industrial appearance dominated by the prominent Olive Units 1, 2, 3, and 4, a switching yard, and storage tanks and buildings, which range in height from 12 to 100 feet. (Ex. 4, Table DR-61.) The decommissioned 150-foot tall HRSG exhaust stack for Magnolia Units 3 and 4 is the facility's most visible feature. Views of the facility are typified by the visually chaotic sight of exposed mechanical equipment, unpainted surfaces, and an absence of attention to design and appearance. (Ex. 45, p. 4.11-7.)

Lower portions of the site are screened by 12-foot high masonry or concrete walls that enclose the power station on Lake Street, Olive Avenue, and the Burbank Western Channel/MetroLink frontages. Views from Magnolia Boulevard to the west are generally hidden behind the two-story Burbank Water and Power administration buildings, which have the appearance of a typical landscaped industrial office. (Ex. 45, pp. 4.11-7 and 4.11-18.) Prominent elevated foreground views into the site occur from elevated bridges on both Olive Avenue and Magnolia Boulevard as these streets cross over the river channel and railroad tracks. (*Ibid*.)

The MPP will include a new power block, switchyard upgrades to the Olive switchyard, new control and administrative buildings, new cooling tower structures, boiler, storage tanks, gas compressors, and other ancillary facilities. The most visually prominent features include a new 150-foot tall HRSG exhaust stack, which replaces the decommissioned Magnolia stack, an enclosed HRSG (82.5 feet high), an STG enclosure structure (71.75 feet high), the CTG inlet structure (84 feet high), located in the eastern corner of the MPP site adjacent to the Magnolia Boulevard overcrossing, and the ZLD facility (80' x 96' blowdown treatment building). Six new cooling tower cells (50 feet high) will be placed near the site's northeastern boundary. An LM6000 combustion turbine already occupies the center of the site. No new transmission towers are proposed. A new 3-story administration building (50.5 feet high) will be constructed immediately west of the MPP. (Ex. 45, p. 4.11-18; Ex. 3, p. 5.13-1.)

1. Methodology

The City of Burbank's (COB) General Plan and the South San Fernando Redevelopment Project establish applicable visual resource management policies in the project vicinity and the COB's Municipal Code contains the City's requirements for landscaping, setbacks, building design, height limits, and public art or in lieu fees. (Ex. 1, § 5.13.4.3.) Applicant conducted visual field studies that viewed the project components from potentially sensitive vantage points to analyze project impacts in light of the local development policies. Six Key Observation Points (KOPs) were chosen to represent sensitive viewpoints. (*Id*. at § 5.13.1.1, Figure 5.13-1.)

- **KOP 1**: Tujunga Street near Camino de Villas (hillside residential setting).
- **KOP 2**: Howard Court near Viewcrest (hillside residential setting).
- **KOP 3**: Victory Boulevard at Cypress (industrial setting).

- **KOP 4**: Magnolia Bridge Panorama (industrial setting).
- **KOP 5**: Olive Avenue above Metrolink Panorama (industrial setting).
- **KOP 6**: Interstate 5 (industrial setting).

Applicant took panoramic photographs of these viewpoints to document their existing visual features and then prepared photo simulations of the viewpoints to show project features superimposed on the original photographs. (Ex. 1, § 5.13.2.4.1, Figures 5.13-3 through 5.13-8.) Applicant relied on these simulations to determine whether project impacts would be noticeable to sensitive public views. (*Ibid*.)

Staff amplified the analysis presented by Applicant and reorganized the KOPs by particular visual settings as follows:

- **Unit 1**: Burbank Industrial (BI) KOPs: including KOPs 4 and 5; plus BI-1 (corner of Lake Street and Olive Avenue); BI-2 (view from Magnolia Avenue eastbound near Lake Street); and BI-3 (view from Metrolink Parking Lot).

- **Unit 2**: Burbank Residential and Urban Parks KOPs (Valley): none identified.

- **Unit 3**: Burbank Commercial (BC) KOPs: including KOP 3; plus BC-1 (Olive Avenue near City Hall looking southwest); BC-2 (view from Magnolia Boulevard east of First Street looking southwest); BC-3 (view from First Street looking south); BC-4 (view from Magnolia Boulevard looking northeast toward site); and BC-5 (view from Olive Avenue looking northeast).

- **Unit 4**: Highway I-5: including KOP 6.

- **Unit 5**: Verdugo Mountains Residential and Open Space: including KOPs 1 and 2.

- **Unit 6**: Santa Monica Hills Open Space

The results of Staff's analysis are shown in Staff's Appendix VR-1 (Ex. 45, Visual Resources, Appendix VR-1) which is replicated on the following pages. According to Staff, no significant impacts were identified due to project structures.

Insert #1

Insert #2

Insert #3

Insert #4

2. Potential Impacts

Construction activities will occur in the context of the low visual quality industrial setting in which large construction equipment and the visual chaos associated with construction would not be conspicuously out of character. Since all potential views of these activities are located in the surrounding industrial zone, no significant adverse visual impacts are anticipated. (Ex. 45, p. 4.11-35, Ex. 1, § 5.13.2.3.)

Staff's analysis in conjunction with the data provided by Applicant regarding potential visual impacts of project components indicates that sensitive residential areas would not be affected due to distance. Given the MPP's location in an urbanized industrial area of Burbank, the forms and structures of the new facility would not be distinguishable from those of the existing power station or adjacent industrial buildings in the area. (Ex. 1, p. 5.13-9.) Views of the MPP from roadways in the industrial zone near the project would be fleeting (3-10 seconds) and indistinguishable from other industrial structures in the area. (*Id*. at pp. 5.13-9 through and 5.13-11.)

According to Staff, power plant facilities have the potential to cause visual impacts from nighttime lighting or glare from sunlight reflection on metallic project components, which can impair visibility on nearby roadways. (Ex. 45, p. 4.11-35.) The Applicant proposed measures that would include hooded night lighting to direct illumination downward and inward. (Ex. 1, § 5.13.3.) Staff accepted these proposals and recommended additional measures, including motion detectors to light areas only when necessary, minimizing brightness levels, and implementing a lighting complaint resolution process. Staff also recommended that metallic surfaces be painted to prevent daytime glare from sunlight reflection. (Ex. 45, p. 4.11-35.) Conditions **VIS-1**, **VIS-2** and **VIS-3** require the project owner to implement specific nighttime lighting measures for both construction

and operation and to paint project surfaces appropriately to prevent daytime glare.

Staff also recommended that the HRSG exhaust stack be painted blue to blend with the sky and reduce overall project contrast and dominance. (Ex. 45, pp. 4.11-38 and 4.11-39.) Condition **VIS-1** requires the project owner to provide samples of the proposed colors for the stack and other components for review and approval prior to treatment.

To ensure compliance with the COB's zoning regulations and the South San Fernando Redevelopment Area plan for improving the appearance of industrial areas, Condition **VIS-4** requires the project owner to provide landscape and architectural plans to the COB for review prior to submitting the plans to the Commission. In addition, the COB requires installation of public art at new development sites or payment of an in lieu fee. (COB Zoning Ordinance, Chap. 31, Art. 11, § 31-1113.1) Condition **VIS-5** ensures compliance with this requirement.

Visual vapor plumes from the cooling tower and the HRSG exhaust stack could occur during periods of cold weather or cool wet weather when MPP operates without duct firing. Although the potential for plumes is higher with duct firing, Applicant does not expect to employ duct firing except on hot summer days during peak demand when plume formation is unlikely. The actual frequency of plume occurrence is weather dependent and varies year to year. Meteorological data indicate that conditions for visible plume formation and maximum dimensions are more prevalent during nighttime and early morning hours. (Ex. 2, p. 5.13-12a; Ex. 45, Visual Resources Appendix VR-2, p. 4.11VR2-13.)

Staff uses a plume frequency of 10% seasonal (November-April) daylight no rain/no fog hours as the significance threshold. Since Applicant predicted cooling tower plumes would occur more than 10% of the seasonal daylight hours, Staff

conducted a separate cooling tower and HRSG exhaust visible plume analysis. (Ex. 45, Visual Resources Appendix VR-2.) Staff found that predicted visible cooling tower plumes would cause significant visual impacts at both foreground and middleground viewpoints and recommended mitigation measures to reduce impacts to insignificant levels. (*Ibid*., Ex. 45, p. 4.11-24 et seq.) The mitigation measures are included in Condition **VIS-6**, which requires the project owner to design the project so that visible plumes from the cooling tower do not exceed 400 feet in length or 200 feet in height more than 10% of seasonal daylight no rain/no fog hours.

The evidentiary record indicates the expected occurrence of HRSG stack plumes of any size (0.02% or 2 hours per 6-month season) falls far below Staff's frequency threshold of 10% of seasonal daytime no rain/no fog hours. (Ex. 45, p. 4.11-23.) Consequently, no significant impacts to visual resources will result from HRSG stack plumes. (*Ibid*.)

3. Cumulative Impacts

The existing Olive Unit 2 and the two existing cooling towers typically produce medium to large plumes (25 yards or greater) during the period of November through February.[82] (Ex. 2, p. 5.13-12a.) Other manufacturing facilities in the area also produce medium to large plumes during low temperature conditions. (*Ibid*., Ex. 45, Visual Resources Appendix VR-2.) Thus, new plumes generated by the MPP will be seen within the context of existing plumes. (*Ibid*.; Ex. 45, p. 4.11-8.)

MPP-related plumes and plumes from either or both the L. A. Department of Water and Power Valley Generating Station and City of Glendale Power Plant

[82] Staff's field observations did not reveal existing plumes of a magnitude that would affect evaluation of the MPP's expected plumes. According to Staff, the degree of existing impact from on or offsite visible plumes in the project vicinity was negligible. (Ex. 45, p. 4.11-36.)

could potentially be visible simultaneously from common viewpoints in the Glendale hills (2-3 miles or more from the site). Staff's field observations indicate, however, that the various plumes appearing together would be indistinct at the Glendale hills locations. The addition of MPP plumes to the viewscape is not expected to attract attention at these distances nor contribute substantially to a potentially significant adverse cumulative impact. (Ex. 45, p4.11-36.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. The MPP is located in a predominantly industrial setting with low visual sensitivity.

2. Construction activities will occur in the industrial zone where large construction equipment and the visual chaos associated with construction are not conspicuously out of character for the area.

3. Project components that could result in visual impacts include the heat recovery steam generator (HRSG) and 150-foot tall HRSG exhaust stack, the CTG inlet structure, the STG enclosure structure, the cooling tower, and the ZLD system components.

4. The project components will not result in significant visual impacts at any of the key observation points (KOPs).

5. The project owner will treat project surfaces with colors that minimize visual intrusion and contrast.

6. The project owner will implement appropriate mitigation measures to reduce or eliminate visual impacts due to backscatter from nighttime lighting and glare from sunlight reflection on the metallic surfaces of project components.

7. The predicted occurrence of vapor plumes from the HRSG stack falls below the significance threshold of 10% seasonal daytime no rain/no fog hours and will not result in significant impacts to visual resources.

8. The predicted occurrence of vapor plumes from the cooling tower exceeds the 10% seasonal daytime no rain/no fog threshold, which will result in

significant visual impacts at both foreground and middleground viewpoints unless mitigated.

9. The project owner will mitigate potential visual impacts of cooling tower plumes by designing the project to limit size and frequency of the plumes.

10. The MPP will comply with all applicable LORS regarding project design, architecture, landscaping, public art, and other zoning requirements.

11. There is no evidence of potential cumulative visual impacts with the addition of MPP plumes in the viewshed.

12. Implementation of the Conditions of Certification, below, will insure that MPP complies with all applicable laws, ordinances, regulations, and standards relating to visual resources as identified in the pertinent portions of **Appendix A** of this Decision.

The Commission concludes that the implementation of the mitigation measures contained in the Conditions of Certification and otherwise described in the evidentiary record ensures that the MPP will not result in significant adverse impacts to visual resources.

CONDITIONS OF CERTIFICATION

VIS-1 Prior to first turbine roll, the project owner shall treat the surfaces of all project structures and buildings visible to the public such that their colors minimize visual intrusion and contrast by blending with the landscape; their surfaces do not create excessive glare; and they are consistent with local laws, ordinances, regulations, and standards. The project owner shall submit for CPM review and approval, a specific treatment plan whose proper implementation will satisfy these requirements. The treatment plan shall include:

a) Specification, and 11” x 17” color simulations at life size scale when viewed at 18“, of the treatment proposed for use on project structures, including structures treated during manufacture;

b) A list of each major project structure, building, tank, transmission line tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation);

c) Two sets of brochures and/or color chips for each proposed color;

d) Samples of each proposed treatment and color on the predominant material of the heat recovery steam generator (HRSG), the HRSG stack, and the cooling tower;

e) A detailed schedule for completion of the treatment; and

f) A procedure to ensure proper treatment maintenance for the life of the project.

Protocol: The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated on site, until the project owner receives notification of approval of the treatment plan by the CPM.

Verification: The project owner shall submit its proposed treatment plan at least 90 days prior to ordering the first structures that are color-treated during manufacture.

Prior to first turbine roll, the project owner shall notify the CPM that all buildings and structures are ready for inspection.

The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report for the life of the project.

VIS-2 The project owner shall ensure that lighting for construction of the power plant is used in a manner that minimizes potential night lighting impacts, as follows:

a) All lighting shall be of minimum necessary brightness consistent with worker safety;

b) All fixed position lighting shall be shielded, hooded, and directed downward to minimize backscatter to the night sky and direct light trespass (direct lighting extending outside the boundaries of the construction area);

c) Wherever feasible and safe, lighting shall be kept off when not in use and motion detectors shall be employed; and

d) A lighting complaint resolution form shall be maintained by plant construction management, to record all lighting complaints received and to document the resolution of such complaints. A sample complaint resolution form is attached to this section as Appendix 1.

Verification: Within 7 days after the first use of construction lighting, the project owner shall notify the CPM that the lighting is ready for inspection.

The project owner shall report any lighting complaints and documentation of resolution in the Monthly Compliance Report.

VIS-3 The project owner shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project, the vicinity, and the nighttime sky is minimized. To meet these requirements the project owner shall ensure that:

a) Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light source is shielded to minimize light trespass outside the project boundary while taking into consideration security concerns.

b) All lighting shall be of minimum necessary brightness consistent with worker safety and security concerns;

c) High illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have switches or motion detectors to light the area only when occupied; and

d) Plant operations staff shall record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file.

Verification: At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval written documentation describing the lighting control measures and fixtures, hoods, shields proposed for use. The project owner shall incorporate the CPM's comments in lighting equipment orders.

Prior to first turbine roll, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection.

The project owner shall report any complaints about permanent lighting and provide documentation of resolution in the Annual Compliance Report for that year.

VIS-4 The project owner shall implement a landscape plan for the entire MPP site that brings the facility into compliance with City of Burbank zoning regulations (Ch. 31, Article 8, Sec. 31-812); and shall ensure conformance with City of Burbank policies to improve the appearance of industrial areas and assure high aesthetic and environmental quality, and to provide unity and integrity to developments within the South San Fernando Redevelopment Areas.

The landscape plan shall include:

a) A detailed topographic landscape plan view drawing that depicts the locations proposed for each species of plant, and the proposed spacing of plants;

b) 11”x17” color photo simulations of the proposed landscaping for the power plant at 10 years after planting as it is expected to appear in both summer and winter;

c) A list and description of potential plant species, including their growth rate, mature size, mature shape, and proposed size at installation. The species shall be selected with the objectives of satisfying the screening requirements and providing the widest possible range of species from which to choose;

d) A discussion of the suitability of each plant species for the site conditions and mitigation objectives, including evidence from a qualified professional arborist that the species selected are both viable for the proposed location and available;

e) A detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as feasible in coordination with project construction;

f) An irrigation plan view drawing at the same scale as the landscape drawing;

g) Maintenance procedures, including any needed irrigation and plans for routine annual or semi-annual debris removal for the life of the project;

h) A procedure for monitoring and replacement of unsuccessful plantings for the life of the project;

i) Landscaping of a minimum of 50 percent of exposed street frontage;

j) Vines planted on masonry buildings and walls along street frontage, including concrete walls facing the MetroLink parking area;

k) Street trees planted along Magnolia Boulevard, Lake Street, and Olive Avenue frontages at a minimum of one tree to be planted for every 40 linear feet of street frontage;

l) A minimum of 50 percent of required trees with a minimum 36-inch box size, with the remainder a minimum 24-inch box size. The required 36-

inch box trees shall be equally distributed in required front or street side yards;

m) If trees are planted in planters, planters with a minimum length and width of 5 feet;

Protocol: The project owner shall submit architectural and landscaping plans for the proposed administration building to the City of Burbank for review and comment, and to the CPM for review and approval.

The project owner shall not implement these plans until the project owner receives approval of the plan from the CPM.

Verification: At least 60 days prior to start of construction, the project owner shall submit the landscape and architectural plans to the City of Burbank for review and comment, and the CPM for review and approval.

At least 30 days prior to start of construction, the project owner shall notify the CPM that the MPP complies with Condition of Certification **LAND-1** regarding exemption findings for height exceedances of project components in the Industrial (M-2) District.

The project owner shall notify the CPM within 7 days after completing installation of the landscaping that the planting and irrigation systems are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in the Annual Compliance Report for the life of the project.

VIS-5 To conform with the City of Burbank's Art in Public Places Ordinance (Ch. 31, Article 11, Sec. 31-1113.1), the project owner shall complete construction and installation of a work of art or other aesthetic amenity, or pay an in lieu fee, as specified in the ordinance, in accordance with the preference of the COB.

The project owner shall submit a plan for complying with Ch. 31, Article 11, Sec. 31-1113.1 to the City of Burbank for review and comment, and to the CPM for review and approval. The compliance plan shall include design and construction details as requested by the City; or procedures and schedule for payment of an in lieu fee, as determined in consultation with the City.

Verification: At least 60 days prior to start of construction, the project owner shall submit the Art in Public Places compliance plan to the City of Burbank for review and comment, and the CPM for review and approval. If the CPM notifies

the project owner that revisions of the submittals are needed before the CPM will approve the submittal, within 15 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

VIS-6 The project owner shall design the project such that visible plumes from the cooling tower do not exceed 400 feet in length or 200 feet in height for more than 10 percent of seasonal (i.e. November through April) daylight no rain/no fog hours. If necessary, based on the proposed cooling tower design, an automated control system shall be used to ensure that plume frequencies and dimensions are within the specified performance requirements.

Verification: At least 60 days prior to ordering the cooling tower, the project owner shall provide to the CPM for review and approval, the specifications of the cooling tower and the specifications for any automated control system and related systems and sensors that will be used to ensure compliance with the specified plume performance requirements. The CPM will, prior to approval of the submittal, independently verify whether the project is expected to satisfy the specified performance standards.

The project owner shall monitor and document the frequency and the dimensions of the cooling tower visible plume from November 1st to April 30th during the first year of operation, and shall provide evidence of compliance, including physical and continuous video evidence covering the entire seasonal period, and frequency data, to the CPM within 30 days of the end of the monitoring period. Video evidence shall be sufficiently comprehensive in coverage as to permit corroboration of plume performance by the CPM for the entire study period (November 1 to April 30) and may consist of hourly or semi-hourly time-lapse exposures (video frames), with on-tape date and time noted. If, after review of the first season's monitoring results, the CPM determines that the project was not in compliance with the condition during the monitoring period, the project owner shall submit a Plume Compliance Plan describing modifications to the power plant's cooling tower or operational regime that would result in compliance. Monitoring shall continue until the project owner provides to the CPM evidence of successful compliance for a monitoring season, and the CPM approves the submittal.

VISUAL RESOURCES ATTACHMENT 1

MAGNOLIA POWER PROJECT, Docket No. 01-AFC-6(C)

CITY OF BURBANK

LIGHTING COMPLAINT RESOLUTION FORM
Complainant's name and address: Phone number:
Date complaint received: Time complaint received:
Nature of lighting complaint:
Definition of problem after investigation by plant personnel: Date complainant first contacted:
Description of corrective measures taken: Complainant's signature: _____ Date:
Approximate installed cost of corrective measures: $ Date installation completed: Date first letter sent to complainant: _____(copy attached) Date final letter sent to complainant: _____(copy attached)
This information is certified to be correct: Plant Manager's Signature:

Attach additional pages and supporting documentation, as required.

D. NOISE AND VIBRATION

The construction and operation of any power plant project will create noise. The character and loudness of this noise, the times of day or night during which it is produced, and the proximity of the project to sensitive receptors combine to determine whether project noise will cause significant adverse impacts to the environment. In addition, operation of the turbines will generate vibration noise that could affect adjacent properties. In this technical area, the Commission evaluates whether noise produced by project-related activities during operation will be sufficiently mitigated to comply with applicable law.

Summary of the Evidence

Laws that regulate noise disturbances in the project vicinity are included in the City of Burbank General Plan Noise Element and the COB Noise Ordinance.[83] The Noise Element recommends that exterior noise exposures at residential locations should not exceed 60 dBA Ldn and interior noise levels attributable to exterior noise should not exceed 45 dBA Ldn.[84] The COB Noise Ordinance permits an increase up to 5 dBA above base noise levels, which are set according to land use and zoning categories. (Ex. 1, § 5.12.1.3; Ex 45, p. 4.6-3.) The COB's base levels are shown below in **Noise Table 2** replicated from Staff's testimony.

CEQA Guidelines set forth characteristics of noise impacts that may indicate potentially significant effects from project-related noise, such as "a substantial

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[83] COB General Plan, Noise Element, Section VI, D and E; and COB Municipal Code, Section 21 Environmental Protection Article 2 Noise Control, Section 21-208 et seq. (Noise Ordinance).

[84] Staff's Noise Tables Appendix 1, 2, 3, and 4 replicated at the end of this section, explain the definitions of these and other noise measurement terms.

permanent increase in ambient noise levels in the project vicinity above levels existing without the project." (Cal. Code Regs., tit. 14, § 15000 et seq., Appendix G, Section XI.) In accordance with this standard, Staff uses the significance threshold of 5 dBA when project-related noise emissions exceed existing ambient noise levels at the nearest sensitive receptor. (Ex. 45, p. 4.6-2.)

Noise Table 2 – City of Burbank Ambient Base Noise Levels*(dBA, L_{eq})

Base Noise Level	Time	Zone
45 dBA	Nighttime (10pm-7am)	Residential
55 dBA	Daytime (7am-10pm)	Residential
65 dBA	Anytime	Commercial
70 dBA	Anytime	All other zones

*The base noise level applies even if the measured ambient noise level is higher. (Ex. 1, p. 5.12-6.)

Source: Ex. 45, p. 4.6-3; Ex. 1, p. 5.12-6.

1. The Setting

The properties adjacent to the project site include commercial and industrial uses. Under the COB Noise Ordinance, the maximum permissible total noise (plant plus ambient) for adjacent industrial uses is 75 dBA (70 dBA ambient plus 5 dBA). (Ex. 45, p. 4.6-3.) Thus, the MPP can generate noise levels up to 73.3 dBA Leq for the total noise level to remain below 75 dBA at adjacent industrial uses. Similarly, the MPP can generate noise levels up to 68 dBA Leq at nearby commercial uses and up to 48.3 dBA Leq (nighttime) at residential areas to remain in compliance with the Noise Ordinance. (*Ibid.*; Ex. 1, pp. 5.12-6 and 5.12-7; *see* **Noise Table 2** above.)

The nearest sensitive receptors are two residences located at 421 Moss Street and 461 North Varney Street, approximately 600 feet west of the MPP site. (Ex. 5, Data Response 42.) These houses represent a non-conforming land use in an industrial zone. The next nearest residences are located on Glenwood Place, a

residential zone, about 1,300 feet southwest of the site. This area is acoustically shielded from the project by intervening buildings. (Ex. 1, § 5.12.1.)

2. Potential Impacts

Existing noise in the site vicinity is due to traffic, industrial facilities, commercial activity, and overhead aircraft. (Ex. 1, pp. 5.12-3 and 5.12-4.) Applicant conducted an ambient noise survey to measure current conditions and to assess potential project impacts. The noise survey included measurements at the two nearest residential locations (Sites LT-1 on Moss Street and LT-2 on Glenwood Place) for 25 hours and six short-term measurements for 2 to15 minutes at representative locations adjacent to the site. Applicant's Tables 5.12-1 and 5.12-2, replicated on page 265 shows the locations chosen for the noise survey.

The noise impact calculations indicate that project noise levels without mitigation would be approximately 62 dBA at LT-1. This level is 14 dBA above the maximum allowable noise level of 48 dBA for residential areas. Since acoustic design features cannot mitigate project noise to acceptable levels at LT-1, Applicant will either purchase the houses on Moss and North Varney Streets or the City of Burbank will take land use enforcement action and conform them to industrial uses so that residential noise standards no longer apply. (Ex. 1, pp. 5.12-11, 5.12-12a (Ex. 2-Noise); Ex. 4, Data Response 42; Ex. 45, p. 4.6-7.) Condition of Certification **NOISE-5** ensures that SCPPA will convert these residences as indicated in the evidentiary record.[85]

Project noise levels without mitigation at LT-2 (the nearest residential zone) were calculated at 50 dBA, about 2 dBA above Noise Ordinance limits. (Ex. 4, Data Response 40.) The predicted noise level at the nearest commercial land use on

[85] At the evidentiary hearing, Applicant agreed to language clarifications of Condition **NOISE-5** regarding the steps taken to convert the residential properties to uses consistent with industrial zoning in the area. (RT, pp. 118-121; Ex. 42.)

the northwest boundary of the site is 71 dBA, about 3 dBA above the maximum allowable noise level of 68 dBA. The predicted noise level at the nearest industrial land use to the northeast of the project boundary is 75 dBA, about 2 dBA above the maximum allowable noise level of 73 dBA. (Ex. 1, p. 5.12-11.) Based on these calculations, Applicant indicated that the project would exceed Noise Ordinance standards and proposed several mitigation measures to reduce project noise emissions. (*Ibid*.)

3. Mitigation Measures

a. Construction

Construction of the power plant will cause temporary noise impacts. Typically, construction noise is exempt from enforcement of local noise ordinances to allow construction of new facilities. The COB Noise Ordinance exempts construction activities from any noise limitations in areas more than 500 feet from a residential zone. Construction within a radius of 500 feet from a residential zone is prohibited during nighttime hours. (Ex. 45, p. 4.6-7.) Since the LT-1 residences will be converted prior to the start of demolition/construction activities, the nearest residences during construction will be the LT-2 area.

Applicant provided data on the anticipated construction noise levels and equipment usage for each phase of construction. (Ex. 1, § 5.12.2.1, Table 5.12-4.) The average noise level from demolition activities is 84 dBA at 50 feet; the average noise level during construction is about 89 dBA at 50 feet. Attenuation of sound by distance and existing shielding from buildings will reduce equipment noise emissions to 57 dBA and 62 dBA, respectively, at 600 feet. (*Id*. at p. 5.12-9.) According to Staff, the worst-case hourly construction noise level at LT-2

TABLE 5.12-2 (Source: Ex. 1, Table 5.12-2.)
SHORT-TERM NOISE MEASUREMENT DATA SUMMARY
(February 6, 2001)

		Measurement Period				Measurement Results, dBA					
Site ID	Measurement Location	Date	Start Time	Duration (minutes)	Predominant Noise Source	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}
ST-1	City Park, Clark Ave.	2/6/01	12:35	15	Traffic, children playing, distant landscaping	61	70	53	56	60	64
ST-2	226 Tujunga Ave.	2/6/01	13:05	2	Leaf blower, traffic	66	72	58	59	65	69
ST-2a	226 Tujunga Ave.	2/6/01	13:18	10	Traffic, car alarm chirps, distant P.A. system	59	77	48	50	52	61
ST-3	East side of plant, adjacent to flood channel	2/6/01	13:40	10	Traffic, water discharge into channel	66	69	63	64	66	67
ST-4	Back of sidewalk, west side of plant	2/6/01	13:55	10	Power plant, traffic, overhead aircraft	67	75	64	65	66	69
ST-5	Magnolia overcrossing across from Varney St.	2/6/01	14:15	10	Traffic	69	82	59	62	67	71
ST-6	Near Holiday Inn Suites	2/6/01	14:38	2	Traffic	71	81	69	70	70	72

TABLE 5.12-1 (Source Ex. 1, Table 5.12-1.)
LONG-TERM NOISE MEASUREMENT DATA SUMMARY

Site ID	Measurement Date	Location	Zone	25 hr L_{eq} (dBA)	24 hr L_{dn} (dBA)	24 hr CNEL (dBA)	25 hr Average L_{50} (dBA)	25 hr Average L_{90} (dBA)
LT-1	2/6/01 – 2/7/01	425 N. Moss St.	M-2	59	63	64	57	55
LT-2	2/6/01 – 2/7/01	Behind Glenwood Place	R	60	62	63	54	52

TABLE 5.12-2 (Source: Ex. 3, Table 5.12-2.)
NOISE LEVEL OF MPP (WITH AND WITHOUT ZLD)

Location	Noise Level Without ZLD (dBA L_{eq})	Noise Level with ZLD (dBA L_{eq})
LT-1	60.9	60.9
LT-2	48.1	48.2

would be 55 dBA.[86] (Ex. 45, p. 4.6-7.) Applicant will schedule construction six days a week (Monday-Saturday) from 7 a.m. to 7 p.m. but during startup, some activities may occur 24 hours a day. (*Ibid*.) Condition of Certification **NOISE-3** limits the hours for noisy construction activity from 7 a.m. to 7 p.m. any day. Conditions **NOISE-1** and **NOISE-2** establish a community noise notification and complaint program to respond to project-related noise concerns.

The loudest construction noise will be created by steam blows, which are necessary to flush piping and tubing of accumulated debris prior to start-up. A series of short steam blows, lasting a few minutes, will be performed several times daily over a period of two to three weeks. (Ex. 1, p. 5.12-11.) Steam blows can produce noise as loud as 130 dBA at a distance of 100 feet, which would attenuate to about 107 dBA at LT-2. (*Ibid*.) The project owner will install appropriate silencers or use a new quieter steam blow process (QuietBlow® or Silentsteam™) to reduce noise levels to about 80 dBA at 100 feet or 58 dBA at LT-2, within the range of daytime ambient noise levels. (*Ibid.*) Conditions **NOISE-3** and **NOISE-8** restrict steam blows to daytime hours (8 a.m. to 5 p.m.). Condition **NOISE-9** requires notification of businesses and residences within a one-mile radius of the project site prior to initiating the steam blow process.

Project workers are susceptible to injury from excessive noise during construction-related activities. (Ex. 45, p. 4.6-7.) Condition **NOISE-4** requires the project owner to implement a noise control program for construction workers in accordance with Cal/OSHA standards.[87]

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[86] Staff recommended compliance with "good community noise control practices," which would limit construction noise to 65 dBA Leq during daytime hours and 55 dBA Leq during nighttime hours at LT-2. (Ex. 45, p. 4.6-7.) According to Staff, the project's compliance with applicable noise control LORS and implementation of the Conditions of Certification regarding noise ensure the project will comply with good community noise practices. (Ex. 58, p. 2.)

[87] Regulations adopted by the federal Occupational Safety and Health Administration (OSHA) and the state Cal/OSHA protect workers from noise-related health and safety hazards. (29 C.F.R., §1910 et seq.; Cal. Code of Regs., tit. 8, § 5095 et seq.)

b. Operation

During normal baseload operation, MPP will emit a steady, continuous noise source day and night. Noise mitigation measures incorporated into the project design will ensure that noise levels at the nearest sensitive receptor at LT-2 will not exceed 57 dBA, which is 5 dBA above the average ambient noise level of 52 dBA. (Ex. 1, Tables 5.12-5 and 5.12-6; Ex. 45, p. 4.6-9.) Noise levels in and near the power plant components will require implementation of industrial occupational safety measures related to noise protection. (Ex. 1. pp. 5.12-12 and 5.12-15.) Condition **NOISE-7** requires the project owner to conduct an occupational noise survey, identify necessary protective measures for onsite employees during project operation, and implement a hearing conservation program.

To prevent strong tonal noises or hissing sounds that could result from the various project components, MPP will be designed to blend the many noise sources so no single noise source will stand out. (Ex. 45, pp. 4.6-8 and 4.6-9.) Condition **NOISE-6** requires project design to blend noise levels and muffle equipment to prevent legitimate complaints from affected residential receptors.

Staff's review of potential vibration noise indicated that the MPP turbines would be maintained in optimal balance to minimize vibration that would cause damage or long-term wear and, therefore, no excessive vibration noise will be experienced by adjacent land uses.[88] (Ex. 45, p. 4.6-8.)

Staff found that the combined noise levels of the existing Olive Peaker Project and the MPP would exceed applicable Noise Ordinance standards and the potential effects would require an additional 3 dBA of mitigation to reduce

[88] Significant vibration occurs in pile driving during construction but the distance to the nearest sensitive receptors would attenuate any effects if pile driving is required. (Ex. 45, p. 4.6-8.)

cumulative noise levels. (Ex. 45, p. 4.6-11.) Condition **NOISE-10** ensures that the project owner will mitigate the potential cumulative effects to insignificant levels.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, the Commission makes the following findings and conclusions:

1. Construction and operation of MPP will increase noise levels above existing ambient levels in the surrounding community.

2. Construction noise levels are temporary and transitory in nature and will be mitigated to the extent feasible by sound reduction devices, limiting construction to daytime hours in accordance with local noise control laws and ordinances, and providing notice to nearby residences and businesses, as appropriate.

3. The nearest sensitive noise receptors are two non-conforming residences on Moss Street and North Varney Street, about 600 feet from the site.

4. The project owner will purchase the non-conforming residences and convert them to industrial uses consistent with area zoning requirements.

5. The next nearest sensitive receptor (LT-2) is a residential area on Glenwood, which is about 1,300 feet from the site where the existing average ambient noise level is 52 dBA L90.

6. Noise reduction measures will be incorporated in the project design to ensure that operation noise levels are maintained at 57 dBA L90 at LT-2, which avoids significant adverse impacts by limiting any noise increase to 5 dBA above background levels.

7. The project owner will implement measures to protect workers from injury due to excessive noise levels by complying with pertinent Cal/OSHA regulations.

8. Potential cumulative noise impacts from the combined operation of the Olive Peaker Project and the MPP will be mitigated to insignificant levels.

9. The project owner will implement the mitigation measures identified in the evidentiary record and the Conditions of Certification to ensure that

project-related noise emissions do not cause significant adverse impacts to sensitive noise receptors.

The Commission concludes that implementation of the following Conditions of Certification ensure that MPP will comply with the applicable laws, ordinances, regulations, and standards on noise and vibration as set forth in the pertinent portions of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

NOISE-1 At least 15 days prior to the start of ground disturbance, the project owner shall notify all residents within one-half mile of the site and the linear facilities, by mail or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement, signed by the project manager, stating that the above notification has been performed, and describing the method of that notification, verifying that the telephone number has been established and posted at the site, and giving that telephone number.

NOISE-2 Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall:

- Use the Noise Complaint Resolution Form (below), or functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
- Attempt to contact the person(s) making the noise complaint within 24 hours;
- Conduct an investigation to determine the source of noise related to the complaint;
- If the noise is project related, take all feasible measures to reduce the noise at its source; and

- Submit a report documenting the complaint and the actions taken. The report shall include: a complaint summary, including final results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to the complainant's satisfaction.

Verification: Within 5 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, with the local jurisdiction and the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 3-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is implemented.

NOISE-3 Heavy equipment operation and noisy construction work shall be restricted to the times of day delineated below:

Any Day 7 a.m. to 7 p.m.

Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

All other construction shall be limited to 20 hours per 24-hour day (6:00 a.m. to 2:00 a.m.), except that the noise levels due to such work that occurs outside the hours of 7 a.m. to 7 p.m. shall not exceed 57 dBA (L_{90}) at residential receivers (i.e., LT-2).

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall transmit to the CPM a verified statement signed by the authorized project manager confirming that the above restrictions will be observed throughout the construction of the project.

NOISE-4 The project owner shall submit to the CPM for review and approval a noise control program. The noise control program shall include a Hearing Conservation Program to be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA and Cal-OSHA standards.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall submit to the CPM the noise control program. The project owner shall make the program available to Cal-OSHA upon request.

NOISE-5 The project owner shall be responsible for converting residences on 421 Moss Street and 461 North Varney Street to a use conforming with the

industrial zoning of the area, specifically through agreement or by City of Burbank land use enforcement action to ensure that no persons are using the properties as residences. The residential use shall be discontinued prior to the initiation of construction.

Verification: At least 30 days, if possible, but no later than 5 working days prior to ground disturbance, the project owner shall provide evidence to the CPM that the residences at 421 Moss Street and 461 North Varney Street have been converted to a land use consistent with the industrial zoning for the area. The evidence may consist of a letter from the City of Burbank indicating whether 421 Moss Street and 461 North Varney Street are being used as residences and indicating any land use enforcement action taken to eliminate residential use of the properties. Additionally, the evidence may include agreements with the landowners for those parcels which remove the residential use, or copies of the title showing the project owner or the City of Burbank as the new owner of these parcels, or an Order for Immediate Possession issued by a court of competent jurisdiction indicating that the project owner or the City of Burbank is entitled to possession of such parcels.

NOISE-6 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause resultant noise levels to exceed 57 dBA L_{90} (the average ambient background noise level (L_{90}) plus 5 dBA) at residential receivers, and that the noise due to plant operations will comply with the noise standards of the City of Burbank of 60 dBA L_{eq}.

No new pure-tone components may be introduced. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints. Steam relief valves shall be adequately muffled to preclude noise that draws legitimate complaints.

A. Prior to initiating construction, the project owner shall conduct short-term ambient noise measurements during day, evening, and nighttime hours at one location in the vicinity of Glenwood Place (i.e., Site LT-2).

B. When the project first achieves a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey at monitoring site (i.e., LT-2). The survey during power plant operations shall also include measurement of one-third octave band sound pressure levels at each of the above locations to ensure that no new pure-tone noise components have been introduced.

C. If the results from the pre-construction and operational noise surveys indicate that the background noise level (L_{90}) at the most affected receptor has increased due to power plant noise by more than 5 dBA for any given hour during the 25-hour period, or that

the noise standards of the LORS have been exceeded, mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

D. If the results from the pre-construction and operational noise surveys indicate that pure-tones are present, mitigation measures shall be implemented to eliminate the pure-tones.

Verification: The short-term survey at Site LT-2 shall take place within 30 days of the project first achieving a sustained output of 80 percent or greater of rated capacity. Within 15 days after completing the post-construction survey, the project owner shall submit a summary report of the survey to the COB and to the CPM. Included in the post-construction survey report will be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the operational noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

NOISE-7 Following the project first achieving a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility.

The survey shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, sections 5095 through 5099 (Article 105) and Title 29, Code of Federal Regulations, section 1910.95. The survey results shall be used to determine the magnitude of employee noise exposure.

The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures and implement a hearing conservation program that will be employed to comply with the applicable California and federal regulations.

Verification: Within 30 days after completing the survey, the project owner shall submit the noise survey report and hearing conservation program to the CPM. The project owner shall make the report and hearing conservation program available to OSHA and Cal-OSHA upon request.

NOISE-8 If a traditional, high-pressure steam blow process is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 110 dBA measured at a distance of 100 feet. The project owner shall conduct steam blows only during the hours of 8 a.m. to 5 p.m., unless the CPM agrees to longer hours based on a

demonstration by the project owner that offsite noise impacts will not cause annoyance.

If a low-pressure continuous steam blow or air blow process is employed, the project owner shall submit a description of this process, with expected noise levels and projected hours of execution, to the CPM, who shall review the proposal with the objective of ensuring that the resulting noise levels will not exceed 50 dBA L_{eq} (the LORS night-time noise standard), and will not exceed 52 (the average night-time hourly L_{90} value) by more than 5 dBA. If the low-pressure process is approved by the CPM, the project owner shall implement it in accordance with the requirements of the CPM.

Verification: At least 15 days prior to the first high-pressure steam blow, the project owner shall submit to the CPM drawings or other information describing the temporary steam blow silencer and the noise levels expected, and a description of the steam blow schedule.

At least 15 days prior to any low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the projected time schedule for execution of the process.

NOISE-9 Prior to the first high-pressure steam blow(s), the project owner shall notify all residents or business owners within one mile of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner.

The notification may be in the form of letters to the area residences, telephone calls, fliers or other effective means. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed schedule, the expected sound levels, and the explanation that it is a temporary operation and not a part of normal plant operations.

Verification: Project owner shall notify residents and businesses at least 15 days prior to the first high-pressure steam blow(s). Within five days of notifying these entities, the project owner shall send a letter to the CPM confirming that they have been notified of the planned steam blow activities, including a description of the method(s) of that notification.

NOISE-10 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that the combined operation of the Magnolia Power Plant and the Olive Peaker Project will not cause noise levels to exceed the noise standards of the City of Burbank, or to exceed the existing ambient background noise level (L_{90}) at residential receivers by more than 5 dBA. Within 30 days of both projects first achieving an output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey

at Site LT-2 used for the ambient noise survey (i.e., housing along Glenwood Place). The Magnolia Power Plant must be running continuously during this period, and the Olive Peaker Project must be running at least 12 hours during the sampling period. If the results from the survey indicate that the combined noise level at the residential location exceeds the standards and requirements cited above, additional mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

Verification: Within 30 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM and to the City of Burbank. Included in the report shall be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. If additional mitigation measures are necessary within 30 days of completion of installation of these measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

NOISE COMPLAINT RESOLUTION FORM

MAGNOLIA POWER PLANT, Docket No. 01-AFC-6(C)

NOISE COMPLAINT LOG NUMBER
Complainant's name and address: Phone number:
Date complaint received: Time complaint received:
Nature of noise complaint:
Definition of problem after investigation by plant personnel: Date complainant first contacted: _____
Initial noise levels at 3 feet from noise source _____ dBA Date: _____ Initial noise levels at complainant's property: _____ dBA Date: _____ Final noise levels at 3 feet from noise source: _____ dBA Date: _____ Final noise levels at complainant's property: _____ dBA Date: _____
Description of corrective measures taken: Complainant's signature: _____ Date: _____
Approximate installed cost of corrective measures: $ _____ Date installation completed: _____ Date first letter sent to complainant: _____ (copy attached) Date final letter sent to complainant: _____(copy attached)
This information is certified to be correct: Plant Manager's Signature: _____ Date: _____

(Attach additional pages and supporting documentation, as required).

Noise Table Appendix 1 Definition of Some Technical Terms Related to Noise	
Terms	**Definitions**
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a Sound Level Meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this testimony are A-weighted.
L_{10}, L_{50}, & L_{90}	The A-weighted noise levels that are exceeded 10%, 50%, and 90% of the time, respectively, during the measurement period. L_{90} is generally taken as the background noise level.
Equivalent Noise Level, L_{eq}	The energy average A-weighted noise level during the Noise Level measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 4.8 decibels to levels in the evening from 7 p.m. to 10 p.m., and after addition of 10 decibels to sound levels in the night between 10 p.m. and 7 a.m.
Day-Night Level, L_{dn} or DNL	The Average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources, near and far. The normal or existing level of environmental noise at a given location.
Intrusive Noise	That noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Pure Tone	A pure tone is defined by the Model Community Noise Control Ordinance as existing if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the two contiguous bands by 5 decibels (dB) for center frequencies of 500 Hz and above, or by 8 dB for center frequencies between 160 Hz and 400 Hz, or by 15 dB for center frequencies less than or equal to 125 Hz.

Source: California Department of Health Services 1976, 1977.

The sound levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in industrial plants can experience noise effects in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction, primarily because of the wide variation in individual tolerance of noise.

One way to determine a person's subjective reaction to a new noise is to compare the level of the existing (background) noise, to which one has become accustomed, with the level of the new noise. In general, the more the level or the tonal variations of a new noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.

With regard to increases in A-weighted noise levels, knowledge of the following relationships (Kryter 1970) can be helpful in understanding the significance of human exposure to noise.

1. Except under special conditions, a change in sound level of one dB cannot be perceived.
2. Outside of the laboratory, a three dB change is considered a barely noticeable difference.
3. A change in level of at least five dB is required before any noticeable change in community response would be expected.
4. A ten dB change is subjectively heard as an approximate doubling in loudness and almost always causes an adverse community response.

Combination of Sound Levels

People perceive both the level and frequency of sound in a non-linear way. A doubling of sound energy (for instance, from two identical automobiles passing simultaneously) creates a three dB increase (i.e., the resultant sound level is the sound level from a single passing automobile plus three dB). The rules for decibel addition used in community noise prediction are:

Noise Table Appendix 2 Addition of Decibel Values	
When two decibel Values differ by:	Add the following Amount to the Larger value
0 to 1 dB	3 dB
2 to 3 dB	2 dB
4 to 9 dB	1 dB
10 dB or more	0
Figures in this table are accurate to ± 1 dB. Source: Thumann, Table 2.3	

Sound and Distance

Doubling the distance from a noise source reduces the sound pressure level by six dB.

Increasing the distance from a noise source ten times reduces the sound pressure level by 20 dB.

Noise Table Appendix 3 Typical Environmental and Industry Sound Levels			
Noise Source (at distance)	A-Weighted Sound Level in Decibels (dBA)	Noise Environment	Subjective Impression
Civil Defense Siren (100')	140-130		Pain Threshold
Jet Takeoff (200')	120		Very Loud
Very Loud Music	110	Rock Music Concert	
Pile Driver (50')	100		
Ambulance Siren (100')	90	Boiler Room	
Freight Cars (50')	85		
Pneumatic Drill (50')	80	Printing Press Kitchen with Garbage Disposal Running	Loud
Freeway (100')	70		Moderately Loud
Vacuum Cleaner (100')	60	Data Processing Center Department Store/Office	
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing

Source: Peterson and Gross 1974

Subjective Response to Noise

The adverse effects of noise on people can be classified into three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction.
- Interference with activities such as speech, sleep, and learning.
- Physiological effects such as anxiety or hearing loss.

Worker Protection

OSHA noise regulations are designed to protect workers against the effects of noise exposure, and list permissible noise level exposure as a function of the amount of time to which the worker is exposed:

Noise Table Appendix 4

OSHA Worker Noise Exposure Standards

Duration of Noise (Hrs/day)	A-Weighted Noise Level (dBA)
8.0	90
6.0	92
4.0	95
3.0	97
2.0	100
1.5	102
1.0	105
0.5	110
0.25	115

Source: 29 CFR § 1910.95

E. SOCIOECONOMICS

The "socioeconomics" topic evaluates the effects of project-related population changes on local schools, medical and fire protection services, public utilities, and other public services, as well as the fiscal and physical capacities of local government to meet these needs. The public benefits of the project, including economic, environmental, and electricity reliability benefits are also reviewed. In addition, an environmental justice screening analysis is conducted to determine whether project-related activities would result in disproportionate impacts on minority and/or low-income populations.

Summary and Discussion of the Evidence

The construction phase is typically the focus of the analysis because of the potential influx of workers into the area. Socioeconomic impacts are considered significant if a large influx of non-resident workers and dependents move to the project area, increasing demand for community resources that are not readily available.

Applicant identified a study area of communities in Los Angeles, Orange, Riverside, and San Bernardino Counties, whose economies have been linked historically with Los Angeles County as the traditional job center for the region. (Ex. 1, § 5.10.1.1.) The evidentiary record indicates that a large skilled labor pool in the study area is available for construction and operation of the project. (*Id.* at pp. 4.8-4 and 4.8-5; Ex. 1, § 5.10.3.2 and p. 5.10-15, Table 5.10-7.) As employment has become more decentralized throughout southern California, construction workers will commute as much as two hours each way from their homes rather than relocate; operation workers are willing to commute one hour each way. (Ex. 45, p. 4.8-4.)

1. Potential Impacts

During the construction period of 24 months, peak employment will reach 318 workers including 35 contractor staff. (Ex. 1, § 5.10.3.2.) Given the strong construction sector and the large construction labor force in southern California, Applicant is confident that sufficient numbers of skilled workers will be available within the daily commute distance. Very few, if any, workers are expected to relocate to the MPP area and no new housing will be required. (*Ibid.*; Ex. 45, p. 4.8-10.) Staff at the existing COB power plant facility will be involved in operation of the MPP. Applicant expects to hire an additional 15 full-time employees for project operation and maintenance. (Ex. 2, Data Responses Socio-3 and -5.)

The evidentiary record demonstrates there is ample and varied housing in Los Angeles County if workers need temporary or permanent housing. Supervisory personnel who are involved in the two-year construction phase may reside in the area temporarily; however, impacts on housing and related services will be minimal in relation to the supply of available housing and services offered. (Ex. 1, § 5.10.3.3; Ex. 2, Data Response Socio-4; Ex. 45, p. 4.8-5.) No replacement or displacement of residential housing will be necessary as a result of the project.[89] The project will have no effect on area property values because use of the site for power generation remains the same and the MPP represents state-of-the-art technology. (Ex. 1, § 5.10.3.3.)

Since project-induced potential population increases will be minimal to non-existent, construction and operation of the MPP will not result in significant

[89] SCPPA will purchase two nonconforming residences in the industrial corridor adjacent to the project site to mitigate noise impacts to sensitive residential receptors. *See* the **Noise** section of this Decision.

adverse impacts on schools,[90] public utilities, or emergency services in the local communities. (Ex. 1, § 5.10.3.4 et seq.; Ex. 45, p. 4.8-13.)

The project owner, SCPPA, is a public agency that is not subject to taxation by any local agency. Revenue from the sale of power will be distributed to SCPPA for purposes of debt service and to cover operating expenses. (Ex. 2, Data Response Socio-1.) The estimated construction payroll will be about $35.6 million (2001 dollars) and the annual operations payroll will be about $1.5 million (2001 dollars), which will be spent in the study area communities. (*Id*., Data Response Socio-6.) The MPP will spend an estimated $10.8 million on locally purchased materials and equipment during construction and about $635,000 per year during operations, generating sales tax revenues in the COB and Los Angeles County. (*Id*., Data Response Socio-7; Ex. 1, § 5.10.3.5; Ex. 45, p. 4.8-11.) Total capital cost of the project including payroll is estimated at $250 million. (Ex. 4, Data Response Socio-46.)

2. Section 25523(h) Public Benefit Findings

Public Resources Code section 25523(h) requires a discussion of the project's public benefits. According to the Applicant, the most important public benefit of the project is the local generation of reliable power for the participating SCPPA municipalities. The economic benefits include the power sales agreements between SCPPA and the municipalities, which will stabilize the cost of power for the participating municipalities. In addition, the local economy is enhanced by the multiplier effect of MPP workers spending payroll income in the area and local purchases of equipment and materials. Since the project will have no unmitigated significant effects on the environment, the MPP provides an environmental benefit compared with the decommissioned Magnolia Units that

[90] The MPP is exempt from the one-time school impact fee because it is a publicly owned utility. (Ex. 1, p. 5.10-11, Ex. 45, p. 4.8-13.)

were more polluting and less efficient. In addition the MPP will provide reliable electricity to the area due to state-of-the-art project design and efficiency levels.

3. Environmental Justice Screening Analysis

Applicant conducted a screening analysis to determine whether environmental justice concerns are present in this case.[91] (Ex. 1, § 5.10-4.) The screening analysis assessed (1) whether the potentially affected community includes minority and/or low-income populations; and (2) whether the project's potential environmental impacts are likely to fall disproportionately on minority and/or low-income members of the community. According to EPA guidelines, a minority population exists if the minority/low-income population of the affected area constitutes 50 percent or more of the general population. Relevant 2000 Census data within a six-mile radius of the site indicate that minority populations constitute more than 50 percent of the general population.[92] (*Ibid.*; Ex. 45, p. 4.12-8.) In its initial testimony, Staff relied on 1990 Census data to analyze low-income populations in the study area. The Committee directed Staff to obtain more current data using the 2000 Census. At the February 24, 2003, hearing, Staff submitted new testimony based on the 2000 Census indicating that approximately 17 percent of the population within a six-mile radius of the site is considered low-income. The Census data include eight census blocks in which 25 percent or more of the population is considered low-income. The percentage of the low-income population in these blocks is meaningfully greater than that of

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[91] Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" requires the U.S. Environmental Protection Agency (EPA) and all other federal agencies and state agencies receiving federal aid to identify and address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. Although the Energy Commission is not obligated as a matter of law to conduct an environmental justice analysis, we include this analysis in power plant siting decisions to ensure that any potential adverse impacts on identified populations will be addressed.

[92] Staff requires a six-mile radius for this analysis because it is the same radius used for Staff's cumulative air quality and public health analyses and captures the areas most likely to be impacted by the project. (Ex. 45, p. 4.8-12.) Based on the 2000 Census data, Staff determined that about 50.9 percent of the population within the six-mile radius are minorities. (*Ibid.*)

the overall study area. However, the eight census blocks remain below the significance threshold of 50 percent. Staff therefore found that data from both the 1990 Census and the 2000 Census show that low-income populations in the study area fall below the 50 percent threshold and do not require additional analysis. (Ex. 58, p. 2.) Based on the demographics, the project could expose a minority population to a disproportionate impact. (*Ibid*.; *See* the Public Health section of this Decision.)

Applicant mapped all known pollution sources within the six-mile radius and also reviewed several regional health studies conducted near the project site. (Ex. 1, p. 5.10-13 et seq. and Figures 5.10-1 and 5.10-2.) Compliance with all Conditions of Certification adopted by this Decision will ensure that no unmitigated significant adverse impacts will result from project-related activities. As described in the **Air Quality** and **Public Health** sections, changes in air quality values and public health indices that could occur as a result of project operations are below regulatory thresholds for significant impact. (Ex. 1, § 5.10.4.3.) Since air quality and public health impacts associated with the MPP would not be significant, no population, including environmental justice populations, would be disproportionately impacted by the MPP. Changes in air quality values and public health indices, while minimal, are fairly widespread and not concentrated in any one community. Since the MPP will not result in adverse effects to any population, no further environmental justice analysis is required. (*Ibid*; Ex. 45, p. 4.8-11.)

3. Cumulative Impacts

There is no evidence of potential adverse cumulative impacts to the local infrastructure or public services. (Ex. 45, p. 4.8-12.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, we make the following findings and conclusions:

1. A large skilled labor pool in the greater Los Angeles area is available for construction and operation of the project.

2. The project will not cause an influx of a significant number of construction or operation workers to relocate in the local Burbank area.

3. The project will not result in significant adverse effects to local employment, housing, schools, public utilities, or emergency services.

4. The MPP is a public utility exempt from property taxes.

5. The estimated construction payroll will be approximately $35.6 million (2001 dollars) and the annual operations payroll will be about $1.5 million (2001 dollars).

6. The MPP will spend an estimated $10.8 million on locally purchased materials and equipment during construction and about $635,000 per year during operation.

7. The demographic environmental justice screening analysis indicates that more than 50 percent of the population within a six-mile radius of the project is classified minority; however, the low-income population does not exceed 50 percent.

8. Since the MPP does not result in adverse effects to any population, there are no disproportionate impacts to minorities or low-income populations.

9. The project will provide public benefits, including economic and environmental benefits, and electricity reliability to the participating municipalities.

10. Construction and operation of the project will not result in any direct, indirect, or cumulative adverse socioeconomic impacts.

We therefore conclude that implementation of all Conditions of Certification in this Decision and the mitigation measures identified in the evidentiary record, ensures that the project will comply with all applicable laws, ordinances, regulations, and standards relating to socioeconomic factors as identified in the

pertinent portions of **Appendix A**. No specific Conditions of Certification are required for socioeconomics in this case.

Appendix A: *Laws, Ordinances, Regulations , and Standards*

Appendix B: *Proof of Service List*

Appendix C: *Exhibit List*

Appendix D: *Glossary of Terms*

APPENDICES

AIR QUALITY

FEDERAL

The federal Clean Air Act requires any new major stationary sources of air pollution and any major modifications to existing major stationary sources to obtain a construction permit before commencing construction. This process is known as New Source Review (NSR). Its requirements differ depending on the attainment status of the area where the major facility is to be located. Prevention of Significant Deterioration (PSD) requirements apply in areas that are in attainment of the national ambient air quality standards (NAAQS). The non-attainment area NSR requirements apply to areas that have not been able to demonstrate compliance with the NAAQS. The entire program, including both PSD and non-attainment NSR permit reviews, is referred to as the federal NSR program.

The U.S. Environmental Protection Agency (EPA) has reviewed and approved the South Coast Air Quality Management District's regulations and has delegated to the District the implementation of the federal PSD, non-attainment NSR, Title IV, and Title V programs. The SCAQMD implements these programs through its own rules and regulations, which are, at a minimum, as stringent as the federal regulations.

Title V of the federal Clean Air Act requires states to implement and administer an operating permit program to ensure that large sources operate in compliance with the requirements included in the Code of Federal Regulations, Title 40, Part 70. A Title V permit contains all of the requirements specified in different air quality regulations that affect an individual project. The Title V program is administered by SCAQMD under Regulation XXX. As described in Section 5.2.3.2 of the AFC (MPP 2001a), installation of the gas turbine by SCPPA will be a major new source and thus will require a Title V permit.

The Magnolia Power Project is also subject to the federal New Source Performance Standards (NSPS). Enforcement of NSPS has been delegated to the SCAQMD and the corresponding regulations are incorporated into the District's Regulation IX. The power-island must comply with the requirements of NSPS Subparts Da and GG. Local emission limitation rules or BACT requirements are, however, more restrictive than the NSPS requirements. For example, Section 5.2.1.4 of the AFC (MPP 2001a) indicates that the BACT level for NO_x emissions will be no more than 2 parts per million by volume dry (ppmvd) at 15 percent excess oxygen (ppmvd @ 15%O_2), significantly less than the NSPS allowable limit of 75 ppmvd @ 15%O_2. The NSPS requirements also include a SO_2 emissions concentration of no more than 150 ppm @ 15%O_2.

The EPA has delegated its Prevention of Significant Deterioration (PSD) and non-attainment New Source Review (NSR) requirements to the SCAQMD. This delegation is only done for air districts that are able to demonstrate to the satisfaction of EPA that

their regulatory programs are at least as stringent as the federal PSD and non-attainment NSR programs. The SCAQMD will issue an Authority to Construct (ATC) only after this project secures a license from the California Energy Commission. This permit will be the equivalent to a federal PSD and federal non-attainment NSR permits. In addition, the EPA has also delegated to the SCAQMD the authority to implement the federal Clean Air Act Title V permitting program. This operating permit is issued only after a facility is in operation and it would be the same as the SCAQMD's Permit to Operate.

Title IV of the federal Clean Air Act provides for the issuance of acid rain permits and requires subject facilities to obtain emission allowances for SO_x emissions. The Title IV program is administered by SCAQMD under Regulation XXXI.

STATE

California State Health and Safety Code, Section 41700, requires that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerate number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

LOCAL

As part of the Energy Commission's licensing process, in lieu of issuing a construction permit to the Applicant for the Magnolia Power Project, the SCAQMD has prepared and presented to the Commission a Determination of Compliance/Permit to Construct (DOC/PTC) (SCAQMD 2002d). The DOC evaluates whether and under what conditions the proposed project will comply with the District's applicable rules and regulations, as described below.

The project is subject to the specific District rules and regulations that are briefly described below:

Regulation II — Permits

This regulation sets forth the regulatory framework of the application for and issuance of construction and operation permits for new, altered and existing equipment.

Rule 202 — Temporary Permit to Operate

This rule states that any new equipment that has been issued a Permit to Construct (PTC) shall be allowed to use that PTC as a temporary Permit to Operate (PTO) upon notification to the Air Pollution Control Officer (APCO).

Rule 203 — Permit to Operate

This rule prohibits the use of any equipment that may emit air contaminants or control the emission of air contaminants, without first obtaining a PTO except as provided in Rule 202.

Rule 217 — Provisions for Sampling and Testing

The Executive Officer (EO) may require the Applicant to provide and maintain facilities necessary for sampling and testing. The EO will inform the Applicant of the need for testing ports, platforms and utilities.

Rule 218 — Continuous Emission Monitoring

This rule describes the installation, QA/QC and reporting requirements for all sampling interfaces, analyzers and data acquisition systems used to continuously determine the concentration or mass emission of an emission source. However, this rule does not apply to the Continuous Emissions Monitoring System (CEMS) required for NO_x monitoring under RECLAIM (Regulation XX).

Regulation IV — Prohibitions

This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, startup/shutdown exemptions and breakdown events.

Rule 401 — Visible Emissions

Generally this rule restricts visible emissions from a single source for more than three minutes in any one hour from being as dark or darker than that designated No. 1 on the Ringelmann Chart (US Bureau of Mines).

Rule 402 — Nuisance

This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance or annoyance to businesses, property or the public.

Rule 403 — Fugitive Dust

This rule requires that the Applicant prevent, reduce or mitigate fugitive dust emissions from the project site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions (between up and down wind measurements) to less than 50 $\mu g/m^3$ and restricts the tracking out of bulk materials onto public roads. Additionally, the Applicant must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include, adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the EPA.

Rule 407 — Liquid and Gaseous Air Contaminants

This rule limits CO emissions to 2,000 ppm and SO_2 emissions to 500 ppm, averaged over 15 minutes. Equipment that complies with Rule 431.1 is exempt from the SO_2 limit. The Applicant will be required to comply with Rule 431.1 and thus the sulfur limit of Rule 407 will not apply.

Rule 408 — Circumvention

This rule prohibits the use of equipment that conceals emissions without reducing emissions, except in cases where the only violation involved is of Section 48700 of the Health and Safety Code or District Rule 402.

Rule 409 — Combustion Contaminants

This rule restricts the discharge of contaminants from the combustion of fuel to 0.23 grams per cubic meter of gas, calculated to 12% CO_2, averaged over 15 minutes. This rule does not apply to internal combustion (IC) engines or jet engine test stands.

Rule 431.1 — Sulfur Content of Gaseous Fuels

This rule restricts the sale or use of gaseous fuels that exceed a sulfur content limit. The sulfur content limit for natural gas is 16 ppmv calculated as H_2S. This rule also establishes monitoring and reporting requirements, as well as test methods to be used.

Rule 431.2 — Sulfur Content of Liquid Fuels

This rule establishes a sulfur content limit for diesel fuel of 0.05% by weight, as well as, record keeping requirements and test methods.

Rule 475 — Electric Power Generating Equipment

This rule limits combustion contaminants (PM_{10}) from electric power generating equipment with a maximum rating of more than 10 net megawatts to 11 pounds per hour and 23 milligrams per cubic meter @ 3%O_2 (averaging time subject to Executive Officer decision).

Regulation VII — Emergencies

Rule 701 — Air Pollution Emergency Contingency Actions

This rule requires that facilities employing 100 or more people or emitting 100 or more tons of pollutants (NO_x, SO_x or VOC) per year, upon declaration or prediction of a Stage 2 or 3 smog episode, reduce NO_x, SO_x and VOC emissions by at least 20% of normal workday operations. This rule also requires that upon declaration of a state of emergency by the Governor, the facility comply with the Governor's requirements. A power plant facility may be exempt from Rule 701 if they are determined by the District to be an essential service responding to a public emergency or utility outage.

Regulation IX — Standards of Performance for New Stationary Sources

Regulation IX incorporates provisions of Part 60, Chapter I, Title 40 of the Code of Federal Regulations (CFR) and is applicable to all new, modified or reconstructed sources of air pollution. Sections of this regulation apply to electric utility steam generators (Subpart Da) and stationary gas turbines (Subpart GG). These subparts establish limits of particulate matter, SO_2, and NO_2 emissions from the facility as well as monitoring and test method requirements.

Regulation XIII — New Source Review

This regulation sets forth the pre-construction review requirements for new, modified or relocated facilities to ensure that these facilities do not interfere with progress in attainment of the national ambient air quality standards and that future economic growth in the SCAQMD is not unnecessarily restricted. This regulation limits the emissions of non-attainment contaminants and their precursors as well as ozone depleting compounds (ODC) and ammonia by requiring the use of Best Available Control Technologies (BACT). This regulation specifies that emissions for VOC, NO_x, SO_x, PM_{10}, and CO above 4 tons per year shall be offset by either Emission Reduction Credits (ERCs) or by allocations from the Priority Reserve (SO_x, PM_{10} and CO only). However, this regulation does not apply to the NO_x emissions for the MPP, which are regulated by Regulation XX (RECLAIM).

Rule 1309.1 – Priority Reserve

The Priority Reserve is established to provide credits for PM_{10}, SO_x and CO to specific priority sources. To be eligible, electric generating facilities must submit a complete application for certification to the California Energy Commission or an application for a permit to construct to SCAQMD between 2000 and 2003; be in compliance with all applicable District rules, variances, orders, and settlement agreements; pay a non-refundable mitigation fee for each pound per day of PM_{10}, SO_x and CO obtained from the Priority Reserve; show due diligence effort to secure available ERCs; be fully and legally operational within 3 years; and enter into a long-term (at least 1-year) contract with the state of California to sell at least 50% of the portion of the power generated using Priority Reserve credits. Municipal utilities and joint power authorities, such as SCPPA, are exempt from the contract requirements of this regulation.

Regulation XVII — Prevention of Significant Deterioration

This regulation sets forth the pre-construction requirement for stationary sources to ensure that the air quality in clean air areas does not significantly deteriorate while maintaining a margin for future industrial growth. This regulation establishes maximum allowable increases over ambient baseline concentrations for each pollutant. Because the MPP would not qualify as a major new source of any PSD pollutant, and because SCPPA is permitting the MPP independent of the existing COB power generating facility, the PSD pre-construction requirement would not apply to the project.

Regulation XX — Regional Clean Air Incentives Market (RECLAIM)

The Regional Clean Air Incentives Market (RECLAIM) is designed to allow facilities flexibility in achieving emission reduction requirements for NO_x and SO_x through controls, equipment modifications, reformulated products, operational changes, shutdowns, other reasonable mitigation measures or the purchase of excess emission reductions. The RECLAIM program establishes an initial allocation (beginning in 1994) and an ending allocation (to be attained by the year 2003) for each facility within the program (Rule 2002). Each facility then reduces their allocation annually on a straight line from the initial to the ending. The RECLAIM program has its own rules for permitting, reporting, monitoring (including CEM), record keeping, variances, breakdowns and the New Source Review program, which incorporates BACT

requirements (Rules 2004, 2005, 2006 and 2012). The RECLAIM program supercedes other district rules where there are conflicts. RECLAIM also has its own banking rule, RECLAIM Trading Credits (RTCs), which is established in Rule 2007. The MPP is exempt from the SO_x RECLAIM program (Rule 2011) because it uses natural gas exclusively (per Rule 2001). However, it will be a NO_x RECLAIM project and therefore subject to the rules of RECLAIM for NO_x emissions.

Regulation XXX — Title V Permits

The Title V federal program is the air pollution control permitting system required by the federal Clean Air Act as amended in 1990. Regulation XXX defines the permit application and issuance as well as compliance requirements associated with the program. Any new or modified major source which qualifies as a Title V facility must obtain a Title V permit prior to construction, operation or modification of that source. Regulation XXX also integrates the Title V permit with the RECLAIM program such that a project cannot proceed without complying with both regulations. The MPP will be a major new source and thus will require a Title V permit.

Regulation XXXI — Acid Rain Permits

Title IV of the federal Clean Air Act provides for the issuance of acid rain permits for qualifying facilities. Regulation XXXI integrates the Title IV program with the RECLAIM program. Regulation XXXI requires a subject facility to obtain emission allowances for SO_x emissions as well as monitoring SO_x, NO_x and CO_2 emissions from the facility.

BIOLOGICAL RESOURCES

FEDERAL

Endangered Species Act of 1973

Title 16, United States Code, section 1531 *et seq*., and Title 50, Code of Federal Regulations, part 17.1 *et seq*., designate and provide for protection of threatened and endangered plant and animal species, and their critical habitat.

Migratory Bird Treaty Act

Title 16, United States Code, sections 703 through 711 make it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird.

Clean Water Act of 1977

Title 33, United States Code, sections 1251–1376, and Code of Federal Regulations, part 30, section 330.5(a)(26), require the permitting and monitoring of all discharges to surface water bodies. Section 404 requires permits from the U.S. Army Corps of Engineers for discharges from dredged or fill materials into waters of the U.S., including wetlands. Section 401 requires permits from the state's water quality control boards for the discharge of pollutants into the state's waters of the U.S.

STATE

California Endangered Species Act of 1984

Fish and Game Code, sections 2050 through 2098, protect California's rare, threatened, and endangered species. California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3 sections 670.2 and 670.5, list the plants and animals of California that are declared as rare, threatened, or endangered.

Fully Protected Species

Fish and Game Code, sections 3511, 4700, 5050, and 5515, designate certain species as fully protected and prohibits the take of such species or their habitat unless for scientific purposes (see also California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3, section 670.7).

Nest or Eggs

Fish and Game Code section 3503 protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird.

Migratory Birds

Fish and Game Code section 3513 protects California's migratory birds by making it unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird.

Significant Natural Areas

Fish and Game Code section 1930 et seq. designate certain areas such as refuges, natural sloughs, riparian areas, and vernal pools as significant wildlife habitat.

Native Plant Protection Act of 1977

Fish and Game Code section 1900 et seq. designate state rare, threatened, and endangered plants.

LOCAL

City of Burbank General Plan

The City of Burbank General Plan includes an Open Space and Conservation Element that focuses on the open space potential of the Verdugo Mountains.

Los Angeles County Significant Ecological Areas

Los Angeles County originally designated 61 Significant Ecological Areas (SEAs) as part of a background study for the 1973 County General Plan (as amended in 1980). The underlying objective of the SEA program is the preservation of biotic diversity. A conditional use permit is required for development in SEAs in order to protect resources contained in SEAs from incompatible development, which may result in or have potential for environmental degradation. Los Angeles County Department of Regional Planning has recently (November 2000) proposed boundary and policy changes to the SEAs as part of its General Plan Update (County of Los Angeles 2000).

City of Glendale General Plan

The City of Glendale General Plan recognizes the Verdugo Mountains as part of its Open Space and Conservation Element.

City of Los Angeles General Plan

Los Angeles Planning and Zoning Code, section 12.04.05, restricts the types of uses that can be permitted in an Open Space zone. Several SEAs are classified as Open Space under the Los Angeles municipal code, including Griffith Park and Verdugo Mountains.

Southern California Association of Governments

The Southern California Association of Governments reviews, pursuant to Public Resources Code Sections 21083 and 21087, Environmental Impact Reports of projects of regional significance for consistency with regional plans. The Growth Management Chapter of the Regional Comprehensive Plan and Guide contains the following policies that are applicable to biological resources:

3.13 Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.

3.18 Encourage planned development in locations least likely to cause environmental impact.

3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.

3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

CULTURAL RESOURCES

FEDERAL

36 Code of Federal Regulations, Section 61, Federal Guidelines for Historic Preservation Projects: The US Secretary of the Interior has published a set of Standards and Guidelines for Archaeology and Historic Preservation. These are considered to be the appropriate professional methods and techniques for the preservation of archaeological and historic properties. The State Historic Preservation Office refers to these standards in its requirements for selection of qualified personnel and in the mitigation of potential impacts to cultural resources on public lands in California.

STATE

The term "cultural resource" is used broadly to include the following categories of resources that are identified pursuant to California Code of Regulations, Title 14, Chapter 11.5, Section 4852. The categories of potential resources eligible for nomination include:

1. Building. A resource, such as a house, barn, church, factory, hotel, or similar structure created principally to shelter or assist in carrying out any form of human activity. 'Building' may also be used to refer to an historically and functionally related unit, such as a courthouse and jail or a house and barn;

2. Site. A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished where the location itself possesses historical, cultural, or archeological value regardless of the values of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric or historic event, and if no buildings, structures, or objects marked it at that time. Examples of such sites are trails, designed landscapes, battlefields, habitation sites, Native American ceremonial areas, petroglyphs, and pictographs;

3. Structure. The term 'structure' is used to describe a construction made for a functional purpose rather than creating human shelter. Examples of structures included mines, bridges and tunnels;

4. Object. The term 'object' is used to describe those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed, as opposed to a building or a structure. Although it may be movable by nature or design, an object is associated with a specific setting or environment. Objects should be in a setting appropriate to their significant historic use, role, or character. Objects that are relocated to a museum are not eligible for listing in the California Register. Examples of objects include

fountains, monuments, maritime resources, sculptures, and boundary markers; and

5. Historic district. Historic districts are unified geographic entities which contain a concentration of historic buildings, structures, objects, or sites united historically, culturally, or architecturally. Historic districts are defined by precise geographic boundaries. Therefore, districts with unusual boundaries require a description of what lies immediately outside the area in order to define the edge of the district and to explain the exclusion of adjoining areas. The district must meet at least one of the criteria for significance discussed in California Code of Regulations, Title 14, Chapter 11.5, Section 4852 (b)(1)-(4).

When a cultural resource is determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, it may be considered to be an "historical resource" and eligible for inclusion in the California Register of Historic Resources (CRHR).

If the archaeological resource does not meet the criteria for an historical resource, it may be assessed to determine whether it meets the criteria of a unique resource as defined in the Public Resources Code.

- Public Resources Code, Section 5020.1 defines several terms, including the following: (j) "Historical resource" and (q) "Substantial adverse change," which means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.
- Public Resources Code, Section 5024.1 establishes a California Register of Historic Resources (CRHR). The implementing regulations are Title 14, California Code of Regulations, Chapter 11.5, Section 4850 et seq.

The California Environmental Quality Act (CEQA) (Public Resources Code, § 21000 et seq.; Title 14, California Code of Regulations, § 15000 et seq.) requires analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.

Public Resources Code Section 21083.2 states that the lead agency determines whether a project may have a significant effect on "unique" archaeological resources; if so, an EIR shall address these resources. If a potential for damage to unique archaeological resources can be demonstrated, the lead agency may require reasonable steps to preserve the resource in place. Otherwise, mitigation measures shall be required as prescribed in this section. The section discusses excavation as mitigation; limits the applicant's cost of mitigation; sets time frames for excavation; defines "unique and non-unique archaeological resources"; and provides for mitigation of unexpected resources.

Public Resources Code Section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of

a historic resource; the section further defines a “historic resource” and describes what constitutes a “significant” historic resource.

Title 14, California Code of Regulations, Section 15126.4(b) prescribes the manner of maintenance, repair, stabilization, restoration, conservation, or reconstruction as mitigation of a project’s impact on a historical resource; discusses documentation as a mitigation measure; and discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.

Title 14, California Code of Regulations, Section 15064.5 defines the term “historical resources,” explains when a project may have a significant effect on historic resources, describes CEQA’s applicability to archaeological sites, and specifies the relationship between “historical resources” and “unique archaeological resources.”

Penal Code, Section 622 1/2 states that anyone who willfully damages an object or thing of archaeological or historic interest is guilty of a misdemeanor.

California Health and Safety Code, Section 7050.5 states that if human remains are discovered during construction, the project owner is required to contact the county coroner.

Public Resources Code, Section 5097.98 defines procedures for notification of discovery of Native American artifacts or remains and for the disposition of such materials. This section also prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.

Public Resources Code Section 5097.99 provides restrictions on the possession of human remains or grave related artifacts. Part (b) specifies exceptions and states a person in violation of this section is guilty of a felony. Part (c) expands the section to say that any person, not under authority of law, who removes Native American artifacts or human remains with an intent to sell or vandalize them is guilty of a felony.

FACILITY DESIGN

Lists of LORS applicable to each engineering discipline (civil, structural, mechanical and electrical) are described in Table 7.1-1 of the AFC (MPP 2001a) and the Data Adequacy Responses (MPP 2001c). Some of these LORS include the California Building Code (CBC) and standards promulgated by the American National Standards Institute (ANSI), the American Society of Mechanical Engineers (ASME), the American Society for Testing and Materials (ASTM), and the American Welding Society (AWS). The following appendices, included in the AFC, describe the applicable LORS and design standards for each engineering discipline (MPP 2001a):

- Appendix A - Foundations and Civil Engineering Design Criteria
- Appendix B – Structural and Seismic Engineering Design Criteria
- Appendix C - Mechanical Engineering Design Criteria
- Appendix D – Control Systems Engineering Design Criteria
- Appendix E – Electrical Engineering Design Criteria

GEOLOGY AND PALEONTOLOGY

FEDERAL

The proposed Magnolia Power Project (MPP) is not located on or adjacent to federal property. There are no federal LORS for geological hazards and resources or grading for the proposed project. The Federal Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 *et seq*.; 34 Stat. 25), in part, protects paleontological resources from vandalism and unauthorized collection on federal land. The National Environmental Policy Act of 1969, as amended, requires analysis of potential environmental impacts to important historic, cultural and natural aspects of our national heritage (42 United States Code, Sections 4321 through 4347; 40 Code of Federal Regulations, Section 1502.25).

STATE AND LOCAL

The California Building Code (CBC) 1998 edition is based upon the *Uniform Building Code* (*UBC*), 1997 edition, which was published by the International Conference of Building Officials. The *CBC* is a series of standards that are used in investigation, design (Chapters 16 and 18) and construction (including grading and erosion control; Appendix Chapter 33). The *CBC* supplements the grading and construction requirements of the *UBC*.

The California Environmental Quality Act (CEQA) Guidelines Appendix G provides a checklist of questions that a lead agency should normally address if relevant to a project's environmental impacts.

Section (V) (c) asks if the project will directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Sections (VI) (a), (b), (c), (d), and (e) pose questions that are focused on whether or not the project would expose persons or structures to geological hazards.

Sections (X) (a) and (b) pose questions about the project's effect on mineral resources.

The Measures for Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources: Standard Procedures (SVP 1994) is a set of procedures and standards for assessing and mitigating impacts to vertebrate paleontological resources. They were adopted in October 1994 by The Society of Vertebrate Paleontology (SVP), a national organization.

HAZARDOUS MATERIALS MANAGEMENT

FEDERAL

The Superfund Amendments and Reauthorization Act of 1986 (Pub. L. 99-499, §301,100 Stat. 1614 [1986]), also known as SARA Title III, contains the Emergency Planning and Community Right To Know Act (EPCRA) as codified in 42 U.S.C. section 11001 et seq. This Act requires that certain information about any release to the air, soil, or water of an extremely hazardous material must be reported to state and local agencies.

The Clean Air Act (CAA) of 1990 (42 U.S.C. §7401 et seq. as amended) established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The CAA section on Risk Management Plans, codified in 42 U.S.C. section 112(r), requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of the CAA are reflected in the California Health and Safety Code, section 25531 et seq.

Currently, due to the high volume of petroleum-containing hazardous materials already in place on this site, the applicant is required to have a Spill Prevention Control and Countermeasure Plan (SPCC) in place (Hazardous Waste Contingency Plan Title 40 C.F.R., Part 112.7).

STATE

The California Accidental Release Prevention Program (Cal-ARP), Health and Safety Code, section 25531, directs facility owners storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the United States Environmental Protection Agency (EPA), and the designated local Administering Agency for review and approval. The plan must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This program supersedes the California Risk Management and Prevention Plan (RMPP).

Section 25503.5 of the California Health and Safety Code requires facilities which store or use hazardous materials to prepare and file a Business Plan with the local Certified Unified Program Authority (CUPA), in this case the Los Angeles County Fire Department, Hazardous Materials Division. This Business Plan is required to contain information on the business activity, the owner, a hazardous materials inventory, facility maps, an Emergency Response Contingency Plan, an Employee Training Plan, and other recordkeeping forms.

Title 8, California Code of Regulations, section 5189, requires facility owners to develop and implement effective safety management plans to ensure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMPP process.

Title 8, California Code of Regulations, section 458 and sections 500 through 515, set forth requirements for design, construction and operation of vessels and equipment used to store and transfer anhydrous ammonia. These sections generally codify the requirements of several industry codes, including the American Society for Material Engineering (ASME) Pressure Vessel Code, the American National Standards Institute (ANSI) K61.1 and the National Boiler and Pressure Vessel Inspection Code. While these codes apply to anhydrous ammonia, they may also be used to design storage facilities for aqueous ammonia.

California Health and Safety Code, section 41700, requires that "No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property."

LOCAL AND REGIONAL

The Uniform Fire Code (UFC 1997) contains provisions regarding the storage and handling of hazardous materials in Articles 4 and 79. The most recent version of the UFC was adopted in 1997. The City of Burbank Municipal Code section 15.1-800 and the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program address the enforcement of CCR title 23 standards on petroleum underground storage tank cleanup. The Los Angeles County Fire Department, Hazardous Materials Division regulates hazardous waste generator permits, handling, and storage requirements.

The California Building Code contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official must inspect and verify compliance with these requirements prior to issuance of an occupancy permit. A further discussion of these requirements is provided in the **Facility Design** portion of this document.

HAZARDOUS MATERIALS MANAGEMENT

FEDERAL

The Superfund Amendments and Reauthorization Act of 1986 (Pub. L. 99-499, §301,100 Stat. 1614 [1986]), also known as SARA Title III, contains the Emergency Planning and Community Right To Know Act (EPCRA) as codified in 42 U.S.C. section 11001 et seq. This Act requires that certain information about any release to the air, soil, or water of an extremely hazardous material must be reported to state and local agencies.

The Clean Air Act (CAA) of 1990 (42 U.S.C. §7401 et seq. as amended) established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The CAA section on Risk Management Plans, codified in 42 U.S.C. section 112(r), requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of the CAA are reflected in the California Health and Safety Code, section 25531 et seq.

Currently, due to the high volume of petroleum-containing hazardous materials already in place on this site, the applicant is required to have a Spill Prevention Control and Countermeasure Plan (SPCC) in place (Hazardous Waste Contingency Plan Title 40 C.F.R., Part 112.7).

STATE

The California Accidental Release Prevention Program (Cal-ARP), Health and Safety Code, section 25531, directs facility owners storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the United States Environmental Protection Agency (EPA), and the designated local Administering Agency for review and approval. The plan must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This program supersedes the California Risk Management and Prevention Plan (RMPP).

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LAND USE

The project site is located within the City of Burbank in Los Angeles County, which is situated in the eastern portion of the San Fernando Valley. Land use laws, ordinances, regulations and standards (LORS) applicable to the proposed project are contained in the City of Burbank's General Plan and Zoning Ordinance. In addition, the project is within the South San Fernando Redevelopment Project area.

CITY OF BURBANK GENERAL PLAN

Land uses are controlled and regulated through a series of goals and policies contained in plans adopted by the local jurisdiction that has land use authority over the area (in this case, the City of Burbank). Local agencies with land use authority (i.e., cities and counties) are required to adopt a General Plan for the area within their jurisdiction that sets forth policies regarding land use and other planning topics. The General Plan is the broadest planning document applicable to the site, expressing broad goals and policies to guide local decisions on future growth, development, and conservation. Other local plans, as well as the zoning ordinance that regulates land use, must be consistent with the goals and policies expressed in the General Plan.

The City of Burbank General Plan was adopted in 1988 and has been selectively amended since. In its preface, the Burbank General Plan is described as an official policy document adopted as a guide for making decisions concerning the development of the community according to desired goals. When adopted in 1988, it was intended to shape the future physical development of the city for the next 20 years. The City of Burbank's General Plan Land Use Element designates the project site as General Manufacturing. In addition, the existing power plant, which is owned and operated by the City of Burbank, is designated Public Facility in the Land Use Element. The project's Industrial land use designation promotes the City of Burbank's role as a regional industrial area and as a significant employment center within the Los Angeles region.

The Land Use Element of the General Plan designates the general location and extent of the uses of the land for housing, business, industry, open space, natural resources, recreation and enjoyment of scenic beauty, and other categories of public and private uses of land. The Land Use Element designates 1,173 acres for industrial purposes. It is the intent of the Land Use Element that industrial sites be attractive, convenient, safe, and that they be located so as to benefit both industry and the community.

The Public Facilities land use designation indicates and provides land for a variety of public and quasi-public facilities. The objective of the Land Use Element in designating Public Facilities sites is to preserve public amenities and necessary public facilities for which alternative sites would be difficult to procure. The City of Burbank is developed to the point where acquisition of additional land for public facilities is not practical. As a result, existing public facility sites will not be relinquished unless it can be demonstrated that they will no longer be necessary to the public. As provided in the AFC (MPP 2001a, p. 5.9-4, section 5.9.1.3), it is the intent of the land use element that public

facilities be located in areas of compatible land use and that their location reflect the policy of distributing service facilities equitably throughout the community.

The City of Burbank is currently in the process of preparing a comprehensive revision to its General Plan. As part of the General Plan revision process, the City staff has prepared a series of community events in the coming months for public involvement. It is not anticipated that there will be any changes affecting the proposed project site.

REDEVELOPMENT PLAN

The Redevelopment Agency implements the goals adopted in the Redevelopment Plans for each project area. These include rehabilitating and revitalizing blighted and deteriorated areas via various methods of Redevelopment Agency participation, such as land assemblage, infrastructure upgrades and certain on-site improvements. Removal of blight, creation and retention of jobs, and improvement and preservation of affordable housing are the three primary areas of focus for the Agency.

The City of Burbank adopted a Redevelopment Plan for the South San Fernando Redevelopment Project in June 1997. This area includes the existing City of Burbank power facility, which is owned by the City of Burbank. The City has joined with a number of other Southern California cities to form a municipal utility consortium, the Southern California Public Power Association (SCPPA), which has proposed the new MPP at the existing Burbank site. The MPP will provide economic development in the form of power for the SCPPA members to either use or sell to other utilities in the area. New employment will be generated by the development of the MPP, and the proposed power facility will use a currently underutilized property to provide a more efficient energy facility that will enhance regional energy resources without introducing additional industrial development within the urban area of the City of Burbank.

CITY OF BURBANK ZONING ORDINANCE

Zoning is the specific administrative tool used by a jurisdiction to regulate land use and development, and is one of the primary tools for implementing the goals and policies of the General Plan. Zoning is typically more specific than the General Plan and includes detailed land use regulations and development standards. The City's Zoning Ordinance divides the land in the city into zones that permit different types of uses and imposes development standards appropriate to the uses permitted in each zoning district. The MPP project site is located in the General Industrial (M-2) zoning district.

The "M-2" District (Section 31-808 of the Burbank Zoning Ordinance) is "intended for the development of manufacturing process, fabrication and assembly of goods and materials." The "M-2 " District permits a broad array of industrial uses, administrative and professional offices/services, automobile-related uses, personal services, retail commercial uses, and service commercial uses. As indicated earlier in this analysis, the site is designated "Public Facility" which is an allowed use in the M-2 Zoning District.

The Zoning Ordinance (Section 10-1.1645) also includes minimum design and performance standards applicable to the construction of industrial and commercial

buildings in the “M-2” District. These include standards for architectural design, fences and walls, landscaping, lighting, outdoor storage, signs, and other design features.

STATE

Warren-Alquist Act (Pub. Resources Code § 25500 et seq.)

The Warren-Alquist Act is the enabling legislation for the California Energy Commission. Section 25525 of the act states:

“The commission shall not certify any facility contained in the application when it finds pursuant to subdivision (d) of Section 25523, that the facility does not conform with any applicable state, local, or regional standards, ordinances, or laws, unless the commission determines that such facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity. In making this determination, the commission shall consider the entire record of the proceeding, including, but not limited to, impacts of the facility on the environment, consumer benefits, and electric system reliability. In no event shall the commission make any finding in conflict with applicable federal law or regulation. . . .”

NOISE AND VIBRATION

FEDERAL

Under the Occupational Safety and Health Act of 1970 (OSHA) (29 U.S.C. § 651 et seq.), the Department of Labor, Occupational Safety and Health Administration (OSHA) has adopted regulations (29 C.F.R. § 1910.95) designed to protect workers against the effects of occupational noise exposure. NOISE Table 1 lists permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed; assuring that workers are made aware of overexposure to noise; and periodically testing the workers' hearing to detect any degradation. It should be noted that there are no federal laws governing offsite (community) noise.

NOISE Table 1 – OSHA Worker Noise Exposure Standards

Duration of Noise (Hrs/day)	A-Weighted Noise Level (dBA)
8.0	90
6.0	92
4.0	95
3.0	97
2.0	100
1.5	102
1.0	105
0.5	110
0.25	115

Source: OSHA Regulation

The Federal Transit Administration (FTA) has published guidelines for assessing the impacts of ground-borne vibration associated with construction of rail projects, which have been applied by other jurisdictions to other types of projects. The FTA-recommended vibration standards are expressed in terms of the "vibration level," which is calculated from the peak particle velocity measured from ground-borne vibration. The FTA measure of the threshold of perception is 65 VdB, which correlates to a peak particle velocity of about 0.002 inches per second (in/sec). The FTA measure of the threshold of architectural damage for conventional sensitive structures is 100 VdB, which correlates to a peak particle velocity of about 0.2 in/sec.

STATE

California Government Code, section 65302(f) encourages each local government entity to perform noise studies and implement a noise element as part of its General Plan. In addition, the California Office of Planning and Research has published guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.

The State of California, Office of Noise Control, prepared a Model Community Noise Control Ordinance, which provides guidance for acceptable noise levels in the absence of local noise standards. The Model also contains a definition of a "pure tone" which can be used to determine whether a noise source contains significant annoying tonal components. The Model Community Noise Control Ordinance further recommends that, when a pure tone is present, the applicable noise standard should be lowered (made more stringent) by 5 dBA.

Other State laws, ordinances, regulations, and standards (LORS) include the California Environmental Quality Act (CEQA) and the California Occupational Safety and Health Administration (Cal-OSHA) regulations.

California Environmental Quality Act

CEQA requires that significant environmental impacts be identified, and that such impacts be eliminated or mitigated to the extent feasible. Section XI of Appendix G of CEQA Guidelines (Cal. Code Regs., tit. 14, App. G) sets forth some characteristics that may signify a potentially significant impact. Specifically, a significant effect from noise may exist if a project would result in:

a) exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies;

b) exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels;

c) a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or

d) a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project….

The Energy Commission staff, in applying Item c) above to the analysis of this and other projects, has concluded that a potential for a significant noise impact exists where the noise of the project plus the background exceeds the background by 5 dBA L_{90} or more at the nearest location where the sound is likely to be perceived.

Noise due to construction activities is usually considered to be insignificant in terms of CEQA compliance if:

1. The construction activity is temporary;
2. Use of heavy equipment and noisy activities is limited to daytime hours; and
3. All industry-standard noise abatement measures are implemented for noise-producing equipment.

CAL-OSHA

Cal-OSHA has promulgated Occupational Noise Exposure Regulations (Cal. Code Regs., tit. 8, §§ 5095-5099) that set employee noise exposure limits. These standards are equivalent to the federal OSHA standards described above.

LOCAL

The City of Burbank's General Plan recommends that exterior noise exposures at residential locations should not exceed an L_{dn} of 60 dBA. Areas where the L_{dn} is between 60 dBA and 70 dBA are considered "conditionally acceptable" for residential properties. This means that any new construction or development of residential properties in these areas must include sufficient noise insulation features to meet the acceptable interior noise exposure level of 45 dBA L_{dn}.

Of more relevance to this project are the standards contained in the City of Burbank's Noise Ordinance (Municipal Code, Section 21 Environmental Protection – Article 2. Noise Control, February 21, 1987). Project noise at the plant site boundaries must comply with the Noise Ordinance standards established for residential, commercial and industrial land uses. Burbank's noise ordinance limits noise from an individual source by restricting the amount to which that source increases the ambient noise level at any other property. The ordinance permits an increase of up to five decibels above the "ambient base levels." Even if the measured ambient noise level is higher than the base noise level, it is the base noise level that applies. **NOISE Table 2** lists the ambient base noise levels contained in the Burbank Noise Ordinance.

NOISE Table 2 – City of Burbank Ambient Base Noise Levels (dBA, L_{eq})

Base Noise Level	Time	Zone
45 Dba	Nighttime	Residential
55 Dba	Daytime	Residential
65 dBA	Anytime	Commercial
70 dBA	Anytime	All other zones

The properties adjacent to the project site consist of commercial and industrial uses. Per the City's noise ordinance the maximum permissible total noise (plant plus ambient) for adjacent commercial uses would be 70 dBA (65 dBA ambient plus 5 dBA). Thus, the plant could generate noise levels of 68 dBA L_{eq} for the total noise level to remain under 70 dBA, assuming that the ambient noise level is 65 dBA. Similarly, at industrial areas the MPP noise level (L_{eq}) could not exceed 73.3 dBA, and at residential areas the MPP noise could not exceed 48.3 dBA, to be in compliance with the Burbank Noise Ordinance.

Section 21-209 of the Noise Ordinance states that noise from construction activities is prohibited during the nighttime (10:00 p.m. to 7:00 a.m.) in a residential zone or within a radius of 500 feet from any residential zone. If necessity is shown, a permit can be obtained from the Superintendent of the Building Department to perform construction activities during the nighttime, stating the predetermined hours and days when the work is to be performed.

PUBLIC HEALTH

FEDERAL

Clean Air Act section 112 (42 U.S. Code § 7412)

Section 112 requires new sources which emit more than ten tons per year of any specified hazardous air pollutant (HAP) or more than 25 tons per year of any combination of HAPs to apply Maximum Achievable Control Technology (MACT).

STATE

California Health and Safety Code sections 39650 et seq.

These sections mandate the Air Resources Board and the Department of Health Services to establish safe exposure limits for toxic air pollutants and identify pertinent best available control technologies. They also require that the new source review rule for each air pollution control district include regulations that require new or modified procedures for controlling the emission of toxic air contaminants.

California Health and Safety Code section 41700

This section states that “no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.”

LOCAL

South Coast Air Quality Management District Rule 1401

This rule requires a risk assessment or risk screening analysis to be performed for new or modified facilities that emit one or more toxic air contaminants that exceed specified amounts.

POWER PLANT EFFICIENCY

FEDERAL

No federal laws apply to the efficiency of this project.

STATE

California Environmental Quality Act Guidelines

CEQA Guidelines state that the environmental analysis "…shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy" (Cal. Code Regs., tit. 14, § 15126.4(a)(1)). Appendix F of the Guidelines further suggests consideration of such factors as the project's energy requirements and energy use efficiency; its effects on local and regional energy supplies and energy resources; its requirements for additional energy supply capacity; its compliance with existing energy standards; and any alternatives that could reduce wasteful, inefficient and unnecessary consumption of energy (Cal. Code regs., tit. 14, § 15000 et seq., Appendix F).

LOCAL

No local or county ordinances apply to power plant efficiency.

POWER PLANT RELIABILITY

Presently, there are no laws, ordinances, regulations or standards (LORS) that establish either power plant reliability criteria or procedures for attaining reliable operation. However, the Energy Commission must make findings as to the manner in which the project is to be designed, sited and operated to ensure safe and reliable operation [Cal. Code Regs., tit. 20, § 1752(c)].

SOCIOECONOMIC RESOURCES

FEDERAL

Executive Order 12898, "Federal Actions to address Environmental Justice (EJ) in Minority Populations and Low-Income Populations," focuses federal attention on the environment and human health conditions of minority communities and calls on agencies to achieve environmental justice as part of this mission. The order requires the US Environmental Protection Agency (EPA) and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

Civil Rights Act of 1964, Public Law 88-352, 78 Stat.241 (codified as amended in scattered sections of 42 U.S.C.) Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national origin in all programs or activities receiving federal financial assistance.

STATE

California Government Code, Sections 65996-65997

As amended by SB 50 (Stats. 1998, ch. 407, sec. 23), these sections state that public agencies may not impose fees, charges, or other financial requirements to offset the cost for school facilities.

14 California Code of Regulations, Section 15131

Economic or social effects of a project shall not be treated as significant effects on the environment.

Economic or social factors of a project may be used to determine the significance of physical changes caused by the project.

Economic, social and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce and or avoid the significant effects on the environment.

REGIONAL

Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) developed the Regional Comprehensive Plan and Guide (RCPG) to disclose issues related to future development in the Southern California Region, which includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. The RCPG is a

composition of plans for the Southern California Region and serves as a guide for development within the Southern California Region. When preparing the RCPG, SCAG reviewed the applicable plans and policies of all local jurisdictions within the SCAG region to develop regional goals and policies. While no specific RCPG goals or policies are directly applicable to the MPP, compliance with the RCPG as a whole will ensure the RCPG goal of guiding development within the Southern California Region.

LOCAL

There are no LORS pertaining to Socioeconomics.

SOIL AND WATER RESOURCES

FEDERAL

Clean Water Act

The Clean Water Act (33 U.S.C. Section 1251 et seq.) requires states to set standards to protect quality of the waters of the United States. Point source discharges to surface water are regulated by this act through requirements set forth in a National Pollutant Discharge Elimination System (NPDES) Permit. Stormwater discharges during construction and operation of a facility also fall under this act and must be addressed through either a project specific or general NPDES permit. In California, the nine Regional Water Quality Control Boards (RWQCB) administer the requirements of the Clean Water Act. The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction in the MPP project area.

STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967, Water Code section 13000 et seq., requires the State Water Resources Control Board (SWRCB) and the nine RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards and implementation procedures. The criteria for the project are contained in the Water Quality Control Plan (Basin Plan), Los Angeles Region. This plan sets numerical and/or narrative water quality standards controlling the discharge of wastes with elevated temperature to the state's waters. These standards would be applied to the proposed project through the Waste Discharge Requirements (WDRs), during construction and/or operation of the project.

California Water Code

Section 13552.6 of the Water Code specifically identifies that the use of potable domestic water for cooling towers is an unreasonable use of water if suitable recycled water is available. The availability of recycled water is based upon a number of criteria, which must be taken into account by the SWRCB. These criteria include provisions that the quality and quantity of the reclaimed water are suitable for the use, the cost is reasonable, the use is not detrimental to public health, and will not impact downstream users or biological resources.

Section 13552.8 of the Water Code states that any public agency may require the use of recycled water in cooling towers if certain criteria are met. These criteria include that recycled water is available and meets the requirements set forth in section 13550, the use does not adversely affect any existing water right, and, if there is public exposure to cooling tower mist using recycled water, appropriate mitigation or control is necessary.

Water Recycling Criteria

Under Title 22 of the California Code of Regulations section 60301 et seq., the California Department of Health Services (DHS) reviews and approves wastewater treatment systems to ensure they meet tertiary treatment standards allowing use of reclaimed water for industrial processes such as steam production and cooling water. California Title 22 recognizes that there are different recycled water uses, and depending on the risk of human contact, different treatment standards are permissible. For industrial cooling, Title 22 recycled water needs to be at a minimum disinfected secondary-23 (Most Probable Number of 23 coliform bacteria/100ml). For unrestricted use of recycled water, such as in a distribution network serving multiple users, tertiary treatment is required to meet a standard of 2.2 MPN/100 ml. Title 22 also regulates wastewater treatment system reliability, requiring a combination of redundant processes, back-up power supplies, and/or storage to provide high reliability.

California Constitution, Article X, Section 2

This section requires that the water resources of the State be put to beneficial use to the fullest extent possible. The waste, unreasonable use or unreasonable method of use of water is prohibited. The conservation of such waters is to be exercised with a view to the reasonable and beneficial use in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in the State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use, or unreasonable method of use, or unreasonable method of diversion of water. This section is self-executing, and the Legislature may also enact laws in the furtherance of the policy contained in this section.

STATE WATER RESOURCES CONTROL BOARD

Policy 75-58

The SWRCB has also adopted a number of policies that provide guidelines for water quality protection. The principle policy of the SWRCB which addresses the specific siting of energy facilities is the Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling (adopted by the Board on June 19, 1976, by Resolution 75-58). This policy states that use of fresh inland waters should only be used for powerplant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. This SWRCB policy requires that power plant cooling water should come from, in order of priority: wastewater being discharged to the ocean, ocean water, brackish water from natural sources or irrigation return flow, inland waste waters of low total dissolved solids, and other inland waters. This policy also addresses cooling water discharge prohibitions.

LOCAL

Los Angeles County Ordinances

The Standard Urban Storm Water Mitigation Plan (SUSMP) was developed as part of the municipal storm water program to address storm water pollution from new Development and Redevelopment by the private sector. While the project does not fall into the category of a private sector development, the applicant will comply with the requirements of the SUSMP by developing Best Management Practices (BMPs) to meet the program objectives on the site.

TRAFFIC AND TRANSPORTATION

FEDERAL

The federal government addresses transportation of goods and materials in Title 49, Code of Federal Regulations:

Title 49, Code of Federal Regulations, sections 171 to 177, governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

Title 49, Code of Federal Regulations, sections 350 to 399, and Appendices A through G, Federal Motor Carrier Safety Regulations, addresses safety considerations for the transport of goods, materials, and substances over public highways.

STATE

The California Vehicle Code and the Streets and Highways Code contain requirements applicable to the licensing of drivers and vehicles, the transportation of hazardous materials, and rights-of-way. In addition, the California Health and Safety Code address the transportation of hazardous materials. Provisions within the California Vehicle Code are:

Section 353 defines hazardous materials. Sections 31303 to 31309 regulate the highway transportation of hazardous materials, the routes used, and restrictions thereon.

Sections 31600 to 31620 regulate the transportation of explosive materials.

Sections 32000 to 32053 regulate the licensing of carriers of hazardous materials and include noticing requirements.

Sections 32100 to 32109 establish special requirements for the transportation of inhalation hazards and poisonous gases.

Sections 34000 to 34121 establish special requirements for the transportation of flammable and combustible liquids over public roads and highways.

Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5 to 7, 34506, 34507.5 and 34510 to 11 regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.

Section 25160 et seq. addresses the safe transport of hazardous materials.

Sections 2500 to 2505 authorize the issuance of licenses by the Commissioner of the California Highway Patrol for the transportation of hazardous materials including explosives.

Sections 13369, 15275, and 15278 address the licensing of drivers and the classifications of licenses required for the operation of particular types of vehicles. In addition, the possession of certificates permitting the operation of vehicles transporting hazardous materials is required.

California Streets and Highways Code, Sections 117 and 660 to 72, and California Vehicle Code, Sections 35780 et seq., require permits for the transportation of oversized loads on county roads.

California Street and Highways Code, Sections 660, 670, 1450, 1460 et seq., 1470, and 1480, regulate right-of-way encroachment and the granting of permits for encroachments on state and county roads.

All construction within the public right-of-way will need to comply with the "Manual of Traffic Controls for Construction and Maintenance of Work Zones" (Caltrans, 1996).

LOCAL

City of Burbank Municipal Code

Each of the following City of Burbank (COB) code sections is relevant to the MPP construction phase, which will affect traffic and transportation resources in Burbank.

COB Municipal Code Chapter 29 "Vehicles and Traffic, Article 13 Truck Routes and Streets Prohibited to Commercial Vehicles" designates Burbank streets and parts of streets that are to be used as truck routes for commercial vehicles with three or more axles. This Code also specifies streets that prohibit vehicles having three or more axles. MPP construction will require use of trucks with three or more axles.

COB Municipal Code, Chapter 29 "Vehicles and Traffic, Article 25 Overloads" requires a permit for the moving of a vehicle exceeding weight, width, length, size, or height of load limitations as set forth in Division 15 of the State Vehicle Code.

COB Municipal Code, Chapter 31, Article 15 "General Off Street Parking Standards, Section 31-1407 Use of Vacant Lots in Residential and Commercial Zones for Parking Vehicles" allows, if permitted by the building Director, for vacant lots to be used for temporary off street parking during construction or special events.

COB Municipal Code, Chapter 13 Excavation, Article 2 "Excavation and Installation in Public Streets" prohibits any person from making changes under, adjacent to, or on public streets without first obtaining either an Excavation/Construction permit or a Street Use permit.

COB Municipal Code, Chapter 26 Streets, Article 5 "Repair of Sidewalks and Curbs" gives the property owner five days to make repairs to damaged sidewalks or curbs adjacent to their property after receiving a written notice from the city.

COB Municipal Code, Chapter 26 Streets, Article 7 "Encroachment on City Property" states that no person can encroach on, in, under, or over any property without applying for a permit.

City of Burbank General Plan Circulation

The COB has established a standard for traffic level of service (LOS). This LOS standard calls for a LOS D or better for the circulation system in Burbank. If the project affects the LOS such that it degrades to a LOS below D, it must be mitigated to the COB standard.

Los Angeles County Regional Transportation Plan and Congestion Management Plan

The project is located in Los Angeles County. Los Angeles County is part of the Southern California Association of Governments (SCAG). SCAG is required by federal and state mandates to develop the Regional Transportation Plan (RTP), which outlines transportation goals, objectives, and policies for the SCAG region. Los Angeles County also has the Congestion Management Plan (CMP), which provides goals and policies in regards to traffic operation on the transportation system in Los Angeles County. The SCAG RTP (SCAG, 1998) and Los Angeles County CMP (amended 1990) contain the guiding policies used in the operational analysis for this project.

TRANSMISSION LINE SAFETY AND NUISANCE

The following federal and state laws and industry practices are intended to ensure implementation of the measures necessary to prevent occurrence of each of the impacts noted.

AVIATION SAFETY

The concern over aviation safety for overhead lines derives from the obstruction hazard to area aircraft from the proposed line's intrusion into the area's air space. The potential for such a hazard is addressed through the following LORS and related requirements.

Title 14, Part 77 of the Federal Code of Regulations (CFR), "Objects Affecting the Navigation Space." Provisions of these regulations specify the criteria used by the Federal Aviation Administration (FAA) for determining whether a "Notice of Proposed Construction or Alteration" is required for potential obstruction hazards. The need for such a notice depends on factors related to the height of the structure, the slope of an imaginary surface from the end of nearby runways to the top of the structure, and the length of the runway involved. Such notification allows the FAA to ensure that the structure is located to avoid any significant hazards to area aviation.

FAA Advisory Circular (AC) No. 70/460-2H, "Proposed Construction and or Alteration of Objects that may Affect the Navigation Space." This circular informs each proponent of a project that could pose an aviation hazard of the need to file the "Notice of Proposed Construction or Alteration" (Form 7640) with the FAA.

FAA AC No. 70/460-1G, "Obstruction Marking and Lighting." This circular describes the FAA standards for marking and lighting objects that may pose a navigation hazard as established using the criteria in Title 14, Part 77 of the CFR.

AUDIBLE NOISE AND RADIO INTERFERENCE

Radio-frequency interference and audible noise are produced from the physical interactions of the line electric fields and the air around the conductor. These impacts are produced through well understood physical mechanisms and are prevented or mitigated through compliance with the following regulations and industry practices:

Federal Communications Commission (FCC) regulations in Title 47 CFR, Section 15.25, which prohibit operation of devices or facilities with fields capable of interference with radio-frequency communication in the fields' impact area. These regulations require all such interference to be mitigated by the operator. The potential for such interference would depend on the distance the source in question.

General Order 52 (GO-52), California Public Utilities Commission (CPUC), which specifies the measures necessary to prevent communication interference as related to power and communication line construction, operation and maintenance.

Regular maintenance, which eliminates the protrusions that enhance the noise-producing impacts of electric field interactions at the conductor surface.

FIRE HAZARDS

Fire hazards from overhead transmission line operation are mostly related to sparks from conductors of overhead lines or direct contact between the line and nearby trees and other combustible objects. Such fires are prevented through compliance with the following regulations:

General Order 95 (GO-95), CPUC, "Rules for Overhead Electric Line Construction," which specifies tree-trimming criteria to minimize the potential for power line-related fires.

Title 14 Section 1250 of the California Code of Regulations, "Fire Prevention Standards for Electric Utilities," which specifies utility-related measures for fire prevention.

SHOCK HAZARDS

All transmission and subtransmission line operations pose a risk of hazardous or nuisance shocks to humans. These hazardous shocks are those from direct or indirect contact between an individual and the energized line. Such shocks are capable of serious physiological harm or death and remain a driving force in the design and operation of transmission and other high-voltage lines. The nuisance shocks by contrast, are caused by current flow at levels generally incapable of physiological harm. They result most commonly from contact with a charged metallic object in the transmission line environment. The following regulations are intended to prevent such shocks:

- GO-95, CPUC, "Rules for Overhead Line Construction," which specify uniform statewide requirements for overhead line construction regarding ground clearance, grounding, maintenance and inspection. Implementing these requirements ensures the safety of the general public and workers working on or around the line.
- GO-128, CPUC, "Rules for Construction of Underground Electric Supply Communication Systems," which specify uniform statewide requirements for underground line construction regarding clearances, grounding techniques, maintenance, and inspection.
- Title 8, CCR, Section 2700 et seq., "High Voltage Electric Safety Orders," which establish essential requirements and minimum standards for safely installing, operating, and maintaining electrical installations and equipment.
- National Electrical Safety Code, Part 2: Safety Rules for Overhead Lines, whose provisions are intended to minimize the potential for direct or indirect contact with the energized line.
- The National Electrical Safety Code and the joint guidelines of the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE), which provide for effective grounding and other safety-related practices.

TRANSMISSION SYSTEM ENGINEERING

California Public Utilities Commission (CPUC) General Order 95 (GO-95), "Rules for Overhead Electric Line Construction," formulates uniform requirements for construction of overhead lines. Compliance with this order ensures adequate service and safety to persons engaged in the construction, maintenance, operation or use of overhead electric lines and to the public in general.

California Public Utilities Commission (CPUC) General Order 128 (GO-128), “Rules for Construction of Underground Electric Supply and Communications Systems,” formulates uniform requirements and minimum standards to be used for underground supply systems to ensure adequate service and safety to persons engaged in the construction, maintenance and operation or use of underground electric lines and to the public in general.

The National Electric Safety Code, 1999 provides electrical, mechanical, civil and structural requirements for overhead electric line construction and operation.

North American Reliability Council (NERC)/Western Systems Coordinating Council (WSCC) Planning Standards merge the WSCC Planning Standards into the NERC Planning Standards and provide the system performance standards used in assessing the reliability of the interconnected system. Certain aspects of the NERC/WSCC standards are either more stringent or more specific than the NERC standards. These standards provide planning for electric systems so as to withstand the more probable forced and maintenance outage system contingencies at projected customer demand and anticipated electricity transfer levels, while continuing to operate reliably within equipment and electric system thermal, voltage and stability limits. These standards include the reliability criteria for system adequacy and security, system modeling data requirements, system protection and control, and system restoration. Analysis of the WSCC system is based to a large degree on Section I.A of the standards, “NERC and WSCC Planning Standards with Table I and WSCC Disturbance-Performance Table,” and on Section I.D, “NERC and WSCC Standards for Voltage support and Reactive Power”. These standards require that the results of power flow and stability simulations verify defined performance levels. Performance levels are defined by specifying the allowable variations in thermal loading, voltage and frequency, and loss of load that may occur on systems during various disturbances. Performance levels range from no significant adverse effects inside and outside a system area during a minor disturbance (loss of load or a single transmission element out of service) and to a level that seeks to prevent system cascading and the subsequent blackout of islanded areas during a major disturbance (such as loss of multiple 500 kV lines in a right of way and/or multiple generators). While controlled loss of generation or load or system separation is permitted in certain circumstances, their uncontrolled loss is not permitted (WSCC 2001).

North American Electric Reliability Council (NERC) Planning Standards provides policies, standards, principles and guidelines to assure the adequacy and security of the

electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC's Criteria for Transmission System Contingency Performance. The NERC planning standards provide for acceptable system performance under normal and contingency conditions; however, the NERC planning standards apply not only to interconnected system operation but also to individual service areas (NERC 1998).

Cal-ISO Reliability Criteria also provide policies, standards, principles and guidelines to assure the adequacy and security of the electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC's Criteria for Transmission System Contingency Performance and the NERC Planning Standards. The Cal-ISO Reliability Criteria incorporate the WSCC Criteria and NERC Planning Standards. However, the Cal-ISO Reliability Criteria also provide some additional requirements that are not found in the WSCC Criteria or the NERC Planning Standards. The Cal-ISO Reliability Criteria apply to all existing and proposed facilities interconnecting to the Cal-ISO controlled grid. It also applies when there are any impacts to the Cal-ISO grid due to facilities interconnecting to adjacent controlled grids not operated by the Cal-ISO (Cal-ISO 2002a).

VISUAL RESOURCES

FEDERAL

The project is not located on federal lands and thus would not be subject to federal land management regulations. Consequently, no federal LORS pertaining to visual resources would apply to the project.

STATE

State Scenic Highway Program

The California State Department of Transportation (Caltrans) identifies a state system of eligible and designated scenic highways which, if designated, are subject to various controls intended to preserve their scenic quality.

There are no State-eligible or designated scenic highways within the viewshed of the proposed project.

LOCAL

City of Burbank General Plan

Land Use Element

Policy 16

New development shall have architectural design that is compatible with surrounding properties and which enhances the appearance of Burbank.

Industrial Land Use Policies

Encourage and promote the landscaping of industrial sites and the aesthetic design of industrial buildings in order to improve the appearance of the industrial areas, and the City as a whole, thereby contributing to the positive image of Burbank.

South San Fernando Redevelopment Plan (SSFRP)

Goals of the SSFRP include ensuring cohesive design and development standards in the development and/or redevelopment of land, implementation of design and use standards to assure high aesthetic and environmental quality, and to provide unity and integrity to developments within the Project Area.

City of Burbank Zoning Regulations

The MPP site is located within an M-2 Industrial Zone (Chapter 31 of the COB Municipal Code). City zoning regulations for M-2 uses require street frontage landscaping, including planting of one tree for every 40 feet of street frontage, and require a

conditional use permit for structures greater than 35 feet in height (Ch. 31, Article 8, Sec. 31-812).

In addition the City Art in Public Places ordinance (Ch. 31, Article 11, Sec. 31-1113.1) requires construction and installation of a work of art or other aesthetic amenity, or payment of an in lieu fee, as specified in the ordinance.

WASTE MANAGEMENT

FEDERAL

Resource Conservation and Recovery Act (42 U.S.C. § 6922)

The Resource Conservation and Recovery Act (RCRA) establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal. Section 6922 requires generators of hazardous waste to comply with requirements regarding:

Record keeping practices which identify quantities of hazardous wastes generated and their disposition;

Labeling practices and use of appropriate containers;

Use of a manifest system for transportation; and

Submission of periodic reports to the EPA or authorized state.

Title 40, Code of Federal Regulations, part 260

These sections contain regulations promulgated by the EPA to implement the requirements of RCRA as described above. Characteristics of hazardous waste are described in terms of ignitability, corrosivity, reactivity, and toxicity, and specific types of wastes are listed.

STATE

California Health and Safety Code § 25100 et seq. (Hazardous Waste Control Act of 1972, as amended).

This act creates the framework under which hazardous wastes must be managed in California. It mandates the State Department of Health Services (now the California Department of Toxic Substances Control (DTSC) under the California Environmental Protection Agency, or Cal EPA) to develop and publish a list of hazardous and extremely hazardous wastes, and to develop and adopt criteria and guidelines for the identification of such wastes. It also requires hazardous waste generators to file notification statements with Cal EPA and creates a manifest system to be used when transporting such wastes.

Title 14, California Code of Regulations, § 17200 et seq. (Minimum Standards for Solid Waste Handling and Disposal)

These regulations set forth minimum standards for solid waste handling and disposal, guidelines to ensure conformance of solid waste facilities with county solid waste management plans, as well as enforcement and administration provisions.

Title 22, California Code of Regulations, § 66262.10 et seq. (Generator Standards)

These sections establish requirements for generators of hazardous waste. Under these sections, waste generators must determine if their wastes are hazardous according to either specified characteristics or lists of wastes. As in the federal program, hazardous waste generators must obtain EPA identification numbers, prepare manifests before transporting the waste off-site, and use only permitted treatment, storage, and disposal facilities. Additionally, hazardous waste must only be transported by registered hazardous waste transporters. Generator requirements for record keeping, reporting, packaging, and labeling are also established.

LOCAL

The City of Burbank Municipal Code section 15.1-800 unified Hazardous Waste and Hazardous Materials Management Regulatory Program address the enforcement of CCR title 23 standards on petroleum underground storage tank cleanup. The Los Angeles County Fire Department, Hazardous Materials Division regulates hazardous waste generator permits, handling, and storage requirements.

WORKER SAFETY AND FIRE PROTECTION

FEDERAL

In December 1970 Congress enacted Public Law 91-596, the Federal Occupational Safety and Health Act (OSH Act) of 1970. This Act mandates safety requirements in the workplace and is found in Title 29 of the United States Code, section 651 (29 U.S.C. §§ 651 through 678). Implementing regulations are codified at Title 29 of the Code of Federal Regulations, under General Industry Standards sections 1910.1 through 1910.1500, and clearly define the procedures for promulgating regulations and conducting inspections to implement and enforce safety and health procedures to protect workers, particularly in the industrial sector. Most of the general industry safety and health standards now in force under this OSH Act represent a compilation of materials from existing federal standards and national consensus standards. These include standards from the voluntary membership organizations of the American National Standards Institute (ANSI) and the National Fire Protection Association (NFPA) which publishes the National Fire Codes.

The purpose of the Occupational Safety and Health Act is to "assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources" (29 USC § 651). The Federal Department of Labor promulgates and enforces safety and health standards that are applicable to all businesses affecting interstate commerce. The Department of Labor established the Occupational Safety and Health Administration (OSHA) in 1971 to discharge the responsibilities assigned by the OSH Act.

Applicable Federal requirements include:

29 U.S. Code section 651 et seq. (Occupational Safety and Health Act of 1970);

29 CFR sections1910.1 through 1910.1500 (Occupational Safety and Health Administration Safety and Health Regulations);

29 CFR sections1952.170 through 1952.175 (Federal approval of California's plan for enforcement of its own Safety and Health requirements, in lieu of most of the Federal requirements found in 29 CFR sections1910.1 through 1910.1500).

STATE

California passed the Occupational Safety and Health Act of 1973 ("Cal/OSHA") as published in the California Labor Code section 6300, et seq. Regulations promulgated as a result of the Act are codified at Title 8 of the California Code of Regulations, beginning with sections 337 through 560 and continuing with sections1514 through 8568. The California Labor Code requires that the Cal/OSHA Standards Board adopt standards at least as effective as the federal standards (Labor Code § 142.3(a)), and thus all Cal/OSHA health and safety standards meet or exceed the Federal requirements. Hence, California obtained federal approval of its State health and safety

regulations, in lieu of the federal requirements published at 29 CFR §§1910.1 through 1910.1500). The Federal Secretary of Labor, however, continually oversees California's program and will enforce any federal standard for which the State has not adopted a Cal/OSHA counterpart.

The State of California Department of Industrial Relations is charged with responsibility for administering the Cal/OSHA plan. The Department of Industrial Relations is further split into six divisions to oversee, among other activities: industrial accidents, occupational safety and health, labor standards enforcement, statistics and research, and the State Compensation Insurance Fund (workers compensation).

Employers are responsible for informing their employees about workplace hazards, potential exposure, and the work environment (Labor Code § 6408). Cal/OSHA's principal tool in ensuring that workers and the public are informed is the Hazard Communication standard first adopted in 1981 (8 CCR §5194). This regulation was promulgated in response to California's Hazardous Substances Information and Training Act of 1980. It was later revised to mirror the Federal Hazard Communication Standard (29 CFR §1910.1200) which established on the federal level an employee's "right to know" about chemical hazards in the workplace, but added the provision of applicability to public sector employers. A major component of this regulation is the required provision of Material Safety Data Sheets (MSDSs) to workers. MSDSs provide information on the identity, toxicity, and precautions to take when using or handling hazardous materials in the workplace.

Finally, 8 CCR section 3203 requires that employers establish and maintain a written Injury and Illness Prevent Program to identify workplace hazards and communicate them to its employees through a formal employee-training program.
Additional applicable State requirements include:

8 CCR section 339 - List of hazardous chemicals relating to the Hazardous Substance Information and Training Act;

8 CCR section 337, et seq. - Cal/OSHA regulations;

24 CCR section 3, et seq. - incorporates the current edition of the Uniform Building Code;

Health and Safety Code section 25500, et seq. - Risk Management Plan requirements for threshold quantity of listed acutely hazardous materials at the facility; and

Health and Safety Code sections 25500 –through 25541 - Hazardous Material Business Plan detailing emergency response plans for hazardous materials emergency at the facility.

LOCAL

The California Building Standards Code, published at Title 24 of the California Code of Regulations section 3 et seq., consists of eleven parts containing the building design and construction requirements relating to fire and life safety and structural safety. The Building Standards Code includes the electrical, mechanical, energy, and fire codes

applicable to the project. Local planning/building & safety departments enforce the California Uniform Building Code.

National Fire Protection Association (NFPA) standards are published in the California Fire Code. The fire code contains general provisions for fire safety, including but not restricted to: 1) required road and building access; 2) water supplies; 3) installation of fire protection and life safety systems; 4) fire-resistive construction; 5) general fire safety precautions; 6) storage of combustible materials; 7) exits and emergency escapes; and 8) fire alarm systems. The California Fire Code reflects the body of regulations published at Part 9 of Title 24 of the California Code of Regulations.

Similarly, the Uniform Fire Code (UFC) Standards, a companion publication to the California Fire Code, contains standards of the American Society for Testing and Materials and the NFPA. It is the United State's premier model fire code. It is updated annually as a supplement and published every third year by the International Fire Code Institute to include all approved code changes in a new edition. The latest revision of the Uniform Fire Code adopted into the City of Burbank Municipal Code is the 1997 version. The City of Burbank Fire Department administers the UFC.

Applicable local (or locally enforced) requirements include:

the 1998 Edition of California Fire Code and all applicable NFPA standards (24 CCR Part 9);

California Building Code, Title 24, California Code of Regulations (24 CCR § 3, et seq.); and

The Uniform Fire Code, 1997.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION OF THE MAGNOLIA POWER PROJECT BY SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY	**DOCKET NO. 01-AFC-6** **PROOF OF SERVICE**

I, NAME, declare that on **DATE**, I deposited copies of the attached **DOCUMENT TITLE** in the United States mail at *Sacramento, CA* with first class postage thereon, fully prepaid, and addressed to the following:

DOCKET UNIT

The original signed document plus the required 12 copies to the Energy Commission Docket Unit:

CALIFORNIA ENERGY COMMISSION
DOCKET UNIT, MS-4
Attn: Docket No. 01-AFC-6
1516 Ninth Street
Sacramento, CA 95814-5512

Individual copies of all documents to the parties:

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I declare under penalty of perjury that the foregoing is true and correct

_____
[signature]

Before the Energy Resources Conservation and Development Commission of the State of California

APPLICATION FOR CERTIFICATION OF THE MAGNOLIA POWER PROJECT BY SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY	**DOCKET NO. 01-AFC-6** Application Accepted September 25, 2001

EXHIBIT LIST

EXHIBIT 1: Application for Certification for the Magnolia Power Project. Docketed on May 14, 2001. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 2: Applicant's Responses to Data Adequacy Requests. Docketed on September 4, 2001. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 3: Applicant's Supplement to the AFC for Zero Liquid Discharge Option for the Magnolia Power Project. Docketed on May 14, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 4: Applicant's Responses to First Set of Data Requests. Docketed on November 5, 2001. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 5: Applicant's Supplemental Responses to First Set of Data Requests. Docketed on November 26, 2001. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 6: Applicant's Responses to First Set of Data Requests – Zero Liquid Discharge Option. Docketed on June 28, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 7: Applicant's Responses to Second Set of Data Requests – Zero Liquid Discharge Option. Docketed on July 8, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 8: Applicant's Comments on Initial Staff Assessment. Docketed on February 11, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 9: Applicant's Revised Air Quality Commissioning Modeling. Docketed on February 28, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 10: Revised FDOC issued by SCAQMD. Docketed on July 19, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 11: Phase II Environmental Site Assessment, dated August 2001. Docketed on October 1, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 12: Los Angeles County Sewer and Stormwater Management Plan. Docketed on November 5, 2001. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 13: Staff and Applicant's Stipulation withdrawing NPDES Opinion. Docketed on August 16, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 14: Letter from Ms. J Heredia, URS Corp. to Mr. J. Yee, SCAQMD Regarding Zero Liquid Discharge Option. Docketed on July 16, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 15: Memo from CARB Regarding Review of Air Quality Impact Analysis of MPP. Docketed on June 11, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 16: Site Lease and Services Agreement Between SCPPA and City of Burbank. Docketed on May 13, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 17: Letter from LARWQCB, Dennis Dickerson dated 8/30/01, relating to use of existing COB NPDES Permit. Docketed on March 7, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 18: Letter from LARWQCB, Dennis Dickerson dated 1/8/02 relating to use of existing COB NPDES Permit. Docketed on March 7, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 19: Letter from LARWQCB, Dennis Dickerson dated February 13, 2002, relating to use of existing COB NPDES Permit. Docketed on March 7, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 20: Revised Offsite Construction Laydown Area. Docketed on May 3, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 21: Letter from Ron E. Davis to Siting Committee, entitled Benefits to Burbank's Reclaimed Water Management Program, dated May 7, 2002. Docketed on May 7, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 22: Letter from City of Burbank, Artashes Bashmakian to James Reede, CEC, dated November 7, 2002. Docketed on November 7, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 23: Letter from Bruce E. Blowey to Desh Jain, South Coast Air Quality Management District, dated November 6, 2002. Docketed on November 6, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 24: Testimony of Bruce E. Blowey, Project Description. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 25: Testimony of Bruce E. Blowey, Alternatives. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 26: Testimony of Bruce E. Blowey, Facility Design, Power Plant Efficiency and Reliability. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 27: Testimony of Bruce E. Blowey and David A. Larsen, Transmission System Engineering and Transmission Line Safety and Nuisance. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 28: Testimony of Douglas L. Hahn, Geological Hazardous and Paleontological Resources. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 29: Testimony of Sally Salzman Morgan, Cultural Resources. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 30: Testimony of Douglas L. Hahn, Hazardous Materials. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 31: Testimony of Douglas L. Hahn, Waste Management. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 32: Testimony of Douglas Smith, Traffic and Transportation. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 33: Testimony of Cindy Poire, Visual Resources. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 34: Testimony of Bruce E. Blowey, Compliance and Facility Closure. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 35: Testimony of Cindy Poire, Land Use. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 36: Testimony of Anne M. Wells, Biological Resources. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 37: Testimony of Robert Collacot, Soil and Water Resources. Docketed on November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 38: Testimony of Joan A. Heredia and Tom A. Umenhofer, Air Quality. Docketed November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 39: Testimony of John Koehler, Public Health. Docketed November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 40: Testimony of Cindy Poire, Socioeconomics. Docketed November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 41: Testimony of Douglas L. Hahn, Worker Safety and Fire Protection. Docketed November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 42: Testimony of Douglas L. Hahn, Noise. Docketed November 12, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 43: Letter from Roger Baker, Deputy City Manager for the City of Burbank Community Development Department to James Reede of the Energy Commission, dated October 22, 2002. Docketed October 24, 2002. Sponsored by Applicant and received into evidence on November 18, 2002.

EXHIBIT 44: Letter from John Yee, Senior Engineer for the South Coast Air Quality Management District to Susan Gefter, Energy Commission, dated November 12, 2002. (Originally sent by email from John Dang.) Docketed November 18, 2002. Sponsored by Staff and received into evidence on November 18, 2002.

EXHIBIT 45: Final Staff Assessment dated October 2002. Docketed October 3, 2002. Sponsored by Staff and received into evidence on November 18, 2002.

EXHIBIT 46: Staff's Evidentiary Hearing Statement Re: Supplemental Staff Testimony and Responses to Applicant's Testimony. Docketed November 15, 2002. Sponsored by Staff and received into evidence on November 18, 2002.

EXHIBIT 47: Copy of email correspondence from Demetrio Bucaneg, Energy Commission Staff to James Reede, Energy Commission, regarding Transmission System Engineering (TSE) Responses, dated November 8, 2002. Docketed November 13, 2002. Sponsored by Staff and received into evidence on November 18, 2002.

EXHIBIT 48: Letter and attachments from Pang Mueller, Senior Manager for the South Coast Air Quality Management District to James Reede, Energy Commission, dated September 27, 2002. Docketed October 9, 2002. Sponsored by Staff and received into evidence on November 18, 2002.

GLOSSARY OF TERMS AND ACRONYMS

	A
A	Ampere
AAL	all aluminum (electricity conductor)
AAQS	Ambient Air Quality Standards
ABAG	Association of Bay Area Governments
AC	alternating current
ACE	Argus Cogeneration Expansion Project Army Corps of Engineers
ACSR	aluminum covered steel reinforced (electricity conductor)
AFC	Application for Certification
AFY	acre-feet per year
AHM	Acutely Hazardous Materials
ANSI	American National Standards Institute
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARCO	Atlantic Richfield Company
ASAE	American Society of Architectural Engineers
ASHRAE	American Society of Heating Refrigeration & Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ATC	Authority to Construct
	B
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BAF	Basic American Foods
BARCT	Best Available Retrofit Control Technology
bbl	barrel
BCDC	Bay Conservation and Development Commission
BCF	billion cubic feet
Bcfd	billion cubic feet per day
b/d	barrels per day
BLM	Bureau of Land Management
BPA	U.S. Bonneville Power Administration
BR	Biennial Report
Btu	British thermal unit
	C
CAA	U.S. Clean Air Act
CAAQS	California Ambient Air Quality Standards
CALEPA	California Environmental Protection Agency
CALTRANS	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CCAA	California Clean Air Act
CDF	California Department of Forestry
CDFG	California Department of Fish and Game
CEERT	Coalition for Energy Efficiency and Renewable Technologies
CEM	continuous emissions monitoring
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFB	circulating fluidized bed
CFCs	chloro-fluorocarbons
cfm	cubic feet per minute

CFR	Code of Federal Regulations
cfs	cubic feet per second
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
COI	California Oregon Intertie
CPCN	Certificate of Public Convenience & Necessity
CPM	Compliance Project Manager
CPUC	California Public Utilities Commission
CT	combustion turbine current transformer
CTG	combustion turbine generator
CURE	California Unions for Reliable Energy
	D
dB	decibel
dB(A)	decibel on the A scale
DC	direct current
DCTL	Double Circuit Transmission Line
DEIR	Draft Environmental Impact Report
DEIS	Draft Environmental Impact Statement
DFG	California Department of Fish and Game
DHS	California Department of Health Services
DISCO	Distribution Company
DOC	Determination of Compliance
DOE	U.S. Department of Energy
DSM	demand side management
DTC	Desert Tortoise Council
DWR	California Department of Water Resources
	E
EDF	Environmental Defense Fund
Edison	Southern California Edison Company
EDR	Energy Development Report
EFS&EPD	Energy Facilities Siting and Environmental Protection Division
EIA	U.S. Energy Information Agency
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ELFIN	Electric Utility Financial and Production Simulation Model
EMF	electric and magnetic fields
EOR	East of River (Colorado River)
EPA	U.S. Environmental Protection Agency
EPRI	Electric Power Research Institute
ER	Electricity Report
ERC	emission reduction credit {offset}
ESA	Endangered Species Act (Federal) Environmental Site Assessment
ETSR	Energy Technologies Status Report
	F
FAA	Federal Aviation Administration
FBE	Functional Basis Earthquake
FCAA	Federal Clean Air Act
FCC	Federal Communications Commission
FEIR	Final Environmental Impact Report
FIP	Federal Implementation Plan
FONSI	Finding of No-Significant Impact
FERC	Federal Energy Regulatory Commission
FSA	Final Staff Assessment G

GEP	good engineering practice
GIS	gas insulated switchgear geographic information system
gpd	gallons per day
gpm	gallons per minute
GW	gigawatt
GWh	gigawatt hour
	H
H_2S	hydrogen sulfide
HCP	habitat conservation plan
HHV	higher heating value
HRA	Health Risk Assessment
HRSG	heat recovery steam generator
HV	high voltage
HVAC	heating, ventilating and air conditioning
	I
IAR	Issues and Alternatives Report
IEA	International Energy Agency
IEEE	Institute of Electrical & Electronics Engineers
IID	Imperial Irrigation District
IIR	Issues Identification Report
IOU	Investor-Owned Utility
IS	Initial Study
ISO	Independent System Operator
	J
JES	Joint Environmental Statement
	K
KCAPCD	Kern County Air Pollution Control District
KCM	thousand circular mils (also KCmil) (electricity conductor)
KGRA	known geothermal resource area
km	kilometer
KOP	key observation point
KRCC	Kern River Cogeneration Company
kV	kilovolt
KVAR	kilovolt-ampere reactive
kW	kilowatt
kWe	kilowatt, electric
kWh	kilowatt hour
kWp	peak kilowatt
	L
LADWP	Los Angeles Department of Water and Power
LAER	Lowest Achievable Emission Rate
lbs	pounds
lbs/hr	pounds per hour
lbs/MMBtu	pounds per million British thermal units
LCAQMD	Lake County Air Quality Management District
LMUD	Lassen Municipal Utility District
LORS	laws, ordinances, regulations and standards
	M
m (M)	meter, million, mega, milli or thousand
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MCE	maximum credible earthquake
MCF	thousand cubic feet
MCL	Maximum Containment Level
MCM	thousand circular mil (electricity conductor)
$\mu g/m^3$	micro grams (10^{-6} grams) per cubic meter

MEID	Merced Irrigation District
MG	milli gauss
mgd	million gallons per day
MID	Modesto Irrigation District
MOU	Memorandum of Understanding
MPE	maximum probable earthquake
m/s	meters per second
MS	Mail Station
MVAR	megavolt-ampere reactive
MW	megawatt (million watts)
MWA	Mojave Water Agency
MWD	Metropolitan Water District
MWh	megawatt hour
MWp	peak megawatt
	N
N-1	one transmission circuit out
N-2	two transmission circuits out
NAAQS	National Ambient Air Quality Standards
NCPA	Northern California Power Agency
NEPA	National Energy Policy Act National Environmental Policy Act
NERC	National Electric Reliability Council
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NMHC	nonmethane hydrocarbons
NO	nitrogen oxide
NOI	Notice of Intention
NOL	North of Lugo
NO_x	nitrogen oxides
NO_2	nitrogen dioxide
NOP	Notice of Preparation (of EIR)
NOV	Notice of Violation
NRDC	Natural Resources Defense Council
NSCAPCD	Northern Sonoma County Air Pollution Control District
NSPS	New Source Performance Standards
NSR	New Source Review
	O
O_3	Ozone
OASIS	Open Access Same-Time Information System
OCB	oil circuit breaker
OCSG	Operating Capability Study Group
O&M	operation and maintenance
OSHA	Occupational Safety and Health Administration (or Act)
	P
PG&E	Pacific Gas & Electric Company
PDCI	Pacific DC Intertie
PHC(S)	Prehearing Conference (Statement)
PIFUA	Federal Powerplant & Industrial Fuel Use Act of 1978
PM	Project Manager particulate matter
PM_{10}	particulate matter 10 microns and smaller in diameter
$PM_{2.5}$	particulate matter 2.5 microns and smaller in diameter
ppb	parts per billion
ppm	parts per million
ppmvd	parts per million by volume, dry
ppt	parts per thousand
PRC	California Public Resources Code

PSD	Prevention of Significant Deterioration
PSRC	Plumas Sierra Rural Electric Cooperative
PT	potential transformer
PTO	Permit to Operate
PU	per unit
PURPA	Federal Public Utilities Regulatory Policy Act of 1978
PV	Palo Verde photovoltaic
PX	Power Exchange
	Q
QA/QC	Quality Assurance/Quality Control
QF	Qualifying Facility
	R
RACT	Reasonably Available Control Technology
RDF	refuse derived fuel
ROC	Report of Conversation reactive organic compounds
ROG	reactive organic gas
ROW	right of way
RWQCB	Regional Water Quality Control Board
	S
SACOG	Sacramento Area Council of Governments
SANBAG	San Bernardino Association of Governments
SANDAG	San Diego Association of Governments
SANDER	San Diego Energy Recovery Project
SB	Senate Bill
SCAB	South Coast Air Basin
SEGS	Solar Electric Generating Station
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SCFM	standard cubic feet per minute
SCH	State Clearing House
SCIT	Southern California Import Transmission
SCR	Selective Catalytic Reduction
SCTL	single circuit transmission line
SDCAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas & Electric Company
SEPCO	Sacramento Ethanol and Power Cogeneration Project
SIC	Standard industrial classification
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAQMD	San Joaquin Valley Air Quality Management District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SMUDGEO	SMUD Geothermal
SNCR	Selective Noncatalytic Reduction
SNG	Synthetic Natural Gas
SO_2	sulfur dioxide
SO_x	sulfur oxides
SO_4	sulfates
SoCAL	Southern California Gas Company
SONGS	San Onofre Nuclear Generating Station
SPP	Sierra Pacific Power
STIG	steam injected gas turbine

SWP	State Water Project
SWRCB	State Water Resources Control Board
	T
TAC	Toxic Air Contaminant
TBtu	trillion Btu
TCF	trillion cubic feet
TCM	transportation control measure
TDS	total dissolved solids
TE	transmission engineering
TEOR	Thermally Enhanced Oil Recovery
TID	Turlock Irrigation District
TL	transmission line or lines
T-Line	transmission line
TOG	total organic gases
TPD	tons per day
TPY	tons per year
TS&N	Transmission Safety and Nuisance
TSE	Transmission System Engineering
TSIN	Transmission Services Information Network
TSP	total suspended particulate matter
	U
UBC	Uniform Building Code
UDC	Utility Displacement Credits
UDF	Utility Displacement Factor
UEG	Utility Electric Generator
USC(A)	United States Code (Annotated)
USCOE	U.S. Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
	V
VCAPCD	Ventura County Air Pollution Control District
VOC	volatile organic compounds
	W
W	Watt
WAA	Warren-Alquist Act
WEPEX	Western Energy Power Exchange
WICF	Western Interconnection Forum
WIEB	Western Interstate Energy Board
WOR	West of River (Colorado River)
WRTA	Western Region Transmission Association
WSCC	Western System Coordination Council
WSPP	Western System Power Pool