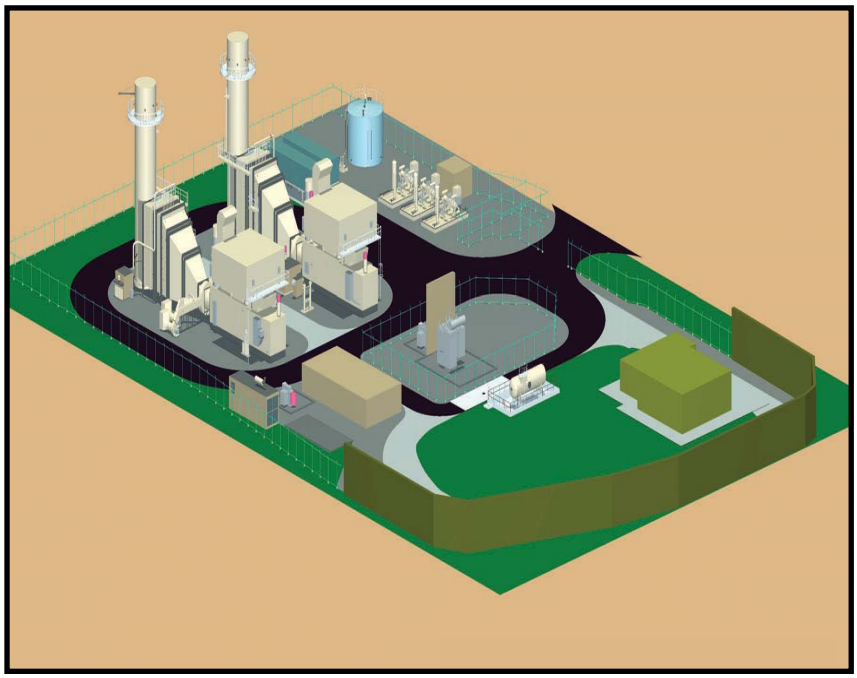
CALIFORNIA
ENERGY
COMMISSION

CHULA VISTA ENERGY UPGRADE PROJECT

Application For Certification (07-AFC-4)
San Diego County



PRESIDING MEMBER'S PROPOSED DECISION

JANUARY 2009
(07-AFC-4)
CEC-800-2009-001-PMPD

CALIFORNIA ENERGY COMMISSION

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San Diego County

PRESIDING MEMBER'S PROPOSED DECISION

CALIFORNIA ENERGY COMMISSION

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JAMES D. BOYD
Presiding Committee Member

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BEFORE THE STATE OF CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

CHULA VISTA ENERGY UPGRADE PROJECT
(CEC Docket No. 07-AFC-4)

The Committee hereby submits the Presiding Member's Proposed Decision (PMPD) for the ***CHULA VISTA ENERGY UPGRADE PROJECT***. The project involves the replacement and increase in capacity of equipment at the Chula Vista Power Plant, located on a 3.8-acre parcel in the City of Chula Vista's Main Street Industrial Corridor and within the City's Light Industrial zoning district. This site is currently occupied by MMC's Chula Vista Power Plant, a 44.5 megawatt (MW) simple-cycle, natural gas-fired peaking power plant.

We have prepared this PMPD pursuant to the requirements set forth in the Energy Commission's regulations. [Cal. Code Regs., tit. 20, § 1769.]

The Committee recommends that the Application for Certification be ***Denied***. The proposed ***CHULA VISTA ENERGY UPGRADE PROJECT*** is inconsistent with applicable laws, ordinances, regulations, and standards and it creates unmitigable impacts under the California Environmental Quality Act (CEQA).

Dated January 23, 2009, at Sacramento, California.

Original Document Signed By:

_____

JAMES D. BOYD
Vice Chair and Presiding Committee Member
Chula Vista Energy Upgrade Project AFC Committee

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INTRODUCTION

A. SUMMARY OF THE DECISION

This Decision contains the Commission's rationale for determining whether the proposed Chula Vista Energy Upgrade Project (CVEUP), a simple-cycle electrical power plant facility in the City of Chula Vista, San Diego County, complies with all applicable laws, ordinances, regulations, and standards (LORS) required for certification. Our findings and conclusions are based exclusively upon the record established during the certification proceeding, which is summarized in this document. We have independently evaluated the evidence, provided references to the record[1] which support our findings and conclusions, and specified the measures required to ensure that if the CVEUP were certified, it would be designed, constructed, and operated in a manner that protects public health and safety, promotes the general welfare, and preserves environmental quality. We have determined, however, that the CVEUP should not be certified because the evidence shows that it is in conflict with the City of Chula Vista General Plan and Zoning Ordinance.

Committee Recommendation

The Commission hereby adopts the Committee's recommendation to ***deny*** certification of the proposed Chula Vista Energy Upgrade Project. In summary, and based on the weight of the evidence, the Committee found adverse impacts or deficiencies in the following areas, all of which are discussed in detail in this Decision:

1) The proposed facility would conflict with certain provisions of the City's General Plan intended to separate industrial and residential uses.

2) The proposed facility would conflict with a provision of the City's General Plan, adopted after the existing peaker plant was built, requiring that placement of electrical generating facilities and other major toxic emitters within 1,000 feet of a sensitive receptor be avoided. The proposed site is within 1,000 feet of sensitive receptors

[1] The Reporter's Transcript of the evidentiary hearing conducted on October 2, 2008 is cited as "date RT page." The exhibits included in the evidentiary record are cited as "Ex. number." A list of all Exhibits is contained in **Appendix B** of this Decision.

and the record does not contain sufficient evidence to establish that placement at the location cannot reasonably be avoided.

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3) The proposed facility would conflict with the City's General Plan intent of maintaining the Main Street Corridor as a light industrial district.

4) The proposed facility would violate the City's zoning ordinance because the existing zoning designation, Limited Industrial, is inappropriate for a natural gas fired electrical generating facility. The zoning ordinance provides that electrical generating facilities are to be placed in the General Industrial zone.

5) The proposed facility is not eligible for a Conditional Use Permit under the City's zoning ordinance because it is neither a listed conditional use, nor is it similar in character to the listed conditional uses.

6) The proposed facility is a Classified Use under the City's Zoning Ordinance because electrical generating facilities are classified General Industrial; it therefore is not eligible for a Conditional Use Permit under the category of Unclassified Uses.

7) The proposed facility would violate the City's Zoning Ordinance because the zoning for the proposed site requires submission and approval of a precise plan. There is no evidence in the record that such a plan has been submitted by the Applicant.

8) The analysis of Alternatives in the Application for Certification and the Final Staff Analysis fails to meet CEQA requirements and the requirements of our CEQA-equivalent process.

These deficiencies constitute violations of the California Environmental Quality Act (CEQA) due to inconsistencies with local LORS or due to failure to meet CEQA requirements. There is insufficient evidence in the record at this time to establish that the benefits of this project are sufficient, and that there is no reasonably feasible alternative, to persuade us to exercise override authority under Public Resources Code 25525. If this Decision should be reversed, the Conditions of Certification identified for each topic would be effective upon certification.

Project Description

On August 10, 2007, MMC Energy, Inc. (Applicant) submitted an Application for Certification (AFC) with the Energy Commission to construct and operate the CVEUP. The project involves replacements and upgrades of equipment at the Chula Vista Power Plant, located on a 3.8-acre parcel in the Main Street Industrial Corridor in the City of Chula Vista and within the City's Light Industrial zoning district. This site is currently occupied by Applicant's Chula Vista Power Plant, a 44.5 megawatt (MW) simple-cycle, natural gas-fired peaking power plant using Pratt & Whitney FT4 Twinpac™ technology.

The proposed CVEUP would be a nominal 100 MW peaking facility. Primary equipment for the generating facility would include two General Electric (GE) Energy LM6000 natural gas-fired turbine-generators and associated equipment.

This site is currently occupied by MMC's Chula Vista Power Plant, a 44.5 MW simple-cycle, natural gas-fired peaking power plant using Pratt & Whitney FT4 Twinpac™ technology. It is approximately eight years old. The proposed plant would be constructed on vacant land in the northern portion of the parcel. Some of the facilities that serve the existing plant would be reused for the new power plant. These facilities include the existing transmission connection; natural gas, water, and sanitary sewer pipelines; fencing and sound attenuation wall; utility/control building; stormwater runoff retention basin; and the 12,000-gallon aqueous ammonia storage tank and tank refilling station. Once the new plant is constructed, the existing plant would be dismantled and removed. The removed power equipment would be sold for salvage and the foundations, piping, and other equipment associated with the existing plant will be recycled as appropriate.

Because the proposed CVEUP would use the existing electrical transmission, natural gas, water service, and sanitary sewer pipelines, the proposed project would have no new offsite linear appurtenances. All connections of the CVEUP to linear facilities would be made on the existing site using the existing facilities.

Project construction is expected to occur over an eight-month period. The greatest number of peak construction workers would occur in the fifth month of construction. There would be an average workforce of approximately 100 personnel and a peak workforce of 160 personnel. During operation of the project, only two workers would be needed to maintain and operate the project. The Applicant estimates capital costs associated with the project to be approximately $80 million.

Numerous local, state, and federal agencies coordinated with the Energy Commission staff in review of the CVEUP. The City of Chula Vista, California Independent System Operator (CAISO), San Diego Air Pollution Control District (SDAPCD), California Air Resources Board, and the U.S. Environmental Protection Agency (U.S. EPA) all worked to identify and resolve issues of concern. Additionally, Staff coordinated the review and analysis of the project with the U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corp of Engineers, and Native American tribes. The local water agencies were also contacted to ensure minimization of water usage and a clearer understanding of potential impacts.

Formal Intervenors are California Unions for Reliable Energy (CURE), the City of Chula Vista, and the Environmental Health Coalition (EHC). CURE did not participate in the evidentiary proceedings.

B. SITE CERTIFICATION PROCESS

The CVEUP and its related facilities are subject to Energy Commission licensing jurisdiction. (Pub. Res. Code, § 25500 et seq.). During licensing proceedings, the Commission acts as lead state agency under the California Environmental Quality Act (CEQA). (Pub. Res. Code, §§ 25519(c), 21000 et seq.) The Commission’s regulatory process, including the evidentiary record and associated analyses, is functionally equivalent to the preparation of an Environmental Impact Report. (Pub. Res. Code, § 21080.5.) The process is designed to complete the review within a specified time period when the required information is submitted in a timely manner; a license issued by the Commission is in lieu of other state and local permits.

The Commission's certification process provides a thorough review and analysis of all aspects of a proposed power plant project. During this process, the Energy Commission conducts 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 formal level as intervenor parties who have the 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 an AFC. Commission staff reviews the data submitted as part of the AFC and makes a recommendation to the Commission on whether the AFC contains adequate information to begin the certification process. After the Commission determines an AFC contains sufficient analytic information, it appoints a Committee of two Commissioners to conduct the formal 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 LORS 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 necessary technical information. During this time, the Commission staff sponsors 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 the Project in its Preliminary Staff Assessment (PSA), which is made available for public comment. Staff's responses to public comment on the PSA and its complete analyses and recommendations 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 the evidentiary hearings, all formal parties, including intervenors, may present sworn testimony, which is subject to cross-examination by other parties and questioning by the Committee. Members of the public may offer oral or written comments at these hearings. Evidence submitted at the hearings provides the basis for the Committee's analysis and recommendations to the full Commission.

The Committee's analysis and recommendations appear in the 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, the 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 in the case, or other persons with an interest in the case, 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 assist the public in participating in all aspects of the certification proceeding.

C. PROCEDURAL HISTORY

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

Applicant filed an AFC with the Energy Commission, on August 10, 2007, to construct and operate the CVEUP. The site is currently occupied by MMC's Chula Vista Power Plant, a 44.5 MW simple-cycle, natural gas-fired peaking power plant using Pratt & Whitney FT4 Twinpac™ technology. That project is not within the jurisdiction of the Energy Commission because it is smaller than 50MW. On September 26, 2007, the Energy Commission deemed the AFC data-adequate (sufficient data to proceed) and assigned a Committee of two Commissioners to conduct proceedings.

On November 8, 2007, the Committee issued a Notice of Informational Hearing and Site Visit. The Notice was mailed to local agencies and members of the community who were known to be interested in the project, including the owners of land adjacent to or in the vicinity of the CVEUP.

The Committee conducted a site visit on Thursday, November 29, 2007, to tour the proposed CVEUP site and then convened a public Informational Hearing in the City of Chula Vista, at the Otay Recreation Center. At that event, the Committee, the parties, interested governmental agencies, and other public

participants discussed issues related to development of the CVEUP, described the Commission's review process, and explained opportunities for public participation. On December 7, 2007, the Committee issued its Scheduling Order.

In the course of the review process, Staff conducted public workshops on Thursday, January 17, 2008, and Monday, May 12, 2008, to discuss issues with the Applicant, governmental agencies, and interested members of the public.

Staff issued its Preliminary Staff Assessment (PSA) on April 29, 2008. Subsequently, on May 8, 2008, Staff conducted a public workshop in Chula Vista to discuss all topics in the PSA with a focus on Air Quality, Land Use and Public Health. Staff issued its Final Staff Assessment (FSA) on August 28, 2008.

A Notice of Prehearing Conference and Notice of Evidentiary Hearing was issued by the Committee on August 22, 2008. Both the Prehearing Conference and the Evidentiary Hearing were held in the Chula Vista City Hall Council Chambers in the City of Chula Vista, on September 18, 2008 and October 2, 2008, respectively. These hearings were open to the public and were televised over the local cable public access channel.

The Committee issued a Briefing Order on October 9, 2008, establishing a schedule for the submission of legal briefs to assist the Committee in reviewing the record and drafting the PMPD.

The Committee published the PMPD on January 23, 2009, and scheduled a Committee Conference in Chula Vista for February 23, 2009, where the parties and the public will offer comments on the PMPD. The 30-day comment period on the PMPD will expire on February 23, 2009. Notice of Availability was published in the *San Diego Union-Tribune* on Sunday, January 25 and Wednesday, January 27, 2009.

D. PUBLIC COMMENT

The record contains public comments from concerned individuals and organizations. Throughout these proceedings, as reflected in the transcribed record, the Committee provided an opportunity for public comment at each Committee-sponsored conference and hearing. The following list shows the names of those offering public comments at the Prehearing Conference on September 18, 2008, and the Evidentiary Hearing on October 2, 2008.

Public Comment
Prehearing Conference, September 18, 2008

Name and Organization
Lisa Cohen - Chula Vista Chamber of Commerce.
Norberto Salazar
Patty Davis
Ed Herrera - Vice President of the Southwest Chula Vista Civic Association.
Tom Lemmon - San Diego Building Trades
Steve Pavko
Diana Vera
Kevin O'Neill
Guillermo Lopez
Theresa Acerro - Southwest Chula Vista Civic Association
Carlos Lopez
Angelina Loiza
Helen Bourne
Graciella Ramon
Ramona Sufle
Jean Costa - Global Warming Committee of the San Diego Chapter of the Sierra Club
Lupe Montes
Carolina Ramos
Jenny Huerta - Environmental Health Coalition
Robert Borboa
Stephanie Miguel
G. Rodriguez
Cindy Gompper Graves - South County Economic Development Council
Ruth Bucio
Hugo Salazar
Richard D'Ascoli - Pacific Southwest Association of Realtors, South County Economic Development Council and the Chula Vista Chamber of Commerce
Juan Ceseca
Javier Saunders - Mexican-American Business and Professional Association
Gardenia Durante
Gisell Reyes
Margo Lopez
William Lansdown
Lynda Gilgun
Gabriella Padilla
Armida Noriega
Graciela Martinez
Ruben Durante
Max Herrera
Gabriela Lopez
Frank Lopez
Graciella Ramon
Monica Montano
Javier Sanders
Rafael Lopez
Reyna Montana
Rudy Borboa
Rodolfo Borboa
Eustolia Solorzano

Public Comment
Evidentiary Hearing – October 2, 2008

Name and Organization	***Name and Organization***
Theresa Acerro Southwest Chula Vista Civic Association	Lisa Cohen, Chula Vista Chamber of Commerce
David Dantu Southwest Chula Vista Civic Association	Cindy Gomppers Graves, South County Economic Development Council
Sharon Ward	Yasmin Campos
Diana Vera	Edgar Gardini
Ashley Campos	Isabel Tutiven-Shogren
Jessica Gomez For Congressman Bob Filner	Gulastar Gihan Francisco Izaguirre
Carina Lopez	Mary Ann Rivera
Councilman Ramirez	Bertha Valles
Maria Pizarro	Carlos Lopez
Graciella Miguel	Eduardo Guiterrez
Patricia Vega	Aramis Vera
Hector Vega	Isidro Morales
Susan Luzzaro	Delfina De la Rocha
Raul Gonzalez	Belkis Gares
Ramona Sufle	Diana Garcia
Raoul Miranda	Joselin Fuller
Lupe Rodriguez	Alissa Calderon
Michael Zamora	Jaime Cueva
Jonathan Goetz	J. Antonio Saldana
Maria Montes	Shakeenah Shapazz
Ada Chan	Eric De la Rocha
Andrew Reyes	Robert Gonzales
Octavio Miranda	Carolina Perez
Mark Rojas	Aurelia Rivera
Isabel Miranda	Maria Zamora-Felkins
Alice Coronado	Rosa M. Garcia
Robert G. Boyd	Juan Carlos Hernanda
Jose Gonzales	Bernardo Vasquez
Mary Lou Franzen	Jasmine Cuevas
Elias Vera	Jose Preciano
Petra Garza	Bianca Java
Elvia Naranjo	Octavio Jara
Beatriz Zamora	Gary Sallis
Carolina Ramos	Maria Euenia
Reyna Montano	Eugene Yepis
Alma Bibiano	Cynthia Ordaz
Francisco Bautista	Irma Serna
Ruth Bucio	Jessica Villalba

Public Comment
Evidentiary Hearing – October 2, 2008

Name and Organization	***Name and Organization***
Daniel Cardoso	Gabriel Leuh
Josh Bakh	Laura Hunter
William Lansdown	Ricardo Montoya
Juan Diaz	Jeanniffer Prieto
Diana Garcia	Maria Ochoa
April Lopez	Vladimir Garcia
Earl Jentz	Jennifer Montano
Enriqueta Vasquez	Juan Antonio Vasquez
Ana Gabriela Jara	Umberto Vasquez
Graciela Martinez	Martin Martinez
Jasmin Lopez	Brandon Lopez
Miguel Lopez	Carlos Torres
Alexis Cano	Juan Antonio Vasquez, Sr.
Jenny Huerta	Javier Saunders
Santiago Baltazar	Kevin O'Neill
Isela Castillo	Marin Moya
Elizabeth West	Elias Vera
Ernesto Ramirez	Sergio Zamora
Celia Diaz	Leticia Chiang
Jesus Chiang	Enrique Chiang
Margaret Lopez	Hugo Salazar
Brenda Garcia	Gilberto Garcia
Israel Soto	Robert Borboa
Mariana Lopez	Stephanie Miguel
Gissell Reyes	Steve Palma
Yasmin	Monique Cornejo
Itzel Nuno	Hermes Vera
Maria Gailan	Maria Montes
Myra Iranis	Mr. Garcia
Graciella Martinez	Liz Bowman
Pancho Escovera	Raul Carranza
Sal Especto	Bianca Hara
Jose Garcia	Christine Roncero
Jessica Lopez	J. Carravio
Monica Frank	Jose Tremont
Eric Meyers	Alan Rezoki
Kari Caldwell	Irene Matthews
Anna Valadez	Jasmine Lopez
Berta	Maria Zamora
Ochil Perez	Diana Lozano
Ruth Yakaneli	Daniel Robledo

I. PROJECT PURPOSE AND DESCRIPTION

MMC Energy, Inc. filed an Application for Certification with the California Energy Commission on August 10, 2007, to construct and operate a simple cycle (peaking) power plant. The proposed Chula Vista Energy Upgrade Project would be a nominally rated 100 megawatt (MW) electrical generating facility within the City of Chula Vista in San Diego County, California. The proposed project consists of two natural gas-fired General Electric LM6000 SPRINT combustion turbine generators. (Ex. 200, p. 3-1.)

Project Location

The proposed project is located on a 3.8-acre parcel in the City of Chula Vista's Main Street Industrial Corridor, 1.8 miles east of Interstate 5 and 1.2 miles west of Interstate 805. The project site is immediately north of the Otay River and the Otay Valley Regional Park Trail. The project site address is 3497 Main Street, Chula Vista, California. Access to the site is via an easement that runs south from Main Street within an adjacent property. This easement also provides access to employee parking for newly constructed industrial buildings immediately east of the project site.

The power plant site is located in Section 23, Township 18 south, and Range 2, west of the San Bernardino Base and Meridian 7.5 Minute Topographic Map. The Assessor's Parcel Number is 629-06-204.

Project Features

The primary proposed project features include the following:

- A power plant on a 3.8-acre property, including an existing sound wall on the southern boundary of the property;
- Reuse of the existing transmission connection; natural gas, water, and sanitary sewer pipelines; fencing and sound attenuation wall; utility/control building; storm water runoff retention basin; and the 12,000-gallon aqueous ammonia storage tank and tank refilling station;
- Upgrades to the existing SDG&E Otay Substation;
- Two natural gas-fired, GE Energy LM6000 SPRINT gas combustion turbines and associated selective catalytic reduction (SCR) equipment;
- Two construction lay down areas; and

- Removal and salvage of the existing 44.5-MW Pratt & Whitney FT4 Twinpac GCT and removal of the associated foundations and piping.

Project Setting: The 3.8-acre proposed power plant site is currently the site of the 44.5-MW operational Chula Vista Power Plant. The surrounding area is mixed-use, with a combination of light industrial, commercial and residential uses. The Otay River and proposed Otay River Regional Park Trail are immediately south of the site. The Otay Substation is approximately 1,300 feet to the north of the proposed project site. The nearest current residence to the power plant site is approximately 350 feet to the west.

Zoning/General Plan: The proposed power plant site is zoned ILP (Limited Industrial Precise Plan) and is located in City of Chula Vista's Main Street District. Permitted uses in the I-L zone include manufacturing; wholesale businesses, storage and warehousing; laboratories; car washing establishments; electrical substations and gas regulator stations; and "any other limited manufactured [sic] use which is determined by the City's Planning Commission to be of the same general character" as the other uses in this area. The existing electrical power-generating facility on the site was permitted by the City of Chula Vista in 2000 under a Special Use Permit (SUP). The General Plan was updated in 2005, and includes a requirement that siting electrical generation facilities and other major toxic emitters within 1,000 feet of a sensitive receptor be avoided. (Chula Vista Municipal Code, title 19; Chula Vista General Plan, 2005, section E 6.4.)

Transmission Lines: Electricity generated by the proposed project would be delivered to the existing SDG&E Otay Substation via the existing transmission line connecting the Chula Vista Power Plant switchyard to the Otay Substation. The Applicant has chosen to install Special Protection Schemes to reduce CVEUP generation instead of reconductoring the South Bay-Sweetwater and Otay-Otay Tap 69-kilovolt (kV) transmission lines as mitigation of overloads forecasted under contingency conditions, avoiding environmental impacts from reconductoring. (Ex. 200, p. 3-3.)

Roads: The Applicant would use the existing access road to the Chula Vista Power Plant off Main Street.

Gas Line: Fuel would be supplied to the project site via the existing natural gas line for the operational Chula Vista Power Plant.

Water Supply: The proposed project would continue to use the existing 4-inch water supply pipeline that serves the Chula Vista Power Plant through an agreement with Sweetwater Authority. This pipe will provide water for drinking, safety showers, fire protection, service water, and sanitary uses. Part of this water will be treated by a truck-mounted demineralizer and then stored in a storage tank for SPRINT water injection, fogger inlet cooling, water wash of the combustion turbine compressor section, and, potentially, water injection for nitrogen oxide control.

Wastewater Discharge: The proposed project would discharge any process water that has come into contact with the plant or its facilities to a concrete-lined holding basin from which it would be discharged to the sanitary sewer. Sanitary wastewater disposal would be through the existing Chula Vista Power Plant's connection with the City of Chula Vista's sanitary sewer system.

Project Construction and Operation

It is expected to take about eight months for construction and startup testing. Construction would be scheduled between 7 a.m. and 7 p.m., Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or complete critical construction activities. During some construction periods and during the start-up phase, some activities will continue 24 hours a day, 7 days a week. Construction access will be from a road leading off Main Street. Materials and equipment will be delivered by truck.

The proposed CVEUP is expected to employ up to two full-time employees. It will be designed as peaking facility to serve SDG&E load during periods of high demand, which generally occur during daytime hours, and more frequently during the high-peak summer months than during other times. The CVEUP would be allowed to operate up to 4,400 hours per engine per year with no seasonal restrictions (a capacity factor of 50 percent). Actual operation will depend upon actual system demand and California Independent System Operator (California ISO) dispatch requirements. Despite the allowed operating hours, the historic capacity factor of peaking power plants of this size is approximately 6 percent. (Ex. 200, p. 3-4.)[2]

[2] The FSA, Ex. 200, p. 3-4, refers to a contract between the Applicant and SDG&E. While there may be an interconnection agreement, there is no evidence of a power purchase agreement in the record of this proceeding. The record leads us to the conclusion that there is no such agreement. At the suggestion of EHC in a comment on the PSA, Staff removed reference to such an agreement from the FSA. (Ex. 200, p. 6-17.)

Facility Closure

CVEUP would be designed for a 30-year operating life. At some point in the future, the proposed project would cease operation and shut down. At that time, it would be necessary to ensure that the closure occurs in a manner that protects public health and safety and the environment from adverse effects.

Although the setting for the proposed CVEUP project does not appear to present any special or unusual closure problems, it is impossible to foresee exactly what the situation will be 30 or more years down the road when the proposed project ceases to operate. Therefore, provisions must be made to provide the flexibility needed to deal with specific situations and project settings at the time of closure. Laws, ordinances, regulations and standards (LORS) relating to CVEUP's closure are identified in the technical sections of this assessment. CVEUP's closure would be required to meet the requirements of all LORS in effect at the time of closure. (Ex. 200, p. 3-4.)

Noteworthy Public Benefits

Unlike the existing Chula Vista Power Plant, the proposed project would be operated under the jurisdiction of the California Energy Commission. The existing facility would be removed. The California Energy Commission specializes in both the permitting and operational oversight of power plants in California. If the project is approved, the Conditions of Certification we adopt to address environmental impacts would be monitored by the California Energy Commission, as specified in title 20, section 1770 of the California Code of Regulations.

The Applicant proposes to provide peaking power and quick start capability as dispatched by SDG&E during periods of high demand (Ex.1, §§ 1.1.1,2.1.15, 2.2.2.1). The fact that the project consists of two combustion turbine generators configured as independent equipment trains provides inherent reliability. A single equipment failure cannot disable more than one train, thus allowing the plant to continue to generate (at reduced output). In light of this and the additional reliability-enhancing features of the project described above, the Applicant's prediction of an equivalent availability factor of 92 to 98 percent appears achievable.

The proposed project has certain fiscal public benefits. These monetary benefits are described in detail in the **SOCIOECONOMICS** section of this Decision.

FINDINGS AND CONCLUSIONS

Based upon the evidentiary record, we find as follows:

1. MMC Energy, Inc. plans to construct and operate the Chula Vista Energy Upgrade Project, (CVEUP) a nominally rated 100 MW natural gas-fired power plant within the City of Chula Vista in San Diego County.

2. The Applicant does not have a contract to sell power to any utility.

3. The CVEUP will be built on 3.8-acre parcel at 3497 Main Street, Chula Vista, California and includes two natural gas-fired, GE Energy LM6000 SPRINT gas combustion turbines and associated selective catalytic reduction (SCR) equipment.

4. The project site is currently occupied by the Chula Vista Power Project, a 44MW peaking facility built in 2000. It would be removed as part of the CVEUP.

5. The CVEUP would reuse the existing gas line, water supply line, and transmission line.

6. Due to its quick start capability, the CVEUP would provide peaking power to respond to unexpected load demand in the San Diego area.

We therefore conclude that MMC Energy Inc. has described the Chula Vista Energy Upgrade 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

For projects such as the Chula Vista Energy Upgrade Project (CVEUP) that have been exempted from the Notice of Intention requirements by Public Resources Code section 25540.6(a),[3] the Commission is required to examine ". . . the feasibility of available site and facility alternatives. . . which substantially lessen the significant adverse impacts of the proposal on the environment." (20 Cal. Code Regs., § 1765; 14 Cal. Code Regs., § 15252.) This inquiry is consistent with the traditional Environmental Impact Report (EIR) process and the California Environmental Quality Act (CEQA) Guidelines.

The range of alternatives we are required to consider is governed by a rule of reason. This means that our consideration of alternatives is limited to those that would avoid or substantially lessen any of the project's significant effects while still continuing to attain most of the basic objectives of the project. This is especially relevant in the present case since, as discussed in the pertinent portions of this Decision, we have determined that the proposed project is in conflict with the General Plan and Zoning Ordinance of the City of Chula Vista. We also evaluated the “no project" alternative. We did not include those alternatives whose effects cannot be reasonably ascertained and whose implementation is remote and speculative. [See, *e.g.,* 14 Cal. Code Regs., § 15126.6.]

In this case, analysis of alternatives serves an additional LORS compliance function. Elsewhere in this Decision, we concluded that local LORS require the Applicant to avoid siting the project in proximity to sensitive receptors. We thus examine the alternatives analysis in both the AFC and the FSA to determine whether or not siting the project in the proposed location can be avoided.

Under both the traditional EIR process and our "functionally equivalent" process, the key issue is whether the selection and discussion of alternatives fosters informed decision making and informed public participation. (*Laurel Heights Improvement Association of San Francisco* v*. The Regents of the University of California* (1988) 47 Cal.3d 376.) To put the alternatives analysis into perspective, it is important to recognize that alternatives are considered at two stages in our process and that differing factors come into play at each stage.

[3] Public Resources Code section 25540.6(b) requires an Applicant for a power plant such as the CVEUP to include information on the site selection criteria, alternative sites, and the reasons for choosing the proposed site. Section 1765 of the Commission’s regulations further requires the parties to present evidence on alternative sites and facilities at the evidentiary hearings.

Alternatives are identified, and refined, beginning with the AFC filing (Ex. 1), and continuing through the Preliminary and Final Staff Assessments (Ex. 200), then examined once again during the Evidentiary Hearing stage. When selecting alternatives as part of its project analysis, Staff's task is to examine the objectives of the project and to identify a range of alternatives that will satisfy most of the basic project objectives while reducing or avoiding any significant impacts. The focus is on whether an alternative can, as a practical matter, be implemented. Alternatives that are not at least potentially feasible[4] are excluded at this stage because there is no point in studying those that cannot succeed.

At the project approval stage, the decision-makers evaluate the relative advantages and disadvantages of the project and its impacts, as well as any alternatives deemed to be potentially feasible, as developed through the foregoing process. The decision-makers can certify the project as fully mitigated, certify the project even with significant unmitigated impacts if there are overriding considerations, or deny certification to the project. The Commission makes this decision after considering the entire range of issues and policies relevant to its action on the project. CEQA does not mandate the choice of the environmentally "best" feasible alternative if, through the imposition of appropriate mitigation measures, a project's impacts can be reduced to an acceptable level. (*Laurel Hills Homeowners Association* v. *City Council of City of Los Angeles* (1978) 83 Cal.App.3d 515.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

Applicant, Staff, and Intervenors City of Chula Vista (City) and Environmental Health Coalition (EHC) submitted evidence on this topic.

1. Project Objectives.

Applicant cited these basic objectives for the CVEUP project site:

- Site control readily available;
- Adjacent to or near an existing substation where additional peaking capacity would serve growing markets near load centers and provide system stability as well as peaking energy;
- Adjacent to or near high pressure natural gas transmission lines;

[4] "Feasibility" takes into account environmental, economic, legal, social, technological, and other considerations. (Pub. Res. Code § 21061.1; 14 Cal. Code Regs., § 15364.)

- Adjacent to or near water supply for process and sanitary purposes to maximize efficiency;

- Industrial land use designation with consistent zoning; and

- Potential environmental impacts can be mitigated and minimized. (Ex. 1, p. 6-2.)

In testimony provided at the Evidentiary Hearing, Applicant's expert witness, Sarah Madams, elaborated on the project objectives, and made it clear that one of the primary site selection objectives was to use "the existing infrastructure site." (10/2/2008 RT, 352:21-23.) As a result, Applicant limited its search for alternative sites to vacant lots in the immediate area, choosing two, both of which were closer to residences than the proposed site. (10/2/2008 RT, 349:21 to 351:15.) In responses to data requests, Applicant acknowledged that its siting objectives included using a site:

> "for which MMC holds site control, and for which there is existing infrastructure in the form of a transmission line with electrical capacity, a natural gas pipeline, and a sanitary sewer that currently serves the site. By definition, *there are no other sites that meet these objectives*." (Ex. 5, p. 25.) (emphasis added)

Staff adopted a broader set of objectives in its analysis. These objectives are:

- To construct and operate a cost-effective and efficient nominal 100 MW, natural-gas-fired, peaking load generating facility with quick-start capability;
- To minimize or eliminate the length of any project linears, including gas and water supply lines, discharge lines, and transmission interconnections;
- To deliver electricity to the SDG&E Otay Substation at 69 kV without the need for transmission system reconductoring; and
- To provide voltage support to the local 69 kV transmission system.

(Ex. 200, p. 6-5.)

Based on these objectives, Staff initially chose to analyze five alternative sites: the two nearby lots chosen by Applicant, as well as three chosen by Staff. However, two of Staff's alternatives were rejected early on in the analysis. Staff's Alternative Site A, a vacant site adjacent to the existing Wildflower Energy Larkspur Energy Facility, was rejected due to potential impacts to the Quino

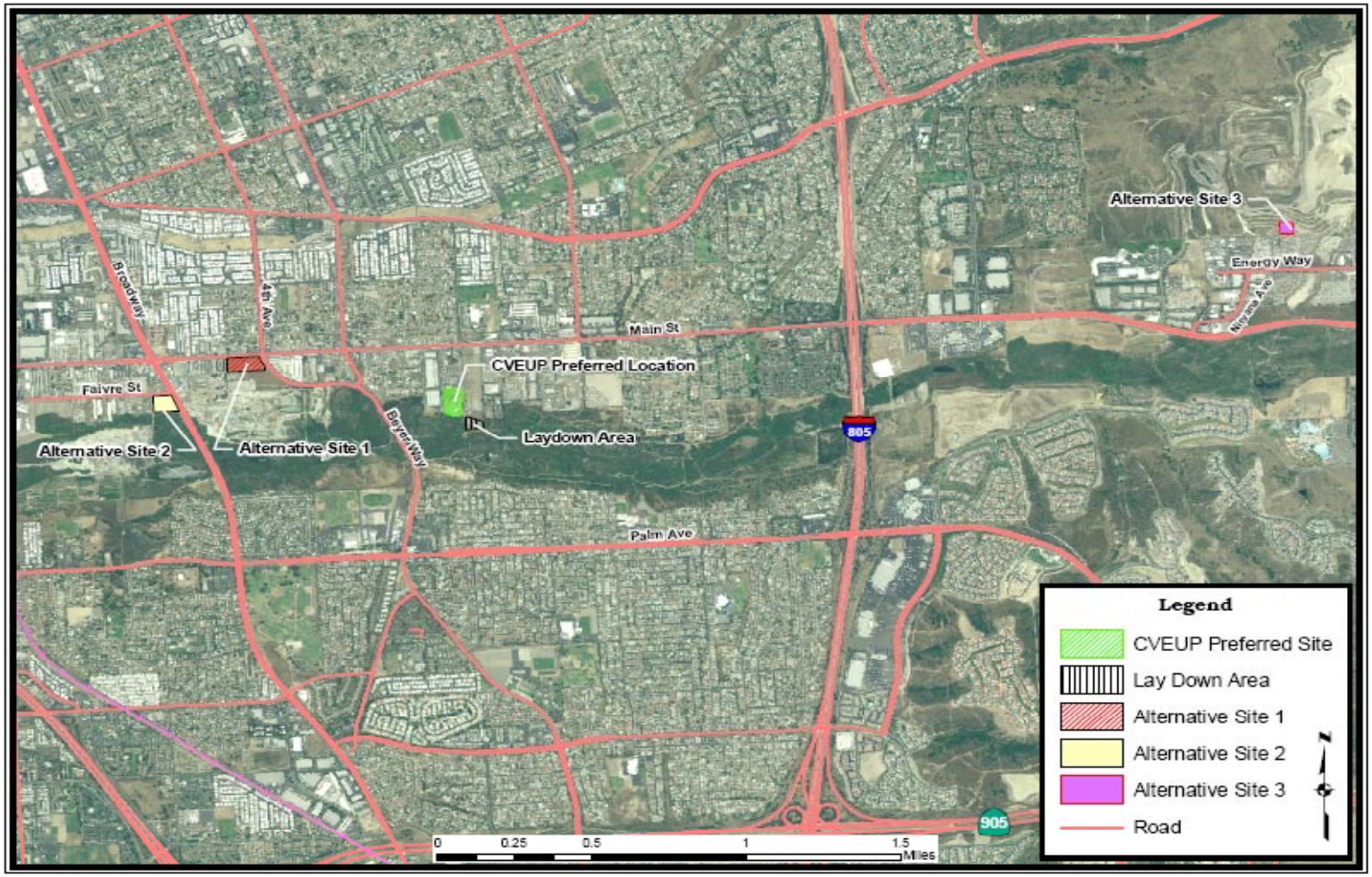
checkerspot butterfly and Otay tarplant habitat and the limited availability of suitable habitat compensation lands, the necessity of constructing a transmission line in excess of seven-miles long, and lack of site control. Staff's Alternative Site B was an unidentified site at the current South Bay Power Plant or within an undeveloped section of the SDG&E South Bay substation. Staff was unable to identify a portion of the South Bay Power Plant or substation that would support a peaker facility and be compatible with the Chula Vista Redevelopment Agency plans to develop recreational facilities in the area. Staff Alternative B was eliminated from further consideration because of considerable concern from the public and the City of Chula Vista over the redevelopment plans for the area. (Ex. 200, pp. 6-6 to 6-7.)

Staff's Alternative Site C, the Otay Landfill site, survived initial screening. It is a landfill facility which currently hosts two 3.4-MW methane-burning electrical generating plants owned and operated by Covanta Energy. (Ex. 200, pp. 6-8 to 6-9.)

As a result of the elimination of Staff Alternative Sites A and B, Staff's analysis included only its Alternative Site C, in addition to Applicant's two sites. These sites are depicted in **Alternatives Figure 1** of the FSA, which we reproduce below. We now discuss these sites, and the adequacy of the alternatives analysis performed by Applicant and Staff.

ALTERNATIVES - FIGURE 1

Chula Vista Energy Upgrade Project - Location of Alternate Sites



SOURCE: EX. 200

2. Analysis of Alternative Sites

Staff's Alternatives Table 1 below, compares the approximate lengths of linears (transmission line, gas pipeline, water and sewer lines) required for the proposed site and the three alternative sites retained for consideration. The distances to sensitive receptors and schools are also shown.

ALTERNATIVES Table 1
Comparison of Approximate Length of Linears/Distance to Receptors (feet)

	CVEUP Site	MMC Alternative Site 1	MMC Alternative Site 2	Staff Alternative Site C
Transmission Line Length	On-site	3160	6336	16,000
Gas Pipeline Length	On-site	Adjacent	4,500	2,000
Water/Sewer Connections	On-site	Adjacent	Adjacent	900
Distance to Sensitive Receptors	350	300	300	2,500
Distance to Schools	1,300	1,000	2,200	5,200

Staff also prepared a table showing a summary of its analysis of these sites in terms of their impacts relative to the proposed site. Alternatives Table 2 is reproduced below.

ALTERNATIVES Table 2
Comparison of Impacts of Alternatives to the Proposed CVEUP*

Issue Area	MMC Alternative Site 1 – Main Street & 4th Avenue	MMC Alternative Site 2 – Faivre Street & Broadway	Staff Alternative Site C – Otay Landfill
Environmental Assessment			
Air Quality	Similar to proposed site	Similar to proposed site	Similar to proposed site
Biological Resources	Greater than proposed site	Greater than proposed site	Greater than proposed site due to linear facilities
Cultural Resources	Greater than proposed site	Greater than proposed site	Greater than proposed site due to linear facilities
Hazardous Materials	Similar to proposed site	Similar to proposed site	Similar to proposed site

Issue Area	MMC Alternative Site 1 – Main Street & 4th Avenue	MMC Alternative Site 2 – Faivre Street & Broadway	Staff Alternative Site C – Otay Landfill
Land Use	Less than proposed site although a Conditional Use Permit would apply	Less than proposed site although a Conditional Use Permit would apply	Less than proposed site
Noise and Vibration	Less than proposed site	Less than proposed site	Less than proposed site
Public Health	Similar to proposed site	Similar to proposed site	Similar to proposed site
Socio-economic Resources	Similar to proposed site	Similar to proposed site	Less than proposed site
Soil and Water Resources	Similar to proposed site	Similar to proposed site	Similar to proposed site
Traffic and Transportation	Similar to proposed site	Similar to proposed site	Greater than proposed site due to linear facilities
Visual Resources	Greater than proposed site	Greater than proposed site	Similar to proposed site
Waste Management	Similar to proposed site	Similar to proposed site	Similar to proposed site
Worker Safety	Similar to proposed site	Similar to proposed site	Similar to proposed site
Engineering Assessment			
Geology, Mineral Resources, and Paleontology	Similar to proposed site	Similar to proposed site	Similar to proposed site
Transmission System Engineering	Similar to proposed site	Similar to proposed site	Similar to proposed site

*Shaded cells identify impacts greater or less than the proposed project

<u>MMC Alternative Site 1</u>: ***4th Avenue and Main Street Intersection***

MMC Alternative Site 1 (MMC Alt. #1) is located approximately 0.5 miles west of the CVEUP site near the intersection of Main Street and 4th Avenue. This property is currently used for strawberry farming and is approximately 3.87 acres in size. The property is zoned limited industrial, and is located near both a gas line and water line that run along Main Street. This site would require construction of a new switch yard and a 3,160-foot transmission line to connect to the Otay Substation. Installation of a short pipeline would be required in order to connect with SDG&E's gas pipeline in Main Street. Pipelines would also need to be installed in order to connect with the existing potable water and sewer adjacent to the site. The closest residential noise receptors are located approximately 300 feet from the site and a school is located approximately 1,000 feet east of the site.

As compared to the proposed site, MMC Alt. #1 would require a new transmission line connection to SDG&E's Otay Substation and the line would need to be underground to be compatible with the Chula Vista Redevelopment Agency plan for the Main Street corridor. Although the natural gas and water service pipelines are close to MMC Alt. #1, temporary traffic impacts and new trenching activities would be required for the short tie-ins to these lines. Although temporary, the construction of the linear facilities for this alternative would cause local traffic disruptions, leading to a greater traffic and transportation impact than the proposed CVEUP. The closest noise receptors are approximately 50 feet closer at this site as compared to the proposed site. The distance to public schools would be about approximately 300 feet closer than the proposed site. In addition, 4th Avenue and Main Street are considered Primary Gateways in the City of Chula Vista General Plan (Chula Vista General Plan, Chapter 5, p. LUT-22), increasing the visual sensitivity of this location.

The City of Chula Vista General Plan defines Primary Gateways as an entry into an important district of the City that "…*should appear visually inviting, provide adequate direction to key community places of interest, and have high quality architectural design."* The size of the LM6000 turbines, and their associated equipment, would have a greater visual resources impact at MMC Alt. #1 than the proposed CVEUP due to the proximity to Main Street and 4th Avenue gateways. The location of MMC Alt. #1 on undeveloped native soil increases the potential for impacts to both surface and buried cultural resources as compared to the construction of the proposed CVEUP on previously disturbed fill, thereby avoiding impacts to surface or buried cultural resources. In addition, the development of MMC Alt. #1 from farming to power generation could require additional mitigation for impacts to any adjacent biological resources.

Although biological surveys have not been conducted at the alternative sites, impacts to biological resources are generally greater from the development of farmed/undeveloped areas than the repowering or reuse of an existing power plant site. It is unknown if site control is possible at MMC Alt. #1. (Ex. 200, pp. 6-7 to 6-8.)

MMC Alternative Site 2: *Faivre Street and Broadway*

MMC Alternative Site 2 (MMC Alt. #2) is located approximately 1 mile west of the CVEUP site near the intersection of Faivre Street and Broadway. The approximately 2.57 acre property is zoned limited industrial and is currently undeveloped. Construction of a new switch yard and a 6,336-foot transmission

line would be necessary in order to connect to the existing Otay Substation. The closest noise receptors are located approximately 300 feet from the site and a school is located approximately 2,200 feet northeast of the site.

As compared to the proposed site, MMC Alt. #2 would require a new transmission line connection to SDG&E's Otay Substation and the line would need to be underground to be compatible with the Chula Vista Redevelopment Agency plan for the Main Street corridor. The natural gas and water service pipelines are close to MMC Alt. #2. The size of the LM6000 turbines, and their associated equipment, would have a greater visual resources impact at MMC Alt. #2 than the proposed CVEUP due to the proximity to Broadway. The closest noise receptors are approximately 50 feet closer to this site than the proposed site. Public schools would be slightly closer. The location of MMC Alt. #2 on undeveloped native soil increases the potential for impacts to both surface and buried cultural resources. In addition, the development of MMC Alt. #2 from undeveloped land to power generation could require additional mitigation for impacts to any on-site or adjacent biological resources. Although biological surveys have not been conducted at the alternative sites, impacts to biological resources are generally greater from the development of farmed/undeveloped areas than the repowering or reuse of an existing power plant site. It is unknown if site control is possible at MMC Alt. #2. (Ex. 200, p. 6-8.)

Staff Alternative Site C: *Otay Landfill*

Staff Alternative Site C (Staff Alt. C) is located at 1700 Maxwell Road in the City of Chula Vista. Owned by the Allied Waste Company, it is a landfill facility which currently includes two 3.4 MW methane-burning electrical generating facilities owned and operated by Covanta Energy. Covanta Energy leases several acres of land from Allied Waste Company for the methane-burning internal combustion engines and owns the gas rights under the landfill. Sufficient land is available adjacent to one of the existing power plants to site two LM6000 gas combustion turbines and the associated equipment. The Otay Landfill is currently designated as both Open Space and General Industrial, with the existing generating facility within the General Industrial Area. Staff Alt. C would not require a Conditional Use Permit if under the jurisdiction of the City of Chula Vista because electrical generating facilities are a permitted use under this zoning designation.

The Otay Substation is located approximately three miles from the site. One possible electrical transmission interconnection route to the substation would be overhead for approximately one mile before going underground to be compatible with the Chula Vista Redevelopment Agency plan for the Main Street corridor.

Staff Alt. C would require construction of a 0.45 mile gas pipeline and connection to the potable water pipeline approximately 0.2 miles south of the site. The site is located adjacent to auto wrecking yards and is about 2,000 feet from the nearest residence. The closest school is approximately one mile away.

Construction of the linear facilities for this alternative would cause temporary local traffic disruptions. Distances to sensitive receptors and schools would be much greater than in the proposed site, reducing noise impacts and land use concerns over the proposed CVEUP. Given its industrial setting, significant visual impacts are not expected. It is unknown if Staff Alt. C is available for development. (Ex. 200, pp. 6-8 to 6-9.)

3. Committee Discussion of Alternative Sites Analysis

In view of our determinations, as discussed in the **Land Use** section of this Decision, that the CVEUP is in conflict with LORS, we must now decide whether or not a feasible alternative site which would eliminate these conflicts exists. Both Applicant and Staff concluded that no feasible alternative site exists which would meet most project objectives. The evidence compels us to disagree.

A reasonable, feasible alternative must be one that meets most basic project objectives while avoiding or substantially lessening any of the significant effects of the project. [CEQA Guidelines, § 15126.6(a).] Stating project objectives too narrowly or too specifically could artificially limit the range of reasonable, feasible alternatives to be considered. Therefore, we have given careful consideration to the selection of project objectives in this case, especially the stated objectives of reusing the existing infrastructure and locating the project at a site designated for industrial use with consistent zoning.

The project objectives formulated by Applicant and Staff include, in one form or another, the reuse of the existing plant's infrastructure such as project linears. While it may be advantageous to reuse existing infrastructure as long as it is serviceable and up-to-date if the reuse does not create or perpetuate adverse environmental impacts, the evidence shows that in this case there are few advantages beyond the obvious economic ones, and there are disadvantages that could be avoided by the use of a site in a General Industrial-Zoned area of Chula Vista.

The objective of reusing the existing infrastructure reduced Applicant's number of alternative sites to two, both of them so near to the proposed site that any differences between them and the proposed site are best characterized as de

minimis. Neither of Applicant's alternative sites meets Applicant's own stated objective of being consistent with local zoning, nor resolves the LORS conflicts we have identified in the **Land Use** section of this Decision. Yet those LORS conflicts constitute adverse environmental impacts whose importance outweighs the largely economic advantages of reusing the existing site infrastructure.

The evidence leads us to conclude that the Applicant defined its objectives so narrowly as to preclude a reasonable range of alternatives. While it is true that a project's objectives should guide the selection of alternative sites for analysis, when objectives are defined too narrowly, the analysis of alternative sites may be inadequate. (*City of Santee v. County of San Diego (1989) 214 Cal. App. 3d 1438, 1455*.) In this case, by the Applicant's admission (10/2/2008 RT 349:21 to 351:15), the project objectives were defined so narrowly as to preclude all other sites.

Furthermore, given that both alternatives analyzed by the Applicant were closer to sensitive receptors than the proposed site, and have the same LORS conflicts, we find that Applicant has not met its duty to analyze a reasonable range of alternative sites. It appears to have limited its analysis to the two sites discussed above primarily based upon the project and site objectives—which we find to be impermissibly narrow. An alternative sites analysis that complies with CEQA and our CEQA-equivalent process must include a reasonable range of alternatives, chosen because they have the potential to avoid impacts caused by the proposed site. We find that Applicant's analysis fails to meet this standard.

Staff also concluded that none of the alternative sites was superior to the proposed site. Yet the Otay Landfill site is much farther from sensitive receptors than the other two sites, and it is in a General Industrial zone where power plants are a permitted use, thereby fulfilling the requirement that an alternative site lessen the impacts of the project. However, since its location would require construction of a three-mile long transmission line and a new gas line, Staff concluded that the costs of that construction, and the environmental impacts of construction and the overhead portion of the transmission line, outweighed the impacts of the Applicant's preferred site.

The record contains only speculation—to which we can assign no evidentiary weight--that the construction costs might render the Otay Landfill site economically unfeasible. MMC's Mr. Scarborough testified that constructing a three-mile long transmission line from the Otay Landfill site to the Otay substation would cost around a million dollars a mile. (10/2/2008 RT 355:9.) Other impacts

identified in connection with construction of linears from the Otay Landfill site were temporary in nature. Visual impacts were not expected. (Ex. 200, p. 6-9.)

The Applicant also voiced concern about the Otay Landfill site due to possible engineering issues. Applicant stated in response to Data Requests that siting a power plant on a landfill raised concerns over subsidence, disturbance of the landfill containment liner and complex engineering. (Ex. 5, p. 26.) Applicant provided no evidence or expert testimony to support these expressed concerns, and thus they, too, cannot be given any evidentiary weight.

The Otay Landfill site was rejected primarily for economic and engineering reasons on the basis of only an offhand estimate of the costs of constructing a transmission line and speculation as to whether or not there would be engineering problems that would make that alternative site infeasible. The evidence of record is silent as to whether the fact that alternative site C is consistent with local land use LORS, and thereby eliminates a known, significant impact, outweighs these cost and engineering concerns. A reasonable alternatives analysis must contain a meaningful level of detail showing why an alternative is infeasible. *Laurel Heights Improvement Association v. The Regents of the University of California*, (1988) 47 Cal. 3d 376, 399-407. On this basis, we conclude that the analysis of the Otay Landfill site is inadequate to support Staff's conclusion that it does not represent a feasible alternative.

Moreover, Applicant has stated that there may be appropriate alternative sites in eastern Chula Vista, and it is uncontroverted that Applicant analyzed no such sites. Applicant's witness stated that the eastern section of Chula Vista "is a very large area." (Ex. 5, p. 26; 10/2/2008 RT 352:13-19.) This, coupled with evidence in the record that the City encouraged MMC, prior to filing this AFC, to consider alternative sites so as to avoid siting the plant in the Main Street Redevelopment Area, and asked the Energy Commission Project Manager to consider sites in eastern Chula Vista (Ex. 200, pp. 6-15), leads us to the conclusion that not enough was done to select and analyze potential sites in eastern Chula Vista.

We cannot, on the basis of the record, find that the analysis of alternative sites performed by Applicant and Staff satisfies the requirement that an alternative sites analysis include a reasonable range of alternatives. For the same reasons, we find that the Chula Vista General Plan requirement to avoid siting power plants within 1,000 feet of a sensitive receptor has not been satisfied by the analysis of alternative sites described in the evidence of record, in violation of the

General Plan as discussed in the **Land Use** section of this Decision. We thus will require a more in-depth analysis of a reasonable range of alternative sites, by both Staff and Applicant, in the event the Applicant chooses to pursue this Application further.

4. Technology Alternatives/No Project Analysis

The evidence of record shows that both Applicant and Staff examined technological alternatives to the CVEUP as well as the consequences of not constructing the proposed project.

a. Generation Technology Alternatives

1. Conservation and Demand Side Management

One alternative to meeting California's electricity demand with new generation is to reduce the demand for electricity. Such "demand side" measures include programs that increase energy efficiency, reduce electricity use, or shift electricity use away from "peak" hours of demand.

In California the Energy Commission adopts comprehensive energy efficiency standards for most buildings, appliance standards for specific items not subject to federal appliance standards, and load management standards. At the federal level, the Department of Energy adopts national standards for appliance efficiency and building standards to reduce the use of energy in federal buildings and at military bases.

At the local level, most if not all investor-owned and municipal utilities administer demand side management and energy conservation programs. These include subsidies for the replacement of older appliances through rebates, building weatherization programs, and peak load management programs. In addition, several local governments have adopted building standards which exceed the state standards for building efficiency, or have by ordinance set retrofit energy efficiency requirements for older buildings.

Even with this great variety of federal, state, and local demand side management programs, the state's electricity use is still increasing as a result of population growth, growth in the size of homes and the energy requirements of appliances in homes, and business expansion. Current demand side programs are not sufficient to satisfy expected growth in electricity needs. Even if the more

aggressive demand side programs envisioned in current state policy satisfy expected growth in electricity needs, a significant amount of aging existing capacity will need to be replaced in the next ten to fifteen years. Both new generation and new transmission facilities will be needed in the immediate future and beyond in order to maintain adequate supplies.

2. Renewable Resources

Applicant and Staff compared various alternative technologies such as solar, wind, and biomass with the proposed project. There are no geothermal resources in the project vicinity and the region lacks water sources for hydroelectric power.

Both solar and wind generation have little or no air pollutant emissions and visible plumes. In the case of biomass, however, emissions can be substantially greater. Central station solar and wind resources require large land areas in order to generate 100 MW of electricity. Specifically, central receiver solar thermal projects require approximately five acres per MW; 100 MW would require approximately 500 acres, or 50 to 100 times the amount of land area taken by the proposed CVEUP facility. Parabolic trough solar thermal technology requires similar acreage per MW. Wind generation generally requires about 4.5 acres per MW; about 450 acres would be needed to generate 100 MW although in some cases this land can also be used for agricultural purposes in addition to wind generation. It is unlikely that this amount of acreage, and specifically acreage that offers the specific needs of these renewable resources would be available in the project area. The need for extensive acreage would also add to the complexities of local discretionary actions for land use modifications.

The Applicant effectively eliminated photovoltaic (PV) generation from its alternatives analysis when it stated that it did “not meet the project objective of utilizing natural gas available from the existing transmission system.” (Ex. 1, p. 6-13.) This is another example of a too-narrow project objective artificially limiting the range of potential alternatives. Requiring the use of natural gas as a project objective eliminates consideration of alternative fuel sources. Bill Powers, P.E., an engineer with over 25 years of experience in the energy field, testified that it may be feasible to install PV on rooftops and over parking lots in a quantity sufficient to meet or exceed the project’s incremental increase in output. (Ex. 616, pp. 11- 14.) According to the FSA, rooftop PV would consume 4 acres per MW and for that reason is infeasible. (Ex. 200, p. 6-13.) We are unpersuaded by this evidence. Photovoltaic arrays mounted on existing flat warehouse roofs or on top of vehicle shelters in parking lots do not consume any acreage. The

warehouses and parking lots continue to perform those functions with the PV in place. (Ex. 616, p. 11.) Mr. Powers provided detailed analysis of the costs of such PV, concluding that there was little or no difference between the cost of energy provided by a project such as the CVEUP compared with the cost of energy provided by PV. (Ex. 616, pp. 13 – 14.) In addition, while PV is not a quick-start technology which can be dispatched on ten minutes' notice any time of the day or night, PV does provide power at a time when demand is likely to be high—on hot, sunny days. Mr. Powers acknowledged on cross-examination that the solar peak does not match the demand peak, but testified that storage technologies exist which could be used to manage this. The essential points in Mr. Powers' testimony about the costs and practicality of PV were uncontroverted.

If new biomass technology is developed in the near future, increased energy production could come from the Otay Landfill and other landfills in the area, limiting the necessity for power from base-load power plants. Nonetheless, such technology is not currently available and thus cannot be considered a potentially viable alternative generation technology in this case. Thus, based upon the evidence of record, we find that, at this time, geothermal, hydroelectric, wind or biomass technologies do not present feasible alternatives to the proposed project.

We find the analysis of the PV alternative is insufficient to comply with the requirements of the California Environmental Quality Act, the Warren-Alquist Act, and their respective regulations. In the event the Applicant chooses to pursue this matter further, we will require a more in-depth analysis of the PV alternative by both Staff and Applicant.

b. The "No Project" Alternative

The "no project" alternative under CEQA assumes that the project is not constructed. In the CEQA analysis, the "no project" alternative is compared to the proposed project and determined to be superior, equivalent, or inferior to it. The CEQA Guidelines state that "the purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" [CEQA Guidelines, § 15126.6(i).] Toward that end, the "no project" analysis considers "existing conditions" and "what would be reasonably expected to occur in the foreseeable future if the project were not approved…" [§ 15126.6(e)(2).] CEQA Guidelines and Energy Commission regulations require

consideration of the “no project” alternative. The “no project” alternative also provides a baseline against which the effects of the proposed project may be compared.

If the “no project” alternative were selected, the construction and operational impacts of the CVEUP—including the violations of LORS discussed in the **LAND USE** section--would not occur. Demolition of the existing Chula Vista Power Plant would probably not occur nor would grading of the site and installation of new foundations, piping and utility connections be required. MMC Energy, Inc. or another entity would likely continue to operate the existing Chula Vista Power Plant as a peaking power plant. (Ex. 1, p. 6-3.) The existing Chula Vista Power Plant is not under the jurisdiction of the California Energy Commission and the operation of this facility would not be monitored nor would the permit conditions be enforced by the Energy Commission’s specialized Compliance Unit under California Code of Regulations, title 20, section 1770.

Staff, in the FSA, stated that in the absence of the CVEUP, MMC Energy, Inc. or another power company would likely propose that other power plants be constructed in the project area to serve the demand that could be met with the CVEUP, and that those plants could consume more fuel and emit more air pollutants per kilowatt-hour generated than the CVEUP. This strikes us as purely speculative; it seems just as likely that MMC or another operator would continue to operate the existing plant and another plant would not be built instead of the CVEUP. Although the Applicant states in the AFC that SDG&E recently circulated a Request for Offers (RFO) indicating that additional peak electric generation capacity is needed for the vicinity (Ex. 1, p.1-1), the record contains no evidence that the Applicant has a Power Purchase Agreement with any utility. References to such an agreement contained in the PSA were removed from the FSA in response to a comment by Intervenor EHC. (Ex. 200, p. 6-17.)

Nor are we convinced that the CVEUP would be a significant step toward removing the reliability-must-run (RMR) status of the South Bay Power Plant. Llena Green of CAISO, was questioned at length on this point by all parties at the evidentiary hearing. She made it clear that while the CVEUP’s addition of 50 MW to the 45 MW of the existing facility would make a contribution toward removal of RMR, this contribution would be small in comparison to South Bay’s 690 MW output, and that much more generation capacity would need to be developed to replace South Bay. (10/2/2008 RT 234:4; 235:2; Ex. 20; Ex. 804.)

Based upon the evidence of record, we find that it cannot be concluded that the "no project" alternative would have serious, long-term adverse consequences. (*See also,* Ex. 200, p. 6-15.)

FINDINGS AND CONCLUSIONS

Based upon the weight of the evidence of record, we make the following findings and reach the following conclusions:

1. The evidence of record shows that only one potentially feasible alternative site was analyzed.

2. The evidence of record shows that a reasonable range of alternative sites has not been considered.

3. The project objectives include reuse of the existing infrastructure and locating the project in an area consistent with land use LORS.

4. The objective of reusing the existing infrastructure severely limits the range of alternative sites, and the proposed location is inconsistent with land use LORS.

5. Acceptable alternative sites are very likely to exist elsewhere in Chula Vista which avoid the adverse impacts of the proposed site, but only one such site was analyzed.

6. The analysis of the Otay Landfill site is insufficient to foster informed decision making and public participation.

7. The failure to examine other potentially feasible alternative sites does not meet the requirement to foster informed decision making and public participation.

8. The evidence of record shows that the Applicant established as a project objective the use of natural gas fuel.

9. The objective of using natural gas fuel artificially limited the range of alternative generation technologies evaluated.

10. Conservation and other demand-side management programs are currently not sufficient to satisfy California's <u>local</u> electricity needs.

11. Photovoltaic solar arrays on rooftops and over parking lots may be a viable alternative to the project.

12. Conservation and other demand-side management programs are currently not sufficient to satisfy California's electricity needs.

13. The "No Project" Alternative would maintain the status quo and avoid any new adverse impacts, but do nothing to alleviate any existing adverse impacts.

14. The CVEUP project would provide local area generation.

15. The existing project provides local area generation.

16. If the existing power plant is sufficient to meet the area's power generation needs the "No Project" Alterative would have no adverse impacts on local system reliability.

17. There is no evidence in the record to show that the existing project is insufficient to meet the area's needs.

18. Applicant does not have a power purchase agreement with SDG&E.

We conclude, therefore, that the evidence of record lacks a sufficient analysis of a reasonable range of alternatives and fails to comply with the requirements of the California Environmental Quality Act, the Warren-Alquist Act, and their respective regulations. We will require a more in-depth analysis of a reasonable range of alternative sites and alternative generation technologies, by both Applicant and Staff, in the event the Applicant chooses to pursue this Application further.

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, 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 Chula Vista Energy Upgrade Project (CVEUP) 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 establishes the "General Conditions," which:

- 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;
- Set forth procedures for settling disputes and making post-certification changes;
- Set forth the requirements for periodic compliance reports and other administrative procedures necessary to verify the compliance status of all Commission imposed Conditions; and
- Set forth 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 levels of insignificance. 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 implemented 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 CVEUP 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 implemented 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

The following terms and definitions are used to establish when Conditions of Certification are implemented.

Pre-construction Site Mobilization

Site mobilization is limited preconstruction activities at the site to allow for the installation of fencing, construction trailers, construction trailer utilities, and construction trailer parking at the site. Limited ground disturbance, grading, and trenching associated with the above mentioned pre-construction activities is considered part of site mobilization. Walking, driving or parking a passenger vehicle, pickup truck and light vehicles is allowable during site mobilization.

Construction Ground Disturbance

Construction-related ground disturbance refers to activities that result in the removal of top soil or vegetation at the site beyond site mobilization needs, and for access roads and linear facilities.

Construction Grading, Boring, and Trenching

Construction-related grading, boring, and trenching refers to activities that result in subsurface soil work at the site and for access roads and linear facilities, *e.g.,* alteration of the topographical features such as leveling, removal of hills or high spots, moving of soil from one area to another, and removal of soil.

Construction

Onsite work to install permanent equipment or structures for any facility construction (Pub. Res. Code § 25105), does **not** include the following:

1. The installation of environmental monitoring equipment;
2. A soil or geological investigation;
3. A topographical survey;
4. Any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility; and
5. Any work to provide access to the site for any of the purposes specified in “Construction” 1, 2, 3, or 4 above.

Start of Commercial Operation

For compliance monitoring purposes, “commercial operation” begins after the completion of start-up and commissioning, where the power plant has reached reliable steady-state production of electricity 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

The 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 (petition to amend), and ownership or operational control (petition for change of ownership); (see instructions for filing petitions)
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 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 Energy Commission staff and management. All submittals must include searchable electronic versions (pdf or word files).

Pre-construction and Pre-operation Compliance Meeting

The CPM usually schedules 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 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 Dockets file, for the life of the project (or other period as required):

1. All documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;
2. All monthly and annual compliance reports filed by the project owner;
3. All complaints of noncompliance filed with the Energy Commission; and
4. All petitions for project or Condition of Certification changes and the resulting staff or Energy Commission action.

PROJECT OWNER RESPONSIBILITIES

The project owner is responsible for ensuring that the Compliance Conditions of Certification and all of the other Conditions of Certification that appear in the Commission Decision are satisfied. The Compliance Conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, Conditions of Certification, or ownership. Failure to comply with any of the Conditions of Certification or the 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 Compliance Conditions of Certification is included as **Compliance Table 1** at the conclusion of this section.

Compliance Conditions of Certification

Unrestricted Access (COMPLIANCE-1)

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 (COMPLIANCE-2)

For the life of the project, the project owner shall maintain project files on-site or at an alternative site approved by the CPM, 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 maintained pursuant to this Condition.

Compliance Verification Submittals (COMPLIANCE-3)

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 work or other evidence that the requirements are satisfied.

Verification lead times 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 project by AFC number, 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 and CEC submittal number.

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 hardcopy submittals shall be addressed as follows:

Compliance Project Manager
(07-AFC-4C)
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

Those submittals shall be accompanied by a searchable electronic copy included on a CD disc or via e-mail as agreed upon by the CPM.

If the project owner desires Energy Commission staff action by a specific date, it shall make that request in its submittal cover letter 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 (COMPLIANCE-4)

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 submitted in the same format as the compliance matrix described below.

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 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.

If the project owner anticipates commencing project construction as soon as the project is certified, it may be necessary for the project owner to file compliance submittals prior to project certification. Compliance submittals should be completed in advance where the necessary lead-time for a required compliance event extends beyond the date anticipated for start of construction. The project owner must understand that the submittal of compliance documents prior to project certification is at the owner's own risk. Any approval by Energy Commission staff is subject to change based upon the Commission 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 Energy 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 (COMPLIANCE-5)

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 Conditions of Certification 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; and
7. The compliance status of each Condition, *e.g.,* “not started,” “in progress” or “completed” (include the date).
8. If the Condition was amended, the date of the amendment.

Satisfied Conditions shall be placed at the end of the matrix.

Monthly Compliance Report (COMPLIANCE-6)

The first Monthly Compliance Report is due one month following the Energy Commission business meeting date upon which the project was approved, unless otherwise agreed to by the CPM. The first Monthly Compliance Report shall include the AFC number and 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 an electronic searchable version 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, as well as the Conditions they satisfy and submitted as attachments to the Monthly Compliance Report;

3. An initial, and thereafter updated, compliance matrix showing the status of all Conditions of Certification (fully satisfied Conditions do not need to be included in the matrix after they have been reported as completed);

4. A list of Conditions that have been satisfied during the reporting period, and a description or reference to the actions that 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 submitted to, 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;

9. A listing of the month's additions to the on-site compliance file; and

10. A listing of complaints, notices of violation, official warnings, and citations received during the month, a description of the resolution of the resolved actions, and the status of any unresolved actions.

All sections, exhibits, or addendums shall be separated by tabbed dividers.

Annual Compliance Report (COMPLIANCE-7)

After construction is complete, 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 include the AFC number, identify the reporting period and shall contain the following:

1. An updated compliance matrix showing the status of all Conditions of Certification (fully satisfied Conditions do not need to be included in the matrix after they have been reported as completed);

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, with the Condition it satisfies, and 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 submitted 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 Compliance Conditions for Facility Closure addressed later in this section this Decision]; 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 matters, and the status of any unresolved matters.

Confidential Information (COMPLIANCE-8)

Any information that the project owner deems confidential shall be submitted to the Energy Commission's Dockets Unit 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.

Annual Energy Facility Compliance Fee (COMPLIANCE-9)

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annual compliance fee, which is adjusted annually. The amount of the fee for FY2007-2008 was $17,676. The initial payment is due on the date the Energy Commission adopts the Final Decision.

You will be notified of the amount due. All subsequent payments are due by July 1 of each year in which the facility retains its certification. The payment instrument shall be made payable to the California Energy Commission and mailed to: Accounting Office MS-2, California Energy Commission, 1516 9th St., Sacramento, CA 95814.

Reporting of Complaints, Notices, and Citations (COMPLIANCE-10)

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 complaints 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 to the CPM of all complaint forms, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and citations, within 10 days of receipt. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the **NOISE** Conditions of Certification of this Decision. 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 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 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 implements the on-site contingency plan. It can also include unplanned closure where the project owner fails to implement the contingency plan, and the project is essentially abandoned.

COMPLIANCE CONDITIONS FOR FACILITY CLOSURE

Planned Closure (COMPLIANCE-11)

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 12 months (or other period of time agreed to by the CPM) prior to commencement of closure activities. 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.

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.

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.

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 the Energy Commission approves the facility closure plan.

Unplanned Temporary Closure/On-Site Contingency Plan (COMPLIANCE-12)

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 than 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 duration of more than 12 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 (COMPLIANCE-13)

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 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.

Post Certification Changes to the Energy Commission Decision: Amendments, Ownership Changes, Insignificant Project Changes and Verification Changes (COMPLIANCE-14)

The project owner must petition the Energy Commission pursuant to title 20, California Code of Regulations, section 1769, in order to modify the project (including linear facilities) design, operation or performance requirements, and to

transfer ownership or operational control of the facility. *It is the responsibility of the project owner to contact the CPM to determine if a proposed project change should be considered a project modification pursuant to section 1769.* Implementation of a project modification without first securing Energy Commission, or Energy Commission staff approval, may result in enforcement action that could result in civil penalties in accordance with section 25534 of the Public Resources Code.

A petition is required for amendments and for insignificant project changes as specified below, and shall be filed as a "Petition to Amend." Staff will determine if the change is significant or insignificant. 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 CPM, who will file it with the Energy Commission's Dockets Unit in accordance with title 20, California Code of Regulations, section 1209.

The criteria that determine which type of approval and the process that applies are explained below. They reflect the provisions of section 1769 at the time this Condition was drafted. If the Commission's rules regarding amendments are amended, the rules in effect at the time an amendment is requested shall apply.

Amendment

The project owner shall petition the Energy Commission, pursuant to title 20, California Code of Regulations, section 1769(a), when proposing modifications to the project (including linear facilities) design, operation, or performance requirements. If a proposed modification results in deletion or change of a Condition of Certification, or makes changes that would cause the project not to comply with any applicable LORS, the petition will be processed as a formal amendment to the Final Decision, which requires public notice and review of the Energy Commission staff analysis, and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the requirements of section 1769(a). Upon request, the CPM will provide you with a sample petition to use as a template.

Change of Ownership

Change of ownership or operational control also requires that the project owner file a petition pursuant to section 1769(b). This process requires public notice and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the requirements of Section 1769(b). Upon request, the CPM will provide you with a sample petition to use as a template.

Insignificant Project Change

Modifications that do not result in deletions or changes to Conditions of Certification, and that are compliant with LORS may be authorized by the CPM as an insignificant project change pursuant to section 1769(a) (2). This process usually requires minimal time to complete, and it requires a 14-day public review

of the Notice of Insignificant Project Change that includes Staff's intention to approve the modification unless substantive objections are filed. These requests must also be submitted in the form of a "petition to amend" as described above.

Verification Change

A verification may be modified by the CPM without requesting an amendment to the decision if the change does not conflict with the Conditions of Certification and provides an effective alternate means of Verification.

CBO DELEGATION AND AGENCY COOPERATION

In performing construction and operation monitoring of the project, Energy Commission staff acts as, and has the authority of, the Chief Building Official (CBO). Energy Commission staff may delegate CBO responsibility to either an independent third party contractor or the local building official. Energy 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.

Energy Commission staff may also seek the cooperation of state, regional and local agencies that have an interest in environmental protection 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.

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 1237, 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 future law or regulations.

The Energy Commission has established a toll-free compliance telephone number of 1-800-858-0784 for the public to contact the Energy Commission regarding power plant construction or operation-related questions, complaints, or concerns.

Informal Dispute Resolution Process

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 an informal dispute resolution process. Disputes may pertain to actions or decisions made by any party, including the Energy Commission's delegate agents.

This process may precede the more formal complaint and investigation procedure specified in title 20, California Code of Regulations, section 1237, 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 process 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 brought before the full Energy Commission for consideration via the complaint and investigation procedure.

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. Within seven working days of the CPM's request, provide a written report to the CPM of the results of the investigation, including corrective measures proposed or undertaken. Depending on the urgency of the noncompliance matter, the CPM may conduct a site visit and/or request the project owner to also provide an initial verbal report, within 48 hours.

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 proposed or 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;
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 that fairly and accurately identifies the positions of all parties and any understandings 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

Any person may file a complaint with the Energy Commission's Dockets Unit alleging noncompliance with a Commission decision adopted pursuant to Public Resources Code, section 25500. Requirements for complaint filings and a description of how complaints are processed are in title 20, California Code of Regulations, section 1237.

KEY EVENTS LIST

PROJECT: _____

DOCKET #: _____

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	
Obtain Building Occupation Permit	
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	

COMPLIANCE TABLE 1
SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION

CONDITION NUMBER	SUBJECT	DESCRIPTION
COMPLIANCE-1	Unrestricted Access	The project owner shall grant Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.
COMPLIANCE-2	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.
COMPLIANCE-3	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.
COMPLIANCE-4	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.
COMPLIANCE-5	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.
COMPLIANCE-6	Monthly Compliance Report including a Key Events 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 Energy 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.

CONDITION NUMBER	SUBJECT	DESCRIPTION
COMPLIANCE-7	Annual Compliance Reports	After construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports.
COMPLIANCE-8	Confidential Information	Any information the project owner deems confidential shall be submitted to the Energy Commission's Dockets Unit with a request for confidentiality.
COMPLIANCE-9	Annual fees	Payment of Annual Energy Facility Compliance Fee
COMPLIANCE-10	Reporting of Complaints, Notices and Citations	Within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.
COMPLIANCE-11	Planned Facility Closure	The project owner shall submit a closure plan to the CPM at least 12 months prior to commencement of a planned closure.
COMPLIANCE-12	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.
COMPLIANCE-13	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.
COMPLIANCE-14	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: AFC Number:
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 Chula Vista Energy Upgrade Project consists of separate analyses that examine the facility design, engineering, efficiency, and reliability aspects of the project. These analyses include the on-site power generating equipment and project-related linear facilities

A. FACILITY DESIGN

This review covers several technical disciplines including the civil, electrical, mechanical, and structural engineering elements related to project design, construction, and operation. The evidentiary presentations were uncontested. (10/2/08 RT 159-65; Exs. 1, § 2; 2, § 2; 3; Responses 42-47; 5, Response 35; 9; 10; 11; 17; 18; 19; 20; 23; 200, pp. 5.1-1 to 5.1-22.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

The Application for Certification (AFC) describes the preliminary facility design for the project. In considering the adequacy of the design plans, the Commission reviews whether the power plant and linear facilities are described with sufficient detail to assure the project can be designed and constructed in accordance with applicable engineering laws, ordinances, regulations, and standards (LORS). The review also includes the identification of special design features that are necessary to deal with unique site conditions which could impact public health and safety, the environment, or the operational reliability of the project. (Ex. 200, pp. 5.1-1 to 5.1-2.)

Staff proposed several Conditions of Certification, which we have adopted, that establish a design review and construction inspection process to verify compliance with applicable design standards and special design requirements. (Ex. 200, p. 5.1-4.) The project will be designed and constructed in conformance with the latest edition of the California Building Standards Code (currently the 2007 CBSC) and other applicable codes and standards in effect at the time design approval and construction actually begin. Condition of Certification **GEN-1** incorporates this requirement.

Staff considered potential geological hazards and reviewed the preliminary project design with respect to grading, flood protection, erosion control, site drainage, and site access in addition to the criteria for constructing related linear

facilities such as the natural gas pipeline and the transmission interconnection facilities. (Ex. 200, p. 5.1-3; see also, the **Geology** and **Paleontology** section of this Decision.) The evidence establishes that the project will incorporate accepted industry standards. This includes design practices and construction methods for preparing and developing the site. (Ex. 200, p. 5.1-3.) Conditions **CIVIL-1** through **CIVIL-4** ensure 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 and facilities used for storage of hazardous or toxic materials, as well as those capable of becoming potential health and safety hazards if not constructed properly. (*Id.*) Condition **GEN-2** lists the major structures and equipment included in the initial engineering design for the project. Conditions **GEN-3** through **GEN-8** require that qualified individuals oversee and inspect construction of the facility. Similarly, conditions **MECH-1** through **MECH-3** address compliance of the project's mechanical systems with appropriate standards, and a quality assurance/quality control program assures that the CVEUP is designed, procured, fabricated, and installed as described. Condition **ELEC-1** provides that design and construction of major electrical features will comply with applicable LORS. Overall, compliance with design requirements will be verified through specific inspections and audits.

The power plant site is located in Seismic Zone 4, the highest level of potential ground shaking in California. (Ex. 200, p. 5.1-2.) The 2007 CBC requires specific "lateral force" procedures for different types of structures to determine their seismic design criteria. 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)[5] for review and approval prior to the start of construction. (Ex. 200, p. 5.1-3.)

The evidentiary record also addresses project closure. (Ex. 200, p. 5.1-5.) To ensure that decommissioning of the facility will conform with applicable LORS to

[5] The Energy Commission is the CBO for energy facilities certified by the Commission. We may delegate CBO authority to local building officials and/or independent consultants to carry out design review and construction inspections. When CBO duties are delegated, the Commission requires a Memorandum of Understanding with the delegatee entity to outline respective roles, responsibilities, and qualifications of involved individuals such as those described in Conditions of Certification **GEN-1** through **GEN-8**. (Ex. 200, p. 5.1-4.) The Conditions further require that every appropriate element of project construction be first approved by the CBO, and that qualified personnel perform or oversee inspections.

protect the environment and public health and safety, the project owner is required to submit a decommissioning plan which is described in the general closure provisions of the Compliance Monitoring and Closure plan. *See* **General Conditions** in this Decision, *Ante*. [Condition **GEN-9** provides for removal of the existing facility.]

Finally, at the evidentiary hearing, the parties also discussed two matters not addressed in the Conditions of Certification: the undergrounding of any future reconductoring of the section of transmission line on Albany (10/2/08 RT 162: 21-25); and an agreement to not expand the CVEUP in the future (10/2/08 RT 163: 9-12). The discussion indicates the reasons these matters were inappropriate for inclusion as distinct conditions (10/2/08 RT 162-64). It is our understanding that Applicant and the City have agreed on these two matters (10/2/08 RT 164). We therefore acknowledge this agreement as a matter of record, and expect that the parties will honor it in the future.

FINDINGS AND CONCLUSIONS

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

1. The Chula Vista Energy Upgrade 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 as well as public health and safety.
4. The Conditions of Certification below and the **General Conditions,** included in a separate section 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 Chula Vista Energy Upgrade Project can be designed and constructed in conformance with the applicable laws pertinent to the engineering aspects summarized in this section of the Decision.

CONDITIONS OF CERTIFICATION

GEN-1 The project owner shall design, construct, and inspect the project in accordance with the 2007 California Building Standards Code (CBSC), also known as Title 24, California Code of Regulations, which encompasses the California Building Code (CBC), California Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable engineering laws, ordinances, regulations, and standards (LORS) in effect at the time initial design plans are submitted to the chief building official (CBO) for review and approval. The CBSC in effect is the edition that has been adopted by the California Building Standards Commission and published at least 180 days previously. The project owner shall ensure that all the provisions of the above applicable codes are enforced during the construction, addition, alteration, moving, demolition, repair, or maintenance of the completed facility (2007 CBC, Appendix Chapter 1, § 101.2, Scope). All transmission facilities (lines, switchyards, switching stations, and substations) are covered in the Conditions of Certification in the **Transmission System Engineering** section of this Decision.

In the event that the initial engineering designs are submitted to the CBO when the successor to the 2007 CBSC is in effect, the 2007 CBSC provisions 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.

The project owner shall ensure that all contracts with contractors, subcontractors, and suppliers clearly specify that all work performed and materials supplied comply with the codes listed above.

Verification: Within 30 days following receipt of the certificate of occupancy, the project owner shall submit to the compliance project manager (CPM) a statement of verification, signed by the responsible design engineer, attesting that all design, 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 (2007 CBC, Appendix Chapter 1, § 110, Certificate of Occupancy).

Once the certificate of occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the

completed facility that requires CBO approval for compliance with the above codes. The CPM will then determine if the CBO needs to approve the work.

GEN-2 Before submitting the initial engineering designs for CBO review, the project owner shall furnish the CPM and the CBO with a schedule of facility design submittals, master drawing, and master specifications lists. 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 upon request.

Verification: At least 60 days (or within a project owner and CBO approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the master drawing, and master specifications lists 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	2
CT Generator Foundation and Connections	2
SCR Catalyst System Structure Foundation and Connections	2
SCR Exhaust Stack Foundation and Connections	2
Tempering Air Fans (Blowers) Foundation and Connections	2
CEMS Station Foundation and Connections	2
CT Auxiliary Skid Foundation and Connections	2
CT Fire Protection System Foundation and Connections	2
SPRINT/Spray Mist Cooler Skid Foundation and Connections	2
NOx Water Injection Skid Foundation and Connections	2
CT Inlet Air Evaporative Cooler System Foundation and Connections	2
Ammonia Delivery Skid Foundation and Connections	2
GT Lube Oil Fin Fan Cooler Foundation and Connections	2
Natural Gas Fuel Filter Foundation and Connections	2
Air Compressor Skid Foundation and Connection	1
Step-Up Transformer Foundation and Connections	1
Auxiliary Transformer Foundation and Connections	1
480V Transformer Foundation and Connections	1
Electrical/ Control Building Foundation and Connections	1

Equipment/System	Quantity (Plant)
Wastewater Drainage Sump System Foundation and Connections	1
Demineralized Water Storage Tank Foundation and Connections	1
Demineralized Water Forwarding Pumps Foundation and Connections	1
Demineralized Water Trailer Foundations and Connections	2
Fuel Gas Compressor Foundation and Connections	1
Fuel Gas Recycle Cooler Foundation and Connections	1

GEN-3 The project owner shall make payments to the CBO for design review, plan checks, and construction inspections 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 2007 CBC (2007 CBC, Appendix Chapter 1, § 108, Fees; Chapter 1, Section 108.4, Permits, Fees, Applications and Inspections), 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 otherwise agreed upon 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 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 the resident engineer in charge of the project (2007 California Administrative Code, § 4-209, Designation of Responsibilities). All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in the Conditions of Certification in the **Transmission System Engineering** section of this Decision.

The resident engineer 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 that each part is clearly defined as a distinct unit. Separate assignments of general responsibility may be made for each designated part.

The resident engineer shall:

1. Monitor progress of construction work requiring CBO design review and inspection to ensure compliance with LORS;

2. Ensure that construction of all facilities subject to CBO design review and inspection conforms in every material respect to applicable LORS, these Conditions of Certification, approved plans, and specifications;

3. Prepare documents to initiate changes in approved drawings and specifications when either directed by the project owner or as required by the conditions of the project;

4. Be responsible for providing project inspectors and testing agencies with complete and up-to-date sets 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 when they do not conform to approved plans and specifications.

The resident engineer shall have the authority to halt construction and to require changes or remedial work if the work does not meet requirements.

If the resident engineer 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 within a project owner and CBO approved alternative time frame) 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 resident engineer and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the resident engineer and other delegated engineer(s) within five days of the approval.

If the resident engineer or the delegated engineer(s) is subsequently reassigned or replaced, the project owner has five days 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 five 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 civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and 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: 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; a mechanical engineer; and 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.) 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 (for example, proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible 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 (2007 CBC, Appendix Chapter 1, § 104, Duties and Powers of Building Official). All transmission facilities (lines, switchyards, switching stations, and substations) are covered in the Conditions of Certification in the **Transmission System Engineering** section of this Decision.

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 (for example, 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 (2007 CBC, Appendix Chapter 1, § 104, Duties and Powers 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, geotechnical, or soils reports 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 the design of), 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; and 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 resident engineer during the construction phase of the project and recommend changes in the design of the civil works facilities and changes to 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, geotechnical or soils reports containing field exploration reports, laboratory tests, and engineering analysis detailing the nature and extent of the soils that could be susceptible to liquefaction, rapid settlement, or collapse when saturated under load (2007 CBC, Appendix J, § J104.3, Soils Report; Chapter 18, § 1802.2, Foundation and Soils Investigations);

3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with requirements set forth in the 2007 CBC, Appendix J, section J105, Inspections, and the 2007 California Administrative Code, section 4-211, Observation and Inspection of Construction (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both); and

4. Recommend field changes to the civil engineer and resident engineer.

This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform to the predicted conditions used as the basis for design of earthwork or foundations (2007 CBC, Appendix Chapter 1, § 114, Stop Orders).

C. The engineering geologist shall:

1. Review all the engineering geology reports and prepare a 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 2007 California Administrative Code, section 4-211, Observation and Inspection of Construction (depending on the site conditions, this may be the responsibility of either the soils engineer, the 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 resident engineer 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 to 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 within a project owner and CBO approved alternative time frame) 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 within a project owner and CBO approved alternative time frame) 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 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 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 five 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 2007 CBC, Chapter 17, Section 1704, Special Inspections; Chapter 17A, Section 1704A, Special Inspections; and Appendix Chapter 1, Section 109, Inspections. All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in Conditions of Certification in the **Transmission System Engineering** section of this Decision.

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).

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 resident engineer. All discrepancies shall be brought to the immediate attention of the resident engineer for correction then, if uncorrected, to the CBO and the CPM for corrective action (2007 CBC, Chapter 17, § 1704.1.2, Report Requirements); and

4. Submit a final signed report to the resident engineer, 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, specifications, and other provisions of the applicable edition of the CBC.

Verification: At least 15 days (or within a project owner and CBO approved alternative time frame) 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 five 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 five 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 required corrective actions (2007 CBC, Appendix Chapter 1, § 109.6, Approval Required; Chapter 17, § 1704.1.2, Report Requirements). 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, 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 five 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 that the CBO inspect the completed structure and review the submitted documents. The project owner shall notify the CPM after obtaining the CBO's final approval. The project owner shall retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at an alternative site approved by the CPM during the operating life of the project (2007 CBC, Appendix Chapter 1, § 106.3.1, Approval of Construction Documents). Electronic copies of the approved plans, specifications, calculations, and marked-up as-builts shall be provided to the CBO for retention by the CPM.

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 the final approved engineering plans, specifications, and calculations described above, the project owner shall submit to the CPM a letter stating both that the above documents have been stored and the storage location of those documents.

Within 90 days of the completion of construction, the project owner shall provide to the CBO three sets of electronic copies of the above documents at the project owner's expense. These are to be provided in the form of "read only" files (Adobe pdf 6.0), with restricted (password-protected) printing privileges, on archive quality compact discs.

GEN-9 After the CVEUP has been declared a commercially operating facility, the project owner shall dismantle and remove the existing 44.5-MW Chula Vista Power Plant, including associated pollution control equipment, foundations, and piping. The project owner shall prepare a removal plan and schedule prior to the start of dismantling.

Verification: Within 180 days following start of commercial operation of the CVEUP, the project owner shall commence removal of the existing facility. At least 30 days prior to the start of dismantling, the project owner shall provide the CPM and the City of Chula Vista a removal plan and schedule for review. The project owner shall notify the CPM and the City of Chula Vista within five days after dismantling has commenced and within five days after removal has been completed.

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, geotechnical, or foundation investigation reports required by the 2007 CBC, Appendix J, section J104.3, Soils Report, and Chapter 18, section 1802.2, Foundation and Soils Investigation.

Verification: At least 15 days (or within a project owner and CBO approved alternative time frame) 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 (2007 CBC, Appendix Chapter 1, § 114, Stop Work 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 2007 CBC, Appendix Chapter 1, section 109, Inspections, and Chapter 17, section 1704, Special Inspections. 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 (2007 CBC, Chapter 17, § 1704.1.2, Report Requirements). 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 five 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 five 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 as well as erosion and sedimentation control and drainage work, the project owner shall obtain the CBO's approval of the final grading plans (including final changes) for the erosion and sedimentation control work. The civil engineer shall state that the work within his/her area of responsibility was done in accordance with the final approved plans (2007 CBC, Chapter 17, § 1703.2, Written Approval).

Verification: Within 30 days (or within a project owner and CBO approved alternative time frame) of the completion of the erosion and sedimentation control mitigation and drainage work, the project owner shall submit to the CBO, for review and approval, the final grading plans (including final changes) and 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, along with a copy of the transmittal letter to the CPM. The project owner shall submit a copy of the CBO's approval 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; and

3. Large field-fabricated tanks.

Construction of any structure or component shall not begin 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 (for example, 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 (2007 CBC, Appendix Chapter 1, § 109.6, 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 prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation (2007 California Administrative Code, § 4-210, Plans, Specifications, Computations and Other Data);

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 (2007 CBC, Appendix Chapter 1, § 106.3.4, Design Professional in Responsible Charge); and

5. Submit to the CBO the responsible design engineer's signed statement that the final design plans conform to applicable LORS (2007 CBC, Appendix Chapter 1, § 106.3.4, Design Professional in Responsible Charge).

Verification: At least 60 days (or within a project owner and CBO approved alternative time frame) 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 the above final design plans, specifications, and calculations, with a copy of the transmittal letter to the CPM.

The project owner shall submit to the CPM, in the next monthly compliance report, a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in 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 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 2007 CBC, Chapter 17, section 1704, Special Inspections, and section 1709.1, Structural Observations.

Verification: If a discrepancy is discovered in any of the above data the project owner shall, within five 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 (2007 CBC, Chapter 17, § 1704.1.2, Report Requirements). The NCR shall reference the Condition(s) of Certification and the applicable CBC chapter and section. Within five 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 five days, of the reason for disapproval and the revised corrective action necessary to obtain the CBO's approval.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans 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 (2007 CBC, Appendix Chapter 1, § 106.1, Submittal Documents; § 106.4, Amended Construction Documents; 2007 California Administrative Code, § 4-215, Changes in Approved Drawings and Specifications).

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 the 2007 CBC, Chapter 3, Table 307.1(2) shall, at a minimum, be designed to comply with the requirements of that chapter.

Verification: At least 30 days (or within a project owner and CBO approved alternate time frame) 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 that construction (2007 CBC, Appendix Chapter 1, § 106.1, Submittal Documents; § 109.5, Inspection Requests; § 109.6, Approval Required; 2007 California Plumbing Code, § 301.1.1, Approvals).

The responsible mechanical engineer shall stamp and sign all plans, drawings, and calculations for the major piping and plumbing systems, subject to CBO design review and approval, and submit a signed statement to the CBO when the proposed piping and plumbing systems have been designed, fabricated, and installed in accordance with all of the applicable laws, ordinances, regulations, and industry standards (2007 CBC, Appendix Chapter 1, § 106.3.4, Design Professional in Responsible Charge) which may include, but are not 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
- San Diego County codes.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency (2007 CBC, Appendix Chapter 1, § 103.3, Deputies).

Verification: At least 30 days (or within a project owner and CBO approved alternative time frame) 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 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 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 that installation (2007 CBC, Appendix Chapter 1, § 109.5, 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 the 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 within a project owner and CBO approved alternative time frame) 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 that 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 (2007 CBC, Appendix Chapter 1, § 109.3.7, Energy Efficiency Inspections; § 106.3.4, Design Professionals in Responsible Charge).

Verification: At least 30 days (or within a project owner and CBO approved alternative time frame) 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 all electrical equipment and systems 480 Volts or higher (see a representative list, 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 (2007 CBC, Appendix Chapter 1, § 106.1, 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 (2007 CBC, Appendix Chapter 1, § 109.6, Approval Required; § 109.5, Inspection Requests). All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in Conditions of Certification in the **Transmission System Engineering** section of this Decision.

A. Final plant design plans shall 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 must 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 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 within a project owner and CBO approved alternative time frame) 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 requirements, the Commission must review whether the CVEUP's consumption of energy (non-renewable fuel) will result in adverse environmental impacts on energy resources. (Cal. Code Regs., tit. 14, § 15126.4(a)(1), Appendix F.) Our review considers the efficiency factors included in project design and the features that will prevent wasteful, inefficient, or unnecessary energy consumption.

SUMMARY AND DISCUSSION OF THE EVIDENCE

Consumption of non-renewable fuel constitutes an adverse environmental impact under CEQA if it results 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. 200, p. 5.3-1; Cal. Code Regs., tit. 14, § 15000 et seq., Appendix F.)

1. Potential Effects on Energy Supplies and Resources

The project's two General Electric LM6000PC SPRINT gas turbine generators will provide a total nominal generation rating of 100 MW, gross output of 93 MW, and a net capacity of 92 MW. Applicant estimates that the project will consume natural gas at a maximum rate of 469.7 million British thermal units (Btu) per hour lower heating value (LHV) at base load and minimum ambient conditions.[6] This is a substantial rate of energy consumption that could potentially impact non-renewal fuel supplies. (Ex. 1, §§ 2.1.2, 2.2.3; Ex. 200, p. 5.3-2.)

Applicant expects that electricity will be generated at a thermal efficiency of approximately 55 to 56 percent LHV at base load and average ambient conditions but at lower efficiency rates when the turbines are operating at less than full output. (Ex. 1, §§ 2.2.3, 2.1.6.) Staff predicts the lower efficiency rates will fall to 39.2 percent LHV. (Ex. 200, p. 5.3-2.)

[6] Applicant estimates that the natural gas requirement during baseload operation at annual average ambient temperature is 408.7 MMBtu/hr LHV (total for both turbines). The maximum natural gas requirement during low ambient temperature is estimated at 428.7 MMBtu/hr LHV basis. (Ex. 1, § 2.1.6.) Staff estimates a higher maximum rate under average ambient conditions at 591.4 MMBtu/hr LHV. (Ex. 200, p. 5.3-2.)

The CVEUP will be permitted to operate up to 4,400 hours per year (less than 50 percent) although historical data for peakers suggests that actual dispatch may be 200 to 300 hours annually. (Ex. 200, pp. 5.3-7 and 5.3-8.) Based on the manufacturer's specifications for the project's LM6000 turbines, the equivalent availability factor for the CVEUP is estimated at approximately 92 to 98 percent. (Ex. 1, §§ 2.2.3 and 2.2.2.1.)

2. Need for Additional Energy Supplies or Capacity

Natural gas will be delivered to the project via SDG&E's existing 8-inch diameter pipeline currently serving the existing power plant at the site. (Ex. 1, §§1.1.1, 4.0; Ex. 200, p. 5.3-3.) The CVEUP could potentially consume more fuel than the existing plant due to the addition of a second generator. However, the hours of plant operation are expected to be low. According to Staff, SDG&E represents adequate delivery capacity for a project of this size and there is no likelihood that the CVEUP will require the development of additional capacity. It is therefore unlikely that the project will pose a significant adverse impact on natural gas supplies in California.[7] (Ex. 200, p. 5.3-3.)

3. Compliance with Energy Standards

No energy efficiency standards apply to the CVEUP or other non-cogeneration projects. (Ex. 200, p. 5.3-3.) Cf. Public Resources Code section 25134.

4. Alternatives to Wasteful or Inefficient Energy Consumption

The record includes an evaluation of alternative technologies that could reduce the project's potentially wasteful, inefficient or unnecessary energy consumption. Applicant provided information on alternative generating technologies, including coal and oil, hydroelectric, biomass, solar, and wind power. However, given the project objectives, location, and air pollution control requirements, the evidence indicates that only natural gas-burning technologies are feasible because: 1) coal and oil are highly polluting; 2) hydro and geothermal resources do not exist in San Diego County; 3) biomass is not available in sufficient quantities; and 4) solar and wind are not dispatchable nor able to produce the needed ancillary

[7] The Energy Commission's 2007 *Integrated Energy Policy Report* (*IEPR*) identifies declining gas field productivity in North America and the potential disruption of supply due to weather-related events as well as the price volatility of the gas market and the tension between reducing environmental impacts of electricity generation and reducing California's overwhelming dependence on a single fuel source. (2007 *IEPR*, p. 216 et seq.) In view of the *IEPR,* we believe Staff's analysis requires further discussion of the gas supply forecast during the life of the project.

services. (Ex. 1, § 6.6; Ex. 200, p. 5.3-4.) *See* the **Alternatives** section of this Decision.

This analysis also requires an evaluation of the project's fuel efficiency, which is determined by the configuration of the power producing system and the selection of generating equipment.[8] (Ex. 200, p. 5.3-4.)

The project objective is to provide peak generation to the San Diego region in a more efficient manner than the existing facility while utilizing existing infrastructure. Applicant expects the CVEUP will provide local reliability service as well as some load following and cycling. (Ex. 1, § 1.1.1, 2.1.15).

The project's two simple cycle aero-derivative General Electric LM6000PC SPRINT gas turbine generators are each nominally rated at 50 MW and 40.3 percent efficiency LHV at ISO[9] conditions. The simple cycle configuration, with its short start-up time and fast ramping capability, is well suited to providing peaking power due to its operating flexibility. (Ex. 1, § 2.1.2, Figure 2.1-4, Appendix 2B; Ex. 200, p. 5.3-3.)

Staff compared the efficiency rating of the LM6000PC SPRINT with two alternative aero-derivative generators that could meet the project objectives as a peaking facility. The Siemens SGT-800 gas turbine generator in a simple cycle configuration is nominally rated at 45 MW and 37 percent LHV at ISO conditions. The Pratt & Whitney FT8 TwinPac gas turbine generator in a simple cycle configuration is nominally rated at 51 MW and 38.4 percent LHV at ISO conditions.[10] (Ex. 200, p. 5.3-5.) The comparisons are shown below.

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[8] Fuel consumption is one of the key economic factors in selecting an electric generator since fuel typically accounts for over two-thirds of total operating costs of a fossil-fired power plant. Thus, in a competitive market, power plant developers are strongly motivated to purchase fuel-efficient machinery. (Ex. 200, p. 5.3-4.)

[9] International Standards Organization (ISO) standard conditions are 15°C (59°F), 60 percent relative humidity, and one atmosphere of pressure (equivalent to sea level).

[10] An older model of the TwinPac is currently operating at the existing power plant on the project site. (Ex. 200, p. 5.3-5; Ex. 1, § 5.1.2.1.)

Machine	*Generating Capacity (MW)*	*ISO Efficiency (LHV)*
GE LM6000PC SPRINT	**50**	**40.5 %**
Siemens SGT-800	45	37.0 %
P & W FT8 TwinPac	51	38.4 %

Source: Ex. 200, p. 5.3-5.

The LM6000PC SPRINT employs spray inter-cooling, which increases efficiency by spraying water into the airstream between the two compressor stages of the aero-derivative turbine, cooling the partially compressed air and reducing the amount of work that must be performed by the second stage compressor.[11] This reduces the power consumed by the compressor and yields greater net power output with higher fuel efficiency. The LM6000 represents a slight advantage in fuel efficiency over the alternative machines but any differences among the three in actual operating efficiency are relatively insignificant. (Ex. 200, p. 5.3-5.)

A further consideration involves the selection of gas turbine inlet air-cooling methods.[12] The CVEUP will use inlet air foggers, which boost power output best on dry days, using less electric power to yield a slightly higher operating efficiency than a mechanical chiller, which consumes electric power to operate its refrigeration process on hot, humid days. According to Staff, however, the difference in efficiency between these technologies is relatively insignificant. (Ex. 1 §§ 2.1.2, 2.1.4, Figure 2.1-4: Ex. 200, p. 5.3-5 and 5.3-6.)

We conclude therefore that the project configuration (simple-cycle) and generating equipment represent the most efficient feasible combination to satisfy the project objectives. There are no alternatives that could satisfy the project objectives established by the applicant[13] and significantly reduce energy consumption. There is no evidence to prove that the project will create significant adverse energy impacts. (Ex. 200, p. 5.3-6.)

[11] The larger industrial type gas turbines typically are single-shaft machines, with single-stage compressor and turbine. Aero-derivatives are two-shaft (or, in some cases, three-shaft) machines, with two-stage (or three-stage) compressors and turbines. (Ex. 200, p. 5.3-5.)

[12] A gas turbine's power output decreases as ambient air temperatures rise. The LM6000PC SPRINT produces peak power at 50°F; this peak output can be maintained in much hotter weather by cooling the inlet air.

[13] We discuss the applicant's project objectives in the ALTERNATIVES section of this decision and conclude there that the applicant's project objectives are so narrow as to preclude consideration of a reasonable range of alternatives.

5. Cumulative Impacts

Staff analyzed the potential cumulative energy consumption impacts of the CVEUP in conjunction with the nearby Otay Mesa Energy Center (currently under construction) and the Orange Grove Project (currently under review by the Energy Commission) in San Diego County. According to Staff, the CVEUP will not cause direct, indirect, or cumulative impacts on the natural gas supply in the San Diego region. The high efficiency and flexibility of the CVEUP peaking project may allow it to replace generation from less efficient plants and potentially reduce the cumulative amount of natural gas consumed for power generation in the region. (Ex. 200, p. 5.3-6.)

FINDINGS AND CONCLUSIONS

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

1. The CVEUP will not require the development of new fuel supply resources since natural gas resources exceed the fuel requirements of the project.

2. The CVEUP 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 the applicant's project objectives.

4. The anticipated operational efficiency of the project's two simple cycle General Electric LM6000PC SPRINT gas turbine generators is equivalent to comparable simple cycle generators operating in peaking capacity.

5. There is no evidence of cumulative impacts to energy resources since SDG&E's natural gas supply system is adequate to supply the CVEUP and other power projects in the San Diego region.

The Commission therefore concludes that CVEUP will not cause any significant direct, indirect, or cumulative 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 Energy Commission must consider the power plant's mechanical safety and reliability, including provisions for emergency operation and shutdown. [Pub. Res. Code, § 25520(b); Cal. Code Regs., tit. 20 § 1752(c)(2).] Although there are currently no LORS that establish either power plant reliability criteria or procedures for attaining reliable operation, the California Independent System Operator (CAISO) has developed a generator maintenance program to be employed by power plant operators in California.[14]

SUMMARY AND DISCUSSION OF THE EVIDENCE

According to Staff, a power plant is acceptable if it does not degrade the reliability of the utility system to which it is connected. Reliable operation is a combination of factors, i.e., the power plant should be available when called upon to operate and it should be expected to operate for extended periods without shutdown for maintenance or repairs. Project safety and reliability are achieved by ensuring equipment availability, plant maintainability with scheduled maintenance outages, fuel and water availability, and adequate resistance to natural hazards. (Ex. 200, p. 5.4-3.)

The CVEUP will maintain equipment availability by use of quality assurance/quality control (QA/QC) programs typical of the power industry. These include inventory review and equipment inspection, as well as testing on a regular basis during design, procurement, construction, and operation. Qualified vendors of plant equipment and materials will be selected based on past performance and independent testing contracts to ensure that reliable equipment is acquired. (Ex. 200, p. 5.4-3; Ex. 1, §§ 2.1.12.3, 2.2.2.5.) The Conditions of Certification in the **Facility Design** section of this Decision require implementation of appropriate QA/QC measures.

Applicant proposes to increase local system reliability in the San Diego region by providing intermediate and peaking power, including black start capacity during periods of high demand. A peaking facility provides adequate opportunity for maintenance work during downtime; however, during periods of extended

[14] CAISO's *Maintenance Performance Standards and Criteria* identify the maintenance standards expected of generators and provide a benchmark against which Generating Asset Owners and CAISO can judge the adequacy of maintenance programs used at each generating facility. (Ex. 200, p. 5.4-2.) Specifically, CAISO requires generators selling ancillary services and holding reliability must-run contracts to: (1) file periodic reports on reliability; (2) report all outages and their causes; (3) describe all remedial actions taken during outages; and (4) schedule all planned maintenance outages with CAISO. (*Ibid.)*

dispatch, the facility could be required to operate for long periods. To ensure reliability under these circumstances the facility should include a redundancy of equipment most likely to require service or repair. (Ex. 200, p. 5.4-4.)

The evidentiary record indicates that the project's design includes appropriate redundancy. Since the project consists of two combustion turbine generator sets operating in parallel as independent equipment trains, the project is inherently reliable. A single equipment failure cannot disable more than one train, thereby allowing the plant to continue to generate at reduced output. Furthermore, all plant ancillary systems are designed with enough redundancy to ensure continued operation in the event of equipment failure. (Ex. 200, p. 5.4-4; Ex. 1, §§ 2.1.5 et seq., 2.2.2.2, Table 2.2-1.)

Reasonable long-term availability of fuel and water is also necessary to ensure project reliability. SDG&E will supply natural gas via an existing 8-inch diameter high pressure pipeline that currently serves the existing power plant at the site, (Ex. 1, §§ 1.1.2, 2.0, 2.1.6, 2.2.2.3, 4.0.) Taking into account the two proposed gas-fired power plants nearby (Otay Mesa Energy Center and Orange Grove), the record indicates that SDG&E's natural gas distribution system offers adequate supply and pipeline capacity to meet project needs. (Ex. 200, p. 5.4-4.) See also the **Power Plant Efficiency** section of this Decision.

The CVEUP will obtain potable water via an existing water pipeline connecting to the Sweetwater Authority, which currently serves the existing power plant at the site. (Ex. 1, §§ 1.1.1, 2.1.7, 5.15.2.1.1, Appendix 2A.) Potable water will be used for safety and sanitary purposes as well as plant service water. Service water will be treated by ion exchange demineralization and used for inlet air fogging, water wash for the compressor, and turbine combustor water injection. Bottled drinking water will be supplied for plant personnel. Demineralized water will be stored in a single 100,000 gallon tank, which corresponds to approximately 12 hours of plant operation. (Ex. 1, §§ 1.1, 1.5.5, 2.1.7, 5.15.2.1.) The record indicates that this water source, combined with the on-site storage capacity, yields sufficient likelihood of a reliable supply of water. See also, the **Soil and Water Resources** section of this Decision.

The site is located in Seismic Zone 4, which presents a high potential for earthquakes to affect project reliability. (Ex. 1, §§ 2.2.1.1.1, 5.4.1.2 et seq.) See discussion in the **Geology and Paleontology** section of this Decision. Seismic design standards have been improved over the years to increase seismic stability of new power plants compared with the design of older plants. According to

Staff, compliance with current seismic design standards will ensure that the CVEUP can perform at least as well as existing plants in the electrical system. (Ex. 200, p. 5.4-5.) The Conditions of Certification in the **Facility Design** and **Geology/Paleontology** sections of this Decision require the project to be designed and constructed in accordance with current seismic design standards.

Fill soil was added to the site in connection with the construction of the existing plant to bring the site five feet above the flood elevation of 45 feet. There is no evidence that flooding will affect power plant reliability. (Ex. 1, §§ 2.2.1.1.1, 5.4.1.5.7; Ex. 200, p. 5.4-5; RT October 2, 2008 277:4 – 278:7; 279:6 - 17.)

According to Applicant, the CVEUP can provide up to 100 MW (nominal) of peaking power and quick start capability[15] to SDG&E to support local demand in the San Diego region.[16] (Ex. 1, § 1.1.) The Air District will permit the project to operate up to 4,400 hours during each year of its operating life. (Ex. 202, p. 12, Condition 5; Ex. 1 § 1.1.2.)

The CVEUP is expected to achieve an equivalent availability factor in the range of 92 to 98 percent. (Ex. 1, §§ 2.1.2, 2.2.2.1.) This compares favorably with the North American Electric Reliability Council (NERC) assessment for similar plants in the United States and Canada, which found an overall Equivalent Availability Factor of 91.82 percent for generators 50 MW or larger. According to Staff, the project's LM 6000PC SPRINT gas turbines have been on the market for several years and can be expected to exhibit high availability and outperform the fleet of older gas turbines that were included in the NERC assessment. Further, since the CVEUP will consist of two parallel gas turbine generating trains, maintenance can be scheduled according to typical industry standards when full output is not required to meet market demand. Thus, CVEUP's projection of an availability factor of 92 to 98 percent appears achievable. (Ex. 200, p. 5.4-6.)

Finally, the evidence shows that the procedures for design, procurement, and operation are in keeping with industry norms and will likely result in an adequately reliable plant. (Ex. 200, p. 5.4-6.)

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[15] The LM6000 PC SPRINT machines employed by this project can achieve full load from a cold start in 10 minutes (Ex. 1, § 1.1.1; Ex. 200, p. 5.4-2.)

[16] The CVEUP would be dispatched in times of high electrical load, when base load plants are not operating, or during emergency conditions. (Ex. 1, § 1.1.2.)

FINDINGS AND CONCLUSIONS

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

1. Implementation of Quality Assurance/Quality Control programs during design, procurement, construction, and operation of the plant, as well as adequate maintenance and repair of the equipment and systems, will ensure the project is adequately reliable.

2. Adequate fuel and water capacity are available for project operations.

3. The project's two LM 6000PC SPRINT generators operating in parallel as independent equipment trains provide inherent reliability and equipment redundancy.

4. The project's estimated 92 to 98 percent availability factor is consistent with industry norms for power plant reliability.

5. The project will meet or exceed industry norms for reliability, including reliability during seismic events, and will not degrade the overall electrical system.

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** and **Geology/Paleontology** sections 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. Res. 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 Commission also conducts an environmental review of the "whole of the action" related to the power plant proposal. This may include examining the environmental effects of facilities made necessary by the construction and operation of the proposed power plant but not licensed by the Commission.

The California Independent System Operator (CAISO) is responsible for ensuring electric system reliability for participating entities, and determines both the standards necessary to achieve system reliability and whether a proposed project conforms to those standards. The Commission works in conjunction with the CAISO in assessing a project's potential impacts of connecting to the electricity grid. The CAISO has reviewed a utility System Impact Study (SIS), and provided its analysis, conclusions and recommendations, in a preliminary approval or concurrence letter. (Ex. 9.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Description

Each generating unit would be connected to the low side of a three-winding 72/96/120 MVA generator step-up (13.8/69-kV) transformer through a circuit breaker and an intermediate 13.8-kV, 3000A bus. The high voltage side of the step-up transformer would be connected to the existing 69-kV generator tie line through an existing 69-kV circuit breaker and a disconnect switch. The existing 1033 ACSR, 1,500 foot long generator tie line connects to San Diego Gas and Electric Company's (SDG&E) 69-kV Otay Substation, which in turn is connected to the electric grid. (Ex. 200, p. 5.5-4.)

2. Study Results

The SIS was performed by the California ISO at the request of the project owner, to identify transmission system impacts caused by the CVEUP on SDG&E's transmission system. The SIS included Power Flow study (Thermal Analysis and Voltage Analysis), Short Circuit study, and Dynamic Stability Analyses (Transient

Stability Analysis). The SIS modeled the proposed CVEUP project for a net output of 93 MW. The base cases included all major California ISO transmission expansion projects, different generation and import scenarios in the SDG&E area. Generation included planned generating facilities ahead of the CVEUP in the CAISO generation interconnection queue and all regulatory must-take generation units in the SDG&E area. Detailed SIS assumptions are described in the SIS. Power Flow studies were conducted both with and without the CVEUP project connection to the SDG&E grid, at the Otay Substation using base cases modeling 2008 and 2010 summer peak conditions. The Power Flow study assessed the project's impact on the thermal loading of the transmission lines and equipment. Dynamic Stability analyses were conducted using the 2008 summer peak base cases to determine whether the project would create instability in the system following certain selected outages. The Short Circuit study was conducted with and without the project to determine if its interconnection could overstress the existing substation facilities. (Ex. 200, p. 5.5-5.)

The SIS identifies existing overloads in the power systems and new or increased overloads resulting from operation of the CVEUP. The overloading problems affect transmission facilities under N-0 (normal conditions), N-1 (single contingency), and N-2 (double contingency) conditions.

Under normal conditions the existing generation tie-line would be capable of carrying the full CVEUP output if the existing TL6929 relays in the Otay Substation are reset to a higher rating (a continuous line rating of 136 MVA). Resetting the relays would occur within the fence line of the Otay Substation.

The South Bay – Montgomery Tap 69-kV line is overloaded under N-1 and N-2 contingency conditions. The overloads can be mitigated by resetting the TL642 relays to achieve a continuous line rating of 200 MVA. This work would occur within the fence line of a SDG&E substation.

The South Bay – Sweetwater 69-kV Line in also overloaded under N-1 and N-2 contingency conditions. Mitigation options are: 1) reconductoring the approximately 3,800-foot long, single 1750 kcmil underground aluminum cable with bundled 1750 kcmil aluminum underground cable between the South Bay and Sweetwater Substations, replacing two existing wood poles with steel poles, and replacing two 69-kV disconnect switches at the South Bay Substation; or 2) installing a Special Protection Scheme (SPS) to trip CVEUP's generators when

the line is overloaded. The Applicant has chosen to implement the SPS mitigation option.

The Otay – Otay Tap 69-kV line is overloaded under N-1 and N-2 contingency conditions. Mitigation options are 1) reconductoring the approximately 5,330-foot long, single overhead 4/0 copper conductor with 636 ACSS conductor between Otay Substation and Otay Tap, replacing 27 existing wood poles with steel poles, and replacing a circuit breaker, two disconnect switches and a 69-kV switch; or 2) installing SPS to trip CVEUP generation when the line is overloaded. The Applicant has chosen the SPS alternative, which would occur within the fence line of SDG&E's substation.

Additional N-2 contingency condition overloads will occur on the South Bay – Montgomery Tap – Sweetwater and South Bay – Sweetwater 69-kV lines: The overloads are mitigated by installing SPS at Otay Substation to trip CVEUP generation units when one of the lines is open and the other line is loading in excess of 205 MVA. This work would occur within the fence line of the existing substation. (Ex. 200, pp. 5.5-6 to 5.5-7.)

Dynamic Stability studies for the CVEUP project were conducted using 2008 summer peak base cases to determine if the project would create any adverse impact on the stable operation of the transmission grid in the event of selected N-1 and N-2 outages. The machine dynamics data remained unchanged between 2008 and the 2010 time period, therefore 2008 summer peak study results are acceptable. No adverse impacts on the stable operation of the transmission system in the event of the selected disturbances were found.

Short circuit studies were conducted using 2010 summer peak base cases to determine the degree to which the addition of the CVEUP project could increase fault duties at SDG&E's substations, adjacent utility substations, and other 69-kV and 138-kV busses within the study area. The addition of the CVEUP would cause fault duty increases in two 69-kV circuit breakers (MG 641 and MG 642) at the Montgomery Substation and nine breakers in the South Bay Substation. Interconnection of the CVEUP would require the replacement of two 69-kV circuit breakers at the Montgomery Substation. SDG&E will address the effect on nine circuit breakers in the South Bay Substation through its Grid Assessment process. The remaining breakers at the substations are adequate to withstand the post project incremental fault currents.

With implementation of the above mitigation measures, Staff found that the project interconnection would comply with NERC/WECC planning standards and California ISO reliability criteria and all other applicable LORS. (Ex. 200, p. 5.5-7.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we make the following findings and conclusions:

1. The record includes a System Impact Study (SIS) which analyzes potential reliability and congestion impacts that would occur when the CVEUP interconnects to the grid.

2. The SIS identified overloads in the transmission system which the addition of the CVEUP will create under certain contingencies.

3. Those transmission system impacts can be mitigated by installation of Special Protection Schemes, and replacement of breakers and switches.

4. Dynamic Stability studies conducted for CVEUP indicated that the project will have no adverse impacts on the stable operation of the transmission system.

5. A Short Circuit Study demonstrated that the CVEUP would cause fault duty increases in two 69-kV circuit breakers (MG 641 and MG 642) at the Montgomery Substation and nine breakers in the South Bay Substation. Replacement of the affected breakers will mitigate the impact.

6. The project interconnection will comply with NERC/WECC planning standards and CAISO reliability criteria and applicable LORS.

7. The Conditions of Certification below are adequate to ensure the CVEUP does not adversely impact the transmission grid.

We therefore conclude that with the implementation of the various mitigation measures specified in this Decision, the proposed transmission interconnection for the project will not contribute to significant direct, indirect, or cumulative impacts. The Conditions of Certification below ensure that the transmission-related aspects of the Chula Vista Energy Upgrade Project will be designed, constructed, and operated in conformance with the applicable laws, ordinances, regulations, and standards identified in the record.

CONDITIONS OF CERTIFICATION

TSE-1 The project owner shall provide the Compliance Project Manager (CPM) and the Chief Building Official (CBO) with 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 both a description and a 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 fewer, if mutually agreed upon by the project owner and the CBO) before the start of construction the project owner shall submit the schedule, a master drawing list, and a master specifications list to both the CBO and the CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment (see a list of major equipment in **Table 1: Major Equipment List** below). Additions and deletions shall be made to the table only with both CPM and CBO approval. The project owner shall provide schedule updates in the monthly compliance report.

Table 1: Major Equipment List
Breakers
Step-up transformer
Switchyard
Busses
Surge arrestors
Disconnects
Take-off facilities
Electrical control building
Switchyard control building
Transmission pole/tower
Grounding system

TSE-2 Before the start of construction, the project owner shall assign to the project an electrical engineer and at least one of each of the following:

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 and fully competent and proficient in the design of power plant structures and equipment supports; or

d) A mechanical engineer (B & P Code §§ 6704 et seq. require state registration to practice as either a civil engineer or a 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, or 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 as required by 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 earth work and require changes; if site conditions are unsafe or do not conform with the predicted conditions used as the basis for design of earth work 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 fewer if mutually agreed to by the project owner and the CBO) before 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 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 corrective action (2001 California Building Code, 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 become a controlled document and shall be submitted to the CBO for review and approval and refer to this Condition of Certification.

Verification: The project owner shall submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM within 15 days of receipt. If disapproved, the project owner shall advise the CPM, within five days, the reason for the disapproval, along with the revised corrective action required to obtain the CBO's approval.

TSE-4 For the power plant switchyard, outlet line and termination, the project owner shall not begin any construction until plans for that increment of construction 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 energization 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 fewer if mutually agreed to by the project owner and the CBO) before 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, and outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer verifying compliance with all applicable LORS, and send the 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, and the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations, as determined by the CBO.

1. The CVEUP project will be interconnected to SDG&E's Otay Substation via the existing radial 69-kV transmission lines. The existing generator tie line is approximately 1,500 feet long and built with 1033 kcmil ACSR conductors.

2. The interconnection of the CVEUP at the Otay Substation will require reset of the existing relays to achieve a continuous line rating of 136 MVA.

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

4. Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be rated to comply with a short-circuit analysis.

5. 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.

6. Termination facilities shall comply with applicable SDG&E interconnection standards.

7. The project owner shall provide to the CPM:

   a. the final Facility Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable;

   b. the executed project owner and California ISO facility interconnection agreement.

Verification: At least 60 days before the start of construction of transmission facilities (or fewer days if mutually agreed upon by the project owner and CBO), the project owner shall submit to the CBO for approval:

a) Design drawings, specifications, and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, CA ISO standards, National Electric Code (NEC) and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment;

b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"[16] 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 National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC), and related industry standards;

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

d) The final DFS, including a description of facility upgrades, operational mitigation measures, and/or SPS sequencing and timing if applicable, shall be provided concurrently to the CPM; and

e) 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 the facilities described in this condition and request approval to implement such changes.

TSE-6 The project owner shall provide the following notice to the California ISO prior to synchronizing the facility with the California electric transmission system:

a) At least one week prior to synchronizing the facility with the grid for testing, provide the California ISO with a letter stating the proposed date of synchronization; and

b) At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the California ISO's outage coordination department.

Verification: The project owner shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one week before initial synchronization with the grid. The project owner shall contact the California ISO's outage coordination department (Monday through Friday, between the hours of 7:00 a.m. and 3:30 p.m. at (916) 351-2300) at least one business day prior to synchronizing the facility with the grid for testing. A report of that conversation with the California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California electric transmission system for the first time.

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

TSE-7 The project owner shall be responsible for inspection of the transmission facilities during and after project construction, and for any subsequent CPM- and CBO-approved changes, to ensure conformance with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC) and related industry standards. In cases of non-conformance, the project owner shall inform the CPM and CBO, in writing and within 10 days of the discovery of such non-conformance, and the actions that will be taken to correct it.

Verification: Within 60 days after the 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 charge. A statement verifying conformity with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC) and related industry standards;

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 charge or an acceptable alternative verification. "As built" drawings of the electrical, 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; and

c) 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 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 section summarizes the analysis of potential impacts of the transmission tie-line on aviation safety, radio-frequency interference, audible noise, fire hazards, nuisance shocks, hazardous shocks, and electromagnetic field exposure.

SUMMARY AND DISCUSSION OF THE EVIDENCE

The CVEUP will be interconnected to the electric grid via an existing 69-kilovolt (kV) single-circuit line currently connecting the existing plant to San Diego Gas & Electric's (SDG&E's) Otay Substation, 1,020 feet north of the site. New on-site conductors will connect CVEUP with the existing overhead single-circuit 69-kV line via an on-site 69-kV switchyard. Reliability upgrades will be made to the 69-kV line as it presently exists and at the Otay Substation to accommodate the power from CVEUP. The line that is owned, operated, and maintained by SDG&E and the necessary upgrades will be according to SDG&E guidelines. (Ex. 200, pp. 4.11-3 to 4.11-4.)

1. Potential Impacts

Aviation Safety. Any potential hazard to area aircraft would arise from the potential for collision in the navigable airspace. Federal Aviation Administration (FAA) notification is required in cases of structures over 200 feet from the ground or if the structure, though below 200 feet in height, is within the restricted airspace in the approaches to public or military airports. For airports with runways longer than 3,200 feet, the restricted space is an area extending 20,000 feet from the runway. For airports with runways of 3,200 feet or less, the restricted airspace extends 10,000 feet from the runway. For heliports, the restricted airspace extends 5,000 feet.

Traffic and Transportation Table 1 lists the six airports in the CVEUP's vicinity. The nearest public airport to the CVEUP site is Brown Field Municipal Airport whose nearest runway of approximately 3,180 feet in length is 21,015 feet away, placing the project's transmission line outside the restricted airspace for which FAA notification is necessary.

The nearest military airport is Naval Outlying Field, Imperial Beach. That airport has a runway 5,022 feet long as well as a heliport. The nearest distance between the runway and CVEUP is 17,900 feet, placing CVEUP within the applicable restricted space and thus requiring FAA notification. As the proposed line's structure would be much less than the 200 feet the FAA regards as triggering the concern about aviation safety, Staff does not consider the line as posing an aviation hazard. Furthermore, the proposed line is of similar structural dimensions as the other area transmission lines that are connected to the same SDG&E Otay Substation without posing an aviation hazard. The Applicant intends to notify the FAA as required. (Ex. 200, pp. 4.11-4 to 4.11-5.)

Interference: Radio-Frequency Communication and Audible Noise. Transmission line-related radio-frequency interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor, known as "corona discharge." The level of any such interference usually depends on the magnitude of the electric fields involved and the distance from the line. The potential for such impacts is, therefore, minimized by reducing the line electric fields and locating the line away from inhabited areas.

The proposed line will use low-corona designs to reduce surface-field strengths. Corona-related interference is usually of concern for lines of 345-kV and above, and not for 69-kV lines such as the proposed line. Similar existing lines do not currently cause corona-related complaints along their routes, so there should not be any corona-related radio-frequency interference or related complaints in the general project area. However, Condition of Certification **TLSN-2** will ensure mitigation as required by the Federal Communications Commission (FCC) in the unlikely event of complaints.

Audible noise can occur from corona discharges, though it is generally limited to transmission lines of 345-kV and larger. This noise does not generally extend beyond the transmission line right-of-way and thus would be inaudible to any sensitive receptor in the vicinity. (Ex. 200, pp. 4.11-5 to 4.11-6.)

Fire Hazards. Fire hazards include fires that could be caused by sparks from overhead conductors or direct contact between the conductors and nearby trees and other combustible objects. Standard fire prevention and suppression measures used for similar SDG&E lines will be implemented for the proposed project lines. Condition of Certification **TLSN-4** will ensure proper clearing of combustible material from the transmission line right-of-way. (Ex. 200, p. 4.11-6.)

Hazardous Shocks. Hazardous shocks could result from direct or indirect contact between an individual and the energized line, whether overhead or underground. Such shocks are capable of causing serious injury or death. Compliance with California Public Utilities Commission (CPUC) GO-95, as required by Condition of Certification **TLSN-1**, will satisfactorily mitigate any hazard. (Ex. 200, p. 4.11-6.)

Nuisance Shocks. Nuisance shocks are caused by current flow at levels generally incapable of causing significant physiological harm. They result mostly from direct contact with metal objects electrically charged by fields from the energized line. The potential for nuisance shocks around the proposed line will be minimized through standard industry grounding practices. Condition of Certification **TLSN-5** will ensure their implementation. (Ex. 200, pp. 4.11-6 to 4.11-7.)

Electric and Magnetic Field (EMF) 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. While the available evidence has not established that such fields pose a significant health hazard to exposed humans, neither does it serve as proof of a definite lack of a hazard.

While there is considerable uncertainty about EMF health effects, the following facts have been established from the available information:

- Any exposure-related health risk to the exposed individual will likely be small;
- No biologically significant exposures have been established;
- Most health concerns are about the magnetic field; and
- The measures employed for such field reduction can affect line safety, reliability, efficiency, and maintainability, depending on the type and extent of such measures.

Field intensities are estimated or measured for a height of one meter above the ground, in units of kilovolts per meter (kV/m) for the electric field, and milligauss (mG) for the companion magnetic field. Their magnitude depends on line voltage (in the case of electric fields), the geometry of the support structures, degree of cancellation from nearby conductors, distance between conductors, and in the case of magnetic fields, amount of current in the line.

Since there are no residences in the immediate vicinity of the proposed project line, there would not be the long-term residential EMF exposures mostly responsible for the health concern of recent years. The only project-related EMF exposures of potential significance are the short-term exposures of plant workers, regulatory inspectors, maintenance personnel, visitors, or individuals in the vicinity of the line. These types of exposures are short-term and well understood as not significantly related to the health concern.

Specific field strength-reducing measures are incorporated into power line designs to ensure the field strength minimization currently required by the CPUC in light of the concern over EMF exposure and health. These reduction measures may include the following:

- Increasing the distance between the conductors and the ground;
- Reducing the spacing between the conductors;
- Minimizing the current in the line; and
- Arranging current flow to maximize the cancellation effects from interacting of conductor fields.

Since optimum field-reducing measures will be incorporated into the proposed line design, further mitigation is unnecessary. Under Condition of Certification **TLSN-3,** however, validation of assumed reduction efficiency by taking before and after field strength measurements is required. (Ex. 200, pp. 4.11-7 to 4.11-9.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we make the following findings and conclusions:

1. The proposed lines and related facilities are not close enough to the nearest airport to pose an aviation hazard according to current FAA criteria.

2. The long-term, mostly residential magnetic exposure from the proposed line would be insignificant as a health concern given the absence of residences along the proposed route. On-site worker or public exposure would be short term and at levels expected for lines of similar design and current-carrying capacity. Such exposure has not been established as posing a significant human health hazard.

3. The potential for nuisance shocks will be minimized through grounding the project's lines and other field-reducing measures required by standard industry practices.

4. The Conditions of Certification reasonably ensure that the project's transmission tie-line will not have significant environmental impacts on public health and safety, nor cause impacts in terms of, radio/TV communication interference, audible noise, fire hazards, nuisance or hazardous shocks, or electromagnetic field exposure.

We therefore conclude that with implementation of the Conditions of Certification the project will conform with all applicable laws, ordinances, regulations, and standards relating to Transmission Line Safety and Nuisance.

CONDITIONS OF CERTIFICATION

TLSN-1 The project owner shall provide verification from SDG&E that the proposed CVEUP line would be upgraded, added to, and operated by SDG&E according to the requirements of CPUC's GO-95, GO-52, GO-131-D, Title 8, and Group 2, High Voltage Electrical Safety Orders, sections 2700 through 2974 of the California Code of Regulations, and SDG&E's EMF-reduction guidelines.

Verification: The project owner shall submit the required verification to the Compliance Project Manager (CPM) at least 30 days before the CPEUP line is energized.

TLSN-2 The project owner shall provide verification of SDG&E's plan to ensure that every reasonable effort is made to identify and correct, on a case-specific basis, any complaints of interference with radio or television signals from operation of the proposed CVEUP line and associated switchyard.

Verification: The required verification shall be provided to the CPM at least 30 days before energization of the CVEUP line.

TLSN-3 The project owner shall provide verification that SDG&E shall use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity along the route. The measurements shall be made before and after energization according to the American National Standard Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) standard procedures. These measurements shall be completed no later than six months after the start of operations with a copy sent to the CPM.

Verification: The project owner shall provide verification of SDG&E's intention to allow for compliance with these measurement requirements 30 days before line energization.

TLSN-4 The project owner shall provide verification from SDG&E's transmission operations program (that would apply to the CVEUP line) is one ensuring that the rights-of-way of the proposed transmission line would be kept free of combustible material as required under the provisions of section 4292 of the Public Resources Code and section 1250 of Title 14 of the California Code of Regulations.

Verification: The project owner shall provide such verification at least 30 days before CVEUP's operation.

TLSN-5 The project owner shall provide verification that SDG&E's transmission line operations program for CVEUP and similar SDG&E lines provides for grounding of all permanent metallic objects within the right-of-way according to industry standards.

Verification: At least 30 days before the lines are energized, the project owner shall transmit the verification letter to the CPM.

V. PUBLIC HEALTH AND SAFETY ASSESSMENT

Operation of the CVEUP 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. In consultation with the local air pollution control district, the Energy Commission determines whether the project will likely conform with applicable laws, ordinances, regulations and standards (LORS), whether it will likely result in significant air quality impacts, including violations of ambient air quality standards, and whether the project's proposed mitigation measures will likely reduce potential impacts to insignificant levels.

National ambient air quality standards (NAAQS) have been established for seven 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), particulate matter less than 10 microns in diameter (PM10) and particulate matter less than 2.5 microns in diameter (PM2.5). The review of potential impacts also includes the precursor pollutants for ozone, which are nitrogen oxides (NO_x) and volatile organic compounds (VOC), and the precursors for PM10 and PM2.5, which are primarily NO_x, sulfur oxides (SO_x), and ammonia (NH_3). Sulfur oxides (SO_x) react in the atmosphere to form particulate matter and are major contributors to acid rain.

The federal Clean Air Act[18] requires new major stationary sources of air pollution to comply with federal requirements in order to obtain Authority to Construct (ATC) permits. The U.S. Environmental Protection Agency (U.S. EPA), which administers the Clean Air Act, has designated all areas of the United States as attainment/unclassifiable (air quality better than the NAAQS or unable to

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

determine) or nonattainment (worse than the NAAQS) for criteria air pollutants. The Clean Air Act also requires a periodic review of the science upon which the standards are based and appropriate updates as necessary.[19]

There are two major components of air pollution law: New Source Review (NSR) for evaluating pollutants that violate federal standards and Prevention of Significant Deterioration (PSD) to evaluate pollutants that do not violate federal standards. Enforcement of NSR and PSD rules is delegated to local air districts, which are established by federal and state law. The San Diego Air Pollution Control District (SDAPCD, or District) has jurisdiction in San Diego County and its rules apply to the CVEUP.[20] (Ex. 200, p. 4.1-3.)

The project is also subject to the federal New Source Performance Standards (NSPS), which are generally delegated to the local air district; however, local emissions limitation rules are typically more restrictive than NSPS requirements. (Ex. 200, pp. 4.1-2; 4.1-34.)

Both the U.S. EPA and the California Air Resources Board (CARB) have established allowable maximum ambient concentrations for the criteria pollutants identified above. The California Ambient Air Quality Standards (CAAQS) are more stringent than federal standards. Federal and state ambient air quality standards are shown below in **AIR QUALITY Table 1** of this Decision.

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[19] Ambient air quality standards are designed to protect people who are most susceptible to respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. The ambient standards are also set to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. (Ex. 200, p. 4.1-4.)

[20] The CVEUP is not subject to PSD review since it is not considered a major source (as defined in 40 CFR Part 52, one that emits any one pollutant in excess of 250 tons/year) for any applicable PSD pollutants. (Ex. 200, P. 4.1-3.)

AIR QUALITY Table 1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone (O_3)	8 Hour	0.075 ppm [b] (147 µg/m^3)	0.070 ppm (137 µg/m^3)
	1 Hour	—	0.09 ppm (180 µg/m^3)
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	0.03 ppm (56 µg/m^3)
	1 Hour	—	0.18 ppm (338 µg/m^3) [a]
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	0.030 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 (PM10)	Annual Arithmetic Mean	—	20 µg/m^3
	24 Hour	150 µg/m^3	50 µg/m^3
Fine Particulate Matter (PM2.5)	Annual Arithmetic Mean	15 µg/m^3	12 µg/m^3
	24 Hour	35 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	—	0.01 ppm (26 µg/m^3)
Visibility Reducing Particulates	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%.

(Ex 200, p. 4.1-6.).

[a] ARB has approved a revised 1-hour standard for NO_2 (0.18 ppm or 338 ug/m^3) and a new annual standard for NO_2 (0.030 ppm or 56 ug/m^3). These standards were recently approved by the Office of Administrative Law and are set to become effective as of March 30, 2008. While these standards were approved after the project application became data adequate, to be conservative, we are analyzing potential impacts based on these new standards.

[b] U.S.EPA has approved a revised 8-hour ozone standard of 0.075 ppm. The attainment status, attainment plans and other requirements of this revised standard will not be fully implemented for several years

Commission adopted a similar EPS for local publicly-owned electric utilities.[21] This standard applies to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of five years or longer, including contracts with power plants located outside of California. As a peaking project, the CVEUP is not subject to the EPS; however, it will emit approximately 1,000 pounds of CO_2 per MWh and is subject to the GHG reporting requirements established under AB 32. (Ex. 200, p. 4.1-53.)

SUMMARY OF THE EVIDENCE

The project site is located in southern San Diego County, in the City of Chula Vista, approximately one-sixth of a mile south of the intersection of Main Street and Albany Avenue. The project site is located approximately 1.25 miles west of Interstate-805, 1.75 miles east of Interstate-5, and 3.6 miles north of the Mexican border. (Ex. 200, p. 4.1-7.)

The San Diego Air Basin (SDAB) is designated as nonattainment for both the federal and state ozone and PM10 standards. **AIR QUALITY Table 2** below summarizes federal and state attainment status of criteria pollutants for the SDAB.

AIR QUALITY Table 2
Federal and State Attainment Status for the San Diego Air Basin

Pollutant	Attainment Status	
	Federal	**State**
Ozone	Nonattainment (8-hr)	Serious Nonattainment (1-hr)
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM10	Attainment	Nonattainment
PM2.5	Attainment	Nonattainment

(Ex. 200, p. 4.1-7.)

1. SDAPCD's Final Determination of Compliance

SDAPCD released its Final Determination of Compliance (FDOC) on May 2, 2008. The FDOC contains the permit conditions specified by the District to

[21] Title 20, California Code of Regulations, section 2900 et seq.

ensure compliance with applicable federal, state, and local air quality requirements.[22] (Ex. 202.) The District's permit conditions are incorporated into this Decision. (Cal. Code Regs, tit. 20, §§ 1744.5, 1752.3.) In the power plant certification process, the Air District's FDOC serves as an in-lieu Authority to Construct (ATC) permit, which is required for new air pollution sources within the Air District's jurisdiction. The ATC cannot be implemented unless the Energy Commission certifies the project.

2. Ambient Air Quality

The following discussion provides an overview of air quality conditions in the SDAB and describes the issues addressed by the Applicant and Staff in consultation with the District.

a. Ozone

Ozone is not directly emitted from stationary or mobile sources, but is formed as the result of chemical reactions in the atmosphere between precursor air pollutants. The primary ozone precursors are nitrogen oxides (NO_x) and volatile organic compounds (VOC), which interact in the presence of sunlight and warm air temperatures to form ozone. Ozone formation is highest in the summer and fall when abundant sunshine and high temperatures trigger the necessary photochemical reactions, and lowest in the winter. (Ex. 200, p. 4.1-8.)

AIR QUALITY Table 3 below summarizes the best representative ambient ozone data collected from the Chula Vista monitoring station. The table includes the maximum 1-hour and 8-hour ozone levels and the number of days above the state or national standards. Ozone formation is higher in spring and summer and lower in the winter. The SDAB was classified as an attainment area for the previous federal 1-hour ozone standard (no longer applicable) and is classified as a basic nonattainment area for the federal 8-hour ozone standard. The SDAB is also classified as a serious nonattainment area for the state 1-hour ozone standard.

[22] The conditions include emissions limitations, operating limitations, offset requirements, and testing, monitoring, record keeping and reporting requirements that ensure compliance with air quality LORS.

AIR QUALITY Table 3
Ozone Air Quality Summary, 1990–2006 (ppm)

Year	Days Above CAAQS 1-Hr	Month of Max. 1-Hr Avg.	Max. 1-Hr Avg.	Days Above NAAQS 8-Hr	Month of Max. 8-Hr Avg.	Max. 8-Hr Avg.
Chula Vista						
1990	21	JUN	0.150	10	OCT	0.101
1991	13	OCT	0.150	6	APR	0.105
1992	14	SEP	0.150	6	APR	0.105
1993	12	SEP	0.133	2	SEP	0.090
1994	4	SEP	0.099	0	OCT	0.084
1995	7	FEB	0.140	1	FEB	0.098
1996	1	JUN	0.098	0	OCT	0.080
1997	10	NOV	0.117	3	NOV	0.099
1998	2	JUL	0.099	0	OCT	0.079
1999	4	APR	0.105	0	APR	0.080
2000	0	APR	0.091	0	MAR	0.077
2001	2	SEP	0.102	0	JUN	0.079
2002	1	SEP	0.115	0	MAY	0.073
2003	0	OCT	0.075	0	JUL	0.056
2004	1	MAY	0.097	1	MAY	0.087
2005	0	OCT	0.093	0	APR	0.081
2006	0	JUN	0.084	0	MAY	0.068
California Ambient Air Quality Standard (CAAQS): 1-Hr, 0.09 ppm, 8-Hr, 0.070 ppm National Ambient Air Quality Standard (NAAQS): 8-Hr, 0.08 ppm.						

(Ex. 200, p. 4.1-9.)

The 1-hour and 8-hour ozone concentrations were highest in 1990 and the number of exceedances was also highest in 1990. From 1997 to the present, the trend for the number of exceedances, as well as the peak concentrations, has remained relatively flat.

b. Respirable Particulate Matter (PM10)

PM10 is a mixture of particles and droplets that vary in size and chemical composition, depending upon the origin of the pollution. PM10 can be emitted directly or it can be formed many miles downwind from emission sources when various precursor pollutants interact in the atmosphere. Gaseous emissions of pollutants like NO_x, SO_x, and VOC from turbines, and ammonia from NO_x control equipment, given the right meteorological conditions, can form 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 are formed through complex chemical reactions in the atmosphere. (Ex. 200, p. 4.1-12.)

As **AIR QUALITY Table 4** below indicates, the project area annually experiences a number of violations of the state 24-hour PM10 standards. The SDAB is classified as an attainment area for the federal PM10 standard and as a nonattainment area for the state PM10 standards. The highest PM10 concentrations are generally measured in the fall and winter when there are frequent low-level inversions. During the wintertime high PM10 episodes, the contribution of ground level releases to ambient PM10 concentrations is disproportionately high.

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AIR QUALITY Table 4

PM10 Air Quality Summary, 1990–2006 ($\mu g/m^3$)

Year	Days * Above Daily CAAQS	Month of Max. Daily Avg.	Max. Daily Avg.	Annual Arithmetic Mean
Chula Vista				
1990	38	NOV	67	31.7
1991	41	JAN	73	33.8
1992	12	JAN	54	29.0
1993	12	NOV	56	26.9
1994	12	JAN	61	28.0
1995	31	DEC	103	32.2
1996	12	JAN	62	27.3
1997	12	OCT	58	28.3
1998	0	APR	40	22.8
1999	--	DEC	61	--
2000	--	NOV	54	--
2001	12	JAN	66	28.6
2002	6	DEC	52	27.1
2003	12	NOV	78	27.6
2004	0	JAN	45	26.5
2005	13	OCT	53	27.0
2006	12	OCT	52	26.3

CAAQS-California Ambient Air Quality Standard: 24-Hr, 50 $\mu g/m^3$;
Annual Arithmetic, 20 $\mu g/m^3$
National Ambient Air Quality Standard: 24-Hr, 150 $\mu g/m^3$

* Days above the state standard (calculated), rounded to nearest whole day: PM10 is monitored approximately once every six days. This value is a mathematical estimate of how many days the PM10 concentrations would have been greater than the ambient air quality standard had each day been monitored.

-- Data not available

(Ex. 200, p. 4.1-12.)

There is an overall gradual downward trend for PM10 concentrations and number of violations of the California 24-hour standard since 1995; however, there has been little progress since 1997.

c. Fine Particulate Matter (PM2.5)

The SDAB is currently classified as nonattainment for the state fine particulate matter (PM2.5) standard and attainment of the federal standards. The highest PM2.5 concentrations are generally measured in the winter. The relative contribution of wood-smoke particles to the PM2.5 concentrations may be even higher than their relative contribution to PM10 concentrations, considering that most of the wood-smoke particles are smaller than 2.5 microns. (Ex. 200, p. 4.1-14.)

As **AIR QUALITY Table 5** indicates, the 24-hour (three-year average 98th percentile) PM2.5 concentration levels have been declining from 1999–2006 at the Chula Vista monitoring station. The annual arithmetic mean also appears to have been declining from 1999–2006, but as of 2004 continue to be above the California Ambient Air Quality Standards of 12 $\mu g/m^3$.

AIR QUALITY Table 5
PM2.5 Air Quality Summary, 1999–2005 ($\mu g/m^3$)

Year	National Maximum Daily	98th Percentile Maximum Daily	3-Yr National 98th Percentile Maximum Average	State Annual Average	National Annual Average
Chula Vista					
1999	47.1	31.5	--	--	15.1
2000	40.5	32.5	--	--	13.1
2001	41.0	31.0	32	--	15.5
2002	41.0	36.0	33	13.9	13.9
2003	40.5[a]	39.2	35	14.4	14.4
2004	32.7	30.7	35	12.2	12.2
2005	34.3	30.2	33	12.0	11.8
2006	30.2	24.0	28	11.2	11.2

California Ambient Air Quality Standard: Annual Arithmetic Mean, 12 $\mu g/m^3$
National Ambient Air Quality Standard: 24-Hr Avg. Conc., 35 $\mu g/m^3$ (based on 98% of the daily concentrations, average over three years); Annual Arithmetic Mean, 15 $\mu g/m^3$
-- Data not available
a – Value is second highest day. The highest day occurred during the 2003 firestorm and is not representative.

(Ex. 200, p. 4.1-15.)

The maximum daily PM2.5 concentrations shown in **AIR QUALITY Table 5** all occurred in the late fall or winter (fourth and first quarters).

d. Carbon Monoxide (CO)

Mobile sources are the principal sources of CO emissions. High levels of CO emissions can also be generated from fireplaces and wood-burning stoves. The highest concentrations of CO occur when low wind speeds and a stable atmosphere trap the pollution emitted at or near ground level in what is known as the stable boundary layer. These conditions occur frequently in the wintertime and late in the afternoon, persist during the night, and may extend one or two hours after sunrise. The peak CO concentrations occur during the rush hour traffic in the mornings and afternoons. CO concentrations in San Diego County and the rest of the state have declined significantly due to two statewide 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. Today, all the areas of California are in attainment with the CO ambient air quality standards. (Ex. 200, p. 4.1-15.)

As **AIR QUALITY Table 6** below shows, the maximum 1-hour and 8-hour CO concentrations in the project area are less than the California Ambient Air Quality Standards. CO is considered a local pollutant, as it is found in high concentrations only near the source of emission. According to the data recorded at the Chula Vista air monitoring station, there have been no violations of the California Ambient Air Quality Standards since before 1990 (see **AIR QUALITY Table 6**).

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AIR QUALITY Table 6
CO Air Quality Summary, 1990–2006 (ppm)

Year	Month of Max. 8-Hr Average	Maximum 1-Hr Average	Maximum 8-Hr Average
Chula Vista			
1990	JAN	7.0	4.75
1991	JAN	7.0	3.88
1992	JAN	7.0	3.75
1993	DEC	5.3	3.30
1994	DEC	7.2	3.64
1995	NOV	5.4	3.84
1996	JAN	5.7	3.36
1997	DEC	5.4	3.76
1998	DEC	4.1	2.73
1999	NOV	5.4	3.04
2000	DEC	5.8	3.14
2001	DEC	5.6	4.65
2002	FEB	4.3	2.61
2003	OCT	6.9	5.40
2004	JAN	3.9	2.48
2005	NOV	2.8	2.13
2006	NOV	2.7	2.20
California Ambient Air Quality Standard: 1-Hr, 20 ppm; 8-Hr, 9.0 ppm National Ambient Air Quality Standard: 1-Hr, 35 ppm; 8-Hr, 9 ppm			

(Ex. 200, p. 4.1-16.)

e. Nitrogen Dioxide (NO_2)

As shown in **AIR QUALITY Table 7,** the maximum 1-hour and annual concentrations of NO_2 at the Chula Vista monitoring station are lower than the California and National Ambient Air Quality Standards. Approximately 75 to 90 percent of the NO_x emitted from combustion sources is NO, while 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. The highest concentrations of NO_2 generally occur during the fall. In urban areas, ozone concentration levels are typically high.

AIR QUALITY Table 7
NO_2 Air Quality Summary, 1990–2006 (ppm)

Year	Month of Max. 1-Hr Average	Maximum 1-Hr Average	Maximum Annual Average
Chula Vista			
1990	FEB	0.130	0.024
1991	FEB	0.120	0.023
1992	JAN	0.150	0.022
1993	SEP	0.089	0.019
1994	JAN	0.101	0.020
1995	FEB	0.098	0.020
1996	FEB	0.079	0.019
1997	NOV	0.109	0.019
1998	DEC	0.104	0.018
1999	SEP	0.100	0.019
2000	DEC	0.072	0.017
2001	OCT	0.071	0.017
2002	NOV	0.093	0.018
2003	OCT	0.102	0.018
2004	MAY	0.072	0.016
2005	NOV	0.071	0.016
2006	OCT	0.074	0.017
California 1-Hr Ambient Air Quality Standard: 0.18 ppm California Annual Arithmetic Mean Ambient Air Quality Standard: 0.03 ppm National Annual Arithmetic Mean Ambient Air Quality Standard: 0.053 ppm			

(Ex. 200, p. 4.1-17.)

f. Sulfur Dioxide (SO_2)

Sulfur dioxide is typically emitted as a result of the combustion of a fuel containing sulfur. Natural gas contains very little sulfur and consequently has very low SO_2 emissions when combusted.

The SDAB is designated attainment for all the SO_2 state and federal ambient air quality standards. (Ex. 200, p. 4.1-17.)

3. Visibility

Visibility in the region of the project site depends upon the area's natural relative humidity and the intensity of both particulate and gaseous pollution in the atmosphere. The most straightforward characterization of visibility is probably the visual range (the greatest distance at which a large dark object can be seen). However, in order to characterize visibility over a range of distances, it is more

common to analyze the changes in visibility in terms of the change in light extinction that occurs over each additional kilometer of distance (1/km). In the case of a greater light extinction, the visual range will decrease.

The SDAB is currently designated as unclassified for visibility reducing particles.

4. Summary

On the basis of the above evidence, we agree with Staff that **AIR QUALITY Table 8** below represents an acceptable level of background concentrations for use in the Air Quality Impacts Analysis.

AIR QUALITY Table 8
Recommended Background Concentrations (µg/m^3)

Pollutant	Averaging Time	Recommended Background	Limiting Standard	Percent of Standard
NO_2	1 hour	139	338	41%
	Annual	32	56	57%
PM10	24 hour	53	50	106%
	Annual	27	20	135%
PM2.5	24 hour	34.3	35	98%
	Annual	12.2	12	102%
CO	1 hour	4,485	23,000	20%
	8 hour	2,756	10,000	28%
SO_2	1 hour	110	655	17%
	3 hour	55	1,300	4%
	24 hour	42	105	40%
	Annual	8	80	10%

(Ex. 200, p. 4.1—19.)

For accuracy, the recommended background concentrations should come from nearby monitoring stations with similar characteristics. For this project the monitoring station is located very close to the project site, in Chula Vista approximately 2.7 miles north of the project site. However, the project site is more industrialized and would likely have more heavy truck traffic than the monitoring location, so some pollutant concentrations may be marginally higher at the project site area on occasion. We consider use of the three-year high values for background added to the worst-case modeled concentrations regardless of the hour of day and time of year to be reasonably conservative for worst-case air quality impact determination. (Ex. 200, p. 4.1-19.)

The background concentrations for PM10 and PM2.5 are above the most restrictive existing ambient air quality standards, while the background concentrations for the other pollutants are all well below the most restrictive existing ambient air quality standards.

The pollutant modeling analysis was limited to the pollutants listed above in **AIR QUALITY Table 8**; therefore, recommended background concentrations were not determined for the other criteria pollutants (ozone, lead, visibility, and H2S), as there are no regulatory approved point source modeling techniques for analyzing impacts of ozone and impacts on visibility. The proposed project would not emit emissions of lead or H2S; thus, analysis of those pollutants is not necessary. (Ex. 200, p. 4.1-19.)

5. Impacts Analysis

The Applicant has proposed to develop the CVEUP on a 3.8 acre site that currently contains the 44.5-MW MMC Chula Vista Power Plant. The project would consist of two LM6000 gas turbines operating in simple-cycle mode. No other separate major facilities or stationary emission sources are proposed as part of the facility. The project site is located in Chula Vista approximately 850 feet south of the intersection of Main Street and Albany Road. The general area around the site has a mixture of light industrial, commercial, residential and school uses, as well as the Otay Regional Park located just to the south of the project site. The new gas turbines would be installed on a currently vacant portion of the northern end of the existing project site. The existing Chula Vista Power Plant Twinpac™ gas turbines would be removed from the site after the new power facilities were installed and operating.

The nearest residence is approximately 350 feet from the site, and the nearest school is Otay Elementary approximately 1,300 feet from the site. (Ex. 1, p. 5.6-1; Ex,. 200, p. 4.1-20.)

a. Construction Impacts

Construction of the CVEUP would consist of the following: 1) clearing, grubbing, and site grading; 2) building of facility structures, and 3) demolition and removal of the existing power plant. The construction is expected to take a total of eight months, based on a 10-hour workday and a five-day work week. Construction lay down would occur on a parcel adjacent to the project site and on a parcel at

2000 Heritage Road in Chula Vista approximately 3.1 miles due east of the project site. (Ex. 200, p. 4.1-20.)

Fugitive dust emissions would occur during the construction of the project. The largest fugitive dust emissions are often generated during site preparation activities by the use of large earth moving equipment. Fugitive dust emissions resulting from on-site soil disturbances, such as dozing and grading, and from on-site and off-site traffic were also taken into account. (*Id*.)

Combustion emissions during the construction of the project result from exhaust sources, including diesel construction equipment used for site preparation, water trucks used to control dust emissions, cranes, diesel-powered welding machines, electric generators, air compressors, water pumps, diesel trucks used for deliveries, and vehicles used by workers. (*Id*.)

The Applicant's estimates for the highest daily emissions during construction were revised by Energy Commission staff to correct off-road equipment emission factors and revise fugitive dust emission calculations. Total on-site and off-site construction equipment exhaust and fugitive dust emissions during the eight-month construction period are summarized below in **AIR QUALITY Table 9**.

AIR QUALITY Table 9
Total Mitigated Emissions During Construction, tons

Activity	NO_x	CO	VOC	SO_x	PM10	PM2.5
On-Site						
Combustion Exhaust Fugitive Dust	7.0 ---	4.5 ---	1.6 ---	0.0 ---	0.5 0.3	0.5 0.1
Off-Site						
On-Road Vehicles (including fugitive dust)	0.4	2.2	0.2	0.0	0.3	0.0
Total Maximum Daily Emissions	7.4	6.7	1.8	0.0	1.1	0.6

(Ex. 200, p. 4.1-21.)

The maximum daily PM10 and PM2.5 emissions are likely to be overestimated as the maximum daily fugitive dust emissions would occur during the site grading phase while the maximum daily on-site combustion exhaust and on-road vehicle emissions would occur during the building phase.

b. Construction Mitigation

We agree with Staff's recommendation that construction emission impacts be mitigated to the greatest extent feasible. The District is currently in the process of creating a fugitive dust control rule which may be approved and in force prior to the project starting or completing construction activities. However, the District has indicated that the Energy Commission's typical conditions for similar projects would require control measures that would be as strict as or stricter than the anticipated requirements of District rule. (Ex. 200, p. 4.1-30.)

We adopt the construction PM10 and NO_x emission mitigation measures set forth in Conditions of Certification **AQ-SC1** through **AQ-SC5** to assure maximum feasible fugitive dust control performance, construction equipment exhaust emissions control, and compliance enforcement mechanisms.

Condition **AQ-SC1** requires the Applicant to have an on-site construction mitigation manager who will be responsible for the implementation and compliance of the construction mitigation program. The documentation of the ongoing implementation and compliance with the construction mitigation program would be provided in the monthly construction compliance report that is required in Condition of Certification **AQ-SC2**.

Condition of Certification **AQ-SC3** includes the following fugitive dust control measures:

- All unpaved roads and disturbed areas in the project and lay down construction sites shall be watered as frequently as necessary to comply with the dust mitigation objectives of **AQ-SC4**. The frequency of watering may be reduced or eliminated during periods of precipitation.
- No vehicle shall exceed 10 miles per hour on unpaved areas within the project and lay down construction sites.
- The construction site entrances shall be posted with visible speed limit signs.
- All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.
- Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.
- All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.

- All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.
- Construction areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.
- All paved roads within the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.
- At least the first 500 feet of any public roadway exiting the construction site shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways.
- All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or shall be treated with appropriate dust suppressant compounds.
- All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least two feet of freeboard.
- Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.
- Disturbed areas will be re-vegetated as soon as practical.

(Ex. 200, p. 4.1-32.)

Condition of Certification **AQ-SC4** limits the potential off-site impacts from visible dust emissions and provides a mechanism to respond to situations when the control measures required by **AQ-SC3** are not working effectively to control fugitive dust emissions.

Condition of Certification **AQ-SC5** mitigates the PM and NO_x emissions from the large diesel-fueled construction equipment. Implementation of this mitigation measure will provide additional primary and secondary PM mitigation to supplement the recommended fugitive dust mitigation measures. This Condition

requires the use of U.S. EPA/ARB Tier 2 engine compliant equipment for equipment over 100 horsepower where available and a good faith effort to find and use available U.S. EPA/ARB Tier 3 engine compliant equipment over 100 horsepower and also includes equipment idle time restrictions and engine maintenance provisions.

Based on the relatively short-term nature of the worst-case construction impacts, with the implementation of the mitigation measures contained in the Conditions of Certification we find that the construction air quality impacts will be less than significant.

c. Initial Commissioning Impacts

The initial commissioning of a power plant refers to the time between the completion of construction and the reliable production of electricity for sale on the market.

Commissioning activities for the CVEUP combustion turbine generators (CTGs) are expected to last a maximum of 440 hours per CTG prior to the initiation of commercial operation. However, only the first 200 hours would have emissions of any pollutant greater than the normal operating controlled emissions. (Ex. 200, p. 4.1-21.)

AIR QUALITY Table 10 shows the Applicant's estimated typical initial commissioning activity duration and emissions for the two CVEUP CTGs. The Applicant testified that commissioning tests are not expected to be conducted on more than one CTG at a time; however, maximum impacts were determined for both turbines operating with maximum initial commissioning emissions. (Ex. 200, p. 4.1-22.)

AIR QUALITY Table 10
CVEUP Initial Commissioning Emissions

Commissioning Activities Per CTG	Operation Duration (Max Hours)	Hourly Emissions		
		NOx	CO	VOC
Initial Load Testing and Engine Checkout	8	51	45	4.5
Pre-Catalyst Initial Tuning	72	51	45	4.5
Post-Catalyst Initial Tuning	120	34	6.2	1.2
Final Tuning	240	4.2	6.2	1.2
Total (1 CTG)	440	9,168	5,832	790
Total (2 CTGs)	880	18,336	11,664	1,581

The PM10 and SO_2 emissions during initial commissioning are not estimated to be higher than during normal full-load operations. Only the first three commissioning activities with a maximum 200 hours per turbine would have emission rates greater than the normal controlled operating emission rates.

The Applicant presented several initial commissioning activities that would occur prior to meeting normal emission limits. The worst-case conditions for the short-term NO_x and CO impacts occur prior to the installation of the oxidation and SCR catalysts. The initial commissioning worst-case analysis assumes both turbines are operating under worst-case initial commissioning conditions. The results of the commissioning emissions impact analysis are shown in **AIR QUALITY Table 11.**

AIR QUALITY Table 11
Maximum CVEUP Initial Commissioning Impacts

Pollutant	Averaging Period	Project Impact ($\mu g/m^3$)	Background ($\mu g/m^3$) [a]	Total Impact ($\mu g/m^3$)	Limiting Standard ($\mu g/m^3$)	Type of Standard	Percent of Standard
NO_2	1 hour	99.2	139	238	338	CAAQS	70
CO	1 hour	87.5	4,485	4,573	23,000	CAAQS	20
CO	8 hour	52.5	2,756	2,809	10,000	CAAQS	28

(Ex. 200, p. 4.1-36.)

The peak impacts at the nearest residence and school would be somewhat lower than the maximum values shown in the table that were found to occur just to the southeast of the project site.

The Applicant's impact analysis indicates that the project's maximum initial commissioning emission impacts are well below what would cause new exceedances of the NO_2 or CO standards. (Ex. 200, p. 4.1-37.)

The project's gaseous emissions of NO_x, SO_2, VOC, and ammonia can contribute to the formation of secondary pollutants: ozone and PM10/PM2.5. Because of the known relationship of NO_x and SO_x emissions to PM2.5 formation, it can be said that the emissions of NO_x and SO_x from the CVEUP do have the potential (if left unmitigated) to contribute to higher PM2.5 levels in the region. The Applicant is proposing to mitigate the project's NO_x, VOC, SO_2, and PM10 emissions through the use of BACT and emission reduction strategies and limit the ammonia slip emissions to 5 ppm. The Applicant proposes to provide total NO_x, VOC, SO_2, and PM10 reductions at a minimum 1:1 ratio, and the ammonia slip

concentration level matches the lowest level proposed in California for a peaking power project. With the proposed emission offsets and ammonia slip limit, we find that the project will not cause significant secondary pollutant impacts. (Ex. 200, p. 4.1-38.)

d. Operational Phase Impacts

1. Equipment Description

The stationary sources of emissions for the proposed CVEUP are two General Electric (GE) LM6000PC Sprint natural gas-fired combustion turbine generators (CTGs) with water injection for NO_x control operating in simple cycle mode producing approximately 46 MW (net) of electricity from each CTG, or 92 MW total. The CTGs would each be equipped with water injection to the combustors for reducing production of NO_x, a selective catalytic reduction (SCR system with 19 percent aqueous ammonia injection to further reduce NO_x emissions, and an oxidation catalyst to reduce CO emissions. Inlet air filters and inlet air fogging; fin fan coolers for dry cooling of lube oil; two exhaust stacks, one for each CTG, with a diameter of 13 feet and height of 70 feet; a Continuous Emission Monitoring (CEM) system installed on each stack to record concentrations of NO_x, CO, and oxygen in the flue gas; a demineralized water storage tank (100,000 gallons) and upgrades to the existing switchyard are the other components of the proposed project. The existing Chula Vista Power Plant 12,000 gallon ammonia tank and containment water pond would be reused for this project. (Ex. 200, p. 4.1-23.)

2. Facility Operation

The Applicant has requested authority to operate each LM6000 CTG up to 4,400 hours per year, which equates to an annual capacity factor of 50 percent, yet has stated repeatedly that operation at that level is extremely unlikely. Applicant's testimony indicates that actual operation is expected to be less than 800 hours per year. (Ex. 1, p. 1-2.)

As a peaking facility, its purpose would be to provide maximum electrical output when demand for electricity is highest, typically on hot summer days. Based on Staff's review of the Quarterly Fuel and Energy Report data, SDAPCD data, and *2007 Integrated Energy Policy Report* scenario forecast data for simple cycle peaking plants in San Diego Gas & Electric (SDG&E) territory, it is likely that this

facility would operate on average 10 percent or less of the requested 4,000 hour per year maximum capacity. (Ex. 200, p. 4.1-40.)

3. Emission Controls

The Applicant proposes to employ water injection, SCR with ammonia injection, and CO catalyst and operate exclusively on pipeline-quality natural gas to limit turbine emission levels. Exhibit 1, Table 5.1-5, p. 5.1-9 and the FDOC (SDAPCD 2008c) provide the following BACT emission limits, each for the two CTGs:

- **NO_x:** 2.5 ppmvd at 15 percent O_2 (one-hour average, excluding startup/shutdown) and 4.4 lb/hr;
- **CO:** 6.0 ppmvd at 15 percent O_2 (three-hour rolling average, excluding startup/shutdown) and 6.4 lb/hr;
- **VOC:** 2.0 ppmvd at 15 percent O_2 (one-hour rolling average, excluding startup/shutdown) and 1.1 lb/hr (1.2 lb/hr when using evaporative cooling);
- **PM10:** 3.0 lb/hr;
- **SO_2:** 1.1 lb/hr with fuel sulfur content of 0.75 grains/100 standard cubic feet (scf); and
- NH3: 5 ppmvd at 15 percent O2 and 3.2 lb/hr.

  (Ex. 200, p. 4.1-38.)

4. Emission Offsets

District Rule 20 requires offsets when NO_x or VOC emissions exceed 50 tons per year. The emissions from this project will be permitted at levels well below the District offset threshold and thus no offset mitigation would be required. Nonetheless, Energy Commission staff has long maintained that emission reductions need to be provided for all nonattainment pollutants and their precursors at a minimum 1:1 ratio of annual operating emissions. The Applicant has proposed to provide emission reductions through the Carl Moyer Fund. The Applicant's proposal includes a determination of the difference between existing site emissions and expected new project emissions based on actual emissions for the existing peaker turbines and the new facility's potential to emit based on a maximum expected operations of 1,000 operating hours per year. The Applicant's specific offset proposal is:

- Total calculated emission increase of 8.75 tons (total of NO_x, VOC, PM, and SO_x emissions);
- Fund Carl Moyer program at a rate of $20,000 per ton; and
- Fund additional 20 percent administration fee to direct emission reduction projects in the immediate project area for two years, then the remaining Carl Moyer Funds would be used county-wide as needed.

Using this basis, the total emission reduction funding proposed by the Applicant is $210,000. (Ex. 200, p. 4.1-39.)

We agree with the District's determination that the project's proposed emission controls/emission levels for criteria pollutants and ammonia slip meets BACT requirements and that the proposed emission levels are reduced to the lowest technically feasible levels.

In addition to the emission reduction mitigation measure **AQ-SC7** recommended by Staff and agreed to by the Applicant; the Applicant has agreed to provide the City of Chula Vista with an additional $210,000 in mitigation funds. These mitigation funds would be used for energy efficiency and related improvements to local homes and business, and are intended to directly benefit the residents potentially most affected by the proposed project. Staff does not formally recommend or oppose this agreement, which Staff considers to be separate from the official CEQA process, as this agreement is not considered necessary under Staff's CEQA findings and this agreement does not change Staff's conclusion that the project would have less than significant impacts with incorporation of Staff's recommended mitigation measures.

We note that the CEQA mitigation basis includes a rather significant safety factor, namely the difference between the project's actual emissions and its proposed maximum emissions. The actual emissions from a LM6000 gas turbine would be some fraction of the permitted maximum emissions. Some pollutants, such as NO_x, are emitted near their permitted emission rate, while others, such as VOC and CO, tend to be much lower than their permitted emission rate. **AIR QUALITY Table 12** provides a comparison of the actual normal hourly operating emissions for the existing Twinpac™ gas turbine and an expected actual range of emissions and average normal hourly operating emissions for two LM6000 gas turbines based on a compilation of source test results (from four separate sites with LM6000PC Sprint gas turbines), the permitted emission rates for the LM6000 gas turbines, and the expected safety factor for each pollutant.

Staff's acceptance of this offset package was determined solely based on the merits of this case, consideration of the region's local ambient air quality and expected attainment timelines, the project's expected operation and resulting emission limits, and the specific form of emission reductions proposed and does not in any way provide a precedent or obligation for the acceptance of offset proposals for any other current or future licensing case.

We adopt Condition of Certification **AQ-SC6** to formalize the Applicant's NO_x, PM10, VOC, and SO_x offset proposal. Staff evaluated the Applicant's assumption for likely maximum annual operation, 1,000 hours or a capacity factor of 11.4 percent, and found data to support using a reduced capacity factor in this general range given the historical capacity factors and the worst-case forecast capacity factors for SDG&E service area peaker facilities. The historical capacity factors, for peaker power plants built after the year 2000, found in a review of the Energy Commission's Quarterly Fuel and Energy Reporting data and available SDAPCD 2005 and 2006 data (Moore 2008) show generation or hour-based capacity factors that have not exceeded 8.4 percent for any single facility. The historical capacity factor data reviewed is provided in **AIR QUALITY Table 12** below.

AIR QUALITY Table 12
Historical Capacity Factors for Comparable SDG&E Service Area Peaker Facilities

	QFER Generation Based Capacity Factor					
Facility Name	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Calpeak Border	7.77%	2.71%	2.28%	1.86%	1.43%	8.39%
Calpeak Enterprise	7.53%	2.18%	2.35%	1.55%	1.24%	5.76%
Larkspur	1.18%	4.01%	4.74%	3.85%	2.89%	6.00%
	SDAPCD Hours of Operation Capacity Factor					
Facility Name	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Calpeak Border	---	---	---	2.29%	1.72%	---
Calpeak Enterprise	---	---	---	1.91%	1.49%	---
Calpeak El Cajon	---	---	---	2.64%	2.26%	---
Miramar Energy Facility	---	---	---	1.69%	1.84%	---
Larkspur	---	---	---	4.41%	3.51%	---

Based upon review of the Applicant's emission calculations, and incorporating Staff's recommended capacity factor basis and assumed worst-case conditions that the maximum annual 1,200 operating hours were comprised of 1,000 hours of normal operations (500 of which use inlet fogging), 100 hours of cold start operation, and 100 hours of warm start operation, Staff calculated the annual

emission rates and incremental emission increase for the project, to be used in Condition of Certification **AQ-SC6,** which are shown below in **AIR QUALITY Table 13**.

AIR QUALITY Table 13
CVEUP Incremental Annual Emissions

(CEQA Mitigation Basis)

	Pollutant (tons/year)			
Emission Source	**NO_x**	**VOC**	**SO_x**	**PM10/2.5**
CVEUP Expected Maximum Annual Emissions,	7.35	1.43	0.40	3.60
Chula Vista Power Plant Emissions Baseline,	1.3	0.07	0.05	0.5
Incremental Emissions Increase, tons/year	6.05	1.36	0.35	3.10

The total incremental emissions value shown in the table and recommended in **AQ-SC6** is 10.86 tons, which is 2.11 tons greater than the Applicant's estimate of 8.75 tons. **AQ-SC6** has also been designed to allow other public agency administered emission mitigation fee programs or traditional emission reduction credits (ERCs) from the District bank to be used to meet the emission mitigation requirement of the condition.

AIR QUALITY Table 14 shows that the actual emissions from the new LM6000 turbines are expected to be quite a bit lower than the permitted emissions, particularly for CO, VOC, and PM10 emissions, which provides a margin of safety for Staff's proposed mitigation level. Additionally, the data shows that the actual normal hourly emissions from the two new LM6000 gas turbines combined are expected to be lower than the normal hourly emissions from the existing Twinpac™ gas turbines. The exceptions are SO_2 emissions, which are strictly a function of total fuel flow, and potentially PM10/PM2.5 emissions, as the actual Twinpac™ normal operating emission rate is not known. (Ex. 200, pp. 4.1-42 to 4.1-43.)

AIR QUALITY Table 14
Comparison of Actual and Permitted Emissions for the CVPP and CVEUP

	Pollutant lb/hr Normal Operations [a] or % as appropriate			
Emission Source	**NO_x**	**VOC**	**CO**	**PM10/2.5**
CVEUP LM6000 Permitted Emissions (both Turbines)	8.4	2.4	12.4	6.0
Existing LM6000 Two Turbine Actual Emissions Range	NR	0.11-	0.93-	0.72-4.9
Existing LM6000 Two Turbine Actual Emissions	NR	0.72	2.5	2.3
Existing LM6000 Source Tests –% of Permit Level [d]	65%	30%	25%	38%
Expected CVEUP Permitted Emissions Safety Margin [e]	15%	70%	75%	60%
Expected Long-Term CVEUP Normal Operating	7.1	0.72	3.1	2.4
CVPP Twinpac™ Actual Emissions	7.6	1.1	52.6	4.6 [b]

CVPP – Chula Vista Power Plant.
NR – Not representative. The NO_x emission concentration limits for the four projects surveyed are different than the proposed CVEUP project so the mass emission rate is not representative.
a – SO_x emissions are strictly a comparison of the heat input rate of the turbines, which for the two LM6000's is approximately 1.4 times that of the existing Twinpac™. The mitigation safety factor is the difference between the natural gas sulfur content used in the emission calculations (0.25 grains/100 scf) and the expected long-term fuel sulfur content, which is expected to be less than half of the assumed value.
b – Estimated value from the applicant; no PM10 source tests were performed on the existing Twinpac™.
c – Lowest and highest source test values from 10 LM6000PC Sprint gas turbines.
d – Average values from source tests from 10 LM6000OPC Sprint gas turbines.
e – Safety factor for NO_x is conservatively assumed to be approximately one-half what would occur if the facility were to meet the average percent of permit level found for the four surveyed sources due to the lower concentration limit required for CVEUP.

We adopt Condition of Certification **AQ-SC8** to ensure that the operations of the CVEUP and MMC Chula Vista Power Plant are properly phased and to ensure that the MMC Chula Vista Power Plant is removed as proposed. This Condition of Certification requires that: 1) there is no concurrent operation of the existing MMC Chula Vista Power Plant while the CVEUP gas turbines are actively operating; 2) the project owner provide confirmation that the air quality permit for the Chula Vista Power Plant has been terminated and that the Twinpac™ has been disconnected from its natural gas fuel source by the time the CVEUP starts commercial operation; and 3) the project owner provide monthly updates on the removal of the MMC Chula Vista Power Plant facilities. Additionally, **AQ-SC8** requires that the construction emission reduction methods in Conditions of Certification **AQ-SC3** through **AQ-SC5** are applied as applicable to the MMC Chula Vista Power Plant removal activities.

Conditions of Certification **AQ-SC7** and **AQ-SC10** also ensure that the license is amended as necessary to incorporate changes to the air quality permits and ensure ongoing compliance through the requirement of quarterly reports.

6. Cumulative Impacts

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or “...compound or increase other environmental impacts.” (CEQA Guidelines § 15355.) “A cumulative impact consists of an impact that is created as a result of a combination of the project evaluated in the EIR together with other projects causing related impacts.” (CEQA Guidelines § 15130[a][1].) Such impacts may be relatively minor and incremental, yet still be significant because of the existing environmental background, particularly when one considers other closely related past, present, and reasonably foreseeable future projects.

This analysis is primarily concerned with “criteria” air pollutants. Such pollutants have impacts that are usually (though not always) cumulative by nature. Rarely will a project cause a violation of a federal or state criteria pollutant standard. However, a new source of pollution may contribute to violations of criteria pollutant standards because of the existing background sources or foreseeable future projects. Air districts attempt to attain the criteria pollutant standards by adopting attainment plans, which comprise a multi-faceted programmatic approach to such attainment. Depending on the air district, these plans typically include requirements for air offsets and the use of best available control technology for new sources of emissions and restrictions of emissions from existing sources of air pollution.

Air quality impacts are, by nature, cumulative. The SDAPCD is the lead agency for managing air quality and coordinating planning efforts for San Diego County and the San Diego Air Basin, so that the federal 8-hour ozone standard is attained in a timely fashion and attainment with CO standards are maintained. The District is responsible for developing those portions of the State Implementation Plan (SIP) and the Air Quality Management Plan (AQMP), that deal with certain stationary and area source controls and, in cooperation with the transportation planning agencies (TPAs), the development of transportation control measures (TCMs). Additionally, the SDAPCD is responsible for providing plans for attaining the California ozone standard and for reducing particulate (PM10 and PM2.5) emissions in compliance with Senate Bill 656 (Sher, Chapter 738, Statutes of 2003). In this role, the SDAPCD is the agency with principal responsibility for analyzing and addressing cumulative air quality impacts, including the impacts of ambient ozone, particulate matter, and CO. The District has summarized the cumulative impacts of ozone, particulate matter, and CO on the air basin from the broad variety of its sources.

The final 8-hour ozone attainment plan for San Diego County was submitted by the state in the ARB *Proposed State Strategy for California's 2007 State Implementation Plan* document in late 2007. This plan has not been approved by U.S. EPA, so the approved 1-hour plan is the currently approved ozone attainment plan for San Diego County. The 2007 State Implementation Plan, when approved by U.S. EPA, will become the ozone attainment plan for the District.

The Carbon Monoxide Maintenance Plan applies to 10 separate areas in California that attained the federal CO standards in the 1990s, including the San Diego area. This plan does not include any further measures or requirements that would specifically relate to the project's direct and indirect emission sources. This plan relies on current motor vehicle programs to ensure that attainment with the federal CO standards are maintained.

The project's construction and operation were not found to cause any new exceedances of the carbon monoxide ambient air quality standards (CO AAQS). The project's generated traffic would be insignificant in comparison with the existing San Diego County traffic, and the project's primary emission sources normally emit CO concentrations out of the stack that are below the federal ambient air quality standards. Therefore, the project would not impact the Carbon Monoxide Maintenance Plan.

Fugitive dust control measures are set forth in Conditions of Certification **AQ-SC3** and **AQ-SC4**.

The applicable air quality plans do not outline any new control measures applicable to the proposed project's operating emission sources. Therefore, compliance with existing District rules and regulations will ensure compliance with those air quality plans. (Ex. 200, pp. 4.1-43 to 4.1-47.)

7. Localized Cumulative Impacts

AIR QUALITY Table 15 shows that CVEUP, along with two other facilities, will contribute to existing violations of the PM10 and PM2.5 ambient air quality standards. The results also show that CVEUP, and the other two facilities, will not contribute to new AAQS violations for any of the other pollutants modeled.

AIR QUALITY Table 15
Cumulative Impacts Modeling Results (ug/m^3)

Pollutant	Averaging Period	Project Impact (μg/m^3)	Background (μg/m^3) [a]	Total Impact (μg/m^3)	Limiting Standard (μg/m^3)	Type of Standard	Percent of Standard
NO_2	1 hour	37.5	139	176.5	338	CAAQS	52
	annual	0.2	32	32.2	56	CAAQS	57
PM10	24 hour	2.8	53	55.8	50	CAAQS	112
	annual	0.1	27	27.1	20	CAAQS	136
PM2.5	24 hour	2.8	34.3	37.1	35	NAAQS	106
	annual	0.1	12.2	12.3	12	CAAQS	103
CO	1 hour	214	4,485	4,699	23,000	CAAQS	20
	8 hour	115	2,756	2,871	10,000	CAAQS	29
SO_2 [c]	1 hour	2.9	110	113	655	CAAQS	17
	3 hour	1.9	55	57	1,300	NAAQS	4
	24 hour	0.6	42	43	105	CAAQS	41
	annual	0.05	8	8	80	NAAQS	10

(Ex. 200, p. 4.1-49.)

Both the CVEUP and Otay Mesa projects will mitigate their PM10 and particulate precursor pollutant (NO_x, SO_x, and VOC) emissions through funded emission reductions. These emission reductions will be generated in amounts greater than the expected operating emissions of these two power plants. Therefore, the particulate matter (PM10 and PM2.5) operating impacts after mitigation are considered to be less than significant. (Ex. 200, p. 4.1-50.)

We have considered the minority population surrounding the site (see **Socioeconomics** Figure 1). Since the project's cumulative air quality impacts have been mitigated to less than significant, there is no environmental justice issue for air quality. (*Id.*)

8. Greenhouse Gas Emissions

a. Global climate change and electricity production

There is general scientific consensus that climate change is occurring and that human activity contributes in some measure (perhaps substantially) to that change. Man-made emissions of greenhouse gases, if not sufficiently curtailed, are likely to contribute further to continued increases in temperature that may result in catastrophic consequences. Indeed, the California Legislature finds that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." (Cal. Health & Safety Code, Sec. 38500, Division 25.5, Part 1.)

In 1998, the Energy Commission identified a range of strategies to prepare for an uncertain climate future, including a need to account for the environmental impacts associated with energy production, planning, and procurement. In 2003, the Energy Commission recommended that the state require reporting of greenhouse gases (GHG) or global climate change emissions as a condition of state licensing of new electric generating facilities. The Energy Commission's *2007 Integrated Energy Policy Report* (IEPR) addresses climate change within the electricity, natural gas, and transportation sectors. For the electricity sector, it recommends such approaches as pursuing all cost-effective energy efficiency measures and meeting the Governor's stated goal of a 33 percent renewable portfolio standard.

In 2006, California enacted the California Global Warming Solutions Act of 2006 (AB 32). It requires the California Air Resources Board (ARB) to adopt standards that will reduce statewide GHG emissions to statewide GHG emissions levels in 1990, with such reductions to be achieved by 2020.[23] To achieve this, ARB has a mandate to define the 1990 emissions level and achieve the maximum technologically feasible and cost-effective GHG emission reductions.

The Energy Commission and the Public Utilities Commission are providing recommendations to ARB for how it should reduce emissions in the electricity and natural gas sectors. The agencies recommend a three-pronged approach: 1) require all retail providers in California to achieve all cost-effective energy efficiency, 2) surpass the current 20 percent renewable portfolio standard requirement, and 3) develop a multi-sector cap and trade system to obtain the remaining reductions in the most cost-effective manner should ARB determine that a market mechanism is beneficial and passes the tests set forth in Part 4 and 5 of AB 32.. To date, the agencies have issued two joint recommendation reports, the first involving the tracking and reporting of emissions and the second involving the point of regulation and allocation design principles.

The ARB adopted early action GHG reduction measures in October 2007, adopted mandatory reporting requirements and the 2020 statewide target in December, 2007, and plans to establish statewide emissions caps by economic "sectors" in 2008. By January 1, 2009, ARB will adopt a scoping plan that will identify how emission reductions will be achieved from significant sources of GHG via regulations, market mechanisms, and other actions. ARB staff will then

[23] Governor Schwarzenegger has also issued Executive Order S-3-05 establishing a goal of 80 percent below 1990 levels by 2050.

draft regulatory language to implement its plan and will hold additional public workshops on each measure, including market mechanisms (ARB 2006b). The regulations must be effective by January 1, 2011 and mandatory compliance commences on January 1, 2012.

Examples of strategies that the state might pursue for managing GHG emissions in California, in addition to those recommended by the Energy Commission and the Public Utilities Commission, are identified in the California Climate Action Team's Report to the Governor. Others are being established by ARB during its 2008 scoping plan development process. Some strategies focus on reducing consumption of petroleum across all areas of the California economy. Improvements in transportation energy efficiency (fuel economy) and land use planning and alternatives to petroleum-based fuels are slated to provide substantial reductions by 2020). It has not yet been determined by ARB how it will apportion the required reductions; however, it is possible that GHG reductions mandated by ARB will be non-uniform or disproportional across emitting sectors, in that most reductions will be based on cost-effectiveness.

SB 1368[24], also enacted in 2006, and regulations adopted by the Energy Commission and the Public Utilities Commission pursuant to the bill, prohibit utilities from entering into long-term commitments with any baseload facilities that exceed the Emission Performance Standard of 0.500 metric tonnes CO_2 per megawatt-hour[25] (1,100 pounds CO_2/MWh). Specifically, the Emission Performance Standard applies (EPS) to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of five years or more, including contracts with power plants located outside of California.[26] If a project, instate or out of state, plans to sell base load electricity to California utilities, the utilities will have to demonstrate that the project complies with the EPS. Base load is defined as units which operate at a capacity factor higher than 60 percent of the year. As a peaking project with a permit operating restriction of less than 60 percent of the year, CVEUP is not required to comply with the SB 1368 EPS.

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[24] Public Utilities Code § 8340 et seq.

[25] The Emission Performance Standard only applies to carbon dioxide, and does not include emissions of other greenhouse gases converted to carbon dioxide equivalent.

[26] See Rule at http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/64072.htm

In addition to these programs, California is involved in the Western Climate Initiative, a multi-state and international effort to establish a cap and trade market to reduce greenhouse gas emissions in the west. The timelines for the implementation of this program are similar to those of AB 32, with full roll-out beginning in 2012. And as with AB 32, the electricity sector has been a major focus of attention.

b. Project Greenhouse Gas Emissions

The generation of electricity using fossil fuels can produce air emissions known as greenhouse gases in addition to the "criteria air pollutants" that have been traditionally regulated under the federal and state Clean Air Acts. Greenhouse gas emissions contribute to the warming of the earth's atmosphere, leading to climate change. For fossil fuel-fired power plants, these include primarily carbon dioxide (CO_2), with much smaller amounts of nitrous oxide (N_2O, not NO or NO_2, which are commonly known as NO_x or oxides of nitrogen), and methane (CH_4 - unburned natural gas). Also included are sulfur hexafluoride (SF_6) from high voltage equipment, and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration/chiller equipment. GHG emissions from the electricity sector are dominated by CO_2 emissions from the carbon-based fuels; other sources of GHG emissions are small and also are more likely to be easily controlled or reused/recycled, but are nevertheless documented here as some of the compounds have very large relative global warming potentials.

1. Construction

Construction of industrial facilities such as power plants requires coordination of numerous equipment and personnel. The concentrated on-site activities result in short-term, unavoidable increases in vehicle and equipment emissions that include greenhouse gases. However, the period of construction will be short-term and the emissions intermittent during that period. Furthermore, control measures we have adopted, such as limiting idling times and requiring, as appropriate, equipment that meet the latest emissions standards, would further minimize greenhouse gas emissions. We therefore conclude that the short-term emission of greenhouse gases during construction would be sufficiently reduced and would, therefore, not be significant.

2. Operations

The proposed Chula Vista Energy Upgrade Project is a peaking project that will operate only when dispatched due to demand needs. The LM6000 PC Sprint gas turbines are fired with natural gas. **Air Quality Table 16** shows what the proposed project, as permitted, could potentially emit in greenhouse gases on an annual basis. All emissions are converted to CO_2-equivalent and totaled. Electricity generation GHG emissions are dominated by CO_2 emissions from the carbon-based fuels; other sources of GHG are small and also are more likely to be easily controlled or reused/recycled, but are nevertheless documented here as some of the compounds have very large relative global warming potentials.

AIR QUALITY Table 16
CVEUP, Estimated Potential Greenhouse Gas Emissions – Permit Basis

	Project Emissions (metric tonnes [a] per year)	Global Warming Potential [b]	CO_2 Equivalent (metric tonnes per year)
Carbon Dioxide (CO_2)	218,855	1	218,855
Methane (CH_4)	16.1	21	338
Nitrous Oxide (N_2O)	5.6	310	1,741
Hexafloride (SF_6)	0	23,900	0
Hydrofluorocarbons (HFCs)	0	--- [c]	0
perfluorocarbons (PFCs)	0	7,850 [d]	0
Total Project GHG emissions – mt CO_2–eq per year			220,933
Total Project MWh per year			404,800
Project CO_2 Emissions Performance - mt CO_2/MWh			0.541
Project GHG Emissions Performance - mt CO_2-eq/MWh			0.546

a. One metric tonne (mt) equals 1.1 short tons or 2,204.6 pounds or 1,000 kilograms.
b. The global warming potential is a measure of the chemicals' warming properties and lifetime in the atmosphere relative to CO_2. The value shown is based on the emission factors from the California Climate Action Registry's Appendix to the General Reporting Protocol: Power Utility Reporting Protocol (CCAR 2005).
c. Can vary from 150 to 10,000, depending on the specific HFC.
d. This figure is an average GWP for the two PFCs, CF_4 and C_2F_6.
(Ex. 200, p. 4.1-53.)

The proposed project would be permitted, on an annual basis, to emit over two hundred thousand metric tons of CO_2-eq per year if operated at its maximum permitted level, but this is extremely unlikely as shown previously by comparing actual capacity factors from other comparable San Diego County peaker facilities. The maximum annual emissions based on a 13.7 percent capacity factor would total approximately 60,000 metric tons of CO_2-eq per year; and the maximum expected long term emissions would be less than 22,000 metric tonnes of CO_2-eq per year (assuming a 5 percent project life capacity factor).

Since the project's permit limits operation to less than a 60 percent annual capacity factor, it does not need to meet the EPS of 0.500 mt CO_2/MWh.

Even though we can identify how many gross GHG emissions are attributable to a project, it is difficult to determine whether this will result in a net increase of these emissions, and, if so, by how much. It would, thus, be speculative to conclude that any given project results in a cumulatively significant adverse impact resulting from greenhouse gas emissions.

Ultimately, ARB's AB 32 regulations will address both the degree of electricity generation emissions reductions, and the method by which those reductions will be achieved, through the programmatic approach currently under its development. That regulatory approach will presumably address emissions not only from the newer, more efficient, and lower emitting facilities licensed by the Commission, but also the older, higher-emitting facilities not subject to any GHG reduction standard that this agency could impose. This programmatic approach is likely to be more effective in reducing GHG emissions overall from the electricity sector than one that merely relies on displacing out-of-state coal plants ("leakage") or older "dirtier" facilities.

As ARB codifies accurate GHG inventories and methods, it may become apparent that relative contributions to the inventories may not correlate to relative ease and cost-effectiveness of the GHG emission reductions necessary to achieve the 1990 GHG level. Though it has not yet been determined, the electricity sector may have to provide less or more GHG reductions than it would have otherwise been responsible for on a pro-rata basis.

To facilitate ARB's future regulatory regime, we adopt Condition of Certification **AQ-SC9**, which requires the project owner to report the quantities of relevant GHGs emitted as a result of electric power production until AB32 is implemented and its reporting requirements are in force. We find that **AQ-SC9**, with the reporting of GHG emissions, will enable the project to be consistent with the policies described above and the regulations that ARB adopts, and provide the information to demonstrate compliance with the EPS. The GHG emissions to be reported in **AQ-SC9**, are carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, HFCs and PFCs emissions that are directly associated with the production and transmission of electric power. (Ex. 200, p. 4.1-57.)

Since it will replace an existing gas-fired peaker, the CVEUP project would not result in a significant cumulative GHG impact. Since this peaking power project

is permitted for less than a 60 percent annual capacity factor, the project is not subject to the requirements of SB1368 and the Emission Performance Standard. (*Id*.)

9. Environmental Justice

The evidentiary record includes a discussion of local demographics to identify potential environmental justice concerns. Many members of the public who participated in this proceeding, representing a broad spectrum of the community, expressed great concern about health effects from project emissions. The project's compliance with the regulatory programs established under the federal Clean Air Act, the State Health & Safety Code, and the District provide the best evidence of whether impacts will be fully mitigated.

10. Compliance with LORS

The San Diego Air Pollution Control District issued a Preliminary Determination of Compliance (PDOC) for the CVEUP on March 6, 2008. Energy Commission staff provided a public comment letter to the SDAPCD on its PDOC (May 2008) and made recommendations for the SDAPCD in its review of the project and completion of project air quality conditions[27]. (November 21, 2007). In June 2008, the SDAPCD provided responses to Staff's comments, with proposed revisions, which were found to be acceptable by Staff. The SDAPCD issued a Final Determination of Compliance (FDOC) on June 20, 2008. Compliance with all District rules and regulations was demonstrated to the District's satisfaction in the FDOC. The District's FDOC Conditions, which include several revisions and additions to the PDOC Conditions, are presented in Conditions of Certification **AQ-1** to **AQ-48**.

a. Federal

The District is responsible for issuing the federal New Source Review (NSR) permit but has not yet been delegated enforcement of the applicable New Source Performance Standard (Subpart KKKK). This project will not require a PSD permit from U.S. EPA prior to initiating construction.

[27] The only written comments on the PDOC received by the District were from the Energy Commission.

b. State

The Applicant will demonstrate that the project will comply with Section 41700 of the California State Health and Safety Code, which restricts emissions that would cause nuisance or injury, with the issuance of the District's Final Determination of Compliance and the Energy Commission's affirmative finding for the project.

c. Local

The Applicant provided an Air Quality Permit application to the SDAPCD in 2007. The District has issued an FDOC, which states that the proposed project is expected to comply with all applicable District rules and regulations.

The District rules and regulations specify the emissions control and offset requirements for new sources such as the CVEUP. Best Available Control Technology will be implemented, and emission reduction credits (ERCs) are not required by District rules and regulations based on the permitted emission levels for this project. Compliance with the District's new source requirements will ensure that the project would be consistent with the strategies and future emissions anticipated under the District's air quality attainment and maintenance plans.

As part of the Energy Commission's licensing process, in lieu of issuing a construction permit to the Applicant for the CVEUP, the District has prepared and presented to the Commission a DOC, both a PDOC, and after a public comment period, an FDOC. The PDOC was published on March 6, 2008, and the FDOC was published, after completion of a 30-day public review period, on June 20, 2008. The DOC evaluates whether and under what conditions the proposed project will comply with the District's applicable rules and regulations, as described below.

<u>REGULATION II – PERMITS</u>

***Rule 20.1 and 20.3* – New Source Review**

Rules 20.1 and 20.3 generically apply to all sources subject to permitting under the nonattainment NSR and PSD programs. All portions of Rule 20.1 apply. This includes definitions and instructions for calculating emissions. Applicable components of Rule 20.3 are described below.

***Rule 20.3(d)(1)* – Best Available Control Technology/Lowest Achievable Emission Rate**

This subsection of the rule requires that BACT be installed on a pollutant specific basis if emissions exceed 10 lbs/day for each criteria pollutant (except for CO, for which the PSD BACT threshold is 100 tons per year). This subsection also requires that Lowest Achievable Emission Rate (LAER) be installed on a pollutant specific basis if the emissions exceed 50 tons per year for NO_x (oxides of nitrogen) or VOC emissions. Because the District attains the National Ambient Air Quality Standards for CO, SO_2, and PM10, LAER does not apply to these particular pollutants. (District Rule 20.3[d][1][v].) The CVEUP NO_x and VOC emissions are below the trigger for LAER. BACT is required for NO_x, VOC, PM10, and SO_x.

***Rule 20.3(d)(2)* – Air Quality Impact Analysis**

This portion of the rule requires that an Air Quality Impact Analysis (AQIA) be performed for air contaminants that exceed the trigger levels published in Table 20.3-1 of the District's rules and regulations. For an AQIA of PM10, the rules require that direct emissions and emissions of PM10 precursors be included in the analysis.

The CVEUP has prepared an AQIA for NO_x, CO, and PM10 that was evaluated by District staff as part of the PDOC/FDOC analysis.

***Rule 20.3(d)(4)* – Public Notice and Comment**

This portion of the rule requires the District to publish a notice of the proposed action in at least one newspaper of general circulation in San Diego County and requires sending notices to the U.S. EPA and the ARB. The District must allow at least 30 days for public comment and consider all comments submitted. The District must also make all information regarding the evaluation available for public inspection.

The official public notice and comment period for the CVEUP started after newspaper notice publication on March 10, 2008, and ended on April 9, 2008.

***Rule 20.3(d)(5)* – Emission Offsets**

This portion of the rule requires that emissions of any federal nonattainment criteria pollutant or its precursors, which exceed major source thresholds, be offset with actual emission reductions. The District is a federal nonattainment area only for ozone. Therefore, this rule potentially requires offsets only for NO_x and VOC emissions, as ozone precursors. Since the CVEUP would not cause

NO_x or VOC emissions exceeding the major source levels (50 tons per year), offsets are not required by District rule for this project.

***Rule 20.3(e)(1)* – Compliance Certification**
This rule requires that the Applicant certify that all major stationary sources owned or operated by the Applicant in California are in compliance, or on an approved schedule for compliance, with all applicable emission limitations and standards under the federal Clean Air Act.

The PDOC/FDOC did not directly address this regulation; however, the Applicant does not appear to currently own any major stationary sources.

***Rule 20.5* – Power Plants**
This rule requires that the District prepare a decision of Preliminary and Final Determinations of Compliance (PDOC and FDOC), which shall confer the same rights and privileges as an Authority to Construct only after successful completion of the Energy Commission's licensing process.

REGULATION IV – PROHIBITIONS

***Rule 50* – Visible Emissions**
This rule prohibits air contaminant emissions into the atmosphere darker than Ringelmann Number 1 (20 percent opacity) for more than an aggregate of three minutes in any consecutive 60-minute time period.

***Rule 51* – Nuisance**
This rule prohibits the discharge of air contaminants that cause or have a tendency to cause injury, detriment, and nuisance or annoyance to people and/or the public or damage to any business or property.

***Rule 52* – Particulate Matter**
This rule is a general limitation for all sources of particulate matter to not exceed 0.10 grains per dry standard cubic foot (0.23 grams per dry standard cubic meter) of exhaust gas. The district calculated the maximum grain loading to be 0.0056 grains per dry standard cubic foot, in compliance with the requirements of this rule.

***Rule 53* – Specific Air Contaminants**
This rule limits emissions of sulfur compounds (calculated as SO_2) to less than or equal to 0.05 percent, by volume, on a dry basis. This rule also contains a

limitation restricting particulate matter emissions from gaseous fuel combustion to less than or equal to 0.10 grains per dry standard cubic foot of exhaust calculated at 12 percent CO_2. As shown above, the project's particulate concentration is well below 0.1 grains per dry standard cubic foot, and the use of pipeline-quality natural gas fuel will ensure compliance with the sulfur compound emission limitation of this rule.

***Rule 62* – Sulfur Content of Fuels**

This rule requires the sulfur content of gaseous fuels to contain no more than 10 grains of sulfur compounds, calculated as hydrogen sulfide, per 100 cubic feet of dry gaseous fuel (0.23 grams of sulfur compounds, calculated as hydrogen sulfide, per cubic meter of dry gaseous fuel), at standard conditions.

The use of pipeline-quality natural gas will ensure compliance with this rule.

***Rule 69.3* – Stationary Gas Turbines - Reasonably Available Control Technology**

This rule limits NO_x emissions from gas turbines greater than 0.3 MW to 42 ppm at 15 percent oxygen when fired on natural gas. The rule also specifies monitoring and record-keeping requirements. Startups, shutdowns, and fuel changes are defined by the rule and excluded from compliance with these limits.

This rule's emission limits are less stringent than the BACT/LAER requirement of Rule 20.3(d)(1) for normal operation.

***Rule 69.3.1* – Stationary Gas Turbines - Best Available Retrofit Control Technology**

This rule limits NO_x emissions from existing and new gas turbines greater than 10 MW to 15 x (E/25) ppm when operating uncontrolled and 9 x (E/25) ppm at 15 percent oxygen when operating with controls and averaged over a one-hour period (where E is the percent thermal efficiency of the unit, typically between 30 – 40 percent for gas turbines). The rule also specifies monitoring and record-keeping requirements. Startups, shutdowns, and fuel changes are defined by the rule and excluded from compliance with these limits. The District has also adopted a policy of 200 hours for initial commissioning when the standards of this rule do not apply.

This rule's emission limits are less stringent than the BACT/LAER requirement of Rule 20.3(d)(1) for normal operation.

***Regulation X* – Standards of Performance for New Stationary Sources**
This regulation adopts federal New Source Performance Standards (NSPS, 40 CFR, Part 60) by reference. The relevant NSPS for the CVEUP, Subpart KKKK – Gas Turbines, has not been formally delegated for enforcement to SDAPCD; however, it is expected to be delegated later this year. This rule's emission limits are less stringent than the BACT/LAER requirement of Rule 20.3(d)(1) for normal operation. At the time of delegation the District will ensure compliance with the record-keeping requirements of this regulation.

***Regulation XI* – National Emission Standards for Hazardous Air Pollutants**
This regulation adopts federal standards for hazardous air pollutants (HAPs) by reference. No such standards presently exist that would apply to the project due to the project's not being a major source of HAPs emissions.

REGULATION XII – TOXIC AIR CONTAMINANTS

***Rule 1200* – Toxic Air Contaminants, New Source Review**
This rule requires a health risk estimate for sources of toxic air contaminants. Toxics Best Available Control Technology (TBACT) must be installed if a Health Risk Assessment shows an incremental cancer risk greater than one in a million, and no source would be allowed to cause an incremental cancer risk exceeding ten in a million. The District found that the project complied with the requirements of this rule.

REGULATION XIV – TITLE V OPERATING PERMITS

***Rule 1401* – General Provisions**
This regulation contains the requirements for federal Title V Operating Permits. The Applicant is required to submit for a revised Title V Operating Permit application after successful construction and startup of the project.

***Rule 1412* – Federal Acid Rain Program Requirements**
This regulation contains the requirements for participation in the federal Acid Rain Program. The Applicant is required to submit an Acid Rain Program application to the District prior to commencement of operation.

Noteworthy Public Benefits
The existing Twinpac™ gas turbines unit (44.5 MW) at the MMC Chula Vista site will be shut down following the commissioning of the new units. The existing unit

will need to be shut down once the new gas turbines are operational in order for the new emissions of CVEUP to be allowed by the SDAPCD.

The proposed project would improve the overall thermal efficiency of the power plant due to the higher efficiency of the two new LM6000PC Sprint gas turbines compared to the existing FT8 Twinpac™ unit. This along with an improved emission control system for the new LM6000PC Sprint gas turbines leads to a reduction in emissions of pollutants, including greenhouse gases, emitted per unit of electricity produced. It also leads to a reduction in amount of natural gas fuel consumed to generate the same amount of power.

Response to Agency and Public Comments

Energy Commission staff received comments on air quality from the City of Chula Vista, the Environmental Health Coalition, the Southwest Chula Vista Civic Association, and two other area residents These comments, and Staff's responses, are summarized in the FSA. In preparing this Decision, we have considered these comments, as well as the comments submitted by members of the public (non-parties) in writing and orally at public hearings on this matter. All such comments are part of the record in this proceeding.

FINDINGS AND CONCLUSIONS

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

1. Construction and operation of the CVEUP will result in emissions of criteria pollutants and their precursors.

2. The CVEUP is located in the City of Chula Vista, in San Diego County within the jurisdiction of the San Diego Air Pollution Control District (SDAPCD).

3. SDAPCD is a nonattainment area for both the federal and state ozone and PM10 standards.

4. Potential impacts from power plant construction-related activities will be mitigated to insignificant levels with implementation of a Construction Mitigation Plan that specifies fugitive dust control, dust plume control, and diesel particulate reduction measures.

5. The project owner will employ the best available control technology (BACT) to limit pollutant emissions.

6. Project operation is limited to 4,400 hours per year but is expected to be less than 1,000 hours per year.

7. SDAPCD issued a Final Determination of Compliance that finds the CVEUP will comply with all applicable District rules for project operation.

8. The project owner will mitigate the project's criteria pollutant emissions through measures set forth in the Conditions of Certification.

9. Implementation of all the Conditions of Certification, listed below, ensures that, if certified, the CVEUP will be mitigated sufficiently to avoid 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, will ensure that the Chula Vista Energy Upgrade Project conforms 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.

CONDITIONS OF CERTIFICATION

AQ-SC1 Air Quality Construction Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with conditions AQ-SC3, AQ-SC4, and AQ-SC5 for the entire project site and linear facility construction. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. The AQCMM shall not be terminated without written consent of the Compliance Project Manager (CPM).

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval, the name, resume, qualifications, and contact information for the on-site AQCMM and all AQCMM Delegates. The AQCMM and all Delegates must be approved by the CPM before the start of ground disturbance.

AQ-SC2 Air Quality Construction Mitigation Plan (AQCMP): The project owner shall provide an AQCMP, for approval, which details the steps that will be taken and the reporting requirements necessary to ensure compliance with conditions AQ-SC3, AQ-SC4, and AQ-SC5.

Verification: At least 60 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. The AQCMP must be approved by the CPM before the start of ground disturbance.

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report (MCR) that demonstrates compliance with the following mitigation measures for the purposes of preventing all fugitive dust plumes from leaving the project site and linear facility routes. Any deviation from the following mitigation measures shall require prior CPM notification and approval.

1. All unpaved roads and disturbed areas in the project and lay down construction sites shall be watered as frequently as necessary to comply with the dust mitigation objectives of AQ-SC4. The frequency of watering may be reduced or eliminated during periods of precipitation.

2. No vehicle shall exceed 10 miles per hour on unpaved areas within the project and laydown construction sites.

3. The construction site entrances shall be posted with visible speed limit signs.

4. All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned and free of dirt prior to entering paved roadways.

5. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

6. All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.

7. All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.

8. Construction areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the

Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.

9. All paved roads within the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.

10. At least the first 500 feet of any public roadway exiting the construction site shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways.

11. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds.

12. All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions shall be provided with a cover or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least two feet of freeboard.

13. Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.

14. Disturbed areas will be re-vegetated as soon as practical.

The fugitive dust requirements listed in this condition may be replaced with as stringent or more stringent methods as required by SDAPCD Rule 55 if that rule becomes effective prior to the completion of the project's construction activities.

Verification: The project owner shall include in the MCR (1) a summary of all actions taken to maintain compliance with this condition, (2) copies of any complaints filed with the air district in relation to project construction, and (3) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC4 Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to

be transported (1) off the project site or (2) 200 feet beyond the centerline of the construction of linear facilities, or (3) within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.

Step 2: The AQCMM or Delegate 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.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails to result in effective mitigation within one hour of the original determination. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shut-down source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, provided that the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

Verification: The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified.

AQ-SC5 Diesel-Fueled Engines Control: The AQCMM shall submit to the CPM, in the MCR, a construction mitigation report that demonstrates compliance with the following mitigation measures for the purposes of controlling diesel construction-related emissions. Any deviation from the following mitigation measures shall require prior CPM notification and approval.

1. All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.

2. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.

3. A good faith effort shall be made to find and use off-road construction diesel equipment that has a rating of 100 hp to 750 hp and that meets the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines as specified in Title 13, California Code of Regulations section 2423(b)(1). This good faith effort shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.

4. All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in Title 13, California Code of Regulations section 2423(b)(1). The following exceptions for specific construction equipment items may be made on a case-by-case basis.

    a. Tier 1 equipment will be allowed on a case-by-case basis only when the project owner has documented that no Tier 2 equipment is available for a particular equipment type that must be used to complete the project's construction. This shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.

    b. The construction equipment item is intended to be on site for five days or less.

    c. Equipment owned by specialty subcontractors may be granted an exemption, for single equipment items on a case-by-case basis, if it can be demonstrated that extreme financial hardship would occur if the specialty subcontractor had to rent replacement equipment, or if it can be demonstrated that a specialized equipment item is not available by rental.

5. All heavy earthmoving equipment and heavy duty construction-related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

6. All diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.

7. Construction equipment will employ electric motors when feasible.

Verification: The project owner shall include in the MCR (1) a summary of all actions taken to maintain compliance with this condition, (2) copies of all diesel

fuel purchase records, (3) a list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained, and (4) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC6 The project owner shall provide emission reduction mitigation to offset the project's NO_x, PM10, SO_x, and VOC emission increases at a ratio of 1:1. These emission reductions are based on the following maximum annual emissions for the facility (tons/yr):

Emission Reduction Credits/Pollutant	Tons/yr
NOx	7.35
PM10	3.60
SOx	0.40
VOC	1.43
Total Tons	10.86

Emission reductions can be provided in any one of the following methods in the following order of preference of their use:

1. The project owner can fund emission reductions through the Carl Moyer Fund in the amount of $16,000/ton, or final 2008 ARB Carl Moyer Program Guideline cost effectiveness cap value, for the total ton quantity listed in the above table, minus any tons offset using the other two listed methods, with an additional 20 percent administration fee to fund the City of Chula Vista and/or the SDAPCD to be used to find and fund local emission reduction projects to the extent feasible. Emission reduction projects funding by this method will be weighted for evaluation and selection, within the funding guideline value of $16,000/ton of reduction, based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site. Emission reduction project cost will not be a consideration for selection as long as the emission reduction project is within the proposed or approved 2008, or other year as applicable, Carl Moyer funding guideline value,

2. The project owner can fund other existing public agency regulated stationary or mobile source emission reduction programs or create a project specific fund to be administered through the SDAPCD or other local agency, which would provide surplus emission reductions. This funding shall include appropriate administrative fees as determined by the administering agency to obtain local emission reductions to the extent feasible. The project owner shall be responsible for demonstrating that the amount of such funding

meets the emission reduction requirements of this condition. Emission reduction projects funding by this method will be weighted for evaluation and selection based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site.

3. ERC certificates from emission reductions occurring in the San Diego Air Basin can be used to offset each pollutant on a 1:1 offset ratio basis only if local emission reduction projects are clearly demonstrated to be unavailable using methods 1 or 2 to meet the total emission reduction burden required by this condition. ERCs can be used on an interpollutant basis for SO_x for PM10, NO_x for VOC, and VOC for NO_x, where the project owner will provide a letter from the SDAPCD that indicates the District's allowed interpollutant offset ratio, or PM10 for SO_x ERCs can be used on a 1:1 basis.

Carl Moyer or other emission reduction funding shall be provided to the responsible agencies prior to the initiation of on-site construction activities. The project owner shall work with the appropriate agencies to target emission reduction projects in the project area to the extent feasible. Emission reduction project selection information will be provided to the CPM for review and comment. Unused administrative fees shall be used for additional emission reduction program funding. ERC certificates, if used, will be surrendered prior to first turbine fire.

Verification: The project owner shall submit to the CPM confirmation that the appropriate quantity of Carl Moyer Project or other emission reduction program funding and/or ERCs have been provided prior to initiation of on-site construction activities for emission reduction program funding and at least 30 days prior turbine first fire for ERCs. The project owner shall provide emission reduction project selection information to the CPM for review and comment at least 15 days prior to committing funds to each selected emission reduction project. The project owner shall provide confirmation that the level of emission reduction program funding will meet the emission reduction requirements of this condition.

AQ-SC7 The project owner shall submit to the CPM for review and approval any modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA, and any revised permit issued by the District or U.S. EPA, for the project.

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.

AQ-SC8 The project owner shall not operate the Chula Vista Power Plant concurrently with the CVEUP at any time including during initial commissioning, and the project owner shall terminate the Chula Vista Power Plant's permit with SDAPCD upon the start of commercial operation of CVEUP. Construction emission mitigation measures in Conditions of Certification **AQ-SC3** through **AQ-SC5** are to be followed as applicable during the removal of the existing power plant facilities.

Verification: The project owner, following the beginning of commercial operation of the CVEUP, shall submit to the CPM the notification of the Chula Vista Power Plant's SDAPCD permit termination and shall provide a Monthly Status Report regarding the status of the removal of the Chula Vista Power Plant, including compliance with Conditions of Certification **AQ-SC3** through **AQ-SC5**, until the removal activities are complete.

AQ-SC9 Until the ARB enacts a program to report and restrict GHG emissions from the electricity sector under the California Global Warming Solutions Act of 2006 (AB32), the project owner shall either participate in a climate action registry approved by the CPM or report on a annual basis to the CPM the quantity of greenhouse gases (GHG) emitted as a direct result of facility electricity production. When ARB's GHG reporting regulations become effective, the project owner shall comply with the requirements of that GHG program, and the reporting requirements of this condition of certification shall cease, provided that the Energy Commission continues to receive the data required by the ARB program. Until then, the project owner shall do what is described in the following paragraphs.

The project owner shall maintain a record of fuel types and carbon content used on-site for the purpose of power production. These fuels shall include but are not limited to each fuel type burned: (1) in combustion turbines, (2) HRSGs (if applicable) or auxiliary boiler (if applicable), (3) internal combustion engines, (4) flares, and (5) for the purpose of startup, shutdown, operation or emission controls.

The project owner may perform annual source tests of CO_2 and CH_4 emissions from the exhaust stacks while firing the facility's primary fuel, using the following test methods or other test methods as approved by the CPM. The project owner shall produce fuel-based emission factors in units of lbs CO_2 equivalent per mmBtu of fuel burned from the annual source tests. If a secondary fuel is approved for the facility, the project owner may also perform these source tests while firing the secondary fuel.

Pollutant	Test Method
CO_2	EPA Method 3A
CH_4	EPA Method 18 (POC measured as CH_4)

As an alternative to performing annual source tests, the project owner may use the Intergovernmental Panel on Climate Change (IPCC) Methodologies for Estimating Greenhouse Gas Emissions (MEGGE). If MEGGE is chosen, the project owner shall calculate the CO_2, CH_4 and N_2O emissions using the appropriate fuel-based carbon content coefficient (for CO_2) and the appropriate fuel-based emission factors (for CH_4 and N_2O).

The project owner shall convert the N_2O and CH_4 emissions into CO_2 equivalent emissions using the current IPCC Global Warming Potentials (GWP). The project owner shall maintain a record of all SF_6 that is used for replenishing on-site high voltage equipment. At the end of each reporting period, the project owner shall total the mass of SF_6 used and convert that to a CO_2 equivalent emission using the IPCC GWP for SF_6. The project owner shall maintain a record of all PFCs and HFCs that are used for replenishing on-site refrigeration and chillers directly related to electricity production. At the end of each reporting period, the project owner shall total the mass of PFCs and HFCs used and not recycled and convert that to a CO_2 equivalent emission using the IPCC GWP.

On an annual basis, the project owner shall report the CO_2 and CO_2 equivalent emissions from the described emissions of CO_2, N_2O, CH_4, SF_6, PFCs, and HFCs.

Verification: The project annual GHG emissions shall be reported as required by the ARB under the California Global Warming Solutions Act of 2006 (AB32) and, until such requirements are enacted, as a CO_2 equivalent, by the project owner to a climate action registry approved by the CPM, or to the CPM annually as part of the operational report required (**AQ-SC10**) or the annual Air Quality Report.

AQ-SC10 The project owner shall submit to the CPM Quarterly Operation Reports, following the end of each calendar quarter that include operational and emissions information as necessary to demonstrate compliance with the conditions of certification herein. The Quarterly Operation Report will specifically note or highlight incidences of noncompliance.

Verification: The project owner shall submit the Quarterly Operation Reports to the CPM and air pollution control officer (APCO) no later than 30 days following the end of each calendar quarter.

DISTRICT PRELIMINARY DETERMINATION OF COMPLIANCE CONDITIONS (SDAPCD 2008B)

985092

Gas Turbine Engine Generator #1: General Electric, Model LM-6000, 46.5 MW capacity, 468.8 MMBtu/hr heat input, natural gas fired, simple cycle, S/N TBD, with water injection; a selective catalytic reduction (SCR) system including an automatic ammonia injection control system; an oxidation catalyst; a Continuous Emission Monitoring System (CEMS) for NO_x, CO, and O_2; and a data acquisition and recording system (DAS).

985093

Gas Turbine Engine Generator #2: General Electric, Model LM-6000, 46.5 MW capacity, 468.8 MMBtu/hr heat input, natural gas fired, simple cycle, S/N TBD, with water injection; a selective catalytic reduction (SCR) system including an automatic ammonia injection control system; an oxidation catalyst; a Continuous Emission Monitoring System (CEMS) for NO_x, CO and O_2; and a data acquisition and recording system (DAS).

AQ-1 This equipment shall be properly maintained and kept in good operating condition at all times.

Verification: The project owner shall submit maintenance records for all equipment to the CPM in the Quarterly Operation Report (**AQ-SC10**).

AQ-2 This equipment shall be fired on Public Utility Commission (PUC) quality natural gas only. The applicant shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to District personnel upon request.

Verification: The project owner shall submit the quarterly fuel sulfur content values in the in the Quarterly Operation Report (**AQ-SC10**) and make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-3 The project owner shall submit a complete Acid Rain Permit application prior to commencement of operation in accordance with Title 40 Code of Federal Regulations Part 72 to the District and submit a copy to U.S. EPA, Region IX.

Verification: The project owner shall submit to the CPM copies of the Title IV permit application at least 15 days prior to the initial firing of the combustion turbine generators (CTGs).

AQ-4 For this equipment, the project owner shall hold allowances in accordance with Title 40 Code of Federal Regulations 72.9(c)(1).

Verification: The project owner shall submit to the CPM proof that necessary Title IV SO_2 emission allotments have been acquired as necessary for compliance with Title IV requirements annually in the first Quarterly Compliance Report (**AQ-SC10**) that is due after the annual SO_2 allotment due date.

AQ-5 This equipment shall not be operated more than 4,400 hours per calendar year.

Verification: The project owner shall submit to the CPM and APCO the CTG operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Report (**AQ-SC10**).

AQ-6 Operation of this equipment under cold start-up conditions shall not exceed 200 hours per calendar year.

Verification: The project owner shall submit to the CPM and APCO the CTG cold start-up operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Report (**AQ-SC10**).

AQ-7 Operation of this equipment under hot or warm start-up conditions shall not exceed 200 hours per calendar year.

Verification: The project owner shall submit to the CPM and APCO the CTG hot and warm start-up operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Report (**AQ-SC10**).

AQ-8 For the purposes of this Authority to Construct, the commissioning period shall be defined as the time beginning from first fuel firing and ending when the emission controls are installed and fully functional, and the project owner has provided the District with a Construction Completion Notice, whichever is sooner. The duration of this commissioning period shall not exceed 200 operating hours. A log of the dates, times, and cumulative unit operating hours when fuel is being combusted during the commissioning period shall be maintained by the project owner and made available to District personnel upon request. Prior to first fuel firing, the project owner shall submit a completed First Fuel Fire Notice form to the District.

Verification: The project owner shall submit a copy of the First Fuel Fire Notice Form to the CPM prior at least five days prior to first turbine fire. The project owner shall submit, commencing one month from the time of gas turbine first fire, a monthly commissioning status report throughout the duration of the commissioning phase that demonstrates compliance with the requirements listed in this condition. The monthly commissioning status report shall be submitted to the CPM by the 10th of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project

owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-9 For the purposes of this Authority to Construct, start-up conditions shall be defined as the time when fuel flow begins until the time that the unit complies with the emission limits specified in this Authority to Construct but in no case exceeding 30 minutes per occurrence. Shut-down conditions shall be defined as the time preceding the moment at which fuel flow ceases and during which the unit does not comply with the emission limits specified in this Authority to Construct but in no case exceeding 30 minutes per occurrence. The Data Acquisition and Recording System, as required by Title 40 Code of Federal Regulations Part 75, shall record these events. This condition may be modified by the District based on field performance of the equipment.

Verification: The project owner shall submit to the CPM the CTG start-up and shut-down event duration data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-10 During startup conditions, the emissions from this turbine shall not exceed the following emission limits as determined by the continuous emissions monitoring system (CEMS), continuous monitors and/or District-approved emissions testing. Compliance with each limit shall be based on a 1-hour averaging period.

Pollutant	Startup Emission Limit, lbs/hr
Oxides of Nitrogen, NO_x (calculated as NO_2)	19.3
Carbon Monoxide, CO	14.3
Volatile Organic Compounds, VOC	1.4

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-11 During shutdown conditions, the emissions from this turbine shall not exceed the following emission limits as determined by the continuous emissions monitoring system (CEMS), continuous monitors and/or District-approved emissions testing. Compliance with each limit shall be based on a 1-hour averaging period.

Pollutant	Shutdown Emission Limit, lbs/hr
Oxides of Nitrogen, NO_x (calculated as NO_2)	7.8
Carbon Monoxide, CO	8.9
Volatile Organic Compounds, VOC	1.4

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-12 Except during the commissioning period, startups, and shutdowns, the water injection system, the SCR system and oxidation catalyst control system, including the automatic ammonia injection system serving the turbine, shall be in full operation at all times when the turbine is in operation.

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-13 In the event of a breakdown in an automatic ammonia injection control system, a trained operator shall operate the system manually and the breakdown shall be reported to the District Compliance Division pursuant to Rule 98(b)(1) and 98(e).

Verification: The project owner shall report breakdowns in the automatic ammonia injection control system to the District and the CPM as required under District Rule 98 and shall include a summary of these breakdowns as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-14 Total combined oxides of nitrogen emissions from the turbines described in Application Nos. 985092 and 985093 shall not exceed the major source threshold of 50 tons per calendar year. The daily NO_x mass emissions from each turbine shall be recorded daily. The aggregate NO_x mass emissions from all turbines for each calendar month, and for each rolling 12-month period, shall be calculated and recorded monthly. In the event that an annual major stationary source threshold is projected to be triggered, the project owner shall submit a complete application to modify this permit at least six months prior to the projected date of exceedance demonstrating how compliance with all applicable requirements will be achieved.

Verification: The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-15 Emissions of oxides of nitrogen (NO_x), calculated as nitrogen dioxide, from the turbine exhaust stack shall not exceed 2.5 parts per million volume on a dry basis (ppmvd) corrected to 15 percent oxygen and averaged over each one-hour period. Compliance with this limit shall be demonstrated continuously based on CEMS data and based upon source testing calculated as the average of three subtests. This limit shall not apply during the commissioning period or during start-up and shut-down conditions.

Verification: The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-16 Total combined carbon monoxide (CO) emissions from the turbines described in Application Nos. 985092 and 985093 shall not exceed the Prevention of Significant Deterioration (PSD) threshold of 250 tons per calendar year. The daily CO mass emissions from each unit shall be recorded daily. The aggregate CO mass emissions from all turbines for each calendar month, and for each rolling 12-month period, shall be calculated and recorded monthly. In the event that an annual PSD stationary source threshold is projected to be triggered, the project owner shall submit a complete application to modify this permit at least six months prior to the projected date of exceedance demonstrating how compliance with all applicable requirements will be achieved.

Verification: The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10)**.

AQ-17 Emissions of carbon monoxide (CO) from the turbine exhaust stack shall not exceed 6.0 parts per million volume on a dry basis (ppmvd) corrected to 15 percent oxygen and averaged over each three-hour period. Compliance with this limit shall be demonstrated continuously based on CEMS data and based upon source testing calculated as the average of three subtests. This limit shall not apply during the commissioning period or during start-up and shut-down conditions.

Verification: The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10)**.

AQ-18 Total combined volatile organic compound (VOC) emissions from the turbines described in Application Nos. 985092 and 985093 shall not exceed the major source threshold of 50 tons per calendar year. The daily VOC emissions from each unit shall be recorded daily. The aggregate VOC mass emissions from all turbines for each calendar month, and for each rolling 12-month period, shall be calculated and recorded monthly. All emission calculations shall be based on fuel usage and emission factors approved by the District. In the event that an annual major stationary source threshold is projected to be triggered, the project owner shall submit a complete application to modify this permit at least six months prior to the projected date of exceedance demonstrating how compliance with all applicable requirements will be achieved.

Verification: The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-19 Emissions of VOCs, calculated as methane, from the turbine exhaust stack shall not exceed 2.0 parts per million volume on a dry basis (ppmvd) corrected to 15 percent oxygen and averaged over each one-hour period. Compliance with this limit shall be demonstrated continuously based on CEMS data and based upon source testing calculated as the average of three subtests. At the time of the initial compliance test, a District-approved CO/VOC surrogate relationship shall be established. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on annual source testing. This limit shall not apply during the commissioning period or during start-up and shut-down conditions.

Verification: The project owner shall provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**), due in the quarter after the each year's source test report is completed.

AQ-20 The emissions from this turbine shall not exceed the following emission limits, except during commissioning period, startup and shutdown conditions, as determined by the continuous emissions monitoring system (CEMS), continuous monitors and/or District-approved emissions testing, calculated as the average of three subtests. Compliance with each limit shall be based on a 1-hour averaging period.

Pollutant	Emission Limit, lbs/hr
Oxides of Nitrogen, NO_x (calculated as NO_2)	4.4
Carbon Monoxide, CO	6.4
Volatile Organic Compounds, VOC	1.2

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-21 The emissions from this turbine shall not exceed the following emission limits, except during the commissioning period, as determined by the continuous emissions monitoring system (CEMS), continuous monitors and/or District-approved emissions testing. Compliance with each limit shall be based on a calendar day averaging period.

Pollutant	Emission Limit, lbs/day
Oxides of Nitrogen, NO_x (calculated as NO_2)	124.1
Carbon Monoxide, CO	164.8
Volatile Organic Compounds, VOC	29.5

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-22 The emissions from this turbine shall not exceed the following emission limits, except during the commissioning period, as determined by the continuous emissions monitoring system (CEMS), continuous monitors and/or District-approved emissions testing. Compliance with each limit shall be based on a calendar year averaging period.

Pollutant	Emission Limit, tons/yr
Oxides of Nitrogen, NO_x (calculated as NO_2)	12.0
Carbon Monoxide, CO	15.4
Volatile Organic Compounds, VOC	2.7

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the fourth quarter Quarterly Operation Report (**AQ-SC10**).

AQ-23 Emissions of particulate matter less than 10 microns (PM10) shall not exceed 3.0 pounds per hour. Compliance with this limit shall be demonstrated based upon source testing calculated as the average of three subtests.

Verification: The project owner shall provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**), due in the quarter after the each year's source test report is completed.

AQ-24 Ammonia emissions from the gas turbine shall not exceed 5 ppmvd at 15 percent oxygen Compliance with this limit shall be demonstrated based upon source testing calculated as the average of three subtests and utilizing one of the following procedures:

a. calculate daily ammonia emissions using the following equation:
NH3 = ((a-(b * c/1,000,000))* (1,000,000/b)) * d
where: a = ammonia injection rate (lbs/hr) / (17.0 lbs/lb-mole),
b = exhaust flow rate @ 15% oxygen / (29 lbs/lb-mole),
c = change in measured NO_x concentration (ppmvd @ 15% oxygen) across the catalyst,
d = ratio of measured ammonia slip to calculated ammonia slip as derived during compliance testing;

b. other calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% oxygen, as approved by the District..

Verification: The project owner shall provide the estimated daily ammonia concentration and daily ammonia emissions based on the procedures given in

this condition and provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**), where the source test data is due in the quarter after the each year's source test report is completed.

AQ-25 An operating log or Data Acquisition System (DAS) records shall be maintained on site to record actual times and durations of all startups, shutdowns, quantity of each fuel used, hours of daily operation, and total cumulative hours of operation during each calendar year.

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

AQ-26 A Continuous Emission Monitoring System (CEMS) shall be installed and calibrated to measure and record the concentration and hourly mass emission rate of oxides of nitrogen (NO_x), the hourly average concentration and daily mass emission rate of carbon monoxide (CO), and the percent oxygen (O_2) in the exhaust gas, including during the commissioning period. The CEMS shall be installed and operational prior to first fuel firing.

Verification: The project owner shall provide notification to the District and the CPM of the anticipated dates for installation, calibration, and testing for the CEMS at least 10 days prior to installation. The project owner shall provide a report to the District and CPM for approval demonstrating compliance with CEMS calibration requirements prior to turbine first fire.

AQ-27 The NO_x and O_2 CEMS shall be installed, certified, and maintained in accordance with applicable federal regulations including the requirements of sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of Title 40, Code of Federal Regulations Part 75, the quality assurance procedures of Appendix B of Title 40, Code of Federal Regulations Part 75, and a CEMS protocol approved by the District. At least 60 days prior to the operation the CEMS, the project owner shall submit a CEMS operating protocol to the District for written approval. This protocol shall also include provisions for operation during the commissioning period.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol at least 60 days prior to the operation the CEMS.

AQ-28 The CO CEMS shall be installed, certified and maintained in accordance with applicable federal regulations including the requirements of 40 CFR 60, Appendix B and F, and a CEMS protocol approved by the District. At least 60 days prior to the operation of the

CEMS, the applicant shall submit a CEMS operating protocol to the District for written approval. This protocol shall also include provisions for operation during the commissioning period.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol at least 60 days prior to the operation the CEMS.

AQ-29 The District shall be notified in writing at least two weeks prior to any changes made in the CEMS software that affect the measurement, calculation, or correction of data displayed and/or recorded by the CEMS.

Verification: The project owner shall notify the CPM and APCO in writing at least two weeks prior to any changes made in the CEMS software that affect the measurement, calculation, or correction of data displayed and/or recorded by the CEMS.

AQ-30 Any violation of any emission standard as indicated by the CEMS shall be reported to the District's compliance division within 96 hours after such occurrence.

Verification: The project owner shall notify the District regarding any emission standard violation as required in this condition and shall document all such occurrences in each Quarterly Operation Report (**AQ-SC10**).

AQ-31 On and after initial startup, this equipment shall be equipped with continuous parametric monitors to measure (or calculate) and to record the following operational characteristics:

1. hours of operation (hours),
2. natural gas flow rate (scfh),
3. exhaust gas temperature (˚F),
4. SCR average temperature (˚F),
5. ammonia injection rate (lbs/hr),
6. water injection rate (lbs/hr) for NO_x control,
7. power output (MW).

These monitors shall be installed, calibrated, and maintained in accordance with the manufacturer's recommended procedures and a protocol approved by the District. Such protocol shall be submitted to the District for written approval at least 60 days prior to initial startup. This protocol shall include, at a minimum, a description of the equipment used for direct measurement of operating characteristics and the methodology used to calculate the remaining operating characteristics. All monitors shall be in full operation at all times when the turbine is in operation

Verification: The project owner shall submit to the CPM for review and the District for approval a parametric monitoring protocol in compliance with this condition at least 60 days prior to the initial startup.

AQ-32 Fuel flow meters shall be installed and maintained to measure the fuel flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flow meters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, Section 2.1.6.

Verification: The project owner shall submit to the CPM the natural gas usage data from the fuel flow meters as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-33 Monthly and annual records of fuel usage shall be maintained and made available to the District upon request.

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

AQ-34 Monthly and annual records shall indicate actual times and duration of all startups, shutdowns, and quantity of fuel used.

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

AQ-35 The ammonia injection flow rate shall be continuously monitored, recorded, and controlled. Records of ammonia injection rate and flow rate device calibration shall be maintained and made available to the District upon request.

Verification: The project owner shall submit to the CPM the hourly ammonia usage data from the ammonia flow rate monitor as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-36 A monitoring plan in conformance with Title 40, Code of Federal Regulations 75.53 shall be submitted to U.S. EPA Region 9 and the District at least 45 days prior to the initial source test, as required in Title 40, Code of Federal Regulations 75.62.

Verification: The project owner shall submit to the CPM for review and the District for approval the initial source test monitoring plan in compliance with this condition at least 45 days prior to the initial source test.

AQ-37 The exhaust stack shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with San Diego Air Pollution Control District Method 3A, Appendix Figure 2, and approved by the District.

Verification: The project owner shall submit to the CPM for review and District for approval a stack test port and platform plan at least 60 days before the installation of the stack ports and platform.

AQ-38 No later than 90 days after commencement of commercial operation (40CFR70.4[b][2]), a Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the permanent CEMS in accordance with Title 40, Code of Federal Regulations Part 75 Appendix A performance specifications. At least 45 days prior to the test date, the project owner shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 45 days prior to the test so that observers may be present. Within 30 days of completion of this test, a written test report shall be submitted to the District for approval.

Verification: The project owner shall submit to the CPM for review and the District for approval the RATA test protocol at least 45 days prior to the RATA test and shall submit to the CPM for review and the District for approval a copy of the written test report within 30 days after test completion.

AQ-39 Within 60 days after the initial startup, an initial source test shall be conducted by an independent, ARB-approved tester or the District, at the project owner's expense, to determine initial compliance with the emission standards of this Authority to Construct. A source test protocol shall be submitted to the District for approval at least 30 days prior to the initial source test. The source test protocol shall comply with the following requirements:

a. Measurements of outlet oxides of nitrogen (NO_x), carbon monoxide (CO), and stack gas oxygen content (O_2 percent) shall be conducted in accordance with the District Source Test Method 100, or the Air Resources Board Test Method 100 as approved by the U.S. Environmental Protection Agency.

b. Measurements of outlet volatile organic compound (VOC) emissions shall be conducted in accordance with the San Diego Air Pollution Control District Methods 25A and/or 18.

c. Measurements of particulate matter less than 10 microns (PM10) shall be conducted in accordance with the U.S. Environmental Protection Agency Test Methods 201A and 202.

d. Measurements of outlet ammonia shall be conducted in accordance with Bay Area Air Quality Management District (BAAQMD) Test Method ST-1B.

e. Source testing shall be performed at or above the normal load level, as specified in 40 CFR Part 75, Appendix A, Section 6.5.2.1 D, and at no less than 80 percent of the unit's rated load, unless it is demonstrated to the satisfaction of the District that the unit cannot operate under those conditions

Verification: The project owner shall submit to the CPM for review and the District for approval the initial source test protocol in compliance with requirements of this condition at least 30 days prior to the initial source test.

AQ-40 Within 30 days after completion of the initial source test, a final test report shall be submitted to the District for review and approval. The testing contractor shall include as part of the test report a certification that to the best of its knowledge the report is a true and accurate representation of the test conducted and the results.

Verification: The project owner will submit the initial source test report to the CPM for review and the District for approval within 30 days of the completion of the initial source test. The source test report will document compliance with the 60 day after initial start-up test deadline required in **AQ-32**.

AQ-41 In the event the initial source test results do not demonstrate compliance with District rules and regulations and emissions standards specified herein, to the satisfaction of the District, the project owner shall take corrective action to meet these standards. Any proposed corrective action that would result in a modification to the equipment shall require an application for a District Authority to Construct for such modification.

Verification: The project owner shall submit an amendment request to the Energy Commission and Authority to Construct application to the District for approval to make any equipment modifications required to comply with the Conditions of Certification.

AQ-42 This unit shall be source tested to demonstrate compliance with the NO_x, CO, VOC, PM10 and ammonia emission standards of this permit using District approved methods. The source test and the NO_x and CO RATA tests shall be conducted in accordance with the RATA frequency requirements of 40 CFR 75, Appendix B, Sections 2.3.1 and 2.3.3.

Verification: The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

AQ-43 Based on source testing, additional monitoring parameters may be established to ensure compliance. Operating characteristics monitored by continuous parametric monitors may also be restricted to specified ranges or limits, as determined by the District, based upon

manufacturer's recommended operating procedures and initial compliance source test results.

Verification: Additional monitoring parameter restrictions to specified ranges or limits as determined by the District, beyond those specified in these conditions, will be recorded and reported as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-44 The applicant shall obtain a modification to the Federal Title V Operating Permit in accordance with District Regulation XIV prior to initial startup of this equipment.

Verification: The project owner shall submit to both the District and CPM the Title V modification application after receiving applicable preconstruction permit(s). The project owner shall submit to the CPM a notification of the completion of the modified the Title V Operating permit prior to initial startup.

AQ-45 All records required by this permit shall be maintained for a minimum of five years and made available to District personnel upon request.

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

AQ-46 Access, facilities, utilities, and any necessary safety equipment for source testing and inspections shall be provided upon request of the Air Pollution Control District.

Verification: The project owner shall provide facilities, utilities, and safety equipment for source testing and inspections upon request of the District, ARB, and the Energy Commission.

AQ-47 The project owner shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxic "Hot Spots" Information and Assessment Act (California Health and Safety Code section 2230 et. seq.).

Verification: The project owner shall provide copies of all Air Toxic "Hot Spots" Information and Assessment Act related correspondence to the CPM within 15 days of their receipt or submittal.

AQ-48 This Air Pollution Control District Authority to Construct does not relieve the project owner from obtaining permit or authorizations required by other governmental agencies.

Verification: The project owner shall provide copies of all permits and authorizations required by other governmental agencies to the CPM within 15 days of their receipt.

Acronyms

AERMOD	ARMS/U.S. EPA Regulatory Model
AQCMM	Air Quality Construction Mitigation Manager
AQCMP	Air Quality Construction Mitigation Plan
APCO	Air Pollution Control Officer (SDAPCD)
BACT	Best Available Control Technology
ARB	California Air Resources Board
California ISO	California Independent System Operator
CEC	California Energy Commission (or Energy Commission)
CEQA	California Environmental Quality Act
CEM	Continuous Emission Monitor
CH_4	Methane (a greenhouse gas)
CO	Carbon Monoxide
CPM	(CEC) Compliance Project Manager
CTG	Combustion Turbine Generator
CVEUP	Chula Vista Energy Upgrade Project
ERC	Emission Reduction Credit
FDOC	Final Determination Of Compliance
GHG	Greenhouse Gas
gr	Grains (1 gr $\cong$ 0.0648 grams, 7000 gr = 1 pound)
GTE	Gas Turbine Engine
HRSG	Heat Recovery Steam Generator
MMBtu	Million British thermal units
MW	Megawatts (1,000,000 Watts)
N_2O	Nitrous Oxide (a greenhouse gas)
NH_3	Ammonia
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen *or* Nitrogen Oxides
NSR	New Source Review
OLM	Ozone Limiting Method (NO_2 dispersion modeling method)
PDOC	Preliminary Determination Of Compliance
PM10	Particulate Mater less than 10 microns in diameter
PM2.5	Particulate Mater less than 2.5 microns in diameter
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
ppmvd	Parts Per Million by Volume, Dry
PSA	Preliminary Staff Assessment (this document)
PSD	Prevention of Significant Deterioration
PVMRM	Plume Volume Molar Ratio Method (NO_2 dispersion modeling method)
scf	Standard Cubic Feet
SCR	Selective Catalytic Reduction
SF_6	Sulfur Hexafluoride (a greenhouse gas)
SIP	State Implementation Plan
SDAPCD	San Diego Air Pollution Control District (also District)
SO_2	Sulfur Dioxide
SO_3	Sulfate
SO_x	Oxides of Sulfur
U.S. EPA	United States Environmental Protection Agency
$\mu g/m^3$	Microgram per cubic meter
VOC	Volatile Organic Compounds

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 Energy Commission determines whether such emissions would exceed limits established for health protection and result in significant adverse public health impacts.[28]

SUMMARY AND DISCUSSION OF THE EVIDENCE

Project construction and operation will result in routine emissions of toxic air pollutants which are identified as non-criteria pollutants because there are no established air quality standards for them. In the absence of standards, state and federal regulatory programs have developed a health risk assessment procedure to evaluate their potential health effects.

1. Health Risk Assessment

For the proposed CVEUP and similar sources, a screening-level risk assessment is initially performed using simplified assumptions intentionally biased toward protection of public health. In other words, the analysis is designed to overestimate the public health impacts from exposure to emissions. Therefore, in reality it is likely that the actual risks from the project will be lower than the risks estimated by the screening-level assessment. This overestimation is generated by identifying conditions that could lead to the highest or worst-case risks, and then assuming them in the study. This process involves the following:

Using the highest levels of pollutants that could be emitted from the source;

- Assuming weather conditions that would lead to the maximum ambient concentration of pollutants;

[28] This Decision discusses other public health concerns in pertinent sections as follows: the accidental release of hazardous materials is discussed in Hazardous Materials Management and Worker Safety and Fire Protection; electromagnetic fields are discussed in Transmission Line Safety and Nuisance; potential impacts to soils and surface water sources are discussed in Soil and Water Resources; and hazardous and non-hazardous wastes are described in Waste Management.

- Using the type of air quality computer models that predict the greatest plausible impacts;

- Calculating health risks at the location where the pollutant concentrations are estimated to be highest;

- Using health-based standards designed to protect the most sensitive members of the population - including the young, elderly, and those with respiratory illnesses; and

- Assuming an individual's exposure to cancer-causing agents would occur over a 70-year lifetime.

A screening-level risk assessment will, at a minimum, include the potential health effects of inhaling hazardous substances. Some facilities may also emit certain substances that could present a health hazard from non-inhalation pathways of exposure. When these substances are found in emissions, a screening-level analysis is conducted to include the following additional exposure pathways: soil ingestion, dermal exposure, and mother's milk. (Ex. 200, p. 4.7-4.)

The risk assessment process addresses three categories of health impacts: acute (short-term) health effects, chronic (long-term) health effects, and cancer risk (also long-term). Acute health effects result from short-term (one-hour) exposure to relatively high concentrations of pollutants. Acute effects are temporary in nature, and include symptoms such as irritation of the eyes, skin, and respiratory tract. (*Id*.)

Chronic health effects result from long-term exposure to lower concentrations of pollutants. This exposure period is defined as approximately from 10–100 percent of a lifetime (from 7 to 70 years). Chronic health effects include reduced lung function and heart disease. (*Id*.)

The analysis for non-cancer health effects compares maximum project pollutant exposure levels to safe levels called reference exposure levels (RELs). These are amounts of toxic substances to which even sensitive individuals can be exposed without suffering adverse health effects. This means that these exposure limits would serve to protect even sensitive individuals including infants, school pupils, the aged, and people suffering from illnesses or diseases (which make them more susceptible to the effects of toxic substance exposure). The RELs are based on the most sensitive adverse health effects reported in the medical and toxicological literature, and include specific margins of safety that address the uncertainties associated with inconclusive scientific and technical

information available at the time standards were set. They are therefore intended to provide a reasonable degree of protection against hazards that research has yet to identify. Each margin of safety is designed to prevent impacts demonstrated to be harmful, as well as impacts from lower levels of exposure that may pose an unacceptable risk of harm, even when the risk is not precisely identified by nature or degree. Health protection can be expected if the estimated worst-case exposure is below the relevant REL. In such a case, an adequate margin of safety would exist between the predicted exposure and the estimated threshold of toxicity. (Ex. 200, p. 4.7-4.)

For carcinogenic substances, the health assessment considers the risk of developing cancer and conservatively includes the previously noted assumption that the individual would be exposed continuously over a 70-year lifetime. The risk that is calculated is not necessarily meant to project the actual expected incidence of cancer, but rather to represent a theoretical upper-bound estimate based on worst-case assumptions. (Ex. 200, p. 4.7-5.)

Cancer risk is expressed in terms of chances per million of developing cancer, and is a function of the maximum expected pollutant concentration, the probability that a particular pollutant will cause cancer (known as its potency factor and established by the California Office of Environmental Health Hazard Assessment, OEHHA), and the length of the exposure period. Cancer risks for individual carcinogens are added together to yield the total cancer risk from the source being considered. The conservative nature of these screening assumptions means that actual cancer risks are likely to be considerably lower than their estimates. (*Id*.)

2. Site and Vicinity Description

The proposed project site is located within the City of Chula Vista's Main Street Limited Industrial Corridor zoned for light industrial use. The site is a 3.82-acre land parcel on which is located MMC's Chula Vista Power Plant. The closest residential area lies approximately 350 feet to the west. There are nine sensitive receptor locations (schools) within a two-mile radius of the site. The nearest of these schools, the Otay Elementary School, is approximately 1,320 feet to the north-northeast of the project's property line. The location of sensitive receptors is an important factor in assessing the potential for public health impacts. (Ex. 200, pp. 4.5-3 to 4.5-5.)

There are census blocks with minority populations of 50 percent or greater within a six-mile radius of the proposed CVEUP. However, there are no census blocks

in the same area where low income individuals constitute more than 50 percent of the population. (Ex. 200, p. 4.7-7.)

3. Existing Air Quality

The proposed project site is within the jurisdiction of San Diego Air Pollution District (SDAPCD or Air District). The SDAPCD monitors the area's toxic air contaminants at the El Cajon and Chula Vista air monitoring stations in collaboration with the California Air Resources Board. As discussed in the Air District's report on their 2006 Air Toxics "Hot spots" program, there has been a 70 percent reduction in the area's cancer risks from airborne carcinogens since 1989 for carcinogens other than diesel particulate. The related cancer risk estimates for 2006 were 143 in one million for Chula Vista and 164 in one million for El Cajon, down from 481 and 545 in one million respectively in 1989. For diesel particulates, the related cancer risk estimate is 420 in one million, which is a decrease of approximately 50 percent from 1989's estimate of 870 in one million. These significant risk reductions reflect the effectiveness of the Air District's ongoing toxic emission reduction measures. The potential cancer risk from CVEUP and similar sources should be assessed within the context of their potential additions to these background risk levels. (Ex. 200, p. 4.7-8.)

4. Impacts

a. Potential Impacts of Project's Non-Criteria Pollutants

The health impacts of the non-criteria pollutants of specific concern in this analysis can be assessed separately as either construction-phase impacts or operational-phase impacts.

b. Construction Phase Impacts

Possible construction-phase health impacts are from wind-blown dust from site excavation and grading, and emissions from construction-related equipment. The dust-related impacts may result from either exposure to the dust itself as PM10 or PM 2.5, or exposure to any toxic contaminants that might be adsorbed onto the dust particle. As more fully discussed in the **WASTE MANAGEMENT** section of this Decision, the Applicant's site contamination assessments did not find any specific signs of environmental contamination from past industrial activities but recommended a specific plan for cleaning up any chemical

contaminants that might be encountered during construction. The recommended **WASTE MANAGEMENT** Conditions of Certification are intended to ensure development and implementation of this management plan. (Ex. 200, p. 4.7-9.)

The exhaust from diesel-fueled and other construction equipment has been established as a potent human carcinogen. Thus, construction-related emission levels could possibly add to the carcinogenic risk analyzed in this analysis. The Applicant has presented the diesel emissions from the different types of equipment to be used in the construction phase. We find the recommended control measures specified in **AIR QUALITY** Conditions of Certification (**AQ-SC1** through **AQ-SC5**) to be adequate for reducing any exposure to levels that would not pose a significant cancer risk, especially in this relatively short construction period. (Ex. 200, p. 4.7-9.)

c. Operational Impacts

The main health risk from the proposed CVEUP would be associated with emissions from its two natural gas-fired combustion turbines. The project's emission control equipment is more fully described in the **AIR QUALITY** section of this Decision.

PUBLIC HEALTH Table 1 lists the project's toxic emissions as expected from the main project sources. The table shows how each would contribute to the risk estimated from the health risk analysis. For example, the first row shows that oral exposure to acetaldehyde is not of concern but, if inhaled, may have cancer and chronic (long-term) non-cancer health effects, but not acute (short-term) effects.

As noted in a publication by the South Coast Air Quality Management District (SCAQMD), one property that differentiates the air toxics of concern from the criteria pollutants is their tendency to be highest in close proximity to the source and quickly drop off with distance. This means that the levels of CVEUP's air toxic contaminants would be highest in the immediate area and decrease rapidly with distance. (Ex. 200, p. 4.7-10.)

The Applicant's estimates of CVEUP's potential contribution to the area's carcinogenic and non-carcinogenic pollutants were obtained from a screening-level health risk assessment conducted according to procedures specified in the 1993 CAPCOA Guidelines. The results from this assessment (summarized in Staff's **PUBLIC HEALTH Table 2**) were provided to Staff along with documentation of the assumptions used.

We agree with Staff's finding that these assumptions are acceptable for use in this analysis, and agree with the Applicant's findings with regard to the numerical public health risk estimates expressed either in terms of the hazard index for each non-carcinogenic pollutant, or as cancer risks for estimated levels of carcinogenic pollutants. These analyses were conducted to establish the maximum potential for acute and chronic effects on body systems such as the liver, central nervous system, the immune system, kidneys, the reproductive system, the skin, and the respiratory system. (Ex. 200, p. 4.7-11.)

Public Health Table 1

Types of Health Impacts and Exposure Routes Attributed to Toxic Emissions

Substance	Oral Cancer	Oral Non-Cancer	Inhalation Cancer	Non-cancer (Chronic)	Non-cancer (Acute)
Acetaldehyde			✔	✔	
Acrolein				✔	✔
Ammonia				✔	✔
Arsenic	✔	✔	✔	✔	✔
Benzene			✔	✔	✔
1,3-Butadiene			✔	✔	
Cadmium		✔	✔	✔	
Chromium			✔	✔	
Copper				✔	✔
Ethylbenzene				✔	
Formaldehyde			✔	✔	✔
Hexane				✔	
Lead	✔	✔	✔	✔	
Mercury		✔		✔	✔
Naphthalene		✔		✔	
Nickel			✔	✔	✔
Polynuclear Aromatic Hydrocarbons (PAHs)	✔	✔	✔	✔	
Propylene				✔	
Propylene oxide			✔	✔	✔
Toluene				✔	✔
Xylene				✔	✔
Zinc				✔	

(Source: Ex. 200, p. 4.7-11.)

As shown in **PUBLIC HEALTH Table 2**, the chronic hazard index at the point of maximum impact (PMI) is 0.0069 while the maximum hazard index for acute effects is 0.088. These values are well below Staff's significance criterion of 1.0,

suggesting that the pollutants in question are unlikely to pose a significant risk of either chronic or acute non-cancer health effects anywhere in the project area.

Public Health Table 2
Chula Vista Energy Upgrade Project's Operation Hazard/Risk

Type of Hazard/Risk	Hazard Index/Risk	Significance Level	Significant?
Acute Non-cancer	0.088	1.0	No
Chronic Non-cancer	0.0069	1.0	No
Individual Cancer	0.15×10^{-6} (a)	10.0×10^{-6}	No

Staff's summary of information from MMC 2007ba pp. 5.9-8 through 5.9-11, and Appendix 5.1D.
(a) Risk at the point of maximum impact
(Source: Ex. 200, p. 4.7-12.)

The cancer risk estimate for the point of maximum impact is 0.15 in 1,000,000, which is well below Staff's significance criterion of 10 in 1,000,000 for this screening-level assessment. Thus, project-related cancer risk from project operations would be less than significant for all individuals in the project area.

The conservatism in these assessments is reflected in the previously noted fact that (a) the individual considered is assumed to be exposed at the highest possible levels to all the carcinogenic pollutants from the project for a 70-year lifetime, (b) all the carcinogens are assumed to be equally potent in humans and experimental animals, even when their cancer-inducing abilities have not been established in humans, and (c) that humans are assumed to be as susceptible as the most sensitive experimental animal, despite knowledge that cancer potencies often differ between humans and experimental animals. Only a relatively few of the many environmental chemicals identified so far as capable of inducing cancer in animals have been shown to also cause cancer in humans. (Ex. 200, p. 4.7-12.)

5. Cumulative Impacts

The maximum impact location would be the spot where pollutant concentrations for the proposed project would theoretically be highest. The evidence of record shows that even at this hypothetical location (which is immediately beyond the existing MMC property boundary) there is no reason to expect any significant change in lifetime risk to any person, given the calculated incremental cancer risk of 0.15 in 1,000,000. This is not a significant contribution to the average

American lifetime individual cancer risk of 330,000 in 1,000,000. Modeled facility-related risks are even lower for more distant locations. Given the previously noted conservatism in the calculation method used, the actual risks would likely be much smaller. Therefore, we do not consider the incremental risk estimate from CVEUP's operation as suggesting a potentially significant contribution to the area's overall or cumulative cancer risk that includes the respective risks from the background pollutants from all existing area sources. (Ex. 200, p. 4.7-12.)

Given the identified lack of significant public health impacts from CVEUP's operation, the minority population living within six miles of the proposed project, would not be exposed to the emitted pollutants at levels considered significant enough to raise environmental justice concerns.

6. Compliance with LORS

The toxic pollutant-related cancer and non-cancer risks from the proposed CVEUP's operation reflect the effectiveness of control measures (including the use of cleaner-burning natural gas, and an oxidation catalyst which reduces hazardous air pollutant emissions) proposed by the Applicant. Since these risk estimates are far below the significance levels in the applicable LORS, we conclude that the related operational plan would comply with these LORS.

7. Response to Agency and Public Comments

Staff received specific comments from the general public and other concerned groups about the potential for CVEUP's emissions to cause cancer or exacerbate the areas' asthma problem given that asthma is commonly believed to be caused or triggered by criteria pollutants (SO_x, NO_x, CO, and PM2.5 addressed in the **AIR QUALITY** section of this Decision) and that some of the toxic air pollutants of specific concern in this **PUBLIC HEALTH** analysis are theoretically capable of inducing cancer. A related February 4, 2008 letter of complaint with forty signatories was forwarded to the Energy Commission by Theresa Acerro on behalf of the Southwest Chula Vista Civic Association. Many other comments by the same organization, the Environmental Health Coalition, and other concerned area residents were also forwarded together with scientific publications about the pollution-related health impacts at issue. We have considered these comments, as well as the numerous comments received orally at the public hearings in this matter, in formulating our conclusions in this matter. In addition, Staff provided additional analysis of the concerns expressed regarding particulate matter and potential impacts on asthma in the FSA.

FINDINGS AND CONCLUSIONS

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

1. During project construction, exposure to emissions from diesel-fueled construction equipment and from fugitive dust during excavation and grading activities could potentially result in adverse health effects.

2. The temporary nature of the construction phase and the implementation of CVEUP's Air Quality Construction Mitigation Plan ensure that construction-related emissions will not result in adverse public health effects.

3. During project operation, the CVEUP will emit criteria and non-criteria pollutants (toxic air contaminants) that could potentially result in adverse public health effects.

4. Project emissions of criteria pollutants will be mitigated to levels consistent with applicable regulatory standards as discussed in the **AIR QUALITY** section of this Decision.

5. Best Available Control Technology (BACT) used to control emissions of criteria pollutants is also effective to control emissions of toxic air contaminants from the same source.

6. Applicant performed a health risk assessment, using well-established scientific protocol, to analyze potential adverse health effects of toxic air contaminants emitted by CVEUP within a six-mile radius of the project site.

7. There are sensitive receptors within a three-mile radius of the site; however the health risk assessment assumed any receptor within the area was a sensitive receptor.

8. Applicant's health risk assessment is based on worst-case assumptions using the highest emission factors, assuming the worst weather conditions, and calculating effects at the point of maximum impact so that actual risks are expected to be much lower at any other location.

9. Results of the health risk assessment indicate that potential public health risks from exposure to emissions of toxic air contaminants during project operation will be insignificant.

10. There is no evidence of project-related disproportionate public health impacts on the environmental justice community.

The Commission concludes that project emissions of non-criteria 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. We find that toxic air emissions from the construction and operation of the proposed CVEUP would be at levels that do not require mitigation beyond the specific emission control measures included as Conditions of Certification elsewhere in this Decision and, therefore, do not adopt any related Conditions of Certification.

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 at the CVEUP and to 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 loud noises. (Ex. 1, § 5.16.2.2, Tables 5.16-1 and 5.16-2; Ex. 200, 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.[29] (*Id.*)

2. Mitigation Measures

The project owner will develop and implement a "Construction Safety and Health Program" and an "Operations and Maintenance Safety and Health Program," in consultation with the appropriate agencies prior to project construction and operation. (Ex. 1, §§ 5.16.2.3.1, 5.16.2.3.2; Ex. 200, p. 4.14-5 et seq.) Separate Injury and Illness Prevention Programs, First Aid, CPR, and Defibrillator Training 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 construction and operation phases of the project.[30] (*Ibid*.) These comprehensive programs will contain more specific plans dealing with the site and linear facilities, such as the Emergency Action Plan, as well as additional programs under the applicable

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[29] California Occupational Health and Safety Administration (Cal-OSHA) regulations (Cal. Code Regs., tit. 8, § 337 et seq. and § 1500 et seq.) and other applicable federal, state, and local laws affecting industrial workers are identified in Appendix A of this Decision. (*See* Ex. 1, § 5.16.3; Ex. 200, p. 4.14-2 et seq.)

[30] Staff noted that in addition to the construction worker safety issues, the potential exists for exposure to contaminated soils during site preparation. Conditions **WASTE-1** and **WASTE**-2 require appropriate handling and disposal of contaminated soils. (Ex. 200, p. 4.14-3.)

General Industry Safety Orders, Electrical Safety Orders, and Unfired Pressure Vessel Safety Orders. (*Id.*) Conditions **WORKER SAFETY-1** and **WORKER SAFETY-2** require the project owner to consult with the Chula Vista Fire Department (CVFD) and to submit the plans for approval to the Energy Commission's Compliance Project Manager (CPM) to ensure compliance with applicable LORS.

To ensure compliance with federal OSHA and Cal-OSHA requirements, it is standard industry practice to employ a Construction Safety Supervisor who has experience with enforcing OSHA/Cal-OSHA standards, can identify workplace hazards, and has the authority to take appropriate action. (Ex. 200, p. 4.14-9 et seq.) Condition **WORKER SAFETY-3** requires the project owner to designate a power plant Construction Safety Supervisor to coordinate and implement the Construction and Operation Safety and Health programs and to investigate any safety-related incidents and emergency responses.

To reduce and/or eliminate safety hazards during project construction and operation, Staff believes it is necessary for the project owner to employ a professional Safety Monitor on-site to track compliance with OSHA/Cal-OSHA regulations and to periodically audit safety compliance during construction, commissioning, and the transition to operational status.[31] (Ex. 200, p. 4.14-11.) Condition **WORKER SAFETY-4** describes the role of a Safety Monitor, who is hired by the project owner but reports to the Chief Building Official (CBO) and CPM, and serves as an on-site OSHA expert to ensure that safety procedures and practices are fully implemented. In this capacity, the Safety Monitor is also authorized to review the work of the Construction Safety Supervisor.

3. Fire Protection and Prevention Plans

The project will include comprehensive on-site fire protection and suppression systems as first line defense in the event of fire. The project will also rely on local fire protection services. (Ex. 200, p. 4.14-11.) To ensure that the fire protection and suppression systems comply with current standards, Condition **WORKER SAFETY-1** requires the project owner to obtain approval of the Construction Fire Protection and Prevention Plan from the CVFD and any other fire protection agencies serving the CVEUP at least 30 days before the start of

[31] Safety audits conducted by Staff in 2005 at CEC-certified power plants revealed safety and health hazards and LORS violations due to errors, misunderstandings, and/or the failure to properly train supervisors and workers. (Ex. 200, pp. 4.14-10 and 4.14-11.)

construction activities. (See, Ex. 206; 10/02/08 RT 158-159.) Condition **WORKER SAFETY-2** requires the project owner to provide a Fire Protection and Prevention Program for review by the fire protection agencies serving the CVEUP prior to the start of project operation. (*Id*.)

The on-site fire protection system provides the first line of defense for small fires. During construction, portable fire extinguishers will be placed throughout the site at appropriate intervals and safety procedures will be implemented in accordance with the guidelines of the Construction Fire Protection and Prevention Program. (Ex. 200, p. 4.14-11.)

During project operation, fire suppression elements include both fixed and portable fire extinguishing systems. A fixed sprinkler system will be installed in areas of risk and in administrative buildings in accordance with National Fire Protection Association (NFPA) guidelines to provide protection from the worst-case single fire. The Sweetwater Authority's potable water system is the primary source of fire protection water for the project. A carbon dioxide and dry chemical fire protection system will be provided for the combustion turbine generators and accessory equipment. This system will have fire detection sensors to trigger alarms, turn off ventilation, close ventilation openings, and automatically activate the CO_2 and chemical suppression system. In addition to the fixed fire protection system, portable extinguishers and fire hydrants will be located throughout the facility at code-approved intervals. (Ex. 1, §§ 2.1.11 and 2.2.1.1.2.) According to Staff, these systems meet the standard requirements of the NFPA and the Uniform Fire Code. (Ex. 200, p. 4.14-12.)

The proposed CVEUP site design provides only one access point for fire department entry to the site. Staff believes that access limited to one entrance could hinder emergency response if the entrance is blocked. The CVFD Fire Marshall agrees that a second access entry point must be available although it may be restricted for only emergency use if it is equipped with the CVFD's Opticom System for remote keyless entry. (Ex. 200, pp. 4.14-12 and 4.14-13.) To ensure a second entrance, we have adopted Condition **WORKER SAFETY-6** to require the project owner to identify and provide a second access point for emergency vehicles and to equip the secondary gate with either the Opticom System or a keypad for fire department personnel to open the gate.

The CVFD will provide fire support services to the site. Fire Station #9, located at 266 East Oneida Street (approximately three miles away), is the closest station to the site. Fire Station # 5 is the next closest station at 391 Oxford Street

(approximately four miles away). The driving time from both stations is about three to five minutes, but the total response time (from the moment a call is made to the point of arrival at the site) is estimated at six to eight minutes. Fire Station #1 is located at 447 F Street (approximately seven miles from the CVEUP site). The drive time from Station #1 to the site is about six to eight minutes and the total response time is estimated at 11 to 14 minutes. Staff confirmed that the CVFD is adequately staffed and equipped to serve as first responder to any fire incident at the site. In the event of a large-scale incident, the CVFD may utilize its mutual aid agreement with the San Diego Fire Department. (Ex. 200, p. 4.14-3.)

The CVFD will also be the first responder to hazardous materials incidents at the site, with backup support provided by the San Diego City and County Department of Health Hazardous Materials Incident Response Team (DEH-HIRT). The DEH-HIRT is capable of handling any hazardous materials-related incident and will respond from two stations: Station No. 44, located at 10011 Black Mountain Road in San Diego, about 21 miles from the CVEUP site, and the San Diego County Station located at 1255 Imperial Avenue, about 15 miles from the site. (Ex. 200, p. 4.14-3; Ex. 1, §§ 5.5.2.5, 5.10.1.6.3).

Staff summarized the location of fire department responders and associated response times in the Table shown below. (Ex. 200, p. 4.14-3.)

WORKER SAFETY AND FIRE PROTECTION Table 2
Response Time for CVFD*

CVFD Station	Total Response Time**	Distance to CVEUP	EMS/HazMat Capability***
Station #9	6-8 min.	~3 mi	Y/Y
Station #5	6-8 min.	~4 mi	Y/Y
Station #1	11-14 min.	~7 mi	Y/Y

*Source: Ex. 200, p. 4.14-3.

**Total response times are estimated from the moment a 911 call is made to arrival at the site and are dependent upon traffic conditions and other variables.

***All personnel are trained to EMT-1 level and first responder for hazardous materials incidents.

In conjunction with its First Aid, CPR, and Defibrillator Program, the project owner will maintain an automatic defibrillator on-site to provide immediate

response in the event of a medical emergency.[32] (Ex. 200, p. 4.14-13.) Condition **WORKER SAFETY-5** requires the project owner to ensure that a portable automatic cardiac defibrillator is located on-site during construction and operation and that appropriate personnel are trained to use it.

4. Cumulative Impacts

Staff reviewed the potential for the CVEUP, combined with existing industrial facilities and expected new facilities, to result in cumulative impacts on the CVEUP's fire and emergency service capabilities. Evidence indicates that the CVFD is adequately staffed and equipped to serve as first responder to any incident at the CVEUP and that in the case of a large-scale incident the CVFD may utilize its mutual aid agreement with the San Diego Fire Department. According to the CVFD, the existing Chula Vista Power Plant did not call upon the fire department often, and it does not expect the new CVEUP to be a burden to the department. (Ex. 200, p. 4.14-13.)

[32] Staff asserts that the potential for both work-related and non work-related heart attacks exists at power plants. The quickest medical intervention can be achieved with the use of an on-site defibrillator since response time from an off-site provider could take too long. Many modern industrial and commercial enterprises maintain defibrillators for emergency use. Staff therefore believes it is an appropriate safety and health precaution in a power plant environment to maintain an on-site defibrillator. (Ex. 200, pp. 4.14-12 and 4.14-13.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidentiary 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 construction and operation phases of the project; each of the programs will include an Injury/Illness Prevention Program, a Personal Protective Equipment Program, a First Aid, CPR, and Defibrillator Training Program, an Exposure Monitoring Program, an Emergency Action Plan, a Fire Protection and Prevention Plan, and other general safety procedures as well as programs under the applicable General Industry Safety Orders, Electrical Safety Orders, and Unfired Pressure Vessel Safety Orders..

3. The CVEUP will include on-site fire protection and suppression systems for first line defense in the event of fire.

4. The Chula Vista Fire Department (CVFD) will provide fire protection and emergency response services to the project.

5. CVFD Station #9, the closest station to the site, and Station # 5, the next closest station, can each respond to emergency calls at the site within approximately 6 to 8 minutes. Fire Station #1 can provide back-up response to the site with a response time of approximately 11-14 minutes.

6. The CVFD is the assigned hazmat first responder with backup support provided by the San Diego City and County Department of Health Hazardous Materials Incident Response Team (DEH-HIRT).

7. The project owner will maintain an automatic defibrillator on-site to provide immediate response in the event of a medical emergency.

8. The CVEUP will provide a secondary emergency access point to the site equipped with either the Opticom System or a keypad for CVFD personnel to open the gate as set forth in Condition **WORKER SAFETY-6**.

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 discussed in the evidentiary record and identified in the pertinent portions of **Appendix A** of this Decision.

The Energy Commission, therefore, concludes that implementation of the project's Construction and Operation 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 Construction Safety and Health Program containing the following:

1. a Construction Personal Protective Equipment Program;
2. a Construction Exposure Monitoring Program;
3. a Construction Injury and Illness Prevention Program;
4. a Construction Emergency Action Plan; and
5. a Construction Fire Prevention Plan.

The Personal Protective Equipment Program, the Exposure Monitoring Program, and the Injury and Illness Prevention Program shall be submitted to the CPM for review and approval concerning compliance of the programs with all applicable Safety Orders. The Construction Emergency Action Plan and the Fire Prevention Plan shall be submitted to the Chula Vista Fire Department for review and comment prior to submittal to the CPM for approval.

Verification: At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review and approval a copy of the Project Construction Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Chula Vista Fire Department stating the Fire Department's comments on the Construction Fire Prevention Plan and 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:

1. an Operation Injury and Illness Prevention Plan;
2. an Emergency Action Plan;
3. a Hazardous Materials Management Program;
4. an Operation Fire Prevention Program (8 CCR § 3221); and

5. a 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 CPM for review and comment concerning compliance of the programs with all applicable Safety Orders. The Operation Fire Prevention Plan, the Hazardous Materials Management Program, and the Emergency Action Plan shall also be submitted to the Chula Vista Fire Department for review and comment.

Verification: At least 30 days prior to the start of first-fire or commissioning, the project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Chula Vista Fire Department stating the Fire Department's comments on the Operations Fire Prevention Plan and Emergency Action Plan.

WORKER SAFETY-3 The project owner shall provide a site Construction Safety Supervisor (CSS) who, by way of training and/or experience, is knowledgeable of power plant construction activities and relevant laws, ordinances, regulations, and standards; is capable of identifying workplace hazards relating to the construction activities; and has authority to take appropriate action to assure compliance and mitigate hazards. The CSS shall:

1. have overall authority for coordination and implementation of all occupational safety and health practices, policies, and programs;

2. assure that the safety program for the project complies with Cal/OSHA and federal regulations related to power plant projects;

3. assure that all construction and commissioning workers and supervisors receive adequate safety training;

4. complete accident and safety-related incident investigations and emergency response reports for injuries and inform the CPM of safety-related incidents; and

5. assure that all the plans identified in Conditions of Certification Worker Safety-1 and -2 are implemented.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit to the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement (CSS) shall be submitted to the CPM within one business day.

The CSS shall submit in the Monthly Compliance Report a monthly safety inspection report to include: 1)record of all employees trained for that month (all records shall be kept on site for the duration of the project); 2) summary report

of safety management actions and safety-related incidents that occurred during the month; 3) report of any continuing or unresolved situations and incidents that may pose danger to life or health; and 4) report of accidents and injuries that occurred during the month.

WORKER SAFETY-4 The project owner shall make payments to the Chief Building Official (CBO) for the services of a Safety Monitor based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. Those services shall be in addition to other work performed by the CBO. The Safety Monitor shall be selected by and report directly to the CBO and will be responsible for verifying that the Construction Safety Supervisor, as required in Condition of Certification WORKER SAFETY-3, implements all appropriate Cal/OSHA and Energy Commission safety requirements. The Safety Monitor shall conduct on-site (including linear facilities) safety inspections at intervals necessary to fulfill those responsibilities.

Verification: Prior to the start of construction, the project owner shall provide proof of its agreement to fund the Safety Monitor services to the CPM for review and approval.

WORKER SAFETY-5 The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during construction and operations and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During construction and commissioning, the following persons shall be trained in use of the AED and shall be on site whenever the workers that they supervise are on site: the Construction Project Manager or delegate, the Construction Safety Supervisor or delegate, and all shift foremen. During operations, all power plant employees shall be trained in use of the AED. The training program shall be submitted to the CPM for review and approval.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit to the CPM proof that a portable automatic external defibrillator (AED) exists on site and a copy of the training and maintenance program for review and approval.

WORKER SAFETY-6 The project owner shall identify and provide a second access point for emergency personnel to enter the site. This access point and the method of gate operation shall be submitted to the Chula Vista Fire Department for review and comment and to the CPM for review and approval.

Verification: At least 60) days prior to the start of site mobilization, the project owner shall submit to the Chula Vista Fire Department and the CPM preliminary plans showing the location of a second access point to the site and a description of how the gate will be opened by the fire department. At least thirty (30) days prior to the start of site mobilization, the project owner shall submit final plans to

the CPM review and approval. The final plan submittal shall also include a letter containing comments from the Chula Vista Fire Department or a statement that no comments were received.

D. HAZARDOUS MATERIALS MANAGEMENT

This analysis considers whether the construction and operation of the Chula Vista Energy Upgrade Project will create significant impacts to public health and safety resulting from the use, handling, transportation, or storage of hazardous materials.[33] Several locational factors affect the potential for project-related hazardous materials to cause adverse impacts. These include meteorological conditions, terrain characteristics, any special site factors, and the proximity of population centers and sensitive receptors. (Ex. 200, p. 4.4-5.) In addition, many sensitive subgroups may be at heightened risk from exposure to emitted pollutants. There are a total of about 240 sensitive receptors within a six-mile radius of the proposed project. The nearest school is the Otay Elementary School, located about 0.25 miles to the north. There are residences just beyond the facility fence line. (Ex. 200, p. 4.4-5.)

The uncontested evidence submitted by Applicant and Staff incorporates these factors in the analysis of record. (10/2/08 RT 26-28; Exs. 1, § 5.5; 3, Response 1; 5, Responses 14-18; 18; 19; 23; 200, § 4.4.)

1. Potential Risks

The evidence of record chronicles the method used to assess risks posed by hazardous materials. This method included the following elements:

- A review of chemicals, the amounts proposed for on-site use, and a determination of the need and appropriateness of their use.

- Chemicals which would be used in small amounts, or whose physical state is such that there is virtually no chance that a spill would migrate off the site and impact the public, were removed from further consideration.

- Measures proposed to prevent spills were reviewed and evaluated. These included engineering controls such as automatic shut-off valves and different size transfer-hose couplings, as well as administrative controls such as worker training and safety management programs.

[33]The **Worker Safety and Fire Protection** portion of this Decision analyzes the protection of workers from such risks. (Ex. 200, p. 4.4-1.)

- Measures proposed to respond to accidents were reviewed and evaluated. These measures included engineering controls such as catchment basins and methods to keep vapors from spreading, as well as administrative controls such as training emergency response crews.

- An analysis of the theoretical impacts on the public of a worst-case spill of hazardous materials even with the mitigation measures in place. (Ex. 200, pp. 4.4-6 To 4.4-7.)

Hazardous materials used during construction will include gasoline, diesel fuel, motor oil, hydraulic fluid, welding gases, lubricants, solvents, paint, and paint thinner. No acutely toxic materials will be used on-site during construction. Hazardous materials will be used or stored during operation only in small quantities.

Appendix A (incorporated in Condition of Certification **HAZ-1** at the end of this section) lists the hazardous materials that will be used and stored on-site. Condition **HAZ-1** prohibits the project owner from using hazardous materials not listed in Appendix A, or storing them in greater quantities than specified, without prior approval of the Energy Commission's Compliance Project Manager. None of these materials, except for aqueous ammonia as discussed below, pose significant potential for off-site impacts as a result of the quantities on-site, their relative toxicity, their physical state, and/or their environmental mobility. (Ex. 200, pp. 4.4-2, 4.4-7.)

The project will connect to an existing on-site natural gas pipeline and will not require the installation of any off-site piping. It will, however, involve the handling – but not storage – of large quantities of natural gas. The evidence shows that, while natural gas poses some risk of both fire and explosion, this risk can be reduced to insignificant levels through adherence to applicable codes and the development and implementation of effective safety management practices. For example, National Fire Protection Association (NFPA) code 85A requires both the use of double-block and bleed valves for gas shut-off and automated combustion controls. These measures will significantly reduce the likelihood of an explosion in gas-fired equipment. Additionally, air purging of the gas turbines will be required prior to start-up, thereby precluding the presence of an explosive mixture. The safety management plan will address the handling and use of natural gas, and the evidence establishes that it will significantly reduce the potential for equipment failure because of either improper maintenance or human error. (Ex. 200, pp. 4.4-2, 4.4-7 to 4.4-8.)

Finally, the use of aqueous ammonia is necessary to control oxides of nitrogen (NO_x) emissions resulting from natural gas combustion. The evidence of record is in accord that aqueous ammonia is the only hazardous material that could realistically, without proper mitigation, pose a significant risk of off-site impact. This could result from the release of ammonia vapor in the event of a spill. (Ex. 200, p. 4.4-9.) The evidence contains a detailed analysis of both the potential impacts resulting from an ammonia spill and the adequacy of measures available to limit the severity of any impacts.

2. Risk Mitigation

The use of aqueous ammonia rather than anhydrous ammonia significantly reduces off-site risks. Anhydrous ammonia is stored as a liquefied gas at high pressure and could explode in an accidental release, resulting in high downwind concentrations. Aqueous ammonia spills are much easier to contain, and emissions from such spills are limited by the slow mass transfer from the surface of the spilled material. (Ex. 200, pp. 4.4-1 to 4.4-2.)

The CVEUP will store aqueous ammonia (in a 19 percent solution) in an existing above-ground tank with a maximum capacity of 12,000 gallons.[34] The secondary containment basin is also above ground and is capable of holding the full contents of the tank plus rainfall. The tanker truck transfer pad will be contained by a berm that drains into a subsurface vault. (Ex. 200, pp. 4.4-6 to 4.4-13.)

To assess the potential impacts associated with an accidental release of aqueous ammonia, the evidence shows that Staff used four benchmark exposure levels of ammonia gas occurring off-site. These include:

a. the lowest concentration posing a risk of lethality, i.e. 2,000 parts per million (ppm);

b. the concentration immediately dangerous to life and health, a level of 300 ppm;

c. the emergency response planning guideline level 2 of 150 ppm, which is also the RMP level 1 criterion used by U.S. Environmental Protection Agency (EPA) and California; and

[34] Seismic criteria governing storage tanks is addressed in the **Facility Design** section of the Decision.

d. the level of 75 ppm, considered by the Energy Commission staff to be without serious adverse effects on the public for a one-time exposure.

If the exposure associated with a potential release exceeds 75 ppm at any public receptor, Staff also assesses the probability of occurrence of the release, the severity of the consequences, and the nature of the potentially exposed population in determining whether the likelihood and extent of exposure would be significant.[35] (Ex. 200, pp. 4.4-9 to 4.4-10.)

In addition, Applicant performed an off-site consequence analysis (OCA) for the worst-case release scenario (involving the failure and complete discharge of the storage tank), as well as an alternative release scenario involving a spill during truck unloading. (Exs. 1, Appendix 5.5A; 3, Attachment WSQ-1; 200, p. 4.4-10.) The evidence establishes that, under both the analyses performed by Applicant and by Staff, various engineering and administrative controls will reduce potential off-site impacts to below levels of significance.

3. Engineering and Administrative Controls

Engineering controls and administrative controls affect the significance of potential impacts from hazardous materials usage. Engineering controls are those physical or mechanical systems (such as storage tanks or automatic shut-off valves) which can prevent a hazardous material spill from occurring, which can limit the spill to a small amount, or which can confine it to a small area. Administrative controls are those rules and procedures that workers at the facility must follow. These are designed to help prevent accidents or keep them small if they do occur. Timely and adequate emergency spill response is also a crucial factor. (Ex. 200, p. 4.4-6.)

The engineered safety features which will be used at the CVEUP include:

- Construction of secondary containment areas surrounding each of the hazardous materials storage areas (such as the containment basin required by Condition of Certification **HAZ-4** for aqueous ammonia), designed to contain accidental releases that might happen during storage or delivery plus the volume of fire suppression water associated with 20 minutes of operating;

[35] Staff's Hazardous Materials Appendix A (Exs. 200, pp. 4.4-37 to 4.4-41) discusses the criteria for ammonia exposure guidelines, their applicability to sensitive populations, and exposure-specific conditions.

- Physical separation of stored chemicals in isolated containment areas separated by a noncombustible partition in order to prevent accidental mixing of incompatible materials, which could result in the evolution and release of toxic gases or fumes;

- Installation of both an automatic sprinkler system and an exhaust system for indoor hazardous materials storage areas;

- Construction of bermed containment surrounding the aqueous ammonia storage tank and the truck unloading area; and

- Process protective systems including continuous tank level monitors, automated leak detectors, temperature and pressure monitors, alarms, and emergency block valves.

Administrative controls also help prevent accidents and releases (spills) from moving off-site and affecting neighboring communities. These include those required in Conditions of Certification **HAZ-1** (limitations on the use and storage of hazardous materials and their strength and volume), **HAZ-2** (Risk Management Plan), and **HAZ-3** (development of a safety management plan). (Ex. 200, pp. 4.4-12 to 4.4-13.)

Worker training programs, process safety management programs, and compliance with all applicable health and safety laws, ordinances, and standards will also reduce risks. The worker health and safety program which will be prepared by the project owner will include (but not be limited to) the following elements:

- Worker training regarding chemical hazards, health and safety issues, and hazard communications;

- Procedures to ensure the proper use of personal protective equipment;

- Safety operating procedures for the operation and maintenance of systems utilizing hazardous materials;

- Fire safety and prevention; and

- Emergency response actions including facility evacuation, hazardous material spill clean-up, and fire prevention.

In order to address the issue of spill response, the project owner will prepare and implement an emergency response plan that includes information on hazardous materials contingency and emergency response procedures, spill containment and prevention systems, personnel training, spill notification and on-site containment, as well as other elements. Emergency procedures will be established which include evacuation, spill cleanup, hazard prevention, and emergency response.

The San Diego City and County Department of Environmental Health Hazardous Materials Incident Response Team (DEH-HIRT) will be the responder to hazardous materials incidents. The DEH-HIRT is capable of handling any hazardous materials-related incident at the proposed facility and would respond from two stations: Station No. 44, located at 10011 Black Mountain Road in San Diego, about 21 miles from the CVEUP site; and the San Diego County Station located 1255 Imperial Avenue, about 15 miles from the site. (Exs.1, § 5.5.25 and 5.10.1.6.3; 200, p.4.4-13.)

4. Transportation Risk Reduction

The evidence shows that transport of aqueous ammonia poses the predominant risk to off-site receptors. Ammonia can be released during a transportation accident; the extent of impact would depend upon the location of the accident and the rate of dispersion of ammonia vapor from the surface of the aqueous ammonia pool.

The transportation of hazardous materials over the nation's highways is neither unique nor infrequent. Data from the U.S. DOT show that the actual risk of a fatality over the past five years form all modes of hazardous material transportation (rail, air, boat, and truck) is approximately 0.1 in 1, 000,000.

The analysis of record contains a conservative evaluation of the risk of an accidental transportation release in the project area. (Ex. 200, pp. 4.4-12 to 4.4-13.) This analysis is based on the maximum 4,400 hours of operation (a capacity factor of approximately 50 percent). The historic capacity factor for similar peaking power plants over 40 MW in California is about 3.4 percent. If the project is operated in a similar manner as other peaking power plants in California, the

number of ammonia tanker trips and the resultant risks would be proportionately smaller than those presented here. (Ex. 200, p. 4.4-15.)

Aqueous ammonia will be delivered to the proposed facility in DOT-certified vehicles with design capacities of 6,500 gallons. These vehicles are designed to DOT Code MC-307. They are high-integrity vehicles designed to haul caustic materials such as ammonia. Condition of Certification **HAZ-5** ensures that, regardless of which vendor supplies the aqueous ammonia, delivery will be made in a tanker that meets or exceeds the specifications described by these regulations. (Ex. 200, pp. 4.4-13 to 4.4-14.)

The maximum use of aqueous ammonia each year of the operation of the CVEUP project will require about 18 tanker truck deliveries of aqueous ammonia per year (one delivery every two to three weeks). Each delivery will travel approximately 1.0 mile from I-805 along Main Street to the facility. This would result in about 18 miles of delivery tanker truck travel in the project area per year (with a full load) for trucks arriving from I-805. Staff's risk transportation risk assessment model shows a risk of 0.5 in 1,000,000 for one trip from I-805; thus, the total annual risk would be 14 in 1,000,000 for 18 deliveries from I-805. (Ex. 200, pp. 4.4-14 To 4.4-15.) To further limit potential risks, Condition **HAZ-6** requires: the use of only one specific route to the site (the shortest from an Interstate, i.e. I-805 west on Main to the facility); and that deliveries of aqueous ammonia be limited to only those times of day when school busses are not present on the transportation route. The risk over this distance is insignificant.

5. Site Security

The hazardous materials used by the CVEUP are listed by several federal agencies (USEPA, Homeland Security, DOE) in Vulnerability Assessments requiring special site security measures to prevent unauthorized access. (Ex. 200, p. 4.4-16.) A security plan will be prepared for the proposed facility and will include a description of perimeter security measures and procedures for evacuating, notifying authorities of a security breach, monitoring fire alarms, conducting site personnel background checks, site access, and a security plan and background checks for hazardous materials drivers. Perimeter security measures utilized for this facility may include security guards, security alarms, breach detectors, motion detectors, and video or camera systems. (Ex. 1, § 5.5.4.2.5.)

In order to ensure that neither this project nor a shipment of hazardous material is the target of unauthorized access, Conditions of Certification **HAZ-7** and **HAZ-8** address both construction security and operation security plans. These plans will require implementation of site security measures which provide for the minimum level of security for power plants necessary for the protection of California's electrical infrastructure from malicious mischief, vandalism, or domestic/foreign terrorist attacks. (Ex. 200, p. 4.4-17.)

6. Cumulative Risks

Finally, the evidence contains an analysis of potential cumulative impacts. A significant cumulative hazardous materials impact is basically the simultaneous uncontrolled release of hazardous materials from multiple locations in a form (gas or liquid) that could cause a significant impact where the release of one hazardous material alone would not cause a significant impact. Existing locations that use or store gaseous or liquid hazardous materials, or locations where such facilities might likely be built, were both considered. Since there are no adjacent facilities which use aqueous ammonia, no projects are proposed in the City of Chula Vista that plan to use hazardous materials that may pose a risk of off-site impacts, and the CVEUP's potential off-site impacts will be mitigated to levels of insignificance, the potential for a significant cumulative impact is negligible. (Ex. 200, p. 4.4-18.)

FINDINGS AND CONCLUSIONS

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

1. The CVEUP will use hazardous materials during construction and operation, including aqueous ammonia and natural gas.

2. The major public health and safety hazards associated with these hazardous materials include the accidental release of aqueous ammonia as well as fire and explosion from natural gas.

3. Staff's independent analysis indicated that appropriate design measures to contain spilled ammonia are necessary to ensure that no significant off-site public health consequences will result from an accidental ammonia release.

4. Compliance with appropriate engineering and regulatory requirements for safe transportation, delivery, handling, and storage of ammonia 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 on-site 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, an approved Hazardous Materials Business Plan, and an approved Risk Management Plan prior to delivery of any hazardous materials to the site.

8. The project owner will ensure that truck deliveries of aqueous ammonia are restricted to the truck delivery route specified in Condition of Certification **HAZ-6**, below.

9. The likelihood of cumulative impacts originating from simultaneous releases of hazardous materials from the CVEUP and nearby facilities is statistically remote and considered insignificant.

10. 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, use, storage, or transportation of hazardous materials.

11. With implementation of the Conditions of Certification, below, the CVEUP 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 CVEUP 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 A, below, or in greater quantities or strengths than those identified by chemical name in Appendix A, below, unless approved in advance by the Compliance Project Manager (CPM).

Verification: The project owner shall provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility.

HAZ-2 The project owner shall concurrently provide a Business Plan and a revised and updated Risk Management Plan (RMP) prepared pursuant to the California Accidental Release Program (CalARP) to the San Diego County Department of Environmental Health, Hazardous Materials Division (DEH HMD) and the CPM for review. The revised RMP shall reflect the maximum operating hours and maximum use of aqueous ammonia, as well as any undated methodology for developing an RMP. After receiving comments from the San Diego County DEH HMD and the CPM, the project owner shall reflect all recommendations in the final documents. Copies of the final Business Plan and RMP shall then be provided to the San Diego County DEH HMD for information and to the CPM for approval.

Verification: At least sixty (60) days prior to commissioning, the project owner shall provide a copy of a final Business Plan and the revised RMP to the CPM for approval.

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of aqueous ammonia and other liquid hazardous materials by tanker truck. The plan 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 incompatible hazardous materials, including provisions to maintain lockout control by a power plant employee not involved in the delivery or transfer operation. This plan shall be applicable during construction, commissioning, and operation of the power plant.

Verification: At least thirty (30) days prior to the delivery of any liquid hazardous material to the facility, the project owner shall provide a Safety Management Plan as described above to the CPM for review and approval.

HAZ-4 The aqueous ammonia storage tank with secondary containment basin and the bermed tanker truck transfer pad that drains into a subsurface vault presently on-site shall be used by the project owner. The secondary containment basin shall be certified by the project owner as being capable of holding 125 percent of the storage volume or the storage volume plus the volume associated with 24 hours of rain, assuming a 25-year storm.

Verification: At least thirty (30) days prior to delivery of aqueous ammonia to the facility, the project owner shall submit the required certification to the CPM for approval.

HAZ-5 The project owner shall direct all vendors delivering aqueous ammonia to the site to use only tanker truck transport vehicles which meet or exceed the specifications of DOT Code MC-307.

Verification: At least thirty (30) days prior to receipt of aqueous ammonia on-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.

HAZ-6 At least thirty (30) days prior to receipt of any hazardous materials on-site, the project owner shall direct all vendors delivering any hazardous material to the site to use only the route approved by the CPM. Trucks will travel on I-805 to Main Street to the plant site. The project owner shall obtain approval of the CPM if an alternate route is desired. The project owner shall also consult with any school in the area where school buses use the designated hazardous materials transportation route and shall prohibit, through contractual language, the transportation of aqueous ammonia to the site that would coincide with school bus traffic along the approved route.

Verification: At least thirty (30) days prior to receipt of any hazardous materials on-site, the project owner shall submit to the CPM for review and approval copies of: 1) notices to hazardous materials vendors describing the required transportation route, 2) the contract with the aqueous ammonia vendor describing the time-of-day limitation on deliveries, and 3) evidence that schools in the area which use the transport route have been consulted.

HAZ-7 Prior to commencing construction, a site-specific Construction-site Security Plan for the construction phase shall be prepared and made available to the CPM for review and approval. The Construction Security Plan shall include the following:

1. perimeter security consisting of fencing enclosing the construction area;
2. security guards;
3. site access control consisting of a check-in procedure or tag system for construction personnel and visitors;
4. written standard procedures for employees, contractors and vendors when encountering suspicious objects or packages on-site or off-site;

5. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and
6. evacuation procedures.

Verification: At least thirty (30) days prior to commencing construction, the project owner shall notify the CPM that a site-specific Construction Security Plan is available for review and approval.

HAZ-8 The project owner shall also prepare a site-specific security plan for the commissioning and operational phases that shall be available to the CPM for review and approval. The project owner shall implement site security measures that address physical site security and hazardous materials storage. The level of security to be implemented shall not be less than that described below (as per NERC 2002).

The Operation Security Plan shall include the following:

1. permanent full perimeter fence or wall, at least 8 feet high;
2. main entrance security gate, either hand operated or motorized;
3. evacuation procedures;
4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;
5. written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on-site or off-site;
6. A. a statement (refer to sample, **Attachment A**), signed by the project owner, certifying that background investigations have been conducted on all project personnel. Background investigations shall be restricted to determine the accuracy of employee identity and employment history and shall be conducted in accordance with state and federal laws regarding security and privacy;

   B a statement(s) (refer to sample, **Attachment B**), signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors (as determined by the CPM after consultation with the project owner), that are present at any time on the site to repair, maintain, investigate, or conduct any other technical duties involving critical components (as determined by the CPM after consultation with the project owner) certifying that background investigations have been conducted on contractors who visit the project site;

7. site access controls for employees, contractors, vendors, and visitors;

8. a statement(s) (refer to sample, **Attachment C**), signed by the owners or authorized representative of hazardous materials transport vendors, certifying that they have prepared and implemented security plans in compliance with 49 CFR 172.880, and that they have conducted employee background investigations in accordance with 49 CFR Part 1572, subparts A and B;

9. closed circuit TV (CCTV) monitoring system, recordable, and viewable in the power plant control room and security station (if separate from the control room) or from a remote location capable of viewing, at a minimum, the main entrance gate and the ammonia storage tank; and

10. additional measures to ensure adequate perimeter security consisting of either:

    A. security guard(s) present 24 hours per day, 7 days per week;

    <u>or</u>

    B. power plant personnel on-site or at a remote location 24 hours per day, 7 days per week, and **all** of the following:

        1. the CCTV monitoring system required in item 9, above, shall include cameras able to pan, tilt, and zoom; that have low-light capability; are recordable; and are able to view 100 percent of the perimeter fence, the ammonia storage tank, the outside entrance to the control room, and the front gate from a monitor in the power plant control room; **and**

        2. perimeter breach detectors **<u>or</u>** on-site motion detectors.

The project owner shall fully implement the security plans and obtain CPM approval of any substantive modifications to those security plans. The CPM may authorize modifications to these measures, or may require additional measures such as protective barriers for critical power plant components— transformers, gas lines, and compressors—depending upon circumstances unique to the facility or in response to industry-related standards, security concerns, or additional guidance provided by the U.S. Department of Homeland Security, the U.S. Department of Energy, or the North American Electrical Reliability Council, after consultation with both appropriate law enforcement agencies and the project owner.

Verification: At least thirty (30) days prior to the initial receipt of hazardous materials on-site, the project owner shall notify the CPM that a site-specific operations site security plan is available for review and approval. In the annual compliance report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. In the annual compliance report, the project owner shall include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.

Hazardous Materials
Appendix A

Hazardous Materials Used at the CVEUP

Appendix A

Hazardous Materials
Hazardous Materials Used at the CVEUP

Material	CAS No.	Application	Hazardous Characteristics	Maximum Quantity On-site	CERCLA SARA RQ[a]
Acytylene	47-86-2	Welding gas	Health: hazardous if inhaled; Physical: combustible, flammable	300 pounds	NA
Aqueous Ammonia 19% Solution	7664-41-7	NO_X emissions control	Health: irritation to permanent damage from inhalation, ingestion, and skin contact; Physical: reactive, vapor is combustible	10,200 gallons	100 pounds
Cleaning Chemicals/ Detergents	None	Periodic cleaning of combustion turbine	Health: various Physical: various	Up to 25 gallons or 100 pounds per chemical	NA
Hydraulic Oil	None	In combustion turbine and turbine control valve actuators	Health: hazardous if ingested; Physical: may be flammable/ combustible	150 gallons	42 gallons
Lubrication Oil	None	Lubricate rotating equipment	Health: hazardous if ingested; Physical: may be flammable/ combustible	400 gallons	42 gallons
Mineral Insulating Oil	8012-95-1	Transformers/switchyard	Health: hazardous if ingested; Physical: may be flammable/ combustible	550 gallons	42 gallons
Oxygen	7782-44-7	Welding gas	Health: skin irritant Physical: flammable	300 pounds	NA
Paint	Various	Touchup of painted surfaces	Health: various Physical: various	Up to 25 gallons or 100 pounds per type	NA
Propane	74-98-6	Torch gas	Health: causes frostbites Physical: flammable, oxidizing	100 pounds	NA
Sulfure Hexaflouride/ USEPA Protocol Gasses	2551-62-4	Calibration gasses	Health: hazardous if inhaled Physical: flammable	400 pounds	NA

Source: Ex. 200.

a. Reportable quantities for a pure chemical, per the Comprehensive Environmental Response, Compensation, and Liability Act.

SAMPLE CERTIFICATIONS

(Attachments A, B, and C)

SAMPLE CERTIFICATION (Attachment A)

Affidavit of Compliance for Project Owners

I, _____
(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of:

_____
(Company name)

for employment at:

_____
(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

_____
(Signature of Officer or Agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

SAMPLE CERTIFICATION (Attachment B)

Affidavit of Compliance for Contractors

I, _____
(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of:

_____
(Company name)

for contract work at:

_____
(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

_____
(Signature of Officer or Agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

SAMPLE CERTIFICATION (Attachment C)

Affidavit of Compliance for Hazardous Materials Transport Vendors

I,

_____

(Name of person signing affidavit)(Title)

do hereby certify that the below-named company has prepared and implemented security plans in conformity with 49 CFR 172.880 and has conducted employee background investigations in conformity with 49 CFR 172, subparts A and B:

_____

(Company name)

for hazardous materials delivery to:

_____

(Project name and location)

as required by the California Energy Commission Decision for the above-named project.

_____

(Signature of Officer or Agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

E. WASTE MANAGEMENT

The CVEUP will generate nonhazardous and hazardous wastes during construction and operation. This topic reviews the project's waste management plans for reducing the risks and environmental impacts associated with handling, storage, and disposal of project-related nonhazardous and hazardous wastes.

Nonhazardous wastes are degradable or inert materials, which do not contain concentrations of soluble pollutants that could degrade water quality and are therefore eligible for disposal at Class II or III disposal facilities. (Cal. Code Regs., tit. 14, § 17200 et seq.)

Hazardous waste consists of materials that exceed criteria for toxicity, corrosivity, ignitability, or reactivity as established by the California Department of Toxic Substances Control (DTSC).[36] State law requires hazardous waste generators to obtain U.S. EPA identification numbers and contract with registered hazardous waste transporters to transfer hazardous waste to appropriate Class I disposal facilities. (Cal. Code Regs., tit. 22, § 66262.10 et seq.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Site Excavation

As described previously in this Decision, the CVEUP will be constructed on a vacant portion of the 3.8-acre site adjacent to the existing 44.5 MW plant. The CVEUP will use the existing power plant infrastructure, including the transmission line and the natural gas, water, and sewage pipelines. (Ex. 200, p. 4.13-6.)

Applicant submitted a Phase I Environmental Site Assessment (ESA), which was prepared by Advantage Environmental Consultants in accordance with the American Society for Testing and Materials Standard Practice E 1527-00 for ESAs.[37] (Ex. 1, Vol. 2, Appendix 5.14A; Ex. 200, p. 4.13-9.) The Phase I ESA

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[36] California Health and Safety Code, section 25100 et seq. (Hazardous Waste Control Act of 1972, as amended) and Title 22, California Code of Regulations, section 66261.1 et seq.

[37] For any proposed power plant site, the project proponent must provide documentation of any actual or potential soil or water contamination at the site. The certification process requires a Phase I ESA to provide the history of the use of the site and a list of hazardous waste releases within a certain distance of the site. If there is reasonable potential that the site contains hazardous waste, a Phase II ESA must be conducted to analyze the contamination and to

did not identify any recognized environmental conditions associated with the project site and linear facility corridors.[38]

However, the Phase I ESA shows the site was used as a salvage yard from 1980 to 2000 prior to construction of the existing power plant. This previous use indicates a potential for impacts from hazardous substances or petroleum products that could have been dumped at the site but were not observed during site reconnaissance. The ESA recommends that suspect soils encountered during construction activities should be evaluated by a qualified environmental expert and handled according to applicable law. (Ex. 1, § 5.14.1.1.1, Vol. 2, Appendix 5.14A, §7; Ex. 200, p. 4.13-9.) To address this concern, we have adopted Conditions of Certification **WASTE-1** and **WASTE-2** to require the project owner to employ a professional geologist or engineer to oversee earth moving activities and to ensure the proper identification and handling of any soil contamination in consultation with the Department of Toxic Substances Control.

2. Construction

Site preparation and construction of the power plant and its associated facilities will generate both nonhazardous and hazardous wastes in solid and liquid forms (Ex. 1, § 5.14.1.2.1.) Condition **WASTE-5** requires the project owner to develop and implement a Construction Waste Management Plan that must identify all waste streams and the methods of managing each waste.

a. Nonhazardous Wastes

Construction of the CVEUP will generate nonhazardous solid waste products comprised of scrap wood, concrete, steel/metal, paper, glass, and plastics. These wastes will be recycled where practical. Non-recyclable wastes will be collected and deposited at a Class II or III landfill. Nonhazardous excavated soil will be reused onsite for grading purposes. (Ex. 1, §§ 5.14.1.2.1, 5.14.2.3.1, Table 5.14-1; Ex. 200, p. 4.13-9; Cal. Code Regs., tit. 14, §17200 et seq.)

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establish a remediation plan. (Ex. 200, pp. 4.13-7 to 4.13-8.) Applicant's Phase I ESA was completed in November 2006.

[38] A recognized environmental condition is the presence or likely presence of any hazardous substances or petroleum products that indicate an existing release, past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the site or in the ground, groundwater, or surface water of the site. (Ex. 200, p. 4.13-9.)

Nonhazardous liquid wastes generated during construction are discussed in the **Soils and Water Resources** section of this Decision. Stormwater runoff will be managed in accordance with the project's Stormwater Pollution Prevention Plan (SWPPP) and Drainage, Erosion, and Sedimentation Control Plan (DESCP). Wastewater will be sampled to determine whether disposal via the City of Chula Vista's sewer system is acceptable. Contaminated water will be accumulated and transported offsite to a wastewater treatment facility. Sanitary wastes will be collected in portable, self-contained toilets and pumped periodically for disposal at an appropriate facility. (Ex. 1, §§ 5.14.1.2.1 and 5.14.1.2.3; Ex. 200, p. 4.13-9.)

b. Hazardous Wastes

Most of the hazardous wastes generated during construction will consist of liquid waste from excavation watering, cleaning fluids, waste oil, waste paint, and solvents. Solid hazardous wastes will include oily rags, fluorescent lamps, spent welding materials, and spent batteries. The quantities of these wastes and disposal methods are listed in Applicant's Table 5.14-1. (Ex. 1, § 5.14.1.2.1, Table 5.14-1.) Staff's review indicates that the disposal methods proposed by Applicant will be consistent with applicable LORS. (Ex. 200, p. 4.13-10.) Condition **WASTE-4** requires the project owner to notify the Energy Commission Compliance Project Manager if any waste management-related enforcement action is taken or initiated by a regulatory agency. (See, Ex. 2, § 5.14.)

The construction contractor in conjunction with the project owner/operator will be considered a generator of hazardous wastes at the site and will be responsible for handling hazardous waste in compliance with applicable LORS. Hazardous wastes will be accumulated at satellite locations near the points of generation and transported daily to the construction contractor's 90-day hazardous waste storage area. The accumulated wastes will be properly manifested, transported, and disposed of by licensed hazardous waste collection and disposal companies. (Ex. 1, § 5.14.1.2.1; Ex. 200, p. 4.13-10.) The existing plant operator at the site already has a hazardous waste generator identification number from the U.S. EPA. Condition **WASTE-3** requires the CVEUP to provide the existing site identification number to the Compliance Project Manager prior to generating any hazardous waste related to construction. (Ex. 19, p. 7; Ex. 200, p. 4.13-10.)

3. Demolition

a. Nonhazardous Wastes

Nonhazardous waste generated by demolition of the existing plant will include debris from wood, metal, or other materials that cannot be separated for recycling. Waste will also include plastics and electrical equipment classified as nonhazardous as well as ventilation materials and other general waste. All nonhazardous wastes will be stockpiled near the work area and stored to prevent surface water erosion in accordance with the approved SWPPP and DESCP. Nonhazardous wastes will be recycled or transported to a Class II or III landfill. (Ex. 1, § 5.14.1.2.2.)

b. Hazardous Wastes

Hazardous wastes generated by demolition will include electrical equipment designated as hazardous, used oils, fluorescent bulbs, and acid storage batteries, all of which will be stored in appropriate containers for waste profiling and removal. (Ex. 1, § 5.14.1.2.2.) An estimated 150 cubic yards of concrete and about 10 tons of waste metal will be recyclable. The project owner will attempt to salvage and sell equipment from the demolished plant, such as the turbines, generators, transformers, and motors; if the equipment cannot be sold, it will either be recycled or transferred to designated landfills. (*Id*.)

4. Operation

Condition **WASTE-6** requires the project owner to develop and implement an Operation Waste Management Plan to identify all waste streams and the methods of managing each waste.

a. Nonhazardous Waste

Applicant expects to generate about 39 tons per year of nonhazardous waste materials during project operation, including routine maintenance wastes (such as used air filters, spent deionization resins, sand and filter media) as well as domestic and office wastes (such as office paper, newsprint, aluminum cans, plastic, and glass). All non-hazardous wastes will be recycled to the extent feasible, and non-recyclable wastes will be regularly transported offsite to a local solid waste disposal facility. (Ex. 1, § 5.14.1.2.3, Table 5.14-2.)

Nonhazardous liquid wastes generated during project operation are discussed in the **Soil and Water Resources** section of this Decision. Stormwater runoff will be managed in accordance with the SWPPP and DESCP. General facility drainage will be discharged to the facility's concrete-lined wastewater sump and discharged to the City of Chula Vista's sewer connection unless the wastewater does not meet discharge criteria, in which case it will be trucked offsite for disposal at an approved wastewater disposal facility. (Ex. 1, § 5.14.1.2.3.)

b. Hazardous Waste

Since the project will generate hazardous wastes during operation, Condition **WASTE-3** requires the project to maintain its hazardous waste generator identification number. Hazardous wastes at the site will include used hydraulic fluids, oils, greases, oily filters and rags, spent SCR catalysts, cleaning solutions, solvents, and batteries. Applicant's Table 8.5.14-2 provides a list of hazardous wastes, the amounts expected to be generated, and their disposal methods. (Ex. 1, § 5.14.1.2.3, Table 5.14-2.)

Spills and unauthorized releases of hazardous materials or hazardous wastes may result in contaminated soils. (Ex. 200, p. 4.13-11.) To ensure proper cleanup and management of contamination due to spills, Condition **WASTE-7** requires the project owner/operator to report, clean up, and remediate as necessary, any hazardous materials spills or releases in accordance with applicable law. See also, the **Hazardous Material Management** section of this Decision.

Hazardous wastes will be stored temporarily onsite in designated storage areas and collected by registered, licensed hazardous waste transporters for disposal at authorized hazardous waste management Class I facilities. (Ex. 200, p. 4.13-11.) Condition **WASTE-4**, *supra*, also applies to any waste management-related enforcement action during project operations.

5. Potential Impacts on Waste Disposal Facilities

Non-hazardous solid waste will be collected by the City of Chula Vista for disposal at the Otay Landfill, a Class III facility about five miles from the project site. Applicant also identified two other Class III landfills available in San Diego County. The CVEUP will generate approximately 450 tons of solid waste during construction/demolition but lesser amounts will be generated during operation. The total amount of project-related nonhazardous waste will amount to less than

one percent of available landfill capacity. Thus, disposal of solid wastes generated by the CVEUP will not significantly impact the capacity or remaining life of the landfill facilities. (Ex. 1, § 5.14.2.3.1, Table 5.14-3; Ex. 2, § 5.14; Ex. 200, 4.13-12.)

Hazardous wastes will be transported to one of California's two available Class I landfills: Clean Harbor's Buttonwillow Landfill in Kern County and Waste Management's Kettleman Hills Landfill in Kings County. The Kettleman Hills facility also accepts Class II, and III waste. In addition, there are several commercial hazardous waste treatment and recycling facilities in Southern California. Evidence indicates there is sufficient capacity at these facilities to handle the project's hazardous wastes during its operating lifetime. (Ex. 1, §§ 5.14.2.3.2, 5.14.2.4; Ex. 200, p. 4.13-12.)

Regarding potential cumulative impacts, the quantities of solid and hazardous wastes generated by the CVEUP will add to the total quantities of waste generated by new residential and commercial development in the Chula Vista area. However the CVEUP's waste stream is relatively low, recycling efforts will be prioritized, and sufficient disposal capacity is available. As a result, the project's cumulative impacts on disposal facilities will be insignificant for both nonhazardous and hazardous waste disposal. (Ex. 200, p. 4.13-12.)

FINDINGS AND CONCLUSIONS

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

1. Applicant's Phase I Environmental Site Assessment did not identify any recognized environmental conditions associated with the project site or linear facility corridors.

2. The project owner will implement appropriate characterization, disposal, and remediation measures to ensure that if suspect soils are uncovered during earth moving activities, any risk of exposure to contaminated soils will be reduced to insignificant levels.

3. The project will generate nonhazardous and hazardous wastes during demolition of site structures, excavation, construction, and operation.

4. The project will recycle nonhazardous and hazardous wastes to the extent feasible and in compliance with applicable law.

5. Hazardous wastes that cannot be recycled will be transported by registered hazardous waste transporters to appropriate Class I landfills.

6. Solid nonhazardous wastes that cannot be recycled will be deposited at Class II and III landfills in the local area.

7. Liquid wastes will be classified for appropriate disposal and stormwater runoff will be managed in accordance with the Stormwater Pollution Prevention Plan and the Drainage, Erosion, and Sedimentation Control Plan.

8. Disposal of project wastes will not result in any significant direct, indirect, or cumulative impacts on existing waste disposal facilities.

9. 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 portions of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

WASTE-1 The project owner shall provide the resume of an experienced and qualified professional engineer or professional geologist, who shall be available for consultation during site characterization (if needed), demolition, excavation, and grading activities, to the CPM for review and approval. The resume shall show experience in remedial investigation and feasibility studies.

The professional engineer or professional geologist shall be given full authority by the project owner 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 for review and approval.

WASTE-2 If potentially contaminated soil is identified during site characterization, demolition, excavation, or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the professional engineer or professional geologist shall inspect the

site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, representatives of Department of Toxic Substances Control, and the CPM stating the recommended course of action. Depending on the nature and extent of contamination, the professional engineer or professional 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 professional engineer or professional geologist, significant remediation may be required, the project owner shall contact the CPM and representatives of the Department of Toxic Substances Control for guidance and possible oversight.

Verification: The project owner shall submit any final reports filed by the professional engineer or professional geologist to the CPM within five days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

WASTE-3 The project owner shall obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during construction and operations.

Verification: The project owner shall keep a copy of the identification number on file at the project site and provide the number to the CPM in the next Monthly Compliance Report.

WASTE-4 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 way project-related wastes are managed.

WASTE-5 The project owner shall prepare a Construction Waste Management Plan for all wastes generated during construction of the facility and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:

1. a description of all construction waste streams, including projections of frequency, amounts generated, and hazard classifications; and
2. management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best

management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans.

Verification: The project owner shall submit the Construction Waste Management Plan to the CPM for approval no less than 30 days prior to the initiation of construction activities at the site.

WASTE-6 The project owner shall prepare an Operation Waste Management Plan for all wastes generated during operation of the facility and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:

1. a detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications;
2. management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans;
3. information and summary records of conversations with the local Certified Unified Program Agency and the Department of Toxic Substances Control regarding any waste management requirements necessary for project activities. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary;
4. a detailed description of how facility wastes will be managed and any contingency plans to be employed, in the event of an unplanned closure or planned temporary facility closure; and
5. a detailed description of how facility wastes will be managed and disposed upon closure of the facility.

Verification: The project owner shall submit the Operation Waste Management Plan to the CPM for approval no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.

The project owner shall also document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year; provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste

Management Plan; and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.

WASTE-7 The project owner shall ensure that all spills or releases of hazardous substances, hazardous materials, or hazardous waste are reported, cleaned up, and remediated as necessary, in accordance with all applicable federal, state, and local requirements.

Verification: The project owner shall document all unauthorized releases and spills of hazardous substances, materials, or wastes that occur on the project property or related pipeline and transmission corridors. The documentation shall include, at a minimum, the following information: location of release; date and time of release; reason for release; volume released; amount of contaminated soil/material generated; how release was managed and material cleaned up; if the release was reported; to whom the release was reported; release corrective action and cleanup requirements placed by regulating agencies; level of cleanup achieved and actions taken to prevent a similar release or spill; and disposition of any hazardous wastes and/or contaminated soils and materials that may have been generated by the release. Copies of the unauthorized spill documentation shall be provided to the CPM within 30 days of the date the release was discovered.

VI. ENVIRONMENTAL ASSESSMENT

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 in the vicinity of the project site and linear alignments, 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 (LORS).

LORS applicable to the project include San Diego County's Multiple Species Conservation Program (MSCP) for long-term habitat preservation and management. The City of Chula Vista incorporated the relevant MSCP Subarea Plan into its General Plan to address local habitat preservation and adopted a habitat loss and incidental take ordinance in conjunction with an Implementing Agreement with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. The Setting

The project site, which features the existing power plant and associated structures, has been used for industrial purposes for several decades and is located in a highly disturbed industrial area with no sensitive biological resources. The laydown areas and linear facilities are also located on similarly developed properties. (Ex. 200, p. 4.2-6; Ex. 1, § 5.2.1.2.)

The Otay River Valley, located immediately south of the site, is the nearest sensitive biological resource. It is a major east-west riparian corridor of regional biological significance covering a broad floodplain supporting riparian and wetland habitats and extending about 13 miles from the southeastern edge of lower San Diego Bay east to the Otay Lakes Reservoir. (Ex. 200, p. 4.2-6.)

This riparian corridor is part of the Otay River Preserve, a designated MSCP open space and natural preserve area characterized by a wide swath of vegetation dominated by willow riparian woodland intermixed with patches of freshwater marsh, braided channels, and sandbars. Riparian habitat near the project could potentially support many special status species covered by the MSCP, including mule fat (*Baccharis salicifolia*), broom baccharis (*Baccharis sarothroides*), poison oak (*Toxicodendron diversilobum*), sandbar willow (*Salix exigua*), Mexican elderberry (*Sambucus mexicana*), and Mediterranean tamarisk (*Tamarix ramosissima)* which form the understory layer. (Ex. 1, § 5.2.1.2.)

On the northern border of the Otay River floodplain, the terrain slopes gently up to the elevation of the project site; but on the south, the topography is steep, with a 70-foot rise to a terrace overlooking the river valley. The banks of this terrace are vegetated with Diegan coastal sage scrub, a habitat type that supports many special status plants and animals covered by the MSCP. (Ex. 200, p. 4.2-7.)

Staff's Biological Resources Table 2, replicated below, lists special status species potentially found in the project area.

The site and both construction laydown areas are included within the MSCP's 75-to-100 percent Conservation Area/Habitat Preserve, which is designed to protect large, interconnected habitat blocks that are defined by a quantitative and qualitative target for conservation but where final boundaries have not been established. (Ex. 200, pp. 4.2-3, 4.2-7.)

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Biological Resources Table 2
Special Status Species Potentially Occurring in the Project Area

PLANTS		
Scientific Name	**Common Name**	**Status*** **(Federal, State, CNPS, MSCP)**
Acanthomintha ilicifolia	San Diego thorn-mint	FT, CE CNPS 1B.1, MSCP
Adolphia californica	California adolphia	CNPS 2.1
Ambrosia chenopodiifolia	San Diego bur-sage	CNPS 2.1
Ambrosia pumila	San Diego ambrosia	FE, CNPS 1B.1, MSCP
Astragalus deanei	Dean's milk-vetch	CNPS 1B.1
Atriplex pacifica	South Coast saltscale	CNPS 1B.2
Bergerocactus emoryi	golden-spined cereus	CNPS 2.2
Brodiaea orcuttii	Orcutt's brodiaea	CNPS 1B.1, MSCP
California macrophyllum	round-leaved filaree	CNPS 1B.1
Ceanothus verrucosus	wart-stemmed ceanothus	CNPS 2.2
Chorizanthe orcuttiana	Orcutt's spineflower	FE, CE,CNPS 1B.1
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	CNPS 1B.2
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	CNPS 1B.2
Cordylanthus orcuttianus:	Orcutt's bird's-beak	CNPS 2.1, MSCP
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	CNPS 1B.1
Cupressus forbesii	Tecate cypress	CNPS 1B.1, MSCP
Deinandra conjugens	Otay tarplant	FT, CE, CNPS 1B.1, MSCP
Dudleya attenuate ssp. *orcuttii*	Orcutt's dudleya	CNPS 2.1
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	CNPS 1B.1
Dudleya variegata	variegated dudleya	CNPS 1B.2, MSCP
Dudleya viscida	sticky dudleya	CNPS 1B.2, MSCP
Ericameria palmeri ssp. *palmeri*	Palmer's goldenbush	CNPS 2.2, MSCP
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE, CE, CNPS 1B.1, MSCP
Euphorbia misera	cliff spurge	CNPS 2.2,
Ferocactus viridescens	San Diego barrel cactus	CNPS 2.1, MSCP
Geothallus tuberosus	Campbell's liverwort	CNPS 1B.1
Isocoma menziesii var. *decumbens*	decumbent goldenbush	CNPS 1B.2
Iva hayesiana	San Diego marsh-elder	CNPS 2.2
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	CNPS 1B.1
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	CNPS 1B.2
Monardella stoneana	Jennifer's monardella	CNPS 1B.2
Muilla clevelandii	San Diego goldenstar	CNPS 1B.1, MSCP
Navarretia fossalis	spreading navarretia	FT, CNPS 1B.1, MSCP
Navarretia prostrata	prostrate navarretia	CNPS 1B.1
Opuntia californica var. *californica*	snake cholla	CNPS 1B.1, MSCP
Orcuttia californica	California Orcutt grass	FE, CE, CNPS 1B.1,MSCP
Ornithostaphylos oppositifolia	Baja California birdbush	CE, CNPS 2.1
Pogogyne nudiuscula	Otay Mesa mint	FE, CE,CNPS 1B.1,MSCP
Ribes viburnifolium	Santa Catalina Island currant	CNPS 1B.2
Salvia munzii	Munz's sage	CNPS 2.2
Satureja chandleri	San Miguel savory	CNPS 1B.2, MSCP
Sphaerocarpos drewei	bottle liverwort	CNPS 1B.1
Stemodia durantifolia	purple stemodia	CNPS 2.1
Stylocline citroleum	oil neststraw	CNPS 1B.1
Tetracoccus dioicus	Parry's tetracoccus	CNPS 1B.2, MSCP

ANIMALS		
Common Name	**Scientific Name**	**Status (Federal, State, MSCP)**
Invertebrates		
Quino checkerspot butterfly	*Euphydryas editha quino*	FE, MSCP
Riverside fairy shrimp	*Streptocephalus woottoni*	FE, MSCP
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE, MSCP
Amphibians		
Arroyo toad	*Bufo californicus*	FE, CSC, MSCP
Western spadefoot	*Spea hammondii*	CSC
Reptiles		
Coast (San Diego) horned lizard	*Phrynosoma coronatum*	CSC, MSCP
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	CSC
Coronado skink	*Eumeces skiltonianus interparietalis*	CSC
Orange-throated whiptail	*Aspidoscelis hyperythra*	CSC, MSCP
Northern red-diamond rattlesnake	*Crotalus rubber rubber*	CSC
Silvery legless lizard	*Anniella pulchra pulchra*	CSC
Two-striped garter snake	*Thamnophis hammondii*	CSC
Birds		
Burrowing owl	*Oteo cunicularia*	CSC, MSCP
California black rail	*Laterallus jamaicensis coturniculus*	CT
California horned lark	*Eremophila alpestris actia*	CSC
Coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	CSC, MSCP
Coastal California gnatcatcher	*Polioptila californica californica*	FT, CSC, MSCP
Cooper's hawk	*Accipiter cooperii*	CSC, MSCP
Double-crested cormorant	*Phalacrocorax auritus*	CSC
Least Bell's vireo	*Vireo bellii pusillus*	FE, CE, MSCP
Northern harrier	*Circus cyaneus*	CSC, MSCP
Osprey	*Pandion haliaetus*	CSC
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	CSC,MSCP
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE, CE, MSCP
Yellow-breasted chat	*Icteria virens*	CSC, MSCP
Yellow warbler	*Dendroica petechia brewsteri*	CSC
Mammals		
American badger	*Taxidea taxus*	CSC, MSCP
Big free-tailed bat	*Nyctinomops macrotis*	CSC
Mexican long-tongued bat	*Choeronycteris mexicana*	CSC
Pallid bat	*Antrozous pallidus*	CSC
San Diego blacktailed jackrabbit	*Lepus californicus bennettii*	CSC
San Diego desert woodrat	*Neotoma lepida intermedia*	CSC
Western mastiff bat	*Eumops perotis californicus*	CSC

***Status Codes:**

Federal: FE = federally listed as endangered; FT = federally listed as threatened

State: CE = state listed as endangered; CT = state listed as threatened; CSC = state species of concern (Source: CDFG 2007 – Special Animals List)

CNPS = California Native Plant Society's Inventory of Rare and Endangered Plants of California: CNPS 1B = plants rare, threatened, or endangered in California, but more common elsewhere; CNPS 2 = plants rare, threatened, or endangered in California, but more common elsewhere.

MSCP = Covered by Multiple Species Conservation Plan (City of Chula Vista 2003)

Source: Ex. 200, p. 4.2-5 and 4.2-6; Ex. 1, Vol. 2, Appendix 5.2A.

2. Potential Impacts

Applicant's consultants conducted biological reconnaissance surveys of the project area and general vicinity in October 2006 and July 2007. The field surveys were aided by aerial photographs to help identify land uses and open habitat areas. The reconnaissance included a one-mile radius around the site and the pallet laydown yard adjacent to the site and a one-mile radius around the off-site construction laydown area about 3.4 miles to the east. In addition, Applicant reviewed natural resource databases and other reference materials to determine the presence of sensitive biological resources. (Ex. 1, § 5.2.1.4; Vol. 2, Appendix 5.2A.)

Three MSCP-covered bird species were detected during field surveys. In July 2007, Applicant's consultants observed a female coastal California gnatcatcher, a federal threatened species, approximately 0.8 miles south of the project site in Diegan sage scrub habitat along the southern border of the Otay River. In September 2007, Staff observed a Cooper's hawk and a northern harrier in the Otay River Valley north of the off-site laydown area.[39] (Ex. 1, § 5.2, Table 5.2.-2; Ex. 200, p. 4.2-8.)

Some of the landscaping trees along the site boundary fence are sufficiently large to support nesting activities by disturbance-tolerant species such as northern mockingbird (*Mimus polyglottus*), western scrub jay (*Aphelocoma californica*), and house finch (*Carpodacus mexicanus*). Cooper's hawks (*Accipiter cooperii*) could also potentially nest in landscaping trees adjacent to the plant site. (Ex. 200, p. 4.2-9.) Since construction activities or tree removal could impact nesting activity, possibly resulting in loss of eggs or young birds protected by the Migratory Bird Treaty Act, Condition of Certification **BIO–6** requires the project owner to conduct pre-construction surveys to prevent potential impacts to nesting birds on the site.

The evidence indicates that construction of the CVEUP will result in the loss of approximately 1.3 acres of disturbed habitat (ruderal vegetation and non-native landscaping) on the northern portion of the site. No special status species are likely to use this area for nesting, foraging, or cover, and the site provides only marginal value to common wildlife species. The loss of 1.3 acres of disturbed habitat is therefore considered less than significant. Dismantling the existing plant

[39] Other bird species covered by the MSCP, which could nest within 500 feet of the CVEUP site, include yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*). The southwestern willow flycatcher and the least Bell's vireo are listed as federal and state endangered. (Ex. 200, pp. 4.2-7 and 4.2-8.)

will affect 0.8 acres of a paved area and will have no direct impacts to special status species or wildlife resources. Use of the two laydown areas and the tie-ins for all linear facilities (natural gas pipelines, potable water supply line, and 69-kV transmission line) will all occur on paved or highly disturbed areas.[40] (Ex. 1, § 5.2.2.2; Ex. 200, p. 4.2-8.)

Construction noise can adversely affect nesting activities because birds communicate primarily through vocalizations and auditory cues. Increased noise levels can interfere with normal avian communication and discourage birds from nesting in areas that are otherwise suitable. The Chula Vista Subarea MSCP prohibits noise levels above 60 A-weighted decibels (dBA) in the Otay River Preserve. Since demolition and construction activities may temporarily exceed the 60-dBA threshold, the project owner will implement several mitigation measures based on recommendations proposed by Staff and the USFWS to avoid noise-related impacts to nesting birds. (Ex. 1, § 5.2.2.2.1.)

The mitigation measures require the project owner to avoid excessively noisy demolition and construction activities during the nesting season (January 15th through September 15th). If such avoidance is not feasible, then pre-construction nest surveys will be conducted in all potential nesting habitat within 500 feet of the project boundaries. If nesting least Bell's vireo, southwestern willow flycatcher, or coastal California gnatcatcher are found within 300 feet of construction activities, such construction shall cease until nesting is complete. (Ex. 1, p. 4.2-9.) Condition **BIO-6** incorporates these measures to ensure that special status species nesting in the Otay River Preserve are protected during project construction.[41]

No wetlands or waters of the United States occur on or near the project site or laydown areas, but the site slopes gently to the south so that stormwater runoff could discharge directly into the floodplain of the Otay River Preserve. Construction activities will increase the potential for pollutant spills, erosion or sedimentation to cause adverse effects to water quality and aquatic life in the Otay

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[40] According to Staff, the past, current, and proposed future uses of the laydown areas are inconsistent with the MSCP 75-to-100 percent Conservation Area Habitat Preserve designation since the areas do not support any biological resources. Use of both laydown areas will be temporary. After construction is completed, the project owner will vacate the areas. No activities associated with the CVEUP preclude eventual restoration of the laydown areas to native plant communities or another use that would be consistent with the Preserve designation. Staff suggested, however, that the current Preserve designation of the laydown areas should be considered inaccurate. (Ex. 200, p. 4.2-13; 10/02/08 RT 224-228.)

[41] Normal operation of the CVEUP will not exceed the 60-dBA wildlife threshold due to several noise reduction features incorporated into project design. (Ex. 200, p. 4.2-10.) See also the **Noise** section of this Decision.

River. The CDFG recommended that the project owner implement Best Management Practices for water quality protection, including a requirement that equipment maintenance, staging, and dispensing of fuel and oil take place in paved areas at least 100 feet from Preserve boundaries and beyond its immediate watershed. Also, as discussed in the **Soil and Water Resources** section of this Decision, the project owner will implement an approved Stormwater Pollution Prevention Plan and an approved Drainage, Erosion, and Sedimentation Control Plan to control erosion and sedimentation. (Ex. 200, p. 4.2-10; Ex. 1, § 5.2.2.2.) Conditions **BIO-7** and **Soil & Water-1, -2, and -3** incorporate these measures to ensure that potential impacts to water quality and aquatic biota are reduced to insignificance.

Condition **BIO-7** also requires construction workers to implement Best Management Practices to properly dispose of food-related trash that could attract predators and to refrain from bringing pet dogs that could prey on wildlife.

Operation of the CVEUP will result in emissions of criteria pollutants and toxic air pollutants that have the potential to adversely impact biological resources. However, the periods during which wildlife could be exposed to air pollutant emissions will be relatively limited because the peaking facility is not expected to operate more than 400 hours a year. Further, the project will employ best available control technology (BACT) and comply with air quality standards designed to protect human health, vegetation, and wildlife. See the **Air Quality** section of this Decision. Thus, the evidentiary record establishes that project emissions of air pollutants are not likely to result in significant impacts to special status plants, animals, or other biological resources in the Otay River Preserve. (Ex. 200, p. 4.2-11.)

Lighting at the CVEUP could adversely affect wildlife, including special status species in the Otay River Preserve, by disrupting normal foraging and nesting activities. Lights on tall structures could also attract nocturnal species putting them at risk of collision. Bird fatalities due to collisions with tall structures such as exhaust stacks and transmission lines have been well documented in the avian literature. (Ex. 200, p. 4.2-12.)

The project's tallest structures, two 70-foot-tall exhaust stacks at the northern end of the site, pose an avian collision risk.[42] Lighting on tall structures increases the

[42] The potential for collision with the project's exhaust stacks is relatively low because the disturbed and developed project area provides no habitat to attract resident birds northward from the Otay River. Moreover, the site offers no topographic or habitat features that would draw nocturnal migrants or funnel them in a north-south direction through the project area. (Ex. 200, p. 4.2-12.)

the risk of collision, particularly for nocturnal migrants flying in inclement weather or low visibility collisions. The stacks will have only the amount of lighting necessary to satisfy safety and security concerns. Operational lighting at the CVEUP will remain the same as the current lighting for the existing plant, with the addition of pole-mounted lights at the northern end of the site located further away from the Otay River Preserve. The existing 18-foot-high wall along the southern property line effectively reduces the potential for light pollution to the south. (Ex. 200, p. 4.2-11.) Mitigation measures designed to minimize the impacts of project lighting are discussed in the **Visual Resources** section of this Decision. Implementation of the measures described in Condition **VIS-2** ensures that potential adverse lighting effects on wildlife will be reduced to insignificant levels.

Condition **VIS-3** requires the project owner to plant the site perimeter with trees and shrubs after completing construction of the CVEUP. To prevent the introduction of inappropriate plant species that could harm plant communities in the Otay River Preserve, Condition **VIS-3** incorporates the CDFG's recommendations to avoid exotic, invasive plant species as well as other plants that require intensive irrigation or fertilizer that could adversely affect water quality in the Preserve.

Conditions **BIO-1** through **BIO-4** require the project owner to employ a qualified Biologist with authority to implement mitigation and other compliance measures necessary to prevent adverse impacts to protected species. Condition **BIO-5** requires the project owner to prepare a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) that incorporates the mitigation and compliance measures required by local, state, and federal LORS regarding biological resources. Condition **BIO-6** requires the Project Owner to develop a Worker Environmental Awareness Program to train construction crews on preventing impacts to sensitive species and their habitats.

Compliance with the Chula Vista MSCP Subarea Plan is the primary guidance for conserving sensitive biological resources and minimizing direct, indirect, and cumulative impacts of future development of both public and private lands within the MSCP area. Implementation of the mitigation measures identified in the Conditions of Certification, all of which are consistent with the Chula Vista MSCP Subarea Plan, ensures that the CVEUP will not result in direct, indirect, or cumulative impacts to special status species or other sensitive biological resources. (Ex. 200, p. 4.2-13.)

FINDINGS AND CONCLUSIONS

Based on the record of evidence, we make the following findings and conclusions:

1. The CVEUP site, laydown areas, and linear facility alignments are located in a highly disturbed area where the presence of special species habitat is considered low or non-existent.

2. The project site and surrounding vicinity are subject to San Diego County's Multiple Species Conservation Program (MSCP) for long-term habitat preservation and management as specified in the MSCP Subarea Plan for the City of Chula Vista.

3. The Otay River Valley, located immediately south of the site, is the nearest biologically significant area and is part of the Otay River Preserve, a designated MSCP open space and natural preserve area.

4. Riparian habitat found within the Otay River Preserve near the project site and surrounding vicinity could potentially support many special status species covered by the MSCP.

5. Three MSCP-covered bird species were detected during field surveys of the site and surrounding vicinity.

6. The project owner will conduct pre-construction biological surveys to determine if nesting birds are present on the site and implement appropriate avoidance and mitigation measures to prevent impacts to protected bird species.

7. The project owner will implement a construction mitigation management plan by educating workers on habitat protection, and designating a qualified biologist and biological monitors with authority to halt activities to avoid impacts to sensitive resources.

8. Construction of the CVEUP will result in the loss of approximately 1.3 acres of disturbed habitat, but since no special status species are likely to use this area for nesting, foraging, or cover, the loss of 1.3 acres of disturbed habitat is considered less than significant.

9. The project owner will submit a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) incorporating all biological mitigation and compliance measures required by applicable local, state, and federal LORS.

10. During construction, the project owner will implement Best Management Practices for water quality protection and for proper disposal of food to avoid attracting predators of sensitive wildlife.

11. Potential effects of construction noise, especially during nesting season, will be mitigated to insignificant levels.

12. Implementation of the Conditions of Certification for air quality will reduce potential impacts of project-related air pollutant emissions on biological resources to insignificant levels.

13. Lighting will be designed to reduce avian collisions with the project's exhaust stacks and to avoid impacts on surrounding wildlife.

14. In landscaping the site perimeter after construction, the project owner will avoid planting inappropriate plant species that could harm plant communities in the Otay River Preserve.

15. With implementation of the mitigation measures described in the evidentiary record and incorporated into the Conditions of Certification below, the CVEUP will not result in cumulative impacts to biological resources.

16. With implementation of the mitigation measures described in the evidentiary record and incorporated into the Conditions of Certification listed below, the CVEUP will comply with all applicable laws, ordinances, regulations, and standards related to biological resources as identified in the pertinent portions of **Appendix A** of this Decision.

The Commission concludes, therefore, that implementation of the Conditions of Certification, below, will ensure the Chula Vista Energy Upgrade Project conforms with all applicable laws, ordinances, regulations, and standards relating to biological resources.

CONDITIONS OF CERTIFICATION

Designated Biologist Selection

BIO-1 The project owner shall submit the resume, including contact information, of the proposed Designated Biologist to the Compliance Project Manager (CPM) for approval. The Designated Biologist must meet the following minimum qualifications:

1. A Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;

2. At least three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;

3. At least one year of field experience with biological resources found in or near the project area; and

4. An ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resources tasks that must be addressed during project construction and operation.

Verification: The project owner shall submit the specified information at least 60 days before the start of any site (or related facilities) mobilization. Site and related facility activities shall not begin until an approved designated biologist is available on site. If the CPM considers the proposed Designated Biologist unacceptable, the project owner shall submit another individual's name and qualifications for consideration. If the approved Designated Biologist needs to be replaced, the project owner shall obtain approval of a new Designated Biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No disturbance will be allowed in any designated sensitive areas until the CPM approves a new Designated Biologist and the new biologist is on site.

Designated Biologist Duties

BIO-2 The CPM-approved Designated Biologist shall perform the following during project construction and operation:

1. Advise the project owner's Construction Manager on the implementation of the Biological Resource conditions of certification;

2. Supervise or conduct mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special status species nesting areas; and

3. Notify the project owner, City of Chula Vista and the CPM of non-compliance with any Biological Resources condition of certification.

Verification: During project construction, the Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

Designated Biologist Authority

BIO-3 The project owner's Construction Manager shall act on the advice of the Designated Biologist to ensure conformance with all Biological Resources conditions of certification. The project owner's Construction Manager shall halt, if necessary, all construction activities in areas specifically identified by the Designated Biologist as sensitive to assure that potential significant biological resource impacts are avoided. The Designated Biologist shall:

1. Inform the project owner and the Construction Manager when to resume construction, and

2. Advise the project owner, the City of Chula Vista, and the CPM if any corrective actions are needed or have been instituted.

Verification: Within two (2) working days of a Designated Biologist notification of non-compliance with a Biological Resources condition of certification or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five (5) working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

Worker Environmental Awareness Program

BIO-4 The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or related facilities during construction and operation are informed about the sensitive biological resources associated with the project area. The Worker Environmental Awareness Program must:

1. Be developed by the Designated Biologist and consist of an on-site or training center presentation or video presentation in which supporting written material is made available to all participants;

2. Discuss the locations and types of sensitive biological resources in the Otay River Preserve, the meaning of various temporary and permanent habitat protection measures, Best Management Practices described in BIO 7, and the reasons for protecting these resources; and

3. Identify whom to contact if there are further comments and questions about the material discussed in the program.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist. Each participant in the on-site

Worker Environmental Awareness Program shall sign a statement declaring that the individual understands and shall abide by the guidelines set forth in the program materials. The person administering the program shall also sign each statement.

Verification: At least 60 days prior to the start of rough grading, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the Designated Biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. The signed statements for the construction phase shall be kept on file by the project owner and made available for examination by the CPM for a period of at least six (6) months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for the duration of their employment and for six (6) months after their termination.

Biological Resources Mitigation Implementation and Monitoring Plan

BIO-5 The project owner shall submit to the CPM for review and approval a copy of the final Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and shall implement the measures identified in the plan. Any changes made to the adopted BRMIMP must be made in consultation with the Energy Commission as well as with the USFWS, CDFG, and the City of Chula Vista. The final BRMIMP shall identify:

1. All biological resources mitigation, monitoring, and compliance conditions included in the Energy Commission's Final Decision;

2. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure;

3. All relevant mitigation measures provided in the Chula Vista MSCP Subarea Plan;

4. All required mitigation measures/avoidance strategies for each sensitive biological resource;

5. All locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;

6. Duration for each type of monitoring and a description of monitoring methodologies and frequency;

7. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;

8. All performance standards and remedial measures to be implemented if performance standards are not met;

9. A discussion of biological resource-related facility closure measures;

10. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification: At least 60 days prior to start of any project-related ground disturbance activities, the project owner shall provide the CPM with the final version of the BRMIMP, and the CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved BRMIMP must be made only after consultation with the Energy Commission, USFWS, CDFG, and the City of Chula Vista. The project owner shall notify the CPM five (5) working days before implementing any CPM-approved modifications to the BRMIMP.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which mitigation and monitoring plan items are still outstanding.

Pre-construction Nest Surveys

BIO-6 Pre-construction nest surveys shall be conducted if construction activities will occur January 15 through September 15. The Designated Biologist shall perform surveys in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat within 500 feet of the boundaries of the CVEUP project site and laydown area;

2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys needs to be conducted within the 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;

3. If active nests of non-listed species are detected during the survey, a buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG) and monitoring plan shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM;

4. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed; activities that might, in the opinion of the Designated Biologist, disturb nesting

activities, shall be prohibited within the buffer zone until such a determination is made; and

5. If active nests of listed species, including least Bell's vireo, southwestern willow flycatcher, or coastal California gnatcatcher, are detected within 300 feet of construction activities, such construction shall cease until the Designated Biologist determines that the nestlings have fledged and dispersed.

Verification: At least one week prior to the commencement of construction activities, the project owner shall provide the CPM and the City of Chula Vista a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.

Best Management Practices

BIO-7 Construction workers should exercise Best Management Practices during all construction activities. Employees at the CVEUP project site and laydown areas shall:

1. Confine their activities and storage of vehicles, equipment, and construction materials to the fenced project footprint;

2. Enclose all food related trash items in sealed containers and remove them regularly from the project site to avoid attracting predators of sensitive wildlife;

3. Refrain from bringing dogs or other pets to the project site;

4. Avoid disposal or temporary placement of excess fill, brush, or other debris should within the Otay River Preserve;

5. Conduct all equipment maintenance; staging; and dispensing of fuel, oil, coolant, or any other such activities within the fenced project limits. Areas for equipment maintenance should be designated only in previously compacted and disturbed sites and shown on construction plans. Equipment maintenance sites should not drain to the Preserve;

6. Fuel equipment within existing paved areas greater than 100 feet from Preserve boundaries. Designate "no fueling zones" on construction plans; and

7. Check equipment for leaks prior to operation and repair as necessary.

Verification: All Best Management Practices and their implementation methods shall be included in the BRMIMP. Implementation of the measures will be described in the Monthly Compliance Reports and provided to the CPM. Within thirty (30) days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how BMPs have been completed.

B. SOIL AND WATER RESOURCES

This section focuses on the soil and water resources associated with the project, including the project's potential to induce erosion and sedimentation, adversely affect water supplies, and degrade water quality. The analysis also considers site contamination and any potential cumulative impacts to water quality in the vicinity of the project. Mitigation measures are included in the Conditions of Certification to ensure that the project will have no significant impacts on the environment and that it will comply with all LORS.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Soil Resources

The project area consists of developed soils formed in sandy marine deposits in the northern portion and in alluvial deposits in the southern portion along the Otay River. These soils are all well drained to excessively drained. Urban development often entails significant mixing of local soils from grading and the import of construction fill soils beneath foundations and roadways. These imported soils would necessarily have to be suitable for compaction to support structures and roadways and consist of a mixture with a wide range of coarse-textured particle sizes (from silt to gravel sizes). Soil borings at the site confirm this type of imported soil as deep as 20 feet. (Ex. 200, pp. 4.9-9 to 4.9-10.)

Soils at the project site include expansive clay which could have the potential to shrink and swell. These soils are mapped as the majority of the northern portion of the CVEUP property and could affect the foundation and roadways for the proposed facility. The geotechnical investigation undertaken for the CVEUP project, however, tested soils on the project site and determined that site soils have low expansion potential. Soils on site are made up of fill material from elsewhere in the county. Therefore, expansive soils are unlikely to cause a significant problem for construction of foundations or piping. (Ex. 200, p. 4.9-11.)

2. Water Supply

The Applicant proposes to use potable water from the City of Chula Vista (Sweetwater Authority) for plant processes including cooling, fogging and turbine wash. The volume of water used per year would vary between approximately

12.8 and 90 acre-feet, or between 4 million and 30 million gallons, depending on the amount of time CVEUP operates. (Ex. 200, p. 4.9-13.)

Based, in part, on the State Constitution and State Water Resources Control Board Policy (SWRCB) 75-58, the Energy Commission adopted its own policy for water conservation in the cooling of power plants. The Energy Commission's *2003 Integrated Energy Policy Report, 2003 (IEPR)* specifies that "the Energy Commission would approve the use of fresh water for cooling purposes by power plants which it licenses only where alternative water supply sources and alternative cooling technologies are shown to be 'environmentally undesirable' or 'economically unsound.'"

California Water Code Section 13550 also states that the use of potable water for industrial uses (power plant cooling/process make up water) is considered an unreasonable use of potable water if recycled water is available that is of adequate quality for the proposed use, is available at a reasonable cost, will not be detrimental to the public health, and will result in no adverse impacts on water rights and water quality.

The evidence is undisputed that the use of recycled water would be economically unsound due to the cost. The cost of constructing a pipeline to the nearest recycled water supplies in the CVEUP area, in the adjoining Otay Water District, a distance of approximately 1.5 miles, would be approximately $2,000,000. There are currently no plans to develop and deliver recycled water closer to the project area. We therefore find that the use of potable water for CVEUP is consistent with SWRCB Resolution 75-58 and the *2003 IEPR* Policy. We encourage the project owner, however, to make use of recycled water should it become available in the area during the life of the project.

The Applicant has agreed to fund the installation of a weather station at the City's Explorer Park to provide microclimate and evapo-transpiration data that would improve municipal water efficiency at several City parks. This project would save approximately 4,000,000 gallons in most years. Some years the water conservation would be greater than the water used by the CVEUP and some years it may be less. This agreed-upon mitigation plan is set forth in Condition of Certification **SOIL&WATER-7** which we hereby adopt. We also require that CVEUP connect to recycled water in the future if and when it becomes available and is neither environmentally undesirable nor economically unsound, and set forth that requirement in Condition of Certification **SOIL&WATER-8**. (Ex. 200, p. 4.9-17.)

3. Wastewater

During the construction period, sanitary waste would be collected in portable toilets supplied by a licensed contractor for collection and disposal at an appropriate receiving facility. Equipment wash water would be collected and disposed of offsite. Water used for dust control and soil compaction during construction would not result in discharge. (Ex. 200, p. 4.9-11.)

To qualify for the National Pollutant Discharge Elimination System (NPDES) statewide General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit), CVEUP, prior to construction, would be required to develop a Storm Water Pollution Prevention Plan (SWPPP) to prevent the off-site migration of sediment and other pollutants and to reduce the effects of runoff from the laydown sites to off-site areas. Successful implementation of the SWPPP would ensure that construction impacts to water resources are mitigated to a less-than-significant level. SWPPP procedures include submitting a Notice of Intent to the San Diego Regional Water and Quality Control Board (RWQCB) and developing the SWPPP prior to the start of construction activities. (Ex. 200, p. 4.9-11.)

During CVEUP operations, industrial stormwater would be conveyed to the retention basin located on site. The retention basin would collect the annual stormwater runoff and would manage the peak storm discharge from the site during runoff from a 100-year 24-hour event. CVEUP proposed that stormwater drainage associated with some areas such as parking lots and the switchyard leave the proposed site as sheet flow. However, Staff disagreed, and the testimony of Staff's expert, Richard Anderson, convinces us that treating all runoff from the site as industrial stormwater and directing it to the municipal storm water system is the more prudent course of action given the project's proximity to a park and the Otay River which runs to the ocean. The adoption of Condition of Certification **SOIL&WATER-2** will help ensure that contaminated waters are discharged appropriately. (Ex. 200, pp. 4.9-4, 4.9-12.)

Process wastewater would be routed to the existing retention basin for testing before discharge to the Chula Vista City wastewater system. Sanitary wastewater from sinks, toilets, showers, and other sanitary facilities would be discharged via the City's sanitary sewer system.

General plant drains would collect containment area washdown, sample drains, and drainage from facility equipment drains. Water from these areas would be

collected in a system of floor drains, hub drains, sumps, and piping and routed to the retention basin.

Drains that could contain oil or grease would first be routed through an oil/water separator and then discharged to the sanitary sewer. Wastewater from combustion turbine water washes would be collected in holding tanks or sumps and would be trucked off site for disposal at an approved wastewater disposal facility.

Due to the relatively modest quantities of wastewater from the project, the City has agreed to accept the project's discharge, other than that hauled off for disposal to an approved disposal facility. A will-serve letter from the City indicating its willingness to accept the project's wastewater is required under Condition of Certification **SOIL&WATER-6** which we hereby adopt. (Ex. 200, p. 4.9-8.)

The CVEUP has included design features to isolate stormwater from hazardous materials and equipment. Liquid storage areas are designed with spill containment. The uncontroverted evidence shows that potential adverse impacts caused by soil erosion and stormwater flows during construction and operation would be mitigated to below the level of significance through the use of a Drainage, Erosion, and Sedimentation Control Plan (DESCP) and compliance with NPDES Permits for Discharges of Storm Water Associated with Construction and Industrial Activities that are included in Conditions of Certification **SOIL&WATER-1, -2** and **-3**. (Ex. 200, pp. 4.9-12 to 4.9-13.)

4. Cumulative Impacts and Mitigation

Cumulative impacts consist of impacts that are created as a result of the proposed project in combination with impacts from other past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over time.

Temporary and permanent disturbances associated with construction of the proposed project would cause accelerated wind and water induced erosion. The evidence shows, however, that the implementation of proposed mitigation measures; the stormwater pollution prevention plan; and the drainage, erosion, and sediment control plan would ensure that the project would not contribute significantly to cumulative erosion and sedimentation impacts. The stormwater discharge would not exacerbate flooding conditions in the area.

The process wastewater from the CVEUP would be properly disposed of. Therefore, no wastewater-related cumulative impacts are expected.

The CVEUP would use a maximum of 90 acre-feet of potable water per year. Although the use of this water would contribute to the cumulative impacts of the already-scarce water supply in the region, the amount of water consumed is modest and CVEUP has agreed to fund a water compensation project that off-sets the potable water used. We therefore find that the use of the water does not have a cumulatively significant impact.

5. Agency and Public Comments

We have reviewed the comments on this topic submitted by the Southwest Chula Vista Civic Association and the City of Chula Vista. These comments concerned the impacts of the project's potable water use on the City's water supply and the impacts of the project's wastewater discharge on the City's sewer system. The record is clear that these concerns have been addressed in the Conditions of Certification which we are adopting, and that the impacts, as mitigated, are below the level of significance.

FINDINGS AND CONCLUSIONS

Based upon the evidence, we find and conclude as follows:

1. Implementation of best management practices during CVEUP construction and operation in accordance with effective Storm Water Pollution Prevention Plans and a Drainage, Erosion and Sedimentation Control Plan would avoid significant adverse impacts that could be caused by wind or water erosion.
2. The funding and implementation of the City of Chula Vista water conservation project in accordance with Condition of Certification **SOIL&WATER-7** will offset the potable water used for the power plant. With implementation of this measure, the project's potable water use would not cause a significant adverse environmental impact on current or future users of potable water.
3. The use of a municipal water supply for this project would comply with state water policy found in the State Water Resources Control Board Resolution 75-58, and the Energy Commission's *2003 Integrated Energy Policy Report (IEPR)* water policy.
4. Recycled water is currently not available in the project area and the cost for delivery is economically unsound. In accordance with Condition of Certification **Soil and Water-8**, the Applicant should evaluate the feasibility of

converting to recycled water for nonpotable plant water uses if it is found to be available in the area during the project life.

5. The CVEUP would be constructed to comply with 100-year flood requirements and would not exacerbate flood conditions in the vicinity of the project.
6. The discharge of wastewater to the City of Chula Vista's wastewater discharge system would not degrade surface or groundwater quality.
7. The CVEUP would comply with all applicable federal, state, and local laws, ordinances, regulations, and standards with the adoption of the Conditions of Certification.
8. The CVEUP would not result in any unmitigated project-specific or cumulative significant adverse impacts to soil or water resources with implementation of the Conditions of Certifications.

Based on these findings, we find that the CVEUP would not result in any unmitigated, significant project-specific or cumulative adverse impacts to Soil or Water Resources and would comply with all applicable LORS with implementation of the Conditions of Certification set forth herein.

CONDITIONS OF CERTIFICATION

SOIL&WATER-1: The project owner shall comply with the requirements of the General National Pollutant Discharge Elimination System (NPDES) permit for discharges of stormwater associated with construction activity. The project owner shall develop and implement a stormwater pollution prevention plan for the construction of the entire Chula Vista Energy Upgrade Project (CVEUP).

Verification: The project owner shall submit copies to the Compliance Project Manager (CPM) of all correspondence between the project owner and the San Diego Regional Water Quality Control Board (RWQCB) regarding the General NPDES permit for the discharge of stormwater associated with construction activities within 10 days of its receipt (when the project owner receives correspondence from the RWQCB) or within 10 days of its mailing (when the project owner sends correspondence to the RWQCB). This information shall include copies of the notice of intent sent to the State Water Resources Control Board and the notice of termination for the project.

SOIL&WATER-2: Prior to site mobilization, the project owner shall obtain CPM approval for a site-specific Drainage, Erosion, and Sedimentation Control Plan (DESCP) that ensures protection of water quality and soil resources of the project site for both the construction and operation phases of the project. This plan shall address appropriate methods and

actions, both temporary and permanent, for the protection of water quality and soil resources, demonstrate no increase in off-site flooding potential, meet local requirements, and identify all monitoring and maintenance activities. Monitoring activities shall include routine measurement of the volume of accumulated sediment in the stormwater detention basin. Maintenance activities must include removal of accumulated sediment from the detention basin when an average depth of 0.5 feet of sediment has accumulated in the detention basin. The plan shall be consistent with the grading and drainage plan as required by Condition of Certification **CIVIL-1** and may incorporate by reference any stormwater pollution prevention plan developed in conjunction with any NPDES permit. The DESCP shall contain the following elements.

Vicinity Map – A map shall be provided indicating the location of all project elements with depictions of all significant geographic features to include watercourses, washes, irrigation and drainage canals, and sensitive areas.

Site Delineation – The site and all project elements shall be delineated showing boundary lines of all construction areas and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.

Watercourses and Critical Areas – The DESCP shall show the location of all nearby watercourses including washes, irrigation and drainage canals, and drainage ditches and shall indicate the proximity of those features to the construction site.

Drainage – The DESCP shall provide a topographic site map showing all existing, interim, and proposed drainage systems; drainage area boundaries and watershed sizes in acres; and the hydraulic analysis to support the selection of best management practices to divert off-site drainage around or through the site and laydown areas. Spot elevations shall be required where relatively flat conditions exist. The spot elevations and contours shall be extended off site for a minimum distance of 100 feet in flat terrain.

Clearing and Grading – The plan shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections, or other means. The locations of any disposal areas, fills, or other special features shall also be shown. Existing and proposed topography tying in proposed contours with existing topography shall be illustrated. The DESCP shall include a statement of the quantities of material excavated or filled for each element of the project (for example, project site, transmission corridors, and pipeline corridors), whether such excavations or fill is temporary or

permanent, and the amount of such material to be imported or exported or a statement explaining that there will be no clearing and/or grading conducted for each element of the project.

Project Schedule – The DESCP shall identify on the topographic site map the location of the site-specific best management practices to be employed during each phase of construction (initial grading, project element excavation and construction, and final grading/stabilization). Separate best management practice implementation schedules shall be provided for each project element for each phase of construction.

Best Management Practices – The DESCP shall show the location, timing, and maintenance schedule of all erosion- and sediment-control best management practices (BMPs) to be used prior to initial grading, during project element excavation and construction, during final grading/stabilization, and after construction. BMPs shall include measures designed to control dust and stabilize construction access roads and entrances. The maintenance schedule shall include post-construction maintenance of treatment-control BMPs applied to disturbed areas following construction.

Erosion Control Drawings – The erosion-control drawings and narrative shall be designed and sealed by a professional engineer or erosion-control specialist.

Verification: No later than 90 days prior to start of site mobilization, the project owner shall submit a copy of the plan to San Diego County for review and comment. A copy shall be submitted to the CPM no later than 60 days prior to the start of site mobilization for review and approval. The CPM shall consider comments received from San Diego County. During construction, the project owner shall provide an analysis in the monthly compliance report on the effectiveness of the drainage-, erosion- and sediment-control measures and the results of monitoring and maintenance activities. Once operational, the project owner shall provide in the annual compliance report information on the results of monitoring and maintenance activities.

SOIL&WATER-3: The project owner shall comply with the requirements of the general NPDES permit for discharges of stormwater associated with industrial activity. The project owner shall develop and implement a stormwater pollution prevention plan for the operation of the site.

Verification: At least 30 days prior to commercial operation, the project owner shall submit copies to the CPM of the operational stormwater pollution prevention plan for the CVEUP site. Within 10 days of its mailing or receipt, the project owner shall submit to the CPM any correspondence between the project owner and the RWQCB about the general NPDES permit for discharge of stormwater associated with industrial activity. This information shall include a copy of the notice of intent sent by the project owner to the State Water

Resources Control Board and the notice of termination. A letter from the RWQCB indicating that there is no requirement for a general NPDES permit for discharges of stormwater associated with industrial activity will satisfy this condition.

SOIL&WATER-4: Water used for project operation for process, sanitary, and landscape irrigation purposes shall be municipal water from Sweetwater Authority. Water use shall not exceed the annual water-use limit of 90 acre-feet without prior approval by the CPM. The project owner shall monitor and record the total water used on a monthly basis.

Verification: The project owner, in the annual compliance report, shall provide a water-accounting summary that states the source and quantity of water used on a monthly basis in units of gallons and on an annual basis in units of acre-feet. If the amount of water that is to be used will exceed 90 acre-feet per year during any single annual reporting period, the project owner shall provide a written request and explanation for the anticipated water-use increase to the CPM 60 days prior to the date when the water-use limit is expected to be exceeded. The CPM shall review the request and may approve an increase in the water-use limit for the period requested.

SOIL&WATER-5: The project owner shall comply with the San Diego County Ordinance regarding flood hazard and base flood elevation.

Verification: The project owner will submit a letter from the county in which it is stated that the project has complied with the county's flood-elevation requirements. Proof of compliance must be provided to the CPM prior to the start of site mobilization.

SOIL&WATER-6: The project owner will provide a letter indicating that Sweetwater Authority is willing to accept wastewater from the CVEUP project.

Verification: The project owner will submit a letter from the Sweetwater Authority in which it is stated that it will accept wastewater from the CVEUP project. Proof of compliance must be provided to the CPM prior to the start of site mobilization.

SOIL&WATER-7: The project owner will fund the installation of a weather station at Explorer Park to provide real-time microclimate and evapo-transpiration data to improve municipal water efficiency at several parks. The station would allow the City's Parks and Open Space Division to more accurately monitor weather data and adjust watering levels as appropriate through its central irrigation control system. The cost is not to exceed $30,000. The project owner will work with City of Chula Vista staff to work out the details.

Verification: The project owner will submit a written agreement with the City of Chula Vista regarding the details of the payment for the weather station and submit a copy of the check(s) paid to the City of Chula Vista. This shall be completed prior to any site mobilization.

SOIL&WATER-8: California Water Code 13550 states that the use of potable water for industrial uses (power plant cooling/process make up water) is considered an unreasonable use of potable water if recycled water of adequate quality is available. Potable water is to be used only when other, non-potable source would be environmentally undesirable or economically unsound. The use of potable water shall be discontinued when recycled water becomes available within one-quarter mile of the CVEUP project site and is determined to no longer be economically unsound by the CPM. The project owner will connect to the recycled water system at that time. Once connected the project owner will use recycled water for all power plant uses except sanitary and drinking water needs. All other requirements of **SOIL&WATER-4** shall apply.

Verification: When and if recycled water becomes available within one-quarter mile of the CVEUP project site, the project owner shall submit a report that discusses the feasibility of connecting to a recycled water supply for either all or part of the non potable project water needs. The report shall include but not be limited to: a) a discussion of revised or updated plans developed by local water districts or other municipalities involved in recycled water development and delivery in the project area; b) estimated costs for recycled water delivery for power plant conversion compared to current project costs, and c) updated plans or maps showing where the recycled water infrastructure is located in the project area. If use of recycled water is found to be feasible, the project owner shall negotiate and submit a will serve letter from the appropriate agency indicating they can commit to serving a portion or all of the project water needs and submit it to the CPM for review and approval. The project owner shall also notify the CPM ninety days before connecting to the service and request an amendment to the project certification for use of recycled water.

C. CULTURAL RESOURCES

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. Res. Code, § 5024.1; Cal. Code Regs., tit. 14 § 4850 et seq.) The potential for impacts to cultural resources depends upon whether such resources are present and whether they would actually be encountered during project development and construction activities. Analysis in this topic area considers three kinds of cultural resources: prehistoric, historic, and ethnographic, as well as appropriate mitigation measures should cultural resources be disturbed by project excavation and construction.

Prehistoric archaeological resources are those materials relating to prehistoric human occupation and use of an area. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American human behavior. In California, the prehistoric period began over 11,500 years ago and extended through the eighteenth century until 1769, the time when the first Spaniards settled in what is now the State of California.

Historic period resources are those materials, archaeological and architectural, usually associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, buildings and structures, travel routes, artifacts, or other evidence of human activity. Under federal and state requirements, historical cultural resources must be more than 50 years old to be considered of potential importance. A resource less than 50 years of age may be historically important if the resource is of exceptional significance. Since there is often a five year lag between resource evaluation and the date that eligibility is decided, cultural resources specialists may use 45 years as a criterion for considering potential eligibility. (See Pub. Res. Code, § 21083.2.)

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as African Americans, Mexican Americans, and Native Americans, or European, Asian, or Latino immigrants and their descendants. They may include traditional resource-collecting areas, ceremonial sites, topographic features, cemeteries, shrines, or ethnic neighborhoods and structures.

The evidence presented was uncontested. (10/2/08 RT 25-26; Exs. 1, § 5.3; 2; 3; 7; 14; 15; 18; 19; 22; 23; 200, § 4.3.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Setting

In general, the Chula Vista area had been used in the past as grazing land for cattle and horses, and as ranches. In the late nineteenth century, the Chula Vista area began to expand and the National City and Otay Railroad built a line which likely crossed the project area. (Ex. 200, pp. 4.3-7 to 4.3-9.) Native Americans known as the Kumeyaay occupied the project area. Today, the project area has been heavily disturbed by the construction and operation of an existing power plant; areas that have not been developed have been graded and landscaped.

Two alternative laydown and worker parking areas are associated with the project. The first is a 5-acre former pallet storage yard located immediately south and west of the power plant site. The other is a 2.75-acre site, currently used for construction laydown, which is located 3.4 miles east of the project at 20000 Heritage Road. The project will use the existing electrical transmission, natural gas, water service, and sanitary sewer pipelines, thus creating no off-site linear construction impacts. (Ex. 200, pp. 4.3-3 to 4.3-4.)

2. Cultural Resources Inventory

The evidence establishes that the CVEUP site and associated laydown areas were thoroughly analyzed for the presence of cultural resources. This analysis was based on both archival/background research and surface surveys. (Ex. 1, p. 5.3-8.)

Archival research included records searches at the South Coastal Information Center for the California Historical Resources Information System (CHRIS) at San Diego State University. These searches included the project site and a one-mile buffer zone around the site and laydown areas. (*Id.*) The record search indicated there have been 57 previous cultural resources studies within the project area, including five which covered the same areas as the project site and laydown locations. Despite these previous surveys (dating back to 1980), and a total of 62 previously recorded properties within approximately a one-mile radius, no cultural resources have been identified within the project or laydown areas.

Two field surveys, in October 2006 and in July 2007, also failed to detect the existence of prehistoric or historic cultural materials. (Exs. 1, pp. 5.3-8 to 5.3-12; 200, p. 4.3-10.)

The record further shows that the Applicant contacted the Native American Heritage Commission (NAHC) by letter on June 19, 2007, to request information important to Native American heritage in and around the project area. The NAHC responded on June 21, 2007, with a list of Native Americans interested in consulting on development projects. Applicant then contacted each of these groups by letter on June 22, 2007. Staff also requested information from the NAHC and sent letters to the Native American groups and individuals on December 17, 2007, asking for information regarding Native American concerns in the project area. No responses have been received. (Exs. 1, p. 5.3-12; 200, pp. 4.3-10, 4.3-12.)

3. Potential Impacts and Mitigation

Direct impacts to cultural resources are those associated with project development, construction, and co-existence. Construction usually entails surface and subsurface disturbance of the ground, and direct impacts to archaeological resources may result from the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historic standing structures when those structures must be removed to make way for new structures or when the vibrations of construction impair the stability of historic structures nearby. New structures can have direct impacts on historic structures when the new structures are stylistically incompatible with their neighbors and the setting, or when the new structures produce something harmful to the materials or structural integrity of the historic structures such as emissions or vibrations. (Ex. 200, pp. 4.3-13 to 4.3-14.)

Generally speaking, indirect impacts to archaeological resources are those which may result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Similarly, historic structures can suffer indirect impacts when project construction creates improved accessibility and opportunities for vandalism, or greater weather exposure becomes possible.

The evidence establishes that there are no standing historic structures within the project area, nor are there standing structures near the CVEUP site which have

been recommended as being eligible for the CRHR. Two buildings identified by a local resident – the Otay Baptist Church and the Lorenzo Anderson House - are listed by the City of Chula Vista as historic sites. The evidence shows, however, that the project would not cause an impact due to the amount of modern commercial and industrial development separating the power plant from these resources. (Ex. 200, pp. 4.3-12, 4.3-18 to 4.3-19.)

The evidence of record is uncontroverted that no archaeological resources have been identified in the area where the project will be built. There is some chance, however, that prehistoric cultural resources may now be buried under the existing artificial fill. Subsurface disturbance thus may reveal as yet unknown resources, particularly at the alternative laydown area, if native soil is encountered. (Ex. 200, p. 4.3-14.) If newly found resources are eligible for the CRHR, the construction activities could materially impair them.

Additional fill material may also be needed in the laydown areas. If Applicant obtains fill from a commercial location, any potential impact will be minimized. If, however, Applicant is unable to obtain or dispose of soil at a commercial location and therefore must perform these activities within the project area, potential impacts may occur.

We have therefore included Condition **CUL-**7 to apply in the situation where the project is unable to obtain or discard soil at commercial locations. These measures, including archaeological monitoring, are warranted for locations where ground disturbance may extend into native soil due to the general area's long history of human utilization. (Ex. 200, p. 4.3-15.)

Furthermore, Conditions **CUL-1** through **CUL-7** incorporate Applicant's proposed mitigation measures as well as Staff's recommendations to ensure that unknown archaeological deposits are properly identified and treated. These Conditions require the project owner to implement a Cultural Resources Monitoring and Mitigation Plan (CRMMP) and to employ a Cultural Resources Specialist to monitor all construction locations where ground excavation activities occur and for a Native American to join the archaeologist in monitoring construction activities if cultural resources are discovered. Impacts to cultural resources could also occur during project operation if the gas or water pipeline requires repair via excavation since previously unknown subsurface archaeological resources could be uncovered. Therefore, the mitigation measures apply under any circumstances when project-related ground disturbance is necessary. (Ex. 200,

pp. 4.3-14 to 4.3-16.) The evidence indicates that these measures will ensure that project-related impacts are not significant.

Finally, the evidence of record shows that applications for three other proposed projects within one mile of the CVEUP have been filed with the City of Chula Vista in the last 18 months. Impacts to as-yet undiscovered subsurface archaeological deposits from these projects may also be limited to less than significant levels by employing mitigation measures similar to those required here, and thus ensuring that the incremental effect of a single proposed project is not cumulatively considerable. (Ex. 200, pp. 4.3-16 to 4.3-17.)

FINDINGS AND CONCLUSIONS

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

1. The CVEUP is located on an existing power plant site, in an area of existing commercial and industrial development.

2. Archival research and field surveys did not reveal any archaeological or historic resources within the project or laydown areas.

3. Construction activities associated with the CVEUP project and related facilities present a potential for adverse impacts to as yet undiscovered cultural resources.

4. The potential for impacts to cultural resources may not be known until subsurface soils are exposed during excavation and construction.

5. The project owner will provide a cultural resources monitor with authority to halt construction if cultural resources are discovered.

6. The potential for cumulative impacts to cultural resources is insignificant.

7. 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 portion of **Appendix A** of this Decision, and will not create any significant indirect, direct, or cumulative adverse impacts.

CONDITIONS OF CERTIFICATION

CUL-1 Prior to the start of ground disturbance, the project owner shall obtain the services of a Cultural Resources Specialist (CRS), and one or more alternates, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities required in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner (discovery). No ground disturbance shall occur prior to CPM approval of the CRS, unless specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this project.

Cultural Resources Specialist

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in the Code of Federal Regulations, 36 CFR Part 61. In addition, the CRS shall have the following qualifications:

1. The CRS's qualifications 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
2. At least three years of archaeological or historic, as appropriate, resources mitigation and field experience in California.
3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and experience to knowledgably make recommendations regarding the significance of cultural resources.

   The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS has the appropriate education and experience to accomplish the cultural resource tasks that must be addressed during ground disturbance

Cultural Resources Monitors

CRMs shall have the following qualifications:

1. a BS or BA degree in anthropology, archaeology, historical archaeology or a related field and one year's experience monitoring in California; or

2. an AS or AA degree in anthropology, archaeology, historical archaeology, or a related field, and four years experience monitoring in California; or

3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology, or a related field, and two years of monitoring experience in California.

Cultural Resources Technical Specialists

The resume(s) of any additional technical specialists, e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification: At least 45 days prior to the start of ground disturbance, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval. At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the approved new CRS the AFC and all cultural documents, field notes, photographs, and other cultural materials generated by the project.

At least 20 days prior to ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least five days prior to the CRMs beginning on-site duties. At least 10 days prior to beginning tasks, the resume(s) of any additional technical specialists shall be provided to the CPM for review and approval.

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 on-site work and is prepared to implement the Cultural Resources Conditions.

CUL-2 Prior to the start of ground disturbance, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, and confidential cultural resources reports for the project. The project owner shall also 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 cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance shall occur prior to CPM approval of maps and drawings, unless specifically approved by the CPM.

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.

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.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification: At least 40 days prior to the start of ground disturbance, the project owner shall provide the AFC, data responses, and confidential cultural resources documents to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities. 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. 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. On a weekly basis during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, email, or fax. Within five days of identifying changes, the project owner shall provide written notice of any changes to scheduling of construction phase.

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 or under the direction of the CRS, to the CPM for review and approval. The CRMMP shall be provided in the Archaeological Resource Management Report (ARMR) format, and, per ARMR guidelines, the author’s name shall appear on the title page of the CRMMP. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, each monitor, and the project owner’s on-site construction manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. A proposed general research design that includes a discussion of archaeological research questions and testable hypotheses specifically applicable to the project area, and a discussion of artifact collection, retention/disposal, and curation policies as related to the research questions formulated in the research design. A prescriptive treatment plan may be included in the CRMMP for limited resource types. A refined research design will be prepared for any resource where data recovery is required.
2. The following statement included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions in this CRMMP is intended as general guidance and as an aid to the user in understanding the Conditions and their implementation. The Conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the Conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A."
3. Identification of the person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team.
4. A description of the manner in which Native American observers or monitors will be included, the procedures to be used to select them, and their role and responsibilities.
5. A statement that all cultural resources encountered shall be recorded on a DPR form 523 and mapped and photographed. In addition, all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.
6. A statement that the project owner will pay all curation fees related to cultural materials recovered and documentation produced during cultural resources investigations conducted for the project. The project owner shall identify three possible curation facilities that could accept cultural resources materials resulting from project activities. Any agreements concerning curation shall be retained and available for audit for the life of the project.
7. A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resources materials that are encountered during construction and cannot be treated prescriptively.

8. A description of the contents and format of the Cultural Resources Report (CRR), which shall be prepared according to ARMR guidelines.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall submit the subject CRMMP to the CPM for review and approval. Ground disturbance may not commence until the CRMMP is approved, unless specifically approved by the CPM. At least 30 days prior to the start of ground disturbance, a letter shall be provided to the CPM indicating that the project owner agrees to pay all curation fees related to materials recovered and documentation produced during cultural resources investigations conducted for the project. The project owner shall also identify three possible curation facilities that could accept cultural resources materials resulting from project activities.

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall be written by or under the direction of 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 analyses. All survey reports, Department of Parks and Recreation (DPR) 523 forms, and additional research reports not previously submitted to the California Historical Resources Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.

If the project owner requests a suspension of construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification: Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix. Within 10 days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the CRR have been provided to the SHPO, the CHRIS, and the curating institution, if archaeological materials were collected. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

CUL-5 The project owner shall ensure that the CRS, alternate CRS, or CRMs shall monitor ground disturbance full time at the project site and linear

facilities, and ground disturbance full time at laydown areas or other ancillary areas, to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner (discovery). Specifically, the CRS, alternate CRS, or CRMs shall monitor the ground disturbance that reaches to within three feet of native soil below the fill and all ground disturbance in native soil.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of all earth-moving activities on the project site and laydown areas for as long as the activities are ongoing. Full-time archaeological monitoring shall require at least one monitor per excavation area where machines are actively removing native soils. If an excavation area is too large for one monitor to effectively observe the soil removal, one or more additional monitors shall be retained to observe the area.

In the event that the CRS determines that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of non-compliance with the Conditions and/or applicable LORS. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the Monthly Compliance Report (MCR). If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

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.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner

shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts are discovered. 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. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

Verification: At least 30 days prior to the start of ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log. While monitoring is ongoing, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS. Daily, the CRS shall provide a statement that "no cultural resources over 50 years of age were discovered" to the CPM as an e-mail, or in some other form acceptable to the CPM. If the CRS concludes that daily reporting is no longer necessary, a letter or e-mail providing a detailed justification for the decision to reduce or end daily reporting shall be provided to the CPM for review and approval at least 24 hours prior to reducing or ending daily reporting. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.

CUL-6 The project owner shall grant authority to halt construction to the CRS, alternate CRS, and the CRMs in the event of a Discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event cultural resources over 50 years of age or considered exceptionally significant are found, or impacts to such resources can be anticipated, construction shall be halted or redirected in the immediate vicinity of the Discovery sufficient to ensure that the resource is protected from further impacts. The halting or redirection of construction shall remain in effect until the CRS has visited the Discovery, and 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 Discovery, or by Monday morning if the cultural resources Discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the Discovery (or changes in character or attributes), the action taken (i.e. work stoppage or redirection), a recommendation of eligibility, and recommendations for mitigation of any cultural resources Discoveries, whether or not a determination of significance has been made.

2. The CRS has completed field notes, measurements, and photography for a DPR 523 primary form. The "Description" entry of the 523 form shall include a recommendation on the significance of the find. The project owner shall submit completed forms to the CPM.

3. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the Discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction activities in the vicinity of a cultural resources Discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a Discovery, or by Monday morning if the cultural resources Discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning. Completed DPR form 523s shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever is more appropriate for the subject cultural resource, as determined by the CRS.

CUL-7 If commercial borrow or disposal sites are not used, as soon as a borrow site and a disposal site for removed plant-site or laydown area soils are selected, and prior to the start of ground disturbance, the CRS shall undertake or supervise the surface survey of the disposal and barrow site for archaeological deposits. If no archaeological deposits are identified, soil disposal and soil acquisition at the selected site may proceed with no restrictions. If any archaeological deposits are discovered, the CRS shall undertake or supervise the recording of all discovered archaeological resources on DPR 523 "Primary" forms, provide recommendations regarding their eligibility for the CRHR in the "Description" fields of the forms, and provide a letter report of the survey's personnel, methods, and findings, along with the completed

forms, to the CPM. If any cultural resources are identified at the chosen soil borrow and disposal sites, no soil removal or disposal activities shall begin at the selected sites before CPM approval of the letter report and any accompanying forms, unless such activities are specifically approved by the CPM.

Verification: At least 30 days prior to the start of ground disturbance, if a commercial site is used, the project shall provide a letter identifying the commercial location and specifying whether it will be used as either a disposal or a borrow site. If a commercial site is not selected, after the identification of the removed-soils disposal site or the borrow site, and **at least 30 days prior** to the start of preconstruction site mobilization, the project owner shall ensure that the CRS submits to the CPM a letter report of the conduct and results of the archaeological survey of that site, along with any completed DPR 523 forms with recommendations regarding the eligibility of the recorded resources.

D. GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

This section reviews the project's potential impacts on significant geological and paleontological resources. It also evaluates whether geological hazards exist at the proposed site, whether the facility can be designed and constructed to avoid any such hazards, and whether geologic or mineralogical resources are present. Geologic hazards include ground movement which could result from seismic activity, liquefaction, dynamic compaction, hydrocompaction, subsidence, expansive soils, landslides, tsunamis, and seiches. Paleontological resources include minerals, fossilized remains, or trace remnants of prehistoric plants or animals. The parties did not dispute any issues in this area.

SUMMARY AND DISCUSSION OF THE EVIDENCE

The proposed CVEUP is located in an active geologic area of the Peninsular Ranges Geomorphic Province which extends from the Los Angeles Basin in the north some 900 miles south to the tip of Baja California in Mexico. The Peninsular Ranges Geomorphic Province is characterized by highland and mountain masses on the east, which slope steeply downward to alluvial, colluvial, and uplifted marine deposits along the Pacific Coast to the west. (Ex. 200, p. 5.2-4.)

1. Site Conditions

Several active and potentially active faults are present within 65 miles of the CVEUP site. The various faults are listed in **GEOLOGY AND PALEONTOLOGY Table 1**, along with the orientation, type, most recent movement, and distance from the project site.

In addition to the above faults, the San Diego-El Centro regional geologic map shows faulting along the length of the Otay River including that portion immediately south of the CVEUP site. This fault is not indicated on more recent geologic maps. The San Ysidro Fault is approximately 1.25 miles south of the site. The proposed plant site surface is composed of approximately 23 to 25 feet of uncontrolled fill that in turn is underlain by a 3 to 5-foot layer of Holocene age unconsolidated alluvium. Beneath that layer are unconsolidated Holocene stream terrace deposits to a depth of at least 41.5 feet below ground surface. Regional mapping indicates the terrace deposits overlie Pleistocene to Holocene age poorly consolidated fine- to medium-grained marine, lagoonal, and non-marine sandstone,

GEOLOGY AND PALEONTOLOGY Table 1
ACTIVE FAULTS RELATIVE TO THE CVEUP SITE

Fault	Type	Strike	Most Recent Movement	Fault Class	Estimated Maximum Magnitude (Mw)[1]	Distance (miles) and Direction from Site
San Andreas (Southern segment)	Right-Lateral Strike-Slip	NW	0 – 200 yrs	A	7.2	92 E
San Jacinto (Coyote Creek Section)	Right-Lateral Strike-Slip and Dip-Slip	NW	39 yrs	A	6.8	65 NE
San Jacinto (Borrego Mountain Section)	Right-Lateral Strike-Slip and Normal Dip-Slip	NW	<330 yrs	A	6.6	66 NE
San Jacinto (Anza Section)	Right-Lateral Strike-Slip and Dip-Slip	NW	300 yrs (possibly <100 yrs)	A	7.2	68 NE
Elsinore (Coyote Mountain Section)	Right-Lateral Strike-Slip and Reverse Dip-Slip	NW	200 – 300 yrs	A	6.8	48 E
Elsinore (Julian Section)	Right-Lateral Strike-Slip and Reverse Dip-Slip	NW	4 – 6.1 ka*	A	7.1	45 NE
Newport-Inglewood-Rose Canyon (San Diego Section)	Right-Lateral Strike-Slip and Dip-Slip	NW	<8.1 ka	A	7.1	9 NW
Newport-Inglewood-Rose Canyon (Silver Strand Section)	Right-Lateral Strike-Slip and Dip-Slip	NW	<3.3 ka	A	7.2	5 W
Coronado Bank Zone	Right-Lateral and Normal	NW	<10 ka	B	7.6	12 W
San Diego Trough	Right-Lateral	NW	<10 ka		7.7[2]	22 W
San Clemente Island	Right-Lateral with Vertical Component	NW	<10 ka	[3]	7.7[2]	50 W
La Nacion	Normal	NNW	12 ka to 1.6 Ma**	[3]	6.6[2]	1.75 E
San Ysidro	Right-Lateral Strike-Slip	NW	undetermined	[3]		1.25 S

*ka = 1000 years ago. **Ma = 1,000,000 years ago.
[1] From CGS 2002b unless otherwise noted. .
[2] San Diego County, 2008.
[3] Not assigned

(Ex. 200, p. 5.2-5.)

which overlies poorly consolidated fine- to medium-grained middle to late Pleistocene age marine sandstone of the San Diego Formation. (Ex. 200, p. 5.2-6.)

2. Geology Analysis

The AFC (Ex. 1) provides documentation of potential geologic hazards at the proposed CVEUP plant site. Review of the AFC, coupled with Staff's independent research, indicates that the possibility of geologic hazards at the plant site, during the project's practical design life, is low.

a. Faulting and Seismicity

No active faults are shown on published maps as crossing the boundary of new construction on the proposed CVEUP site. The closest mapped faults to the plant site are the San Ysidro Fault Zone located 1.25 miles to the south and the La Nacion Fault Zone approximately 1.75 miles east of the site. These faults are considered only potentially active because, although they show Quaternary movement, there is no evidence of movement during the Holocene period. The nearest onshore Holocene active faults are the Elsinore Fault (Coyote Mountain and Julian Sections) and the San Jacinto Fault including the Coyote Creek, Borrego Mountain, and Anza Sections. These faults are located east and northeast of the CVEUP site and range from approximately 45 to 68 miles in distant. Movement along these faults has occurred at various times ranging from about 6,000 years ago to within the last few decades. The San Jacinto Fault is considered to be the most active fault system within the southern Sierra Nevada batholith. (Ex. 200, p. 5.2-9.)

The Alquist-Priolo Act of 1973 and subsequent California state law require that all occupied structures be set back 50 feet or more from the surface trace of an active fault. Since no active faults have been documented within the CVEUP power plant site, setbacks from occupied structures will not be required. (*Id.*)

b. Other Seismic Hazards

Seismic activity can produce other hazardous conditions related to ground shaking. These conditions include liquefaction, lateral spreading, and dynamic compaction. The evidence is uncontroverted that these hazards are very unlikely to occur at the proposed site. (Ex. 200, p. 5.2-10.)

c. Hydrocompaction

Hydrocompaction is generally limited to young soils that were deposited rapidly in a saturated state, most commonly by a flash flood. The soils dry quickly, leaving an unconsolidated, low density deposit with a high percentage of voids. Foundations built on these types of compressible materials can settle excessively. Site specific geotechnical investigation indicates the artificial fill material which covers the site to approximately 23 feet as well as the alluvial deposits which underlie the fill, is generally too dense to experience significant hydrocompaction. (Ex. 200, p. 5.2-11.)

d. Subsidence

Subsidence or settlement may occur when areas containing compressible soils are subjected to foundation loads. Site-specific geotechnical investigation indicates the artificial fill material which covers the site to a depth of approximately 23 feet, as well as the alluvial deposits which underlie the fill, are generally compacted to a medium-dense to very dense consistency. Recommendations for re-excavation and compaction of uncontrolled fill in foundation and other structural areas, as presented in the site geotechnical report, should be followed to minimize settlement of the proposed improvements. Deep foundations (drilled shafts) or mat foundations may be necessary to limit settlement of heavily loaded structures. (Ex. 200, p. 5.2-11.)

Subsidence can also be caused by petroleum or groundwater withdrawal. The nearest known petroleum or gas fields are located in the Los Angeles Basin roughly 60 miles northwest of the project site. The site water supply will be provided by a local water purveyor and not by groundwater removal from beneath the site. Therefore, subsidence due to petroleum, natural gas, or groundwater production is considered very unlikely. (*Id.*)

e. Expansive Soils

Soil expansion occurs when the addition of moisture from irrigation, precipitation, capillary tension, water line breaks, etc., causes clay soils to absorb water, which in turn causes an increase in the overall volume of the soil. This increase in volume can correspond to movement of overlying structural improvements. Expansive soils are not thought to be present at this site since it is underlain by about 23 feet of fill. The geotechnical report also recommends reworking the top five feet of fill, which would mitigate any expansive materials present in the fill. (*Id*.)

f. Landslides

Although numerous landslides have been mapped along the Otay Mesa southeast of the site and along Spooners Mesa south of the site, the gradual slope of the site coupled with the absence of topographically high ground within or immediately above the site have led to it being assigned a landslide susceptibility rating of 2 or "Marginally Susceptible" to landslide activity by the California Division of Mines and Geology. (Ex. 200, pp. 5.2-11 – 5.2-12.)

g. Flooding

Intervenor Environmental Health Coalition (EHC) contended that the site is within a 100-year flood plain, offering in evidence Exhibit 625, an SEC form 10-Q filing on behalf of Applicant which contains the statement: "…the Chula Vista facility lies within a designated flood plane [sic] and is therefore potentially at risk if subject to a 100 year flood event." However, this statement is made in the context of discussing the adequacy of Applicant's flood insurance. There is no evidence that the author of the statement had any expertise in the area of geologic hazards, nor is there any indication of where the author obtained this information.

Both the Applicant and Staff offered the sworn testimony of acknowledged experts in this field, and they are in agreement that the CVEUP site and lay-down area lie outside the limits of the 100-year floodplain. Thus, based upon the persuasive weight of the evidence, we find that flooding is not a significant risk to the project. (Exs. 1, p. 5.4-9; 200, p. 5.2-12.)

h. Tsunami

The potential for tsunami (tidal wave) impact to the site was not addressed by the geotechnical investigation or by the AFC. No existing study of tsunami hazards for southern San Diego County could be located by Energy Commission staff. Staff's testimony indicates that the proximity of the CVEUP site to San Diego Bay and the Pacific Ocean shore, coupled with the presence of at least five Holocene faults within 50 miles offshore, indicates at least some potential for tsunami activity in its vicinity. However, Staff determined that the distance from the CVEUP site to the bay and ocean (2-3/4 to 4-1/4 miles), the elevation of the site above sea level (50 to 60 feet), and the presence of intervening structures that would slow any wave front, all act to reduce the potential for significant site damage from a tsunami. We therefore find that the likelihood of damage to the project from tsunami is very low; however, the true potential for tsunami impact

should be evaluated by a tsunami expert to assure inclusion of any necessary design criteria. (Ex. 200, p. 5.2-12.)

3. Geologic, Mineralogic, and Paleontologic Resources

Staff did not identify any geological, mineralogical, or paleontological resources at the energy facility location. Since the proposed site is underlain to a depth of approximately 23 to 25 feet by uncontrolled fill, even if construction includes significant amounts of grading, foundation excavation, and utility trenching, we find the probability that paleontological resources will be encountered during such activities to be low. There is some potential to encounter significant vertebrate fossils if drilled shaft foundations are required to support heavily loaded structures. Any fossil brought to the surface by drilling operations would be badly disturbed and out of context as well. Given the small diameter of the boring (24 inches), and the general scarcity of significant fossils, the chances of intersecting strata bearing significant fossils would seem remote.

Nonetheless, Conditions of Certification **PAL-1** to **PAL-7** are designed to mitigate paleontological resource impacts to less than significant levels. These Conditions essentially require a worker education program in conjunction with the monitoring of earthwork activities by a qualified professional paleontologist (a paleontologic resource specialist, or PRS). The Conditions of Certification allow the Energy Commission's compliance project manager (CPM) and the Applicant to adopt a compliance monitoring scheme ensuring compliance with LORS applicable to geologic hazards and the protection of geologic, mineralogic, and paleontologic resources. If final project design does not include drilled shafts, or other excavations that extend below a depth of 25 feet, these Conditions may not be necessary. (Ex. 200, p. 5.2-13.)

4. Cumulative Impacts and Mitigation

The proposed CVEUP is situated in a seismically active geologic environment. Strong ground shaking potential must be mitigated through foundation and structural design as required by the CBC. Compressible soils (undocumented fill) must be mitigated in accordance with a design-level project geotechnical investigation and proposed Conditions of Certification **GEN-1, GEN-5, and CIVIL-1** under **Facility Design**. The potential impacts to paleontological resources due to construction activities will be mitigated as required by proposed Conditions of Certification **PAL-1 to PAL-7**.

We find that the potential for significant adverse cumulative impacts to the proposed project from geologic hazards, during the project's design life, is low, and that the potential for impacts to geologic, mineralogic, and paleontologic resources is very low.

Based upon the literature and archives search, field surveys, and compliance documentation for the CVEUP project, the Applicant proposes monitoring and mitigation measures for construction of the CVEUP, and Staff agrees that the project can be designed and constructed to minimize the effects of geologic hazards at the site and that impacts to fossils encountered during construction would be mitigated to levels of insignificance.

The Conditions of Certification which we hereby adopt allow the Energy Commission CPM and the Applicant to adopt a compliance monitoring scheme ensuring compliance with applicable LORS for geologic hazards and geologic, mineralogic, and paleontologic resources.

5. Facility Closure

Facility closure activities are not expected to impact geologic, paleontologic, or mineralogic resources since no such resources are known to exist at the project location. In addition, the decommissioning and closure of the project should not negatively affect geologic, mineralogic, or paleontologic resources since the majority of the ground disturbed during plant decommissioning and closure would have been already disturbed, and mitigated as required, during construction and operation of the project.

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, we make the following findings and reach the following conclusions:

1. Several active and potentially active earthquake faults are present within 65 miles of the CVEUP site.

2. The project will be designed to withstand earthquake shaking in accordance with the requirements established in the California Building Code.

3. No significant geologic or mineralogical resources have been discovered in the immediate project area as a result of recent surveys.

4. Although there are no known paleontological resources on the site, the potential exists for such resources to be discovered during project construction.

5. The Conditions of Certification ensure that activities associated with construction and operation of the project will cause no significant adverse impacts to geological or paleontological resources.

We therefore conclude that the CVEUP will not cause any significant adverse direct, indirect, or cumulative impacts to geological, mineralogical, or paleontological resources and that with implementation of the Conditions of Certification below, the project will conform to all applicable laws, ordinances, regulations, and standards.

CONDITIONS OF CERTIFICATION

PAL-1 The project owner shall provide the compliance project manager (CPM) with the resume and qualifications of its paleontological resource specialist (PRS) for review and approval. If the approved PRS is replaced prior to completion of project mitigation and submittal of the Paleontological Resources Report, the project owner shall obtain CPM approval of the replacement PRS. The project owner shall keep resumes on file for qualified paleontological resource monitors (PRMs). If a PRM is replaced, the resume of the replacement PRM shall also be provided to the CPM.

The PRS resume shall include the names and phone numbers of references. 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:

1. Institutional affiliations, appropriate credentials, and college degree;

2. Ability to recognize and collect fossils in the field;

3. Local geological and biostratigraphic expertise;

4. Proficiency in identifying vertebrate and invertebrate fossils; and

5. 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 he or she deems necessary on the project. Paleontologic resource monitors (PRMs) shall have the equivalent of the following qualifications:

1. BS or BA degree in geology or paleontology and one year of experience monitoring in California; or
2. AS or AA in geology, paleontology, or biology and four years' experience monitoring in California; or
3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.

Verification: 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. 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, 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. The letter shall be provided to the CPM no later than one week prior to the monitor's beginning on-site duties. 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, construction lay-down areas, and all related 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 plan and profile drawings for the utility lines would be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and be at a scale between one inch = 40 feet and one inch = 100 feet. If the footprint of the project or its linear facilities changes, the project owner shall provide maps and drawings reflecting those changes to the PRS and CPM.

If construction of the project proceeds 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. Before work commences 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 or PRM consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked the following week and until ground disturbance is completed.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings to the PRS and CPM. If there are changes to the footprint of the project, revised maps and drawings shall be provided to the PRS and CPM at least 15 days prior to the start of ground disturbance. If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within five days of identifying the changes.

PAL-3 The project owner shall ensure that the PRS prepares, and the project owner submits 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 the basis of discussion when 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 Vertebrate Paleontology (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 collection, identification and inventory, preparation of final reports, and transmittal of materials for curation will be performed according to PRMMP procedures;
2. Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and the conditions of 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 units;
5. A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed plan for monitoring and sampling;
6. A discussion of procedures to be followed in the event of a significant fossil discovery, halting construction, resuming construction, and how notifications will be performed;
7. A discussion of equipment and supplies necessary for collection 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 meet the Society of Vertebrate Paleontology's standards and requirements for the curation of paleontological resources;
9. Identification of the institution that has agreed to receive data and fossil materials collected, 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 to the CPM. The PRMMP shall include an affidavit of authorship by the PRS and acceptance of the PRMMP by the project owner evidenced by a signature.

PAL-4 Prior to ground disturbance and for the duration of construction activities involving ground disturbance, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for the following workers: project managers, construction supervisors, foremen and general workers involved with or who operate ground-disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of a CPM-approved video or in-person presentation. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or other areas of interest or concern. No ground disturbance shall occur

prior to CPM approval of the Worker Environmental Awareness Program (WEAP), unless specifically approved by the CPM.

The WEAP shall address the possibility of encountering paleontological resources in the field, the sensitivity and importance of these resources, and legal obligations to preserve and protect those resources.

The training shall include:

1. A discussion of applicable laws and penalties under the law;

2. Good quality photographs or physical examples of vertebrate fossils for project sites containing units of high paleontologic sensitivity;

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 WEAP certification of completion form signed by each worker indicating that he/she has received the training; and

7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: 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 for workers to follow. 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 to use a video for interim training. If the owner requests an alternate paleontological trainer, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval prior to installation of an alternate trainer. Alternate trainers shall not conduct training prior to CPM authorization.

In the monthly compliance report (MCR), the project owner shall provide copies of the WEAP certification of completion forms with the names of those trained and the trainer or type of training (in-person or video) offered that month. The MCR 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 potential fossil-bearing materials have been identified, both at the site and along any constructed linear facilities associated with the project. 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 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 from the accepted schedule in the PRMMP shall be proposed in a letter or email from the PRS and the project owner to the CPM prior to the change in monitoring and will be included in the monthly compliance report. The letter or email shall include the justification for the change in monitoring and be submitted to the CPM for review and approval.

2. The project owner shall ensure that the PRM(s) keep a daily monitoring log 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 notifies the CPM within 24 hours of the occurrence 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 within 24 hours, or Monday morning in the case of a weekend event, where construction has been halted because of a paleontological find.

The project owner shall ensure that the PRS prepares a summary of monitoring and other paleontological activities placed in the monthly compliance reports. The summary will include the name(s) of PRS or PRM(s) active during the month; general descriptions of training and monitored construction activities; and general locations of excavations, grading, and other activities. A section of the report shall include the geologic units or subunits encountered, descriptions of samplings within each unit, and a list of identified fossils. 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 or

any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the report shall include an explanation in the summary as to why monitoring was not conducted.

Verification: The project owner shall ensure that the PRS submits the summary of monitoring and paleontological activities in the MCR. When feasible, the CPM shall be notified 10 days in advance of any proposed changes in monitoring different from the plan identified in the PRMMP. If there is any unforeseen change in monitoring, the notice shall be given as soon as possible prior to implementation of the change.

PAL-6 The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed including collection of fossil materials, preparation of fossil materials for analysis, analysis of fossils, identification and inventory of fossils, the preparation of fossils for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during project construction.

Verification: The project owner shall maintain in his/her 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 project completion and approval of the CPM-approved paleontological resource report (see Condition of Certification **PAL-7**). The project owner shall be responsible for paying any curation fees charged by the museum for fossils collected and curated as a result of paleontological mitigation. A copy of the letter of transmittal submitting the fossils to the curating institution shall be provided to the CPM.

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 collected fossil materials and related information and submit it to the CPM for review and approval.

The report shall include, but is not limited to, a description and inventory of recovered 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 below the level of significance.

Verification: Within 90 days after completion of ground-disturbing activities, including landscaping, the project owner shall submit the PRR under confidential cover to the CPM.

Certification of Completion
Worker Environmental Awareness Program
Chula Vista Energy Upgrade Project (07-AFC-4)

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, paleontological, and biological resources for all personnel (that is, construction supervisors, crews, and plant operators) working on site or at related facilities. By signing below, the participant indicates that he/she understands and shall abide by the guidelines set forth in the program materials. Include this completed form in the Monthly Compliance Report.

No.	Employee Name	Title/Company	Signature
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Cultural Trainer: _____ Signature:_____ Date: ___/___/____

PaleoTrainer: _____ Signature:_____ Date: ___/___/____

Biological Trainer: _____Signature:_____ Date: ___/___/____

VII. LOCAL IMPACT ASSESSMENT

In general, a power plant may be incompatible with existing or planned land uses resulting in significant impacts such as unmitigated noise, dust, public health or safety hazards, adverse traffic or visual effects, or an excessive burden on local community services. The following sections of the Decision discuss local impacts under the technical topics of land use, traffic and transportation, visual resources, noise, and socioeconomics.

A. LAND USE

To determine whether the CVEUP project will result in a significant impact on land use, the 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

1. Applicable LORS

According to CEQA Guidelines, a project results in significant land use impacts if it would: [43]

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses;
- Physically disrupt or divide an established community;
- Conflict with any applicable habitat conservation plan or natural community conservation plan;

[43] Title 14, Cal. Code Regs., § 15000 et seq., Appendix G, Sections II, IX, XVI.

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction, or that would normally have jurisdiction, over the project. This includes, but is not limited to, a General Plan, community or specific plan, local coastal program, airport land use compatibility plan, or zoning ordinance; and
- Create individual environmental effects which, when considered with other impacts from the same project or in conjunction with impacts from other closely related past, present, and reasonably foreseeable future projects, are considerable, compound, or increase other environmental impacts.

Land use LORS directly applicable to the proposed CVEUP site and construction lay down/worker parking area include the City of Chula Vista (City) General Plan and Municipal Code.[44] Other Land Use LORS applicable to areas surrounding the CVEUP site and lay down area include the Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan.[45] **LAND USE Table 1** provides a general description of land use LORS applicable to the proposed project.

LAND USE Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable Law	***Description***
Federal	None
State	None
Local	
Chula Vista General Plan	The Chula Vista General Plan functions as the "constitution" for future growth and development. It consists of six elements, including the Land Use & Transportation Element, Economic Development Element, Housing Element, Public Facilities & Services Element, Environmental Element, and Growth Management Element. The elements of the general plan are closely interrelated. Each element must be internally consistent as well as consistent with one another. The Land Use and Transportation Element address the location and compatibility of land uses and provides for a planned pattern of land uses.
Chula Vista Municipal Code	The Chula Vista Municipal Code consists of all of the regulatory and penal ordinances and certain administrative ordinances of the City, codified pursuant to the provisions of Sections 50022.1 through 50022.8

[44] The proposed CVEUP site and construction lay down/worker parking area are located within the boundaries of the City of Chula Vista and are not subject to land use LORS of the City of San Diego.

[45] The **Biological Resources** section addresses consistency with the MSCP.

Applicable Law	*Description*
	and 50022.10 of the Government Code. The Municipal Code includes the City's Subdivision Ordinance and Zoning Ordinance, including the Growth Management Ordinance. Zoning classifies the immediate, permissible uses of land and is one of the primary means of implementing the General Plan. The Chula Vista Zoning Ordinance divides the City into districts or zones specifying what uses are permitted, conditionally permitted, or prohibited within each zone.
Chula Vista Multiple Species Conservation Program Subarea Plan	The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP Subregional Plan was adopted by the City of San Diego and San Diego County in 1997, and conditionally approved by the City of Chula Vista in October 2000. The MSCP Subregional Plan encompasses an area of approximately 580,000 acres and 12 local jurisdictions, including the City of Chula Vista. On May 13, 2003, the City of Chula Vista City Council and Planning Commission approved the City of Chula Vista MSCP Subarea Plan (Subarea Plan) and formally adopted it as part of the City's General Plan. The Subarea Plan is the policy document through which the MSCP Subregional Plan is implemented within the City's jurisdiction. The Subarea Plan provides the framework for habitat planning and specifically establishes areas of conservation and development within the Chula Vista MSCP Planning Area.

Applicant's **Land Use Table 5.6-1** summarizes the general plan land use designations within a one-mile radius of the site. We reproduce this table below as **Land Use Table 2**.

LAND USE TABLE 2

General Plan Land Use Designations and Allowable Uses Within a 1-Mile Radius of the Project Site

Land Use Designation	**Allowable Uses**
City of Chula Vista	
Limited Industrial	Light manufacturing, warehousing, auto repair, auto salvage yards, and flexible use projects that combine these uses with associated office space. FAR ranges from 0.25 to 0.5.
Retail Commercial	Allows a range of retail shopping services, including neighborhood, community and regional shopping areas. The category may include limited thoroughfare retail and automobile-oriented services. FAR ranges from 0.25 to 0.75.
Land Use Designation	**Allowable Uses**
Residential (Low-Medium, Medium-High, High)	*Low-Medium Density:* Maximum density of 6 dwellings units per acre, consisting primarily of detached single-family dwellings on medium-sized lots. *Medium Density:* Maximum density of 11 dwelling units per

	acre, consisting of small-lot detached single-family homes, duplexes, triplexes, garden apartments, planned developments, and townhomes. *Medium-High Density:* Maximum density of 18 dwelling units per acre, allowing for moderate-density apartments, townhomes, condominiums, and planned unit developments. *High Density:* Maximum density of 27 dwelling units per acre, accommodating higher-intensity multiple-family dwellings where adequate support infrastructure exists. Housing units typically consist of apartments, planned unit developments, condominiums, and townhomes.
Open Space	Intended for lands to be protected from urban development, including floodplains, canyon, mountain, and agricultural uses. May include lands in natural condition or provide scenic vistas, or areas set aside that have potential exposure to hazards such as earthquakes, landslides, fires, floods, erosion, or high levels of roadway noise. Passive recreation uses, such as trails, staging areas, scenic overlooks, and picnic areas may occur within these areas.
Open Space Preserve	Intended for areas designated within the Chula Vista MSCP Subarea Plan for the permanent conservation of biological resources.
Public/Quasi-Public	Includes existing areas used by schools, churches, hospitals, civic centers, fire stations, and libraries.
Parks and Recreation	Intended for parks, sports fields, playgrounds, golf courses, and other passive and active recreation uses. May also include community centers and urban areas.
City of San Diego	
Park, Open Space, and Recreation	Open Space: Applies to land or water areas generally free from development of developed with very low-intensity uses that respect natural environmental characteristics. Open Space is generally non-urban in character and may have utility for: park and recreation purposes, primarily passive, conservation of land, water, or other natural resources, or historic or scenic purposes.
Institutional and Public and Semi-Public Facilities	Provides a designation for uses that are indentified as public or semi-public facilities in the community plan and which offer public and semi-public services to the community. Uses may include but are not limited to: airports, military facilities, community colleges, university campuses, landfills, communication and utilities, transit centers, water sanitation plants, schools, libraries, police and fire facilities, cemeteries, post offices, hospitals, park-and-ride lots, government offices and civic centers.
Land Use Designation	**Allowable Uses**
Residential	Very Low – Single-family (0-4 dwelling unit per acre [du/ac]). Low – Single-family and multi-family (5-9 du/ac). Low Medium – Single family and multi-family (10-14 du//ac). Medium – Single-family and multi-family (15-29) du/ac). Medium High – Multi-family (30-44 du/ac). Very High – Multi-family (45-74 du/ac).

Applicant's **Land Use Table 5.6-2** summarizes the zoning designations and allowable activities within a one-mile radius of the site. We reproduce this table below as **Land Use Table 3**.

LAND USE TABLE 3

Zoning Designations and Allowable Activities Within a 1-Mile Radius of the Project Site

Land Use Designation	Allowable Uses
City of Chula Vista	
I-P	General Industrial / Precise Plan: permits manufacturing, processing, assembling, research, wholesale or storage uses which are of the same character: accessory uses also permitted; other uses allowable subject to conditional use permit.[46] P District requires that the use of land and buildings, including height, setbacks and open areas be developed in accordance with the approved precise plan. The plan will take precedence over the restrictions of the underlying zone.
I-L/I-LP	Limited Industrial: Permits manufacturing, printing, assembling, processing, repairing, or packaging of products from previously prepared materials, as well as wholesale and warehousing, storage yards, minor auto repair, and manufacture of food products. Accessory uses such as offices, restaurants, and incidental services to serve employees and retail sales of products produced on the site. Other uses subject to a conditional use permit such as machine shops, restaurants, major auto repair, service stations, synthetics manufacturing and trucking terminals. (min. lot size = 10,000 square feet [ft]); Precise plan takes precedence over restrictions of the underlying zone.
A-8	Agricultural (min. lot size 8 acres): permits agricultural uses, single-family dwellings and accessory uses such as stables, public and private noncommercial recreational facilities. Other uses allowable subject to conditional use permit.
Land Use Designation	**Allowable Uses**
A70/A708	Agricultural/County: Agricultural uses, single-family dwellings and accessory uses such as stables, public and private non-commercial recreational facilities.
C-N	Neighborhood Commercial: Permits retail and service establishments such as shops, stores, offices, banks, nightclubs, printing, hotels, parking lots garages, and business and technical schools. Other uses allowable subject to conditional use permit.

[46] The Committee notes that General Industrial also lists Electrical Generating Plants as a permitted use. Chula Vista Municipal Code, § 19.46.020 (E).

	C-N-P: Neighborhood Commercial/Precise Plan – land and buildings, including height, setbacks, and open areas be developed in accordance with the approved precise plan. The plan will take precedence of the restrictions of the underlying zone.
C-T	Commercial Thoroughfare: Permits uses adjacent to thoroughfares where they are dependent upon or cater to through traffic, supplying commodities or services to the community C-T-P: Thoroughfare Commercial/Precise Plan – land and buildings, including height, setbacks and open areas be developed in accordance with the approved precise plan. The plan will take precedence over the restrictions of the underlying zone.
F-1	Floodway Zone: regulates land use and development in an area designated for a flood control channel; all uses subject to conditional use permit; no permanent structures allowed.
R-15-P/R-16-P/R-17-P	Single-family Residence Zone/Precise Plan: Permits single-family dwellings and accessory uses such as large family day care and foster homes. Other uses subject to a conditional use permit such as schools, churches, and other quasipublic uses. (15 = min. lot size 15,000 ft; 16 = min. lot size 16,000 ft; 17 = min. lot size 17,000 ft). Subject to provisions of precise plan overlay.
R-2	R-2-T: One and Two Family Residence Zone – Permits single-family dwellings, duplexes and attached single-family dwellings. Accessory uses and conditional uses similar to R-1. (min. lot size 7,000 ft); subject to precise plan.
R-3	Apartment Residential Zone: Permits apartments, townhouses, and duplexes; rooming and boarding for not more than two persons as an accessory use. Other uses subject to conditional use permit such as single-family homes, boarding or lodging houses, day nurseries or nursery schools. R-3-G: Garden Apartments R-3-G-D: Garden Apartments – 17 dwelling units (du) R-3-L: Apartments – 32 du/Precise Plan R-3-P-8: Apartments – 8 du/Precise Plan R-3-P-12: Apartments – 12 du/Precise Plan
R1	Single Family Residential: Single-family dwellings and accessory uses such as large family day care and foster homes.
Land Use Designation	**Allowable Uses**
C-C/C-C-P	Central Commercial: Permits stores, shops, and offices for the residents of the city and surrounding community in a shopping center atmosphere such as department stores, banks, business offices, restaurants, nightclubs, and personal services. Other uses subject to conditional use permit such as carwashes, service stations, and commercial recreational facilities. (min. lot size 5,000 ft)

	Central Commercial Zone/Precise Plan: Development must take place in accordance with the approved precise plan. The plan will take precedence over the restrictions of the underlying zone.
MHP	Exclusive Mobile Home Park Zone: Permits development of mobile home parks on minimum 5-acre lots through the application of a conditional use permit. The density and design standards shall be governed by the City's adopted development policy for mobile home parks
S94	Special Zones/County
S80	Special Zones/County
PC	Planned Community: Provides for the orderly development of large tracts of land, which may contain a variety of land uses, but are under unified ownership or control.
City of San Diego	
R-S	R-S-1-1: Residential – Multiple Unit (min. 3,000ft lots) R-S-1-2: Residential – Single Unit (min. 20,000 ft lots) R-S-1-6: Residential – Single Unit (min. 6,000ft lots) R-S-1-7 – Single Unit; Urbanized Communities (min. 5,000 ft lots) R-S-1-14: Residential – Single Unit; Planned Urbanizing Communities (min. 5,000 ft lots)
RM	R-M-1-1: Residential – Multiple Unit (maximum density of one dwelling unit for each 3,000 square feet of lot area) R-M-2-4: Residential – Multiple-Unit; medium density multiple dwelling units (max. 1 du per 1,750 ft lot area) R-M-2-5: Residential – Multiple Unit (maximum density of one dwelling unit for each 1,500 square feet of lot area)
OF-1-1	Open Space Flood plain: Controls development within floodplains to protect public health, safety, and welfare and to minimizes hazards due to flooding in areas identified by the Flood Insurance Rate Map on file with the city engineer; development that will not constitute a dangerous condition or an impediment to the flow of flood waters is permitted.
Land Use Designation	**Allowable Uses**
AR	A-R-1-1: Agricultural-Residential – Accommodates a wide range of agricultural uses while permitting development of single-family homes at a very low density (minimum 10-acre lots) A-R-1-2: Agricultural-Residential – Accommodates a wide range of agricultural uses while permitting development of single-family homes at a very low density (minimum 1-acre lots)

OMDD-INDUST-SUBD	Otay Mesa Development District: Industrial Subdistrict
CN-1-2	Commercial-Neighborhood: Provides residential areas with a limited number of convenient retail and personal service uses; small-scale, low-intensity developments consistent with the scale of the surrounding neighborhood with an auto orientation.

We note an apparent inconsistency between Staff's and Applicant's zoning tables; Staff's Table 3, Ex. 200 p. 4.5-7, does not include the General Industrial zone within a one-mile radius of the site whereas Applicant's Table 5.6-2, Ex. 1, p. 5.6-11, does include that designation. We further note that the description of permitted uses in the General Industrial zone in Applicant's Table 5.6-2 fails to mention that electrical generating plants is a specifically permitted use in that zone. The fact that the City of Chula Vista has designated a particular zone as suitable for electrical generating plants, such as the CVEUP, was not discussed in the AFC, and was dismissed in the FSA as "irrelevant." (Ex. 200, p. 4.5-39.) However, as discussed below, that fact is crucial to our analysis of the proposed project's consistency with land use LORS.

2. Site Location

The power plant site is located in the City of Chula Vista's Main Street District, in the Southwest Planning Area. According to the City's General Plan, "…the Southwest Planning Area has a grid street pattern and a diversity of land uses, including a mix of residential, commercial, and industrial businesses that, in some cases, have evolved over time without adequate planning, and have resulted in land use conflicts." (City of Chula Vista General Plan 2005, p. LUT-131). The Main Street District "functions as a commercial-industrial service area…." It is the "…focus of limited industrial uses within western Chula Vista." (City of Chula Vista General Plan, 2005, p. LUT-156.)

The Otay Recreation Center is located directly to the east of the Otay Substation on the north side of Main Street, less than 1,000 feet from the proposed site. Otay Elementary School is located immediately to the north and west of the Otay Substation, adjacent to the north side of the Otay Recreation Center, approximately 1,320 feet from the proposed site. Single-family residences are located along the north side of Main Street, west of Albany Avenue, south of Main Street, and east of Del Monte Avenue, approximately 350 feet from the CVEUP site. (Ex. 200, p. 4.5-4.)

3. Potential Impacts

The evidence establishes that the CVEUP would not have certain land use impacts mentioned in the CEQA Guidelines. For example:

- The proposed CVEUP site and the proposed construction laydown/construction worker parking area are designated as "Urban and Built-Up Land." The proposed CVEUP would not convert any Farmland to nonagricultural use. Neither the construction nor operational activities of the proposed project would result in any impacts to existing agricultural operations or foreseeable future agricultural use. In addition, the project site is not located in an area that is under a Williamson Act contract. (Ex. 200, pp. 4.5-8 to 4.5-9.)

- The power plant would be located on a parcel that currently houses a peaker plant. There is no evidence that the project will physically divide or disrupt an established community.

- The Applicant would build and operate the CVEUP in accordance with requirements of the Chula Vista MSCP Subarea Plan, which incorporates the habitat and species conservation goals and requirements in the San Diego MSCP Subregional Plan. Therefore, the proposed CVEUP would not conflict with the goals and policies of the MSCP. (Ex. 200, p. 4.5-9.)

4. Consistency with Land Use LORS

The evidentiary record and post-hearing briefs show that a dispute among the parties exists concerning consistency of the project with the General Plan and Title 19 of the Chula Vista Zoning Ordinance. We analyze this dispute below.

a. General Plan

i) Existing Land Use Designations

The northern portion of the CVEUP site is designated "IL, Limited Industrial" in the City of Chula Vista General Plan Land Use Diagram. (City of Chula Vista General Plan, 2005, p. LUT-47.) The Limited Industrial category encompasses light manufacturing, warehousing, auto repair, auto salvage yards, and flexible-use projects that combine these uses with associated office space. (City of Chula Vista General Plan, 2005, p. LUT-53.) There are two other designations in the Industrial category: Regional Technology Park and General Industrial. The

latter category includes all Limited Industrial and Technology Park uses as well as heavier manufacturing, large-scale warehousing, transportation centers, and public utilities. (City of Chula Vista General Plan, 2005, p. LUT 53.)

The southern portion of the CVEUP site is designated "OS, Open Space" in the City of Chula Vista General Plan Land Use Diagram. (City of Chula Vista General Plan, 2005, p. LUT-47.) The Open Space designation is intended for lands to be protected from urban development, including floodplains, canyon, mountain, and agricultural uses. These lands may include unique natural conditions, provide scenic vistas, or be areas to be set aside that have potential exposure to hazards such as earthquakes, landslides, fires, floods, erosion, or even high levels of roadway noise. Passive recreation uses, such as trails, staging areas, scenic overlooks, and picnic areas may occur within these areas. (City of Chula Vista General Plan, 2005, p. LUT-54.)

The proposed construction laydown/worker parking area has a General Plan land use designation of "OSP, Open Space Preserve." The Open Space Preserve designation is intended for areas designated within the Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan for the permanent conservation of biological resources. The various Preserve categories and locations of these lands are provided in the Chula Vista MSCP Subarea Plan. (City of Chula Vista General Plan, 2005, p. LUT-55.)

ii) Conflicts with General Plan

The General Plan contains numerous policy statements which are set forth in Staff's Table 4, at pages 4.5-13 to 4.5-14 of the FSA. (Ex. 200.) Noteworthy are policies LUT 45.6, ED 1.3, E 6.4, and E 23.3. Although Staff and Applicant were in agreement that the proposed project did not conflict with these General Plan policies, Intervenor EHC contended that there were serious conflicts. We discuss these land use policies below.

LUT 45.6 Land Use and Transportation Policy 45.6 calls for Main Street to be maintained primarily as a limited industrial corridor. The "Limited Industrial" designation is defined in the General Plan as "intended for light manufacturing, warehousing, auto repair, auto salvage yards, and flexible-use projects that combine these uses with associated office space." (City of Chula Vista General Plan, 2005, p. LUT-53.) Applicant's and Staff's position is that the CVEUP constitutes an upgrade of an existing industrial use, thereby furthering the policy

of maintaining Main Street as a limited industrial corridor.[47] (Ex. 200, p 4.5-15.) EHC, however, focused on the "limited" designation and argued that the operation of a natural gas-fired power plant such as the existing plant or the proposed CVEUP is not a light industrial use. (EHC Opening Brief at 15.)

We find the wording of the General Plan itself to be specific and definitive here. Section 4.9.5 of the General Plan describes the "Industrial" category and breaks it down into Limited Industrial and General Industrial sub-categories. "Heavier manufacturing" and "public utilities" are uses listed as appropriate in the General Industrial land use sub-category. These uses are compatible with the industrial nature of a power plant. The examples given to illustrate the Limited Industrial sub-category—warehousing, auto repair and salvage, and office uses--do not resemble gas-fired power plants. (Chula Vista General Plan, 2005, pp. LUT-53 - 54). We can only conclude that this distinction is meant to purposefully categorize these different types of uses. The purpose of these categories is to further the goal of preserving the Main Street Corridor as a limited industrial area. Siting a power plant in the area designated Limited Industrial conflicts with this goal. Siting it in an area designated General Industrial would be in keeping with the wording of the policy. We thus find that the proposed project conflicts with General Plan Policy LUT 45.6.

ED 1.3 Economic Development Policy 1.3 seeks to encourage the preservation and expansion of existing industrial uses in areas designated as industrial. (City of Chula Vista General Plan, 2005, p. EDE-5.) Applicant's and Staff's position is that the CVEUP is an expansion of an existing industrial use and thus is in accord with this policy. EHC contends that the Policy does not give license to expand such uses "ad infinitum." (EHC Reply Brief at 6.)

We find that the CVEUP is consistent with this policy. The General Plan contains many policies designed to balance such competing interests as economic prosperity, reliability of electrical service, separation of industrial and residential uses, and the like. Conformity with the General Plan requires that the project achieve an overall harmony with the General Plan. *Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 719 ("state law does not require an exact match between a proposed subdivision and the applicable general plan."). The proposed expansion of the existing use is obviously finite

[47] We note that Staff's Table 4 omits the word "limited" from its explanation of why the CVEUP would be consistent with LUT 45.6. Ex. 200, p. 4.5-15.

and would not introduce an new non-conforming use. As such, we believe it represents a pragmatic balance as envisioned in Policy ED 1.3.

E 6.4 Environmental policy 6.4 calls for the City to:

> "Avoid siting new or re-powered energy generation facilities and other major toxic air emitters within 1,000 feet of a sensitive receiver, or the placement of a sensitive receiver within 1,000 feet of a major toxic emitter." (City of Chula Vista General Plan, 2005, p. E-32.)

Staff and Applicant are of the opinion that the proposed CVEUP project does not conflict with this policy, while EHC argues that siting the facility at the proposed location does not comply with the requirement to avoid siting major toxic air emitters within 1000 feet of a sensitive receptor. The parties all agree that there are sensitive receptors within 1000 feet of the site (Ex. 200, p. 4.5-16), and that Policy E 6.4 was adopted after the existing peaker plant was already in place (Applicant's Opening Brief at 12) but long before this AFC was filed.

Applicant's and Staff's argument is that the "avoid" requirement in Environmental Policy section 6.4 of the City's General Plan applies only to major toxic emitters. In the view of these two parties, power plants that are not major toxic emitters are not included. In other words, the phrase "energy generation facilities <u>and</u> other major toxic emitters" implies that the requirement applies only to power plants which are major toxic emitters, and excludes power plants that are not major toxic emitters. In essence, the argument boils down to the assertion that if the drafters had intended to include all power plants, they would have written "power plants and major toxic emitters."

EHC argues that the policy applies to <u>all</u> new or repowered energy generation facilities. The word "other" indicates that the drafters viewed <u>any</u> "new or repowered energy generation facility" as a major toxic emitter.

The former interpretation requires an initial inquiry as to whether or not a particular power plant is a major toxic emitter, a term undefined in the General Plan. If so, then its siting near a sensitive receptor must be avoided. Applicant suggests that proper interpretation and implementation of policy E 6.4 requires one to become familiar with the projected emissions of a proposed project and then consult the Federal Clean Air Act and rules of the SDAPCD to determine if its toxic emissions are "major" as that word is used in those laws. This strikes us as unrealistic. A fundamental rule of statutory construction is that a court should ascertain the intent of the Legislature so as to effectuate the purpose of the law.

(*O'Kane v. Irvine* (1996) 47 Cal.App.4th 207, 211.) "To determine the intent of legislation, we first consult the words themselves, giving them their usual and ordinary meaning." (*DaFonte v. Up-Right, Inc.* (1992) 2 Cal.4th 593, 601.) Since even the cleanest natural-gas fired power plant emits large quantities of toxic substances, albeit within legal limits, it is reasonable to assume that the drafters of Policy E 6.4 listed "new or repowered energy generation facilities" as an example of a major toxic emitter. This interpretation gives the words of the policy their usual and ordinary meaning.

The evidence of record supports this view. Exhibit 626 contains various documents pertaining to the drafting and adoption of Policy E 6.4 as part of the General Plan update in 2005. Particularly telling are documents A and C. Document A shows a redlined draft of Policy E 6.4 from July, 2005. It is clear that the original intent was to allow the siting of new or repowered energy generation facilities and other major toxic air emitters within 1,000 feet of a sensitive receptor if a health risk assessment showed that attendant health risks were within acceptable standards. In August 2005, Mayor Padilla, in Document C, made it clear that he wanted stronger protection for the community. "A health risk assessment alone is never sufficient in my opinion to achieve adequate protections for our community and so I believe the Staff language is not strong enough." (emphasis added.) Mayor Padilla then proposed adopting Policy E 6.4 as it exists today. The Mayor's language eliminated the need to determine whether or not a project constituted a health risk.

Applicant's interpretation requires one to make a judgment as to whether or not a new or repowered energy generation facility is a major toxic emitter (according to an undefined standard). This is the equivalent of making a judgment as to whether or not a project constitutes a health risk by conducting a health risk assessment. The legislative history reveals the drafters' purpose to eliminate such subjectivity from policy E 6.4 by imposing a requirement to avoid siting any new or repowered energy generation facility, and any other major toxic emitter, within 1,000 feet of a sensitive receptor, regardless of what the outcome of a health risk assessment might have been.

A document from the archives of the Chula Vista General Plan Update also suggests that the drafters did not view any energy generation facilities as exempt from the "avoid" requirement of Environmental Policy 6.4. The "Digest of General Plan Update Revisions," Digest, page 5 of 7, accessed at http://www.ci.chula-vista.ca.us/city_Services/Development_Services/Planning_Building/Archive/GPU Archive/documents/GPU_PE_09_05_Web_000.pdf, contains a summary of

revisions to the first draft of the General Plan made in 2005 in response to community input. In summarizing the revisions to Policy E 6.4, the document reads:

> "Revising certain policies promoting clean air (Policy E 6.4, which deals with environmental effects of *energy generation facilities and major toxic air emitters*,…)." (emphasis added)

The omission of "other" from the italicized portion of this statement supports an inference that the word "other" in Policy E 6.4 does not have the significance assigned to it by the Applicant. It therefore appears to us that the City intended the Policy to apply to all energy generation facilities and to all major toxic air emitters.

Furthermore, Applicant's interpretation comes perilously close to rendering the policy meaningless. "Major" as used in the Federal Clean Air Act and the SDAPCD Rules connotes facilities that emit such large quantities of air pollutants that it is implausible that anyone would seek to site one within 1,000 feet of a sensitive receptor. Policy E 6.4 would have little meaning if it only applied to facilities that would not normally be sited near sensitive receptors even in the absence of the Policy.

We therefore find that the weight of the evidence shows that the purpose of Policy E 6.4 is to avoid siting energy generation facilities and other major toxic emitters within 1,000 feet of a sensitive receptor.

Our conclusion is supported by recent events concerning the City's consideration of this project. In a letter from the Office of the City Manager to the Energy Commission Project Manager, dated June 13, 2008, (Ex. 622) the City expressed concern that the CVEUP is inconsistent with Land Use Policy E 6.4. The basis for this concern was that the General Plan Update of 2005 added policies that did not exist at the time the SUP for the existing plant was approved in 2000. The City stated that:

> "The City's General Plan was updated in 2005 and contains policies regarding locating of a major toxic emitter within 1,000 feet of a sensitive receptor (residents). Adequate justification must be provided to demonstrate that there are no other feasible locations to site the Upgraded Peaker Plant."

Notwithstanding these concerns, on August 7, 2008, the Office of the City Manager issued another letter (Ex. 804) in which it described certain mitigation measures offered by the Applicant, and concluded that:

> "Subsequent to the Commission adopting the measures contained in the attached letter and/or the completion of a detailed written agreement between the City and MMC on any of the measures not included in the CEC proposed decision, and timely payment by MMC to implement the measures, the City concludes that any potential inconsistencies with the City's General Plan will have been addressed."

The measures described therein, and set forth in a letter from MMC to the City, dated August 4, 2008, (Ex. 804) include payment of $210,000 to City for "air quality related mitigation for the local area," another $210,000 to fund the estimated cost of mitigating the project's air emissions, agreement to pay applicable Utility User Tax to City, payment of $30,000 for a wireless weather station that will help with water conservation, and agreement to remove the existing facility. These mitigation measures, while commendable, *do not resolve the project's inconsistencies with the General Plan and Zoning Ordinance* set forth in this Decision.

Since the proposed site is within 1,000 feet of a sensitive receptor, we must also determine whether or not the evidence shows that the Applicant has met its obligation to "avoid" siting it there. "Avoid" means to prevent the occurrence of or to refrain from. (Merriam-Webster Online Dictionary, 2008.) Under Policy E 6.4, one seeking to site a major toxic emitter within 1,000 feet of a sensitive receptor would be required to make a reasonable effort to site it farther than 1,000 feet from a sensitive receptor. Many factors would be analyzed in the course of such an examination, including but not limited to economic, environmental, safety, reliability, and visual factors. A reasonable effort logically includes an examination of a reasonable range of alternative sites, which is a part of our certification process, and our detailed discussion is contained within the **Alternatives** section of this Decision.

E. 23.3 Environmental Policy 23.3 calls for the City to "avoid siting industrial facilities and uses that pose a significant hazard to human health and safety in proximity to schools or residential dwellings." (City of Chula Vista General Plan, 2005, p. E-79.) Applicant contends that since the CVEUP does not pose a significant hazard to human health or safety, the power plant may be sited near schools and residences. Staff agrees. EHC argues that the CVEUP will actually

produce more emissions than the existing facility, citing the FSA, Ex. 200, at pages 4.1-34 and 4.1-37. (EHC Reply Brief at 7.) The FSA does indicate that an incremental increase in emissions of criteria pollutants is expected, and bases its recommended emissions mitigation on an incremental increase of 10.86 tons/year. (Ex. 200, p. 4.1-41.) EHC further points out that Policy E 23.3 is part of the Environmental Justice subsection of the Environmental Element of the General Plan. According to the General Plan, the City of Chula Vista seeks to avoid the over concentration of industrial uses and promote the equitable distribution of public facilities and services as part of its environmental justice effort. (City of Chula Vista General Plan, 2005, p. E-6.) Diane Takvorian testified that the project area has a disproportionate share of energy generation facilities. (Ex. 608; RT 10/2/08 192:2.) This testimony is uncontroverted.

We need not reach EHC's contentions to conclude that siting the CVEUP at the proposed site must be avoided under Policy E 23.3. It is undisputed that the CVEUP is an industrial facility. Policy E 23.3 plainly asks that siting such facilities in proximity to schools or residential dwellings be avoided. As with Policy E 6.4, we must determine only whether or not the evidence shows that the Applicant has met its obligation to choose an acceptable location. That analysis is contained within the **Alternatives** section of this Decision.

b. Zoning

i) Precise Plan

The entire CVEUP site is zoned "IL-P, Limited Industrial Precise Plan" (Ex. 200, p. 4.4-5.)[48] According to the zoning ordinance:

> …the planning commission or the city council may require that a precise plan be submitted for the development of the property by attaching the P precise plan modifying district to the underlying zone. The precise plan includes, but is not limited to, the location, height,

[48] The zoning designation for the construction laydown/worker parking area is "A70, Agricultural/County" with permitted uses including: agricultural uses; single-family dwellings; and accessory uses. In addition, according to the Chula Vista Municipal Code (CVMC) § 19.20.020, the agricultural zone allows for agricultural processing plants (per CVMC § 19.58.030), which process agricultural products produced on the premises or within a contiguous agricultural area, so located as to provide convenient trucking access with a minimum of interference to normal traffic and that shall provide parking and loading spaces. No party has placed the siting of this laydown area in dispute, and since in any event its use as a laydown and parking area will be temporary, we find that the record supports our finding that this use does not violate any land use LORS.

> size, and setbacks of buildings or structures, open spaces, signs, and densities. (Chula Vista Municipal Code, section 19.12.120 B.)

According to the City of Chula Vista, the proposed CVEUP site does "…not include a Precise Plan." (Ex. 200, p. 4.5-5, Fn. 3.) Indeed, the Applicant argues in its brief that a Precise Plan is not required. (Applicant's Reply Brief at 14.) EHC, on the other hand, argues that section 19.12.120 B of the Municipal Code does require the approval of a Precise Plan for any proposed development in the zone.

The Code section quoted above gives the commission or the council discretion ("may") as to whether or not to attach the P designation. Attachment of the P designation then triggers a requirement that a precise plan be submitted for the development of the property. Section 19.14.576 of the City's code requires that the City make certain findings before a precise plan can be approved, as follows:

> The planning commission may recommend approval of the plan and the city council may grant approval of the plan if all of the following facts are found:
>
> A. That such plan will not, under the circumstances of the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity, or injurious to property or improvements in the vicinity;
>
> B. That such plan satisfies the principle for the application of the P modifying district as set forth in CVMC 19.56.041;
>
> C. That any exceptions granted which deviate from the underlying zoning requirements shall be warranted only when necessary to meet the purpose and application of the P precise plan modifying district; and
>
> D. That approval of this plan will conform to the general plan and the adopted policies of the city.

There is no evidence in the record showing whether the City would approve or disapprove a Precise Plan were one submitted for the CVEUP. In view of the lack

of a Precise Plan, we find a LORS violation which must be corrected before certification can be further considered.

ii) Generation of Electricity as a Permitted Manufacturing Use

Applicant argues that the generation of electricity through the combustion of natural gas is manufacturing, a permitted use in the Limited Industrial zone, and that therefore no Conditional Use Permit is needed here. Applicant cites Exhibit 620, page 19-99, which is a copy of part of Chapter 19.44, in support of this contention. (Applicant's Opening Brief at 25.)

Section 19.44.020 specifies that *permitted* uses in the IL zone are:

A. Manufacturing, printing, assembling, processing, repairing, bottling, or packaging of products from previously prepared materials, not including any prohibited use in this zone;

B. Manufacturing of electrical and electronic instruments, devices and components;

C. Wholesale businesses, storage and warehousing;

D. Laboratories; research, experimental, film, electronic and testing;

E. Truck, trailer, mobile home, boat and farm implement sales establishments;

F. Public and private building material sales yards, service yards, storage yards, and equipment rental;

G. Minor auto repair;

H. Laundries, laundry services, and dyeing and cleaning plants, except large-scale operations;

I. Car washing establishments, subject to the provisions of CVMC 19.58.060;

J. Plumbing and heating shops;

K. Exterminating services;

L. Animal hospitals and veterinarians, subject to the provisions of CVMC 19.58.050;

M. The manufacture of food products, drugs, pharmaceuticals and the like, excluding those in CVMC 19.44.050;

N. Electrical substations and gas regulator stations, subject to the provisions of CVMC 19.58.140;

O. Temporary tract signs, subject to the provisions of CVMC 19.58.320 and 19.60.470;*

P. Any other limited manufactured [sic] use which is determined by the Commission to be of the same general character as the above uses; and

Q. Agricultural uses as provided in CVMC 19.16.030.

The above section does not list electrical generating facilities as a permitted use, however, "manufacturing" is a permitted use, along with printing, assembling, processing, repairing, bottling or packaging of products from previously prepared materials. [§ 19.44.020(A).] Yet "manufacturing" is also a prohibited use when it is a "manufacturing use and process involving the primary production of products from raw materials" [§ 19.44.050 (A).]

Comparing the permitted types of manufacturing with the prohibited types of manufacturing leads us to find that not only is the generation of electricity through the combustion of natural gas not a permitted use, it may in fact be a prohibited use in the Limited Industrial zone. None of the permitted types of manufacturing involves combustion and the resultant production of air emissions. The permitted types of manufacturing are not what one might categorize as "smokestack industries." The generation of electricity through the combustion of natural gas, on the other hand, more closely resembles the prohibited uses because it involves the production of a product (electricity, as Applicant contends) from a raw material (natural gas). Furthermore, the types of manufacturing listed as prohibited are largely what might be characterized as "smokestack industries," for example the manufacture of charcoal, rubber, chemicals, and petroleum refining. Also prohibited is "any other use which is determined by the commission to be of

the general character as the above uses" [§ 19.44.050(C).] We find that Applicant has not provided any evidence in support of its contention that the CVEUP is a manufacturing use of the type permitted in the Limited Industrial zone.

iii) Special Use Permit/Conditional Use Permit

a) Electrical Generating Facilities as a Conditional Use

Applicant, Staff, and Intervenor City all point out that the City of Chula Vista Redevelopment Agency issued a Special Use Permit (SUP) in September 2000 to the existing 44.5-MW peaking power plant (Ex. 8), and argue that this constitutes a de facto determination by City that the siting of the CVEUP would qualify for a Conditional Use Permit (CUP) today. According to information prepared by City staff and presented in the board packet that recommended approval of the Special Use Permit in September, 2000:

> "[t]he zoning on the currently vacant site (Limited Industrial) *allows public and quasi public uses like a peak load power plant through a Special Use Permit*… With the approval of the Special Use Permit (and the conditions listed in the Agency Resolution) the proposed project is determined to be consistent with the Zoning Ordinance, the Montgomery Specific Plan[49], and the General Plan of the City of Chula Vista." (emphasis added)

The evidence shows that the City based its 2000 approval of the SUP for the existing plant on a determination that the plant was a public or quasi public use, permissible in the Limited Industrial zone. While we recognize that we are to give deference to a City's interpretation of its zoning ordinance, we do not necessarily feel bound by such determinations when the evidence shows that the City erred in its determination, or when circumstances have changed since that interpretation was made. Applicant, Staff, and Intervenor City argue that a CUP would be granted today because the CVEUP is a public or quasi-public use. We now discuss whether or not their analysis of that issue is correct.

The relevant language of the zoning ordinance is as follows:

> "The purpose of the I-L zone is to encourage sound limited industrial development by providing and protecting an environment free from nuisances created by some industrial uses and to insure the purity of the total environment of Chula Vista and San Diego County and to

[49] According to the City of Chula Vista, "[t]he Montgomery Specific Plan was deleted from the 2005 General Plan Update…" (COCV 2008b).

protect nearby residential, commercial and industrial uses from any hazards or nuisances." (City of Chula Vista Municipal Code, § 19.44.010.)

After listing the permitted uses, set forth above in our discussion of manufacturing, the Limited Industrial section goes on to specify that *conditional* uses in the IL zone are:

A. Machine shops and sheet metal shops;

B. Service stations, subject to the conditions in CVMC 19.58.280;

C. Steel fabrication;

D. Restaurants, delicatessens and similar uses;

E. Drive-in theaters, subject to the conditions of CVMC 19.58.120;

F. Major auto repair, engine rebuilding and paint shops;

G. Commercial parking lots and garages;

H. Plastics and other synthetics manufacturing;

I. Building heights exceeding three and one-half stories or 45 feet;

J. Unclassified uses, as set forth in Chapter 19.54 CVMC;

K. Trucking yards, terminals and distributing operations;

L. The retail sale of such bulky items as furniture, carpets and other similar items;

M. Retail distribution centers and manufacturers' outlets which require extensive floor areas for the storage and display of merchandise, and the high-volume, warehouse-type sale of goods and retail uses which are related to and supportive of existing, on-site retail distribution centers of manufacturers' outlets. Conditional use permit applications for the establishment of retail commercial uses, covered by the provisions of this subsection, shall be considered by the city council subsequent to its receipt of recommendations thereon from the planning commission;

N. Roof-mounted satellite dishes, subject to the standards set forth in CVMC 19.30.040;

O. Recycling collection centers, subject to the provisions of CVMC 19.58.345;

P. Hazardous waste facilities, subject to the provisions of CVMC 19.58.178; and

Q. Brewing or distilling of liquors requiring a Type 23 Alcoholic Beverage Control License; Conditional use permit applications for the use in subsection (Q) of this section shall be considered and approved by the zoning administrator.

The conditional use section of the IL zoning description, like the permitted use section, does not list electrical generating facilities. Nor does it list public or quasi public uses—which Applicant, Staff, and Intervenor City contend is the proper category for the proposed CVEUP. These parties argue that the project is an Unclassified use under subpart J, and point out that Unclassified uses includes public and quasi-public uses by its reference to section 19.54. [50]

Applicant, Staff, and Intervenor City contend that a Conditional Use Permit would be granted because the proposed project is an unclassified use, as set forth in section 19.44.040 (J).[51] That section, however, by its terms, requires reference to section 19.54, which describes unclassified uses as follows:

A. All of the following, and all matters directly related thereto, are declared to be *uses possessing characteristics of such unique and special form as to make impractical their being included automatically in any classes of use as set forth in the various zones herein defined*, and the authority for the location and operation thereof shall be subject to review and the issuance of a conditional use permit; provided, however, that conditional use permits may not be granted for a use in a zone in which it is specifically excluded by the provisions of this title.

B. The purpose of this review shall be to determine that the characteristics of such use shall not be incompatible with the type of uses permitted in surrounding areas and for the further purpose of stipulating such conditions as may reasonably

[50] It is uncontested that the zoning ordinance is essentially the same today as it was in 2000.

[51] The City's Special Use Permit, granted in 2000 for the existing peaker was based upon a determination that the power plant was an unclassified use.

> assure that the basic purposes of this title shall be served. Factors to be considered and the manner in which conditional use applications are to be processed shall be as set forth in CVMC 19.14.060, et seq. (emphasis added)

The section then goes on to list a number of types of uses deemed unclassified, including "public and quasi-public uses." Those unclassified uses, the ordinance provides, may be "considered for location in any zone."

Uses that are specifically assigned elsewhere in the ordinance to a particular zone or zones, such as electrical generating facilities, are not, and cannot be, unclassified uses. They become classified by virtue of being assigned to a particular zone or zones. Not only are electrical generating facilities *not* a use "possessing characteristics of such unique and special form as to make impractical their being included automatically in any classes of use" as set forth in section 19.54.010, the fact is that electrical generating plants *are included* in the General Industrial zone as set forth in section 19.46.020 (E). Thus, it cannot be said that it would be impractical to include electrical generating plants automatically in a particular class of use; the City *did* in fact include them in the General Industrial zone. "Electrical Generating Facilities" is *not* an unclassified use.

The evidence of record leads to no other conclusion. Both Applicant's and Staff's experts testified that the purpose of the "unclassified use" designation was to cover uses the city "didn't think about" when drafting the zoning ordinance (10/2/2008 RT 312:9-10; 327:12-14). The evidence shows that the City *did* "think about" electrical generating plants because the City specifically included that use in the General Industrial zone. The Acting City Manager, Scott Tulloch, agreed with this interpretation of the meaning of an unclassified use in the zoning ordinance: it "gives the City flexibility *where they haven't either prohibited or specifically allowed a use*." (10/2/2008 RT 336: 4-6.) (emphasis added) The City *has* specifically allowed this use in the General Industrial Zone.

These facts lead us to reject the argument that the proposed project is an unclassified use and could therefore be conditionally permitted. Since we find that electrical generating facilities is not an unclassified use, we need not reach the question of whether or not it is a public or quasi public use. The public and quasi public designations depend first upon a determination that the use is unclassified. Since we find that Electrical generating facilities is not an unclassified use, it cannot be conditionally permitted as a public or quasi-public use in the Limited Industrial zone.

b) Changed Circumstances

In light of our finding that the CVEUP cannot be a conditional use in the Limited Industrial zone, we need not reach the issue of whether or not changed circumstances would affect giving deference to the City's interpretation. Nonetheless, we address it briefly because the General Plan Update is a changed circumstance that could have an impact on the City's analysis of the zoning issue were it considering granting a CUP today.

The City issued a SUP for the existing peaker in 2000 under the same zoning that exists today. The City updated its General Plan in 2005, adding a policy, discussed above, requiring that placement of electrical generating facilities and other major toxic emitters within 1000 feet of a sensitive receptor be avoided. While no party presented evidence on the reason power plants were specifically mentioned in that policy, that question was addressed by two commenters at the Evidentiary Hearing. First, Theresa Acerro stated that she was on a committee that worked on the General Plan Update[52] and that the inclusion of Policy E 6.4 was a response to the existing peaker. (RT 10/2/08 437:12-17.) Second, Councilman Rudy Ramirez stated that he, too, participated in the General Plan Update. He stated that he represented southwest Chula Vista in connection with the update, and that based upon some 6,000 surveys completed by residents it was his belief that "…this peaker plant expansion in this neighborhood is exactly what we did not want." (10/2/2008 RT 467:16-18.) These comments corroborate what we find to be a reasonable inference based upon the relevant policy stated in the General Plan: that power plants were mentioned in Policy E 6.4 because of the relatively recent approval and construction of the existing peaker.[53] This inference is further corroborated by the City's Advanced Planning Section's recently-submitted comments on the PSA in which concern was expressed over the apparent conflict of the proposed peaker with this Policy. (Ex. 622) As discussed previously, it appears to us that Policy E 6.4 was adopted to ensure that any future attempt to site a power plant within 1,000 feet of a sensitive receptor would be subject to greater scrutiny than was the existing peaker.

[52] Reference to the agendas and minutes of the Environment, Open Space, and Sustainable Development Subcommittee for the General Plan Update confirms that Ms. Acerro was a member of that subcommittee representing the Sierra Club. These documents are available at: http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/PDFs/environmental/minutes/2004-06-01.pdf

[53] Another commenter, Kevin O'Neill, stated he worked with Ms. Acerro and Mr. Ramirez on the Update, and implied that his recollection of the intent of policy E 6.4 was different than what they described. However, he did not elaborate and we cannot presume to guess at what he meant. (10/2/2008 RT 514:22 – 515:1.)

There is no evidence in the record which would support any contrary inference, nor can we fathom any other reason why power plants would have been singled out for specific mention in Policy E 6.4.[54]

5. Compatibility with Existing and Planned Land Uses

The evidence of record shows that the area around the proposed site is a mix of light industrial, office, residential, retail, school, and agricultural uses. The evidence further shows that this land use pattern occurred due to lack of planning. (City of Chula Vista General Plan, 2005, p. LUT-151.) The General Plan states that the Main Street District functions as a commercial-industrial service area and interfaces with the Otay Town residential neighborhoods north of Main Street and with the OtayRiver Valley open space to the south. The City's vision is that the district be the focus of limited industrial uses within western Chula Vista. The City has promulgated and enforced design standards that encourage attractive buildings and street frontages, and that provide protection of adjacent residential areas. (City of Chula Vista General Plan, 2005, p. LUT-156.)

Because there is already a peaker plant on the site, it might seem a foregone conclusion that the proposed project is compatible with existing uses. In fact, Staff's conclusion that the proposed project is compatible with the existing land uses is based primarily upon its determination that the existing peaker is consistent with the existing zoning and general plan designation (Ex. 200, p. 4.5-23.), as well as upon its finding that the proposed CVEUP will not result in a significant project-related impact at any sensitive receptor location. (Ex 200, p. 4.5-25.)

There is, however, no evidence to show that there are any other industrial facilities that engage in large-scale combustion in the immediate vicinity of the site. Staff's testimony provides a comprehensive description of the existing uses in the vicinity, and mentions only the Otay substation, auto salvage yards, storage, warehousing, and commercial/light industrial businesses. This increases our concern over the proposed siting, and also tends to corroborate our finding that the zoning is inconsistent with the proposed power plant use. (Ex. 200, pp. 4.5-23 to 4.5-25.)

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[54] This finding is further corroborated by the Digest of General Plan Update Revisions discussed at page 15, supra. That document states that Policy E 6.4 deals with "…energy generation facilities and major toxic air emitters."

Moreover, City staff, in its June 13, 2008 comments on the PSA (Ex. 622) stated that "the recent completion of the industrial park to the west of the project site is an example of a job generating use, and what is envisioned for this area." City staff goes on to point out that the CVEUP will employ two persons, far fewer than would be employed in a business park or other industrial use of the site. This, City staff concludes, is inconsistent with General Plan policy LUT 1.5 which calls for a mixture of employment opportunities for citizens an all economic levels." Additionally, the CVEUP would be 350 feet from residences and 1,325 feet from an elementary school. (Ex. 200, pp. 4.5-24 to 4.5-25.) Immediately across from the peaker is an attractively landscaped new business park that appears intended for office, retail, and wholesale use.

As discussed at length above, we have found that the zoning does not encompass the proposed project, and that it is also not consistent with the "avoid" mandates of the General Plan. Accordingly, we find that the CVEUP is not compatible with the existing and planned uses for the immediate vicinity of the project site.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

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

FINDINGS OF FACT

1. There is no evidence that the CVEUP will result in the conversion of farmland to non-agricultural use or conflict with existing agricultural zoning or Williamson Act contracts.

2. There is no evidence that the CVEUP will physically divide or disrupt an established community.

3. Local ordinances and policies applicable to the CVEUP include the City of Chula Vista General Plan 2005 Update and the Chula Vista Municipal Code

4. The project site is zoned Limited Industrial Precise Plan.

5. A Precise Plan has not been submitted for either the existing plant or the CVEUP.

6. The purpose of the Limited Industrial Zone is to encourage sound limited industrial development by providing and protecting an environment free from nuisances created by some industrial uses and to insure the purity of the total environment of Chula Vista and San Diego County and to protect nearby residential, commercial and industrial uses from any hazards or nuisances.

7. The Limited Industrial Zone prohibits manufacturing uses and processes involving the primary production of products from raw materials.

8. The CVEUP is a facility producing electricity from natural gas.

9. The City of Chula Vista included the Unclassified category in the zoning ordinance to cover those uses not specifically permitted or prohibited in the zoning ordinance.

10. The City of Chula Vista approved a Special Use Permit for the existing electrical generating facility in 2000.

11. The City of Chula Vista updated its General Plan in 2005.

12. The project site is designated Limited Industrial in the Chula Vista General Plan.

13. The Limited Industrial designation of the Chula Vista General Plan does not mention power plants or electrical generating facilities.

14. The General Industrial designation of the Chula Vista General Plan specifies public utilities as consistent with that designation.

15. The project site is not within the area designated General Industrial in the General Plan.

16. The CVEUP is a new or repowered energy generation facility.

17. Environmental Element Policy E6.4, stating that the siting of new or repowered energy generation facilities and other major toxic emitters within 1,000 feet of a sensitive receptor is to be avoided, was adopted in 2005.

18. There are sensitive receptors within 1,000 feet of the proposed site.

CONCLUSIONS OF LAW

19. Electrical Generating Facilities is not a permitted use in the Limited Industrial Zone under the Chula Vista Zoning Ordinance.

20. Electrical Generating Facilities is a specifically permitted use in the General Industrial Zone under the Chula Vista Zoning Ordinance.

21. If a use is a specifically permitted or specifically prohibited use, it is not an unclassified use under the Chula Vista Zoning Ordinance.

22. Public/quasi-public uses are unclassified under the Chula Vista Zoning Ordinance.

23. Electrical Generating Facilities are not an unclassified use under the Chula Vista Zoning Ordinance.

24. An electrical generating facility like the CVEUP does not qualify as a public/quasi-public use under the Chula Vista Zoning Ordinance because it is not unclassified.

25. The City of Chula Vista can issue a Conditional Use permit for uses listed as Conditional Uses in its Zoning Ordinance.

26. The CVEUP does not qualify for a Conditional Use Permit under the Chula Vista Zoning Ordinance because it is not one of the listed conditional uses in the Limited Industrial zone.

27. Chula Vista General Plan Policy E6.4 requires that the siting of new or repowered energy generation facilities, whether or not they are deemed major toxic emitters, within 1,000 feet of a sensitive receptor, is to be avoided.

28. The CVEUP is an electrical generating facility which does not qualify as Limited Industrial and thus conflicts with Chula Vista General Plan policy LUT 45.6.

29. The CVEUP is in conflict with the City's zoning ordinance and with its General Plan.

30. The mitigation measures described in Applicant's August 4, 2008 letter to the City and the City's response, dated August 7, 2008, do not resolve the project's inconsistencies with the City's zoning ordinance and General Plan.

We conclude, therefore, that construction and operation of the CVEUP will result in direct, indirect, and cumulative land use impacts.

Section 25523(d)(1) of the California Public Resources Code requires us to consult and meet with City officials in an effort to resolve this LORS violation. We will conduct such a meeting; however, it appears to us that the only

resolution will be for the City to attempt to resolve the zoning conflict through its own public hearing process. We are not able to change the City's Zoning Ordinance or its General Plan, and as discussed in the **OVERRIDE** section of this Decision, we decline at this time to override the City's Zoning Ordinance or its General Plan.

If the LORS violations at the proposed site can be cured to comply with requirements for certification, adoption of Condition of Certification **LAND-1** will ensure the project is constructed and operated in accordance with the City's Limited Industrial Zone requirements.

CONDITION OF CERTIFICATION

LAND-1 The project owner shall ensure that the project and its associated facilities are constructed and operated in compliance with the City of Chula Vista's Limited Industrial (I-L) Zone requirements, such as height limits, minimum design and performance standards (such as air quality best available control technology and noise abatement measures), landscaping requirements, and other applicable municipal code requirements.

The project owner shall submit a development plan for the site to the City of Chula Vista in sufficient time for review and comment and to the Energy Commission's Compliance Project Manager (CPM) for review and approval prior to the proposed start of construction. The development plan shall include all elements normally required for review and permitting of a similar project, including site plan, structural dimensions, design and exterior elevation(s) (COCV 2008a).

Verification: At least 90 calendar days prior to the start of construction, including any demolition, grading, or site remediation on the project site, the project owner shall submit the proposed development plan to the City of Chula Vista for review and comment and to the CPM for review and approval. The project owner shall also provide the CPM with a copy of the transmittal letter to the City of Chula Vista.

At least 30 calendar days prior to the start of construction, the project owner shall provide copies of any comment letters received from the local jurisdiction, along with any changes to the proposed development plan, to the CPM for review and approval.

Upon receipt of any required permits and/or documentation from the City of Chula Vista (e.g., such as building permits, engineering, grading, encroachment, and demolition permits, and a recycling and solid waste diversion report), the

project owner shall provide to the CPM documentation that the permits applicable to the project have been obtained.

B. TRAFFIC AND TRANSPORTATION

This section addresses the extent to which the proposed project will affect the local area's transportation network. The evidence includes an analysis of: 1) the roads and routings that are proposed to be used for construction and operation; 2) potential traffic-related problems associated with the use of those routes; 3) the anticipated encroachment upon public rights-of-way during the construction of the proposed project and associated facilities; 4) the frequency of trips and probable routes associated with the delivery of hazardous materials; and 5) the possible effect of project operations on local airport flight traffic.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Location

The proposed CVEUP project site is in a mixed-use residential and light industrial area of the City of Chula Vista in San Diego County approximately 1.75 miles east of Interstate 5 (I-5), and 1.25 miles west of Interstate 805 (I-805). The site address is 3497 Main Street, at its intersection with Albany Avenue.

During construction, CVEUP would also use an off-site lay down area located on Heritage Road, just south of Main Street, about three miles east of the CVEUP site. Parking for construction workers would be provided at this site.

2. Access Roads

Access to the CVEUP site would be via the following highways and roads:

Interstate 5: I-5 is a north-south freeway that links Chula Vista with central San Diego to the north and Otay Mesa and Mexico to the south. Access from I-5 east to the site is provided via Main Street; I-5 in this location has four lanes in each direction. Caltrans reports that I-5 carries approximately 160,000 average daily vehicle trips near the CVEUP site.

Interstate 805: I-805 is a north-south freeway that provides access to the center of the Chula Vista residential and commercial areas. This freeway connects the inland portions of Chula Vista with communities to the north and south. Access from I-805 west to the site is provided via Main Street. This section of I-805 has four lanes in each direction. Caltrans reports that I-805 carries approximately 165,000 average daily vehicle trips near the CVEUP site.

Main Street: Main Street is an east-west undivided arterial with two lanes in each direction and is considered a gateway access facility to the Auto Park and commercial recreation venues within the Otay Valley, according to the City of Chula Vista's General Plan. Main Street connects the project site to I-5 on the west side and to I-805 on the east side of the CVEUP site. (Ex. 200, pp. 4.10-3 to 4.10-4.)

a. Airports

There are four public airports and two Naval Air Stations within 20 miles of the CVEUP site, summarized in **TRAFFIC AND TRANSPORTATION Table 1**.

TRAFFIC AND TRANSPORTATION Table 1
Airports within 20 Miles of CVEUP

Name	Miles from CVEUP	Public /Private	Flights per day	Runways
Ream Naval Air Station	4 Miles	Private/ Military	N/A	2
North Island Naval Air Station	10 Miles	Private/ Military	N/A	2
Brown Field	4 Miles	Public/ General	277[1]	2
San Diego International-Lindbergh Field	12 Miles	Public/ Commercial	605[2]	1
Montgomery Field	16 Miles	Public/ General	671[3]	3 + 2 heli pads
Gillespie Field Airport	20 Miles	Public/ General	699[4]	3

N/A = Not Available

[1] For 12-month period ending December 31, 2004; [2] For 12-month period ending December 31, 2006; [3] For 12-month period ending March 31, 2000; [4] For 12-month period ending December 31, 2005

(Ex. 200, pp. 4.10-6 to 4.10-7.)

b. Public Transportation

Public transportation in the CVEUP area is provided by Chula Vista Transit and San Diego Trolley. Chula Vista Transit operates routes 701, 702, 703, and 712 in the area. Routes 701, 702, and 703 connect the Palomar Trolley Station to the H Street Trolley Station and areas north, east, and south of the project site. Route 712 connects the Palomar Trolley Station and areas to the east of the project site.

The San Diego Metropolitan Transit Service operates the San Diego Trolley which runs from Old Town in San Diego to San Ysidro south of Chula Vista. The

line has two stops near the project site, at Palomar Street, approximately two miles to the northwest and at Palm Avenue in Palm City, approximately 2.5 miles to the southwest.

The Sweetwater Union High School District has three school bus routes that run along Main Street between I-5 and I-805. The District's closest school bus stop is at Third Avenue and Montgomery Street, approximately one-half mile northwest of the CVEUP site. School buses also travel near the construction worker parking and lay down area on Heritage Road. The closest District school bus stop is at Brandywine Avenue and Sequoia Street. No District school bus stops are located on Heritage Road.

Chula Vista Elementary School District has three school bus stops on Main Street near the CVEUP site: at Main Street and 7th Avenue, Main Street and Del Monte Avenue, and Main Street and Mace Street. (Ex. 200, pp. 4.10-5 to 4.10.6.)

c. Bicycle Routes

City of Chula Vista bike paths include some Class I facilities (bike lane separated from traffic), but virtually all arterial roadways east of Interstate 805 have Class II facilities (on-street bike lanes marked at the curb or in the parking lane). There are also a significant number of Class III bikeways (signage, no paint in right-of-way), primarily in western Chula Vista.

There are several existing bicycle paths within two miles of the CVEUP site. A Class II bicycle path runs along Main Street approximately two miles east of the project site at Oleander Avenue. Additionally, a Class III bicycle path runs across Main Street at Oleander Avenue, Melrose Avenue, Hilltop Drive, 4th Avenue, and Broadway in the project vicinity. The bicycle path at Melrose Avenue is approximately one mile from the project site. The Hilltop Drive bicycle path is 0.39 miles from the CVEUP site; the 4th Avenue bicycle path, 0.64 miles; and the Broadway bicycle path, approximately one mile distant. A Class II bicycle path runs along Heritage Road in the immediate vicinity of the off-site lay down area as well as along Main Street from Heritage Road to Brandywine Avenue. (Ex. 200, p. 4.10.6.)

d. Traffic Congestion

"Level of service" (LOS) is a qualitative measure describing operational conditions within a traffic stream. LOS is a term used to describe and quantify the congestion level on a particular roadway or intersection and generally describes these conditions in terms of such factors as speed, travel time, and delay. The Highway Capacity Manual defines six levels of service for roadways or intersections ranging from LOS A, which represents the best operating conditions, to LOS F, which represents the worst. The City of Chula Vista's Threshold Standards Policy requires that LOS C or better be maintained on all signalized arterial streets, except that during peak hours LOS D can occur for no more than two hours.

TRAFFIC AND TRANSPORTATION Table 2 summarizes the existing LOS for intersections that may be affected in the project area. LOS A represents free-flowing traffic; whereas, LOS F represents overcapacity operation. The only intersection that operates below an acceptable LOS is the I-5 northbound ramp/Main Street intersection, which currently operates at a LOS F.

TRAFFIC AND TRANSPORTATION Table 2
Existing Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
I-5 southbound ramps/Main St	11.1	B	17.9	C
I-5 northbound ramps/Main St	27.0	**D**	>50.0	**F**
Broadway/Main St	29.8	C	33.3	C
Fourth Avenue/Main St	24.9	C	25.1	C
Third Ave.-Beyer Way/Main St	29.5	C	31.5	C
Albany Avenue/Main St	11.8	B	9.5	A
Hilltop Drive/Main St	18.5	B	17.9	B
I-805 southbound ramps/Main St*	25.1	C	30.9	C
I-805 northbound ramps/Main St*	24.6	C	35.7	**D**

* Both the AFC and FSA describe these as I-5/Main Street ramps, which is a typographic error. The correct references should be to I-805, which we adopt above.

(Ex. 200, p. 4.10-4.)

3. Direct/Indirect Impacts on Traffic

a. Construction

Facility construction is projected to take place over eight months. A maximum 160 construction workers are expected to commute to the project site during peak hours. Parking for construction workers would be provided at an off-site lay down area located on Heritage Road, just south of Main Street, about three miles east of the CVEUP site. (Ex. 200, p. 4.10-3.) Six shuttle buses will transport workers between the parking area and the construction site during the morning and afternoon peak hours for a total of 24 bus trips per day.

The construction workforce (boilermakers, carpenters, electricians, ironworkers, millwrights, etc.) is expected to come from within San Diego County. Workers will use I-805 to commute to the construction laydown area. The maximum expected traffic volume from construction workers commuting to and from the lay down area would be 160 vehicles commuting via I-805.

Construction truck traffic would originate from the north of the project site and be equally distributed between I-5 and I-805. Construction trucks would use the southbound ramps on I-5 and I-805 to get onto Main Street and then use the northbound ramps to return to their origin. Approximately 15 construction-related truck deliveries to the CVEUP site and haul trips from the CVEUP site would occur per day during construction; three of those trips would occur during peak hours.

While construction truck traffic will not reduce LOS or substantially increase congestion, it could cause damage to local roads. Condition of Certification **TRANS-2**, which requires repair of any road damaged by project construction, will ensure that any damage to local roadways will not be a safety hazard to motorists. (Ex. 200, pp. 4.10-8 to 4.10.11.)

Construction traffic will pass within a half block of Otay Elementary School, which abuts and is contiguous with the Otay Recreation Center, on Main Street, on its southern side. The school is less than 2,000 feet from the CVEUP site. (Ex. 1, Fig. 5.6-1.) Construction traffic will not pass any of the other schools within one mile of the CVEUP site. (Ex. 200, pp. 4.10-12 to 4.10-13.) At the site visit, it was observed that many students visit the Recreation Center after school to participate in programs offered by the Center and to use its recreational facilities. The construction traffic control plan required by Condition **TRANS-1** will address,

among other things, signage and other measures to mitigate the potential for hazards to pedestrians, bicyclists and motorists arriving at and departing from Otay Elementary School and Otay Recreation Center. (Ex. 200, p. 4.10-11.)

A Class II bicycle path runs along Heritage Road in the immediate vicinity of the off-site laydown area as well as along Main Street from Heritage Road to Brandywine Avenue. Construction worker vehicles, delivery trucks, and construction shuttle buses could present potential conflicts with bicyclists riding past the laydown area. The construction traffic control plan required by Condition **TRANS-1** will address, among other things, signage and other measures to mitigate the potential for hazards to cyclists. (Ex. 200, p. 4.10-11.)

It may be necessary to temporarily close parking spaces in the business park immediately to the east of the CVEUP site in order to allow sufficient room for trucks and construction equipment to enter the site. Condition of Certification **TRANS-3** requires that the Applicant coordinate temporary closures of the parking spaces with the business park tenants or schedule delivery of materials and large construction equipment when those parking spaces would be vacant. (Ex. 200, pp. 4.10-11 to 4.10.12.)

b. Operation

Plant operations will require 2 permanent workers. Sufficient space for employee parking is available on the project site. Plant operations would also generate approximately 4 delivery truck trips per day and an additional weekly hazardous material delivery. (Ex. 200, p. 4.10-13.)

The addition of construction/operation traffic to the area roadways only represents a small increase in traffic and does not significantly reduce the LOS. It is not a significant impact.

c. Airports

Aircraft flying at altitudes lower than 1,000 feet above ground may be affected by the hot exhausts of a thermal power plant such as the CVEUP. Neighboring airports and flight patterns are sufficiently distant from the CVEUP, however, that no impacts on aviation are expected. (Ex. 200, pp. 4.10-13 to 4.10-14.)

d. Hazardous Materials Transport

Operation of the CVEUP would result in weekly transportation of hazardous materials such as aqueous ammonia. The primary designated hazardous materials route for the CVEUP would be either I-5 to the Main Street exit or I-805 to the Main Street exit and then along Main Street to the site. This route minimizes off-freeway travel and avoids passing directly by any local schools. School buses, however, do travel along Main Street past the project site. To avoid potential conflicts or accidents between school buses and vehicles transporting aqueous ammonia, we adopt Hazardous Materials Management Condition of Certification **HAZ-6**, which requires the Applicant to restrict deliveries to avoid coinciding with school bus schedules.

Although the transportation and handling of hazardous materials (i.e., aqueous ammonia) can increase roadway hazard potential, impacts associated with the hazardous materials can be mitigated to a level of insignificance by compliance with existing federal and state standards regulating the transportation of hazardous substances.

The California Department of Motor Vehicles specifically licenses all drivers who carry hazardous materials. Drivers are required to check weight limits and conduct periodic brake inspections. Commercial truck operators handling hazardous materials are required to take instruction in first aid and procedures on handling hazardous waste spills. Drivers transporting hazardous waste are required to carry a manifest, which is available for review by the CHP at inspection stations along major highways and interstates.

For a more detailed discussion on the handling and disposal of hazardous substances, see the **Hazardous Materials Management** section of this Decision.

Conducted in compliance with existing federal and state standards, deliveries of hazardous materials such as aqueous ammonia and water treatment chemicals will not cause a significant impact. (Ex. 200, pp. 4.10-14 to 4.10-15.)

4. Cumulative Impacts and Mitigation

No cumulative impacts on traffic or transportation are expected from construction or operation of the CVEUP. Applications for 26 proposed projects have been filed in the City of Chula Vista. These are mostly residential development

projects, with some commercial developments, one warehouse development, and one manufacturing development. One of these projects, a proposed sewing manufacturing and wholesale sales business, is located within 1,000 feet of the CVEUP. The Palomar Gateway District and Bayfront developments will likely generate high volumes of construction and, later, residential and other traffic. It is unlikely, however, that their construction will coincide with the proposed construction of the CVEUP. Generally, the majority of traffic related to Palomar Gateway District project will use I-5 and Palomar Street to access the area. Bayfront development will likely generate traffic along I-5, J Street, and adjacent I-5 ramps. Since none of the CVEUP construction traffic would use the same roadways, it is anticipated that the CVEUP traffic would not conflict with the Palomar Gateway District and Bayfront project's construction or residential traffic. Though those projects may cause degradation in LOS, the degradation will be on roads unaffected by CVEUP.

Operation of the CVEUP would only require two full-time staff and would not contribute to a significant cumulative traffic impact. (Ex. 200, pp. 4.10-15 to 4.10-16.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find and conclude as follows:

1. The project as proposed would comply with all applicable LORS related to Traffic and Transportation.
2. Because of the distance from the nearest airports the project would not impact aviation safety.
3. Condition of Certification **TRANS-2** requires a mitigation plan to repair area roads that are damaged by project construction-related traffic.
4. There would be no significant direct or cumulative traffic and transportation impacts.
5. The lack of significant impacts leads us to conclude that there would be no environmental justice impacts.

We therefore conclude that construction and operation of the project, as mitigated herein, will not result in any significant direct, indirect, or cumulative impacts to the local or regional traffic and transportation system.

CONDITIONS OF CERTIFICATION

Traffic Control and Implementation Plan

TRANS-1 Prior to construction of the CVEUP, the project owner shall prepare and implement a traffic control and implementation plan for the CVEUP construction traffic, containing:

- a Traffic Management Plan addressing the movement of vehicles and materials, including arrival and departure schedules, designated workforce and delivery routes, delivery schedules outside peak travel periods and school bus pick-up/drop-off, and coordination with Caltrans and other traffic-related activities and resulting impacts during both construction and operation of the proposed facility.
- redirection of construction traffic with a flag person.
- signage, lighting, and traffic control device placement at the project construction site and lay down areas.
- a Heavy Haul Plan addressing the transport and delivery of heavy and oversized loads requiring permits from Caltrans or other state and federal agencies.
- a Parking Plan to ensure that designated parking areas and shuttle buses are adequate to accommodate construction workforce and parking.

The project owner shall consult with the City of Chula Vista and Caltrans in the preparation and implementation of the traffic control and implementation plan and shall submit the proposed traffic control plan to the City of Chula Vista and Caltrans in sufficient time for review and comment and to the Energy Commission Compliance Project Manager (CPM) for review and approval prior to the proposed start of construction and implementation of the plan. The project owner shall provide a copy of any written comments from the City of Chula Vista or Caltrans and any changes to the traffic control plan to the CPM prior to the proposed start of construction.

Verification: At least 90 calendar days prior to the start of construction, including any grading or site remediation on the power plant site or its associated easements, the project owner shall submit the proposed traffic control and implementation plan to the City of Chula Vista and Caltrans for review and comment and to the CPM for review and approval. The project owner shall also provide the CPM with a copy of the transmittal letter to the City of Chula Vista and Caltrans requesting review and comment.

At least 30 calendar days prior to the start of construction, the project owner shall provide copies of any comment letters received from either the City of Chula Vista or Caltrans, along with any changes to the proposed development plan to the CPM for review and approval.

Repair of Public Right-of-Way

TRANS-2 The project owner shall restore all public roads, easements, and rights-of-way that have been damaged due to project-related construction activities to original or near-original condition in a timely manner.

Prior to the start of site mobilization, the project owner shall consult with the City of Chula Vista and Caltrans (if applicable) and notify them of the proposed schedule for project construction. The purpose of this notification is to request that the local jurisdiction and Caltrans consider postponement of public right-of-way repair or improvement activities in areas affected by project construction until construction is completed and to coordinate with the project owner regarding any concurrent construction-related activities that are planned or in progress and cannot be postponed.

Verification: At least 30 days prior to the start of mobilization, the project owner shall photograph or videotape all affected public roads, easements, and right-of-way segment(s) and/or intersections and shall provide the CPM, the affected local jurisdiction(s) and Caltrans (if applicable) with a copy of these images.

Within 60 calendar days after completion of construction, the project owner shall meet with the CPM, the affected local jurisdiction(s) and Caltrans (if applicable) to identify sections of public right-of-way to be repaired. At that time, the project owner shall establish a schedule to complete the repairs and to receive approval for the action(s). Following completion of any public right-of-way repairs, the project owner shall provide a letter signed by the affected local jurisdiction(s) and Caltrans stating their satisfaction with the repairs to the CPM.

Coordination with adjacent Business Park

TRANS-3 The project owner shall coordinate with the tenants of the business park located immediately east of the CVEUP site to accommodate truck and construction equipment turning movements into and out of the CVEUP site. Such coordination may require compensation (such as provision of alternate parking spaces) for coordinated temporary closure of the parking spaces located along the eastern boundary of the access road and/or delivery of construction materials and equipment to the CVEUP site when the adjacent parking area would be vacant.

Verification: At least 60 days prior to start of construction, the project owner shall contact in writing the business park tenants to develop a delivery schedule. The applicant must provide evidence to the CPM that demonstrates the delivery schedule is satisfactory for all parties. The submittal to the CPM for review and approval shall include evidence of review and approval by the business owners.

C. SOCIOECONOMICS

This section analyzes the potential impact to the social and economic structure within the project vicinity and region resulting from the construction and operation of the Chula Vista Energy Upgrade Project (CVEUP). This analysis considers project-related impacts to population, housing, public services (fire protection, emergency response services, law enforcement, schools, and medical services) and utilities, county tax revenue, and economic benefits from the project. Additionally, this section analyzes the cumulative impacts on the availability of labor within the area. The criteria to be used in determining whether project-related socioeconomic impacts would be significant are set forth in CEQA Guidelines, Appendix G.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Demographics and Employment

The project site is located within the southwest portion of the City of Chula Vista. According to the FSA, Census 2000 information indicates that the minority population by census block (the smallest geographic unit for which the Census Bureau collects and tabulates data) is 73.41 to 81.13 percent within a six-mile and one-mile radius of the proposed CVEUP. Census 2000 by census block group (a combination of census blocks and subdivision of a census tract) information shows that the below-poverty population is 13.34 percent within a one-mile radius. (Ex. 200, p. 4.8-3.)

Staff conducted the demographic screening in accordance with the guidance document, “Final Guidance for Incorporating Environmental Justice Concerns in EPA’s NEPA Compliance Analysis” (EPA 1998). People of color populations, as defined by this Guidance Document, are identified where either:

- The minority population of the affected area is greater than 50 percent of the affected area’s general population; or
- The minority population percentage of the area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis; or
- One or more census blocks in the affected area have a minority population greater than 50 percent.

There would be an average construction work force of approximately 100 personnel and a peak construction work force of 160 personnel. The majority of these workers are expected to come from San Diego County, the area within two hours of the site.

During operation of the project, only two workers would be needed to maintain and operate the project. We find that this increase in employment would not have a significant effect on San Diego County unemployment rates.

Approximately $112,000 per year is expected to be spent in operational payroll. The estimated sales taxes from the operation and maintenance expenditure would be approximately $23,250. Of this amount, the place of sale will receive $3,000 in sales tax revenue. We find that the city and county revenue from the CVEUP sales tax would not be significant. (Ex. 200, pp. 4.8-5 to 4.8-6.)

2. Public and Private Sector Revenue Effects

Public sector revenue impacts of the CVEUP include:

- Property tax revenue for San Diego County of $800,000, distributed as follows:
    - Housing set-aside - $160,000
    - Chula Vista Elementary School District - $88,000
    - Sweetwater Union High School District - $57,000
    - Southwestern College - $15,000
    - County of San Diego - $68,000
    - County Office of Education - $8,000
    - County Administration - $6,000
    - Chula Vista Redevelopment Agency – $398,000
- Construction total (state and local) sales tax of $139,500;
- Operation total (state and local) sales tax of $23,250; and
- School impact fee of $344.

Additionally, the City of Chula Vista imposes a Utility Users' Tax (CV Municipal Code Chapter 3.44) based on the consumption of electricity, gas and telephone services. According to CV Municipal Code Chapter 3.44.030, there is imposed a tax upon the use of intrastate telephone communication services in the city at a

rate of five percent of the charges made for such services. Similar taxes for electricity and gas services are also imposed under CV Municipal Code Chapters 3.44.040 and 3.44.050. According to these Code Chapters, however, all electricity and gas used by public utilities, such as the proposed facility, in the conduct of its business shall be excluded from this tax. (Ex. 200 Addendum, p. 8.)

Private sector revenue impacts include:

- Total capital costs of $80 million.
- Construction eight month payroll of $8.9 million; annual operations payroll of $112,000.
- Approximately $14.5 million to be spent on construction materials and supplies and $1.25 million for operation and maintenance supplies.

a. Housing

There will be no displacement of housing due to this project. As of January 1, 2007, there were approximately 1,129,749 housing units in San Diego County; 76,838 units were in the City of Chula Vista (City). The vacancy rate is approximately 4.5 percent for San Diego County and 3 percent for the City (based on single-family, multi-family, and mobile homes). (Ex. 200, p. 4.8-7.)

There is an ample supply of hotel/motels in San Diego County. There are approximately 448 hotels/motels with a collective 53,598 rooms in San Diego County. (Ex. 1, p. 5.10–16.) Additionally, there are approximately 40 recreational vehicle parks within 2.5 miles of Chula Vista. (Ex. 1, p. 5.10–16.)

The construction workforce is anticipated to come primarily from San Diego County and commute daily. While the vacancy rates for housing units in San Diego County and Chula Vista are low, with the large number of units in San Diego County, we find the supply of permanent and temporary housing adequate to accommodate the few non-local construction workers who may decide to temporarily relocate to the study area.

The small operational workforce is expected to commute from within San Diego County. Therefore, staff concludes that there would not be a significant adverse socioeconomic impact on housing.

b. Schools

There are 46 elementary, high school, and unified school districts in San Diego County. (Ex. 1, p. 5.10–10.) The CVEUP would be in the Chula Vista Elementary School District and the Sweetwater Union High School District. Current enrollment for the Chula Vista Elementary School District is 26,891 students and for the Sweetwater Union High School District enrollment is 42,083 students. (Ex. 1, p. 5.10–18.) Currently, these two school districts are not considered to be overcrowded. (Ex. 200, p. 4.8-7.)

Construction workers would most likely commute to the project site. Non-local construction workers would not likely relocate family members for the relatively short duration of construction, choosing instead to commute weekly to the project area and returning home for the weekends. Assuming two operational employees and an average family size of 3.04 persons per household for Chula Vista, the project would add approximately two children to the local schools if both workers relocated. (Ex. 1, p. 5.10–21.)

Government Code section 17620 authorizes a school district to levy a fee against any construction within a district. Local and state agencies are precluded from imposing additional fees or other required payments on development projects for the purpose of mitigating possible enrollment impacts to schools. School impact fees to the Chula Vista Elementary School District would include a one-time assessment fee of $0.20 per square foot of principal building area. The Sweetwater Union High School District school impact fee is a one-time payment of $0.23 per square foot of principal building area on 800 square feet of occupied structures. Therefore, the CVEUP would need to pay $160 to the Chula Vista Elementary School District and $184 to the Sweetwater Union High School District for a total of $344 in school impact fees. We adopt Condition of Certification **SOCIO-1** as a means of verifying payment of the school impact fees.

We find that there would not be a significant adverse socioeconomic impact on education during the construction or operation of the CVEUP.

c. Parks and Recreation

Because the construction labor force is assumed to commute from San Diego County or neighboring counties within a two-hour commute and the operation workforce of two persons would commute from the local area, we find that there

would be no significant adverse socioeconomic impacts on parks and recreation. (Ex. 200, p. 4.8-8.)

d. Law Enforcement

The City of Chula Vista Police Department (CVPD) would provide service for the CVEUP. There is one police station, located at 315 4th Avenue, Chula Vista, that serves the City of Chula Vista. The CVPD consists of 252 authorized officers. (Ex. 1, p. 5.10–11.) The average response time to "priority one" emergency calls is approximately 5 minutes and for "priority two" urgent calls is approximately 10 minutes.

The state highways and roads near the CVEUP are also patrolled by the California Highway Patrol (CHP). The CHP provides law enforcement, traffic control, accident investigation, and management of hazardous materials spill incidents.

The CVEUP should not significantly increase the demand for law enforcement, from a population perspective, since most of the construction labor force would commute. For the operational phase, the change in population is minimal (the operations labor force is small and local), so the impact on law enforcement should be correspondingly small. We find no significant adverse socioeconomic impacts associated with law enforcement with the construction and operation of the CVEUP.

e. Medical Services

The Chula Vista Fire Department (CVFD) has three stations that would serve the CVEUP. Station No. 5, located at 391 Oxford Street, would be the first responder, followed by Station No. 3 at 1410 Brandywine Avenue, and Station No. 9 at 266 E. Oneida Street. The response time from any of the three stations to the project site would be approximately three minutes. (Ex. 1, p. 5.10–12.) The CVFD Station No. 3 houses the City's Urban Search and Rescue unit.

Emergency medical service would be provided by the CVFD. CVFD Stations 5, 3, and 9 provide emergency hazmat (hazardous materials) response. In addition, the San Diego County Department of Environmental Health Hazardous Incident Response Team (DEH-HIRT) responds jointly with the San Diego Fire-Rescue Department Hazardous Incident Response Team to investigate and mitigate chemically related emergencies or complaints. The DEH-HIRT provides

mitigation, containment, and control actions as well as hazard identification, evaluating the threat to the local populations and the environment. (Ex. 200, p. 4.8-8.)

The hospital nearest the CVEUP and with an emergency room is Scripps Mercy Hospital Chula Vista (Scripps Mercy). Scripps Mercy is located at 435 H Street in Chula Vista. This facility recently added more than 40,000 square feet. With the addition, the hospital now has a 24-hour emergency department, intensive care unit, and laboratory.

However, Scripps Mercy does not have a trauma center. There are four hospitals with trauma centers within 25 minutes of the CVEUP:

- Sharp Memorial Hospital: 7901 Frost Street, San Diego;
- Scripps-Mercy Hospital: 4077 5th Avenue, San Diego;
- Children's Hospital & Health Center: 3020 Children's Way, San Diego; and
- University of California San Diego (UCSD) Medical Center: 200 West Arbor Drive, San Diego.

We find that the medical services available for the CVEUP would be adequate and that the CVEUP would not cause a significant adverse impact to these services. The CVEUP would not displace significant numbers of people or directly or indirectly induce substantial population growth. Hence, there are no significant socioeconomic impacts that might trigger adverse physical impacts in the provision of emergency medical services. For additional discussion see the **Worker Safety and Fire Protection** and **Hazardous Material Management** sections of this Decision.

3. Cumulative Impacts and Mitigation

A project may result in a significant adverse cumulative impact where its effects are cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (Cal. Code Regs., tit. 14, § 15130.)

Cumulative impacts could occur when more than one project has an overlapping construction schedule that creates a demand for workers that cannot be met by local labor, resulting in an influx of non-local workers and their dependents.

The City of Chula Vista has received applications for 26 proposed projects. These are mostly residential development projects, with some commercial developments and one warehouse development and one manufacturing development. (Ex. 1, p. 5.10–22.) Although the 26 proposed projects would require a labor supply for construction, Staff concludes that there is a sufficient supply of skilled labor in San Diego County. (Ex. 1, p. 5.10–23.)

The CVEUP would employ, on average, approximately 100 workers per month and 160 during the peak month, for eight months of construction. In addition to the CVEUP, there are three other power plants operating or proposed in the greater San Diego area. They are:

- A 100-MW power plant, Orange Grove Energy (OGE), near the community of Pala, San Diego County. It is in undergoing review by the Energy Commission. The proposed site is off Pala Del Norte Road, approximately 60 miles from the CVEUP.

- The 558-MW Carlsbad Energy Center Project (CECP) for the City of Carlsbad, San Diego County. It is undergoing review by the Energy Commission. The CECP would be approximately 47 miles from the CVEUP.

- The 590-MW Otay Mesa Generating Project (OMGP) currently under construction in the Otay Mesa area of western San Diego County. Construction is proposed to be completed in May 2009. The OMGP is approximately 10 miles from the CVEUP.

The CVEUP, OGE, and OMGP power plants are scheduled to complete construction during the second quarter of 2009. The peak labor needed to construct the CVEUP, OGE, CECP, and the OMGP power plants would be 970 construction personnel. The construction workforce of 970 personnel would be 1.3 percent of the available construction workforce in San Diego County. Hence, we find no significant adverse socioeconomic cumulative impacts associated with the CVEUP.

The Socioeconomic Table 1 below, provides a summary of socioeconomic data and information from this analysis, with emphasis on economic benefits of the CVEUP.

Socioeconomics Table 1
Data and Information

Estimated Project Capital Cost	$80 Million
Estimate of Locally Purchased Materials	
Construction	$14.5 million
Operation (Operation & Maintenance)	$1.25 million
Estimated Annual Property Taxes	$800,000
Low and Moderate Housing Set- Aside	$160,000
Redevelopment Agency Tax Increment	$398,000
City of Chula Vista	$34,000 (after 2015)
Chula Vista Elementary School District	$88,000
Sweetwater Union High School District	$57,000
Southwestern College	$15,000
San Diego County	$68,000
County Office of Education	$8,000
Other/Administrative Fee	$6,000
Estimated School Impact Fees	$344
Estimated Employment	
Construction (average)	100 average jobs per month (total of 633)
Operation	2
Estimated Payroll	
Construction	$8.9 million (estimated)
Operation	$112,000 annually (estimated)
Estimated Total Sales Taxes (Total: Combined State, County and local)	
Construction	$139,000
Operation	$23,250 annually
Existing Unemployment Rates	4% (San Diego County)
Percent Minority Population (6 mile radius)	73.41%
Percent Poverty Population (6 mile radius)	14.12%
Percent Minority Population (1 mile radius)	81.13%
Percent Poverty Population (1 mile radius)	13.34%

Source: (Ex. 200, p. 4.8-23.)

Response to Agency and Public Comments

Energy Commission staff received comments on socioeconomic impacts from the City of Chula Vista, the Environmental Health Coalition, and the Southwest Chula Vista Civic Association. These comments, and Staff's responses, are summarized in the FSA. In preparing this Decision, we have considered these

comments, as well as the comments submitted by members of the public (non-parties) in writing and orally at public hearings on this matter. All such comments are part of the record in this proceeding.

FINDINGS AND CONCLUSIONS

Based on the evidence, we find and conclude as follows:

1. The project will draw primarily upon the local and regional labor pool for the construction and the operation workforce.

2. The project will not cause an influx of a significant number of construction or operation workers into the local area.

3. The proposed project is not likely to have a significant adverse effect upon local employment, housing, schools, medical resources, or police protection.

4. Construction and operation of the project will not result in any significant direct, indirect, or cumulative socioeconomic impacts.

5. All environmental impacts from the project will be mitigated to below a level of significance.

CONDITIONS OF CERTIFICATION

SOCIO-1 The project owner shall pay the one-time statutory school development fee to the School District as required by Education Code Section 17620.

Verification: At least 30 days prior to start of project construction, the project owner shall provide the Compliance Project Manager proof of payment of the statutory development fee.

SOCIO-2 The project owner shall pay the City of Chula Vista's utility users' tax ("UUT") in accordance with the City of Chula Vista Municipal Code.

Verification: The project owner shall submit documentation of the biannual payments of the UUT in each annual compliance report to the Compliance Project Manager.

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. In some cases, vibration may be produced as a result of construction activities such as blasting, which has the potential to cause structural damage and annoyance. The analysis of record summarized below evaluates whether noise and vibration produced during project construction and operation will be sufficiently mitigated to comply with applicable law. (10/2/08 RT 248-266; Exs. 1 § 5.7; 7, Responses 50 and 51; 23; 200, pp. 4.6-1 to 4.6-19.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

The project site is in an area of mixed industrial, commercial, residential, and recreational uses. It lies within Chula Vista's Main Street Industrial Corridor, a district zoned Light Industrial. The ambient noise in the project vicinity consists of occasional operation of an existing power plant (which will be demolished), aircraft overflights, and local road and freeway traffic. The nearest sensitive noise receptors are residences 350 feet west and 1,000 feet north of the site, a school 1320 feet to the north-northeast, and the Otay River Preserve adjacent to the site's southern boundary. (Ex. 200, p. 4.6-5.)

The Noise Element of Chula Vista's General Plan (Chapter 9, section 3.5) indicates that noise at residences, schools, and neighborhood parks is generally considered acceptable if it does not exceed 65 dBA community noise equivalent levels (CNEL). Chula Vista's Municipal Code sets the exterior noise limits shown below in Table 1:

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NOISE Table 1: Exterior Noise Limits

Noise Level (dBA)		
Receiving Land Use Category	10 p.m. to 7 a.m. Weekdays	7 a.m. to 10 p.m. Weekdays
	10 p.m. to 8 a.m. Weekends	8 a.m. to 10 p.m. Weekends
All residential (except multiple dwelling)	45	55
Multiple dwelling residential	50	60
Commercial	60	65
Light Industry	70	70
Heavy Industry	80	80

Source: Ex. 200, p. 4.6-4.

Noise from construction and demolition are exempted from these limits. (Ex. 200, p. 4.6-3.) These are the sole adopted municipal noise standards applicable to the project. (10/2/08 RT 254:14-23.)

CEQA Guidelines also set forth characteristics of noise impacts that may indicate potentially significant effects from project-related noise, such as "a substantial 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. Staff believes that an increase in background noise levels of up to 5 dBA in a residential setting is insignificant; an increase of more than 10 dBA, however, is clearly significant.[55] An increase of between 5 and 10 dBA may be considered adverse, but could be either significant or insignificant depending upon the particular circumstances of a given case. (10/2/08 RT 256:16-20, 257:11-14; 259:2-10; Ex. 200, p. 4.6-4.)

Factors to be considered in determining the significance of an adverse impact as defined above include: (1) the resulting noise level; (2) the duration and frequency of the noise; (3) the number of people affected; and (4) the land use designation of the affected receptor sites. Noise due to construction activities is usually considered insignificant in terms of CEQA compliance if the construction

[55] Staff's expert witness testified that "[a] 3 decibel increase is understood as the minimum increase in noise level that's normally perceptible by the human ear." (10/2/08 RT 253:19-22, 255:14-17.) In contrast, a 10 decibel (or more) increase is significant, noticeable, and annoying. (10/2/08 RT 254:4-6, 256:9-13.)

activity is temporary and the use of heavy equipment and noisy activities are limited to day-time hours. (Ex. 200, p. 4.6-5.)

Applicant performed an ambient noise survey on July 25 and 26, 2007 in order to establish a baseline for comparison of predicted project-related noise to the existing noise levels. (Ex. 1, pp. 5.7-4 to 5.7-7.) Long term (25 consecutive hours) noise measurements were recorded at the following locations:

- **M-1**; near a residence at 3336 Alvoca Street, part of a residential neighborhood approximately 400 feet west of the site.
- **M-2**; near a residence at 160 Zenith Street, part of a residential neighborhood approximately 1,000 feet north of the site.
- **M-3**; the southeast corner of the site, to show ambient noise levels representative of the Otay River Preserve.

(Ex. 200, p. 4.6-6.)

The existing ambient noise levels are shown in Table 2 below:

NOISE Table 2
Summary of Measured Ambient Noise Levels

Measurement Location	Measured Noise Levels, dBA		
	L_{eq} – Day-time[1]	L_{eq} – Night-time[2]	L_{90} – Night-time[3]
M-1: Nearest residence at 3336 Alvoca Street	51.0	43.9	36.5
M-2: Residence at 160 Zenith Street	49.7	46.8	42.5
M-3: Southeast corner of site	58.5	56.2	51.5

Source: Ex. 1, Tables 5.7-3, 5.7-4, 5.7-5.
[1] Staff calculations of average of 15 day-time hours.
[2] Staff calculations of average of 9 night-time hours.
[3] Staff calculations of average of 4 consecutive quietest hours of the night-time.

The evidence further shows the effects the project's short-term construction activities and its long-term operation will have upon the ambient levels.

1. Construction

Construction noise is a temporary event, in this case expected to last between 8-12 months. (Ex. 200, p. 4.6-6.) Aggregate construction noise will increase at the sensitive receptors as shown on Table 3, below:

NOISE Table 3

Predicted Power Plant Construction Noise Impacts

Receptor	Highest Construction Noise Level (dBA L_{eq})	Measured Existing Ambient (dBA L_{eq})	Cumulative (dBA L_{eq})	Change (dBA)
M-1 Nearest residence	70	51 day-time	70 day-time	+19 day-time
		44 night-time	70 night-time	+26 night-time
M-2 Residences to north	62	50 day-time	62 day-time	+12 day-time
		47 night-time	62 night-time	+15 night-time
School to north-northeast	60	—	60	—

Source: Ex. 200, p. 4.6-8.

The increases shown above include the construction of the associated linear facilities (natural gas, water, wastewater, and transmission interconnection lines).

The evidence establishes that the construction noise increases will be noticeable, but can be rendered tolerable, at sensitive receptors. (Ex. 200, p. 4.6-7.) To ensure this, we have adopted Condition of Certification **NOISE-6** which limits construction activities to day-time hours between 7 a.m. and 8 p.m. on weekdays, and 8 a.m. to 8 p.m. on weekends, thus avoiding the creation of significant night-time disturbances. In the event that construction noise should nevertheless annoy nearby residents, Conditions of Certification **NOISE-1** and **NOISE-2** establish notification and complaint processes to address this situation.

In addition, pile driving will occur during construction. Associated noise is predicted to reach 104 dBA at 50 feet, translating into a level of 85 dBA at **M-1**, the nearest residential receptor. This would be an increase of 34 dBA over the ambient level; noise at other nearby receptors would also commensurately increase. (Ex. 200, p. 4.6-8.) The evidence indicates that limiting pile driving to day-time hours would be insufficient to mitigate this impact. The evidence further indicates that measures such as padded hammers, “Hush” noise attenuating enclosures, vibratory drivers, and hydraulic techniques that press rather than hammer piles into the ground are available and reduce pile driving noise by 20 to 40 dBA. (Ex. 200, pp. 4.6-8 to 4.6-9.) We have therefore included Condition of Certification **NOISE-7** to reduce pile driving noise to the extent feasible.

Next, to protect construction workers from injury due to excessive noise, Condition **NOISE-3** requires the project owner to implement a noise control program consistent with OSHA and Cal/OSHA requirements. (Ex. 200, p. 4.6-9.) Finally, there is no indication in the evidence of record that vibration from construction activities would be perceptible at any appreciable distance from the project site, or that it would cause any impact. (*Id*.)

2. Operation

The noise emanating from a power plant is unique. It is generally broadband, steady state in nature. When it is operating, the CVEUP will essentially be a continuous noise source. This noise contributes to, and becomes part of, the background noise level when most intermittent noises cease The primary noise sources of this project include the gas turbine generators, gas turbine air inlets, selective catalytic reduction units and their exhaust stacks, electrical transformers, fuel gas compressors and metering equipment, and various pumps and fans. (Ex. 200, pp. 4.6-9 to 4.6-11.)

The evidence identifies various mitigation measures which will be employed to reduce operational noise. (Exs. 1, pp. 5.7-11 to 5.7-14; 200, pp. 4.6-9 to 4.6-10.) The evidence also establishes that the plant's operating noise is not predicted to exceed 45 dBA L_{eq} at **M-1**, the nearest residential receptor. This level complies with the applicable standards in Chula Vista's General Plan Noise Element and in the City's Municipal Code (10/2/08 RT 265:9-14; Exs. 7, p. 11; 200, p. 4.6-10.) Condition of Certification **NOISE-4** will ensure compliance with applicable municipal standards.

The evidence also establishes that when the operational noise is added to the ambient values, the noise levels will increase during the day-time by 3 dBA and 9 dBA during the night-time at receptor **M-1**. (Ex. 200, p 4.6-11.) The evidence shows that the day-time increase (3 dBA) is insignificant since it would be barely noticeable and not expected to annoy a person of normal sensitivity. (10/2/08 RT 253:19-25 to 254:1-3, 258:5-9, 258:21-25; Ex. 200, p. 4.6-11.)

The night-time increase of 9 dBA is within the range of increase that could be potentially significant. (10/2/08 RT 259:4-10.) The evidence shows, however, that as a peaker plant, the CVEUP is unlikely to actually operate extensively during quiet night-time hours. (Ex. 200, pp. 4.6-11 to 4.6-12.) Applicant estimates that the project will operate about 500 hours per year. (Ex. 7, Response 39.) Staff agrees that few of these operational hours would likely be

after 10 p.m., during night-time. (10/2/08 RT 260-262.) Given these particular circumstances, the evidence indicates that the 9 dBA increase would not be a significant adverse impact. (10/2/08 RT 257:15-17.)

Next, as with construction activities, operational and maintenance activities will meet OSHA and Cal/OSHA standards to protect workers. (Ex. 200, p. 4.6-12; Condition of Certification **NOISE-5**.) The evidence also establishes that operational vibration – whether ground borne or air borne – will be undetectable by likely receptors. (Ex. 200, p. 4.6-12.) Finally, the evidence shows that the project will not contribute to significant cumulative noise impacts. (Ex. 200, p. 4.6-13.)

FINDINGS AND CONCLUSIONS

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

1. Construction and operation of the CVEUP 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 day-time hours in accordance with local noise control LORS, and providing a notice and complaint process to nearby receptors.

3. Traditional pile driving techniques would result in unacceptable levels of noise.

4. Additional mitigation, such as that identified in the evidence of record and adherence to Condition of Certification **NOISE-7**, will assure that noise from pile driving activities is reduced to below a level of significance.

5. Project operations will increase day-time ambient noise levels by 3 dBA at the nearest residential receptor. The evidence establishes that this will not be a significant increase.

6. Project operations will increase night-time ambient noise levels by 9 dBA at the nearest residential receptor.

7. The project is proposed as a peaker power plant, expected to operate about 500 hours per year. Relatively few of these hours are expected to be after 10 p.m., during the quiet night-time hours. Because of these

circumstances, the 9 dBA increase mentioned in Finding 6, above, is not expected to be significant.

8. The project owner will implement measures to protect workers from injury due to excessive noise levels during both construction and operation.

9. The CVEUP will not create ground or air borne vibrations which will cause significant off-site impacts.

10. Implementation of the Conditions of Certification, below, ensure that project-related noise emissions will not cause significant adverse impacts to sensitive noise receptors.

The Commission concludes that implementation of the following Conditions of Certification ensure that the CVEUP will comply with the applicable laws, ordinances, regulations, and standards on noise and vibration as set forth in the pertinent portion of **Appendix A** of this Decision, and that the project will not cause indirect, direct, or cumulative significant adverse noise impacts.

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, 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 and include that telephone number in the above notice. 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 Compliance Project Manager (CPM) a statement, signed by the project owner's 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 Complaint Process

NOISE-2 Throughout the construction and operation of the CVEUP, 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 a 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;
- Take all feasible measures to reduce the noise at its source if the noise is project related; 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 five days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form with the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a three-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is implemented.

NOISE-3 The project owner shall submit to the CPM for review and approval a noise control program and a statement, signed by the project owner's project manager, verifying that the noise control program will be implemented throughout construction of the project. The noise control program shall 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 and the project owner's project manager's signed statement. The project owner shall make the program available to Cal/OSHA upon request.

Noise Restrictions

NOISE-4 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause noise levels due to plant operation to exceed an average

of 45 dBA L_{eq} measured at monitoring location M-1, the residence at 3336 Alvoca Street. No new pure-tone components may be caused by the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected residential locations to determine the presence of pure tones or other dominant sources of plant noise.

1. When the project first achieves a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct a community noise survey at monitoring location M-1 or at closer locations acceptable to the CPM. This survey shall be performed during power plant operation and shall also include measurement of one-third octave band sound pressure levels to determine whether new pure-tone noise components have been caused by the project.
2 If the results from the noise survey indicate that the power plant average noise level (L_{eq}) at M-1 exceeds the above value, mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.
3. If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within 30 days of the project's first achieving a sustained output of 80 percent or greater of rated capacity. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report will be a description of any additional mitigation measures necessary to achieve compliance with the above-listed noise limit and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of the new noise survey, performed as described above and showing compliance with this condition.

NOISE-5 Following the project's 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 5095–5099 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 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 to the CPM. The project owner shall make the report available to OSHA and Cal/OSHA upon request.

Construction Time Restrictions

NOISE-6 Heavy equipment operation and noisy construction work relating to any project features shall be restricted to the times of day delineated below:

Weekdays	7:00 a.m. to 8:00 p.m.
Weekends and Holidays	8:00 a.m. to 8:00 p.m.

Haul trucks and other engine-powered equipment shall be equipped with mufflers that meet all applicable regulations. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project.

NOISE-7 The project owner shall perform pile driving using the quietest pile driving technology available to ensure that noise from these operations is mitigated to the greatest extent possible at monitoring locations M-1 and M-2.

Verification: At least 15 days prior to first pile driving, the project owner shall submit to the CPM a description of the pile driving technique to be employed, including calculations showing its projected noise impacts at monitoring locations M-1 and M-2.

EXHIBIT 1 - NOISE COMPLAINT RESOLUTION FORM

Chula Vista Energy Upgrade Project
(07-AFC-4)

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: _____

E. VISUAL RESOURCES

Visual resources are the 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 in order to determine whether the project has the potential to cause substantial degradation to the existing visual character of the site and its surroundings. (Cal. Code Regs., tit. 14 § 15382, Appendix G.)

In analyzing the visual resources and impacts, we first describe the project's visual setting in terms of existing visual character and quality. The project setting is delineated into landscape units of contiguous, broadly consistent visual character and quality.

Within each landscape unit, Key Observation Points (KOPs) are then identified to represent the most critical locations from which the project would be seen. These reflect, in particular, those key sensitive viewer groups most likely to be affected by the project. Assessments of project impact are determined from these KOPs. KOPs are rated for their level of Visual Sensitivity to impact.

Visual simulations of the project as seen from KOPs, along with field observations, are used to evaluate the projected levels of project contrast, dominance, and view blockage. In addition, the project is evaluated for conformance with applicable LORS. Local public policy pertaining to visual resources is also taken into account in determining levels of viewer concern.

As needed, Conditions of Certification are imposed to mitigate potentially significant impacts, and to ensure LORS conformance.

SUMMARY AND DISCUSSION OF THE EVIDENCE

The proposed CVEUP is located at the southern end of the City of Chula Vista (City), next to the city boundary with the City of San Diego, and within 4 miles of the Mexico border to the south. The project site is located on the northern portion of a 3.8-acre parcel within Chula Vista's Main Street corridor. MMC Energy Incorporated's (MMC) Chula Vista Power Plant currently occupies the southern portion of the site. Some of the facilities that serve the existing plant will be reused for the new power plant. These facilities include the existing transmission connection; natural gas, water, and sanitary sewer pipelines; 6-foot high fencing and 18-foot high sound attenuation wall; utility/control building; stormwater runoff

retention basin; and the 12,000-gallon aqueous ammonia storage tank and tank refilling station. (Ex. 200, p. 4.12-5.)

Once construction of the CVEUP is completed, the existing power plant and pollution control equipment will be removed. (Ex. 200, p. 4.12-6.)

The Main Street corridor is heavily developed with a combination of old and new light industrial, commercial, and residential land uses. Abutting the project site are, on the east, across the private lane to be used for access to the project, a new low-rise commercial office building; on the west, a meat packing warehouse facility; on the north, a car salvage lot; and on the south, Otay Valley Regional Park. (Ex. 200, p. 4.12-5.)

The nearest residential areas are to the north and west of the project. One area lies one block north of Main Street; the other is immediately west of the warehouse property that abuts the CVEUP western site boundary. These residential areas consist primarily of single-family homes and also include several community uses (Otay Park, Otay Elementary School, and Otay Recreation Center) clustered near Main Street and Albany Avenue and the Otay Substation, which is about 1,000 feet north of the CVEUP site. (*Id.*)

Otay Valley Regional Park is a major urban park and open space area. Its greenbelt is an east-west-oriented, roughly quarter-mile-wide swath of hilly river wash formed by the Otay River floodplain. Some areas within the wash have been mined and natural contours are disturbed. On the north side of the wash, eucalyptus trees and willows dominate. On the south side, chaparral and scrub dominate. The river wash is bounded on the south side by steep cliffs more than 100 feet in height. Residences on the cliff edge north of Lindbergh Street overlook the proposed project site and low-lying greenbelt. (*Id.*)

Visual Resources Figure 1: Landscape Character and Key Observation Point (KOP) Location Map depicts the location and orientation of the camera from which photographs were taken of the characteristic landscape that surrounds the project and the view of the project site from designated KOPs. **Visual Resources Figure 2: Existing Landscape Character Photographs** depicts the existing visual character in the project vicinity.

The most prominent visual features of the CVEUP include those facilities that would extend above the fence and sound attenuation wall. The tallest features of the CVEUP would be the two exhaust stacks. The stacks would have a top

elevation of 70 feet above ground level and a diameter of 13 feet. (Ex. 200, p. 4.1-23). The metal structures would be 70 feet apart and are located at the north end of the site. The stacks would be metal, gray in color, with a flat or un-textured finish. Other less visually prominent features would be the gas turbine generator and the selective catalytic reduction unit (SCR), which would be 34 and 31 feet tall, respectively. Like the stacks, both would be metal structures, gray in color, with flat/untextured finishes. The remaining features range in height between 9.5 and 21 feet. (Ex. 200, p. 4.12-6.)

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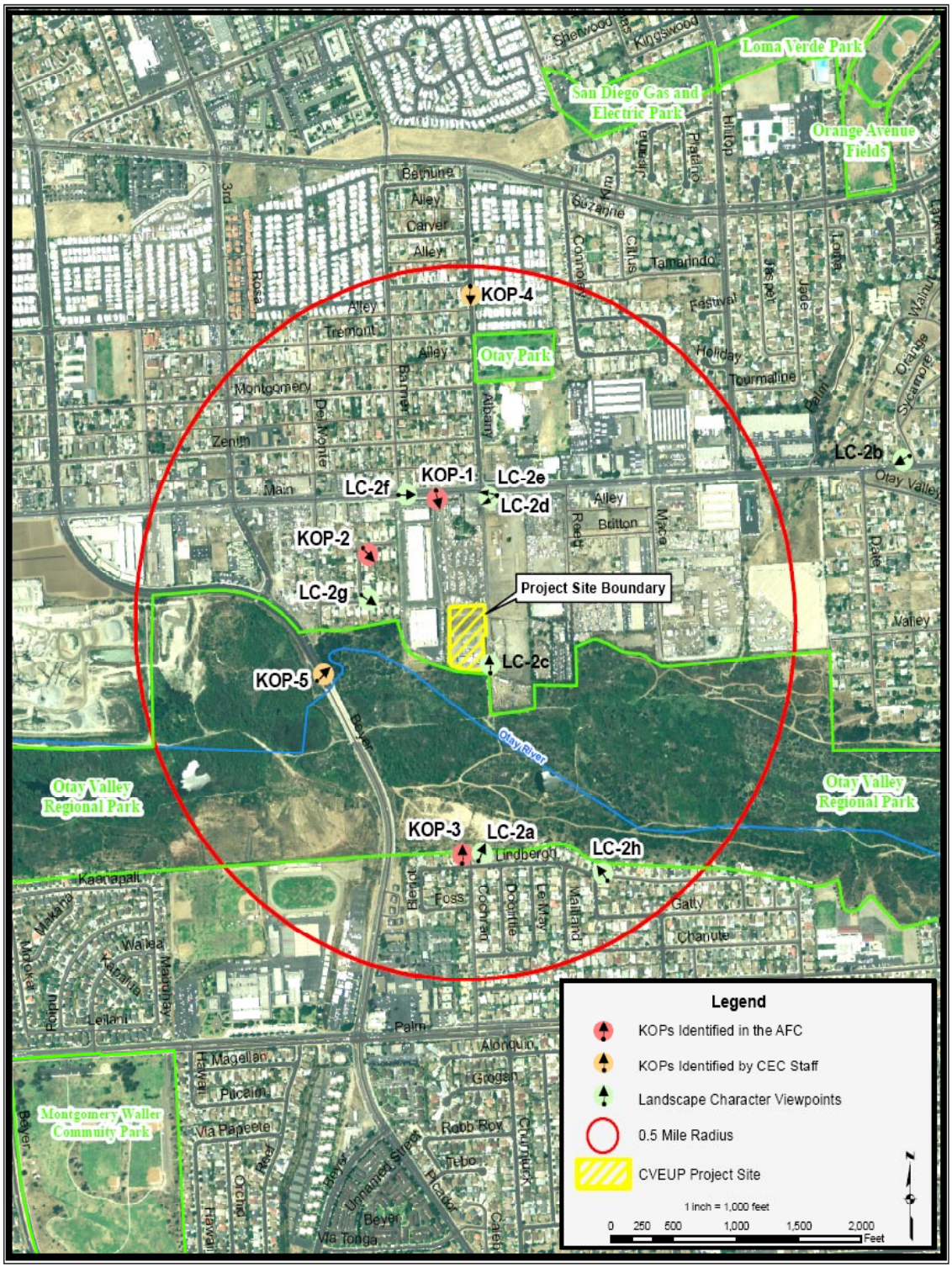
VISUAL RESOURCES - FIGURE 1

Chula Vista Energy Upgrade Project - Landscape Character and Key Observation Point (KOP) Locations.



SOURCE: EX. 200

VISUAL RESOURCES - FIGURE 2a and 2b
Chula Vista Energy Upgrade Project - Landscape Character Photographs

Figure 2a. View of the project vicintiy looking east towards the San Miguel Mountains, from the mesa above the Otay River Valley at Cochran Avenue near Linbergh Street (the project site is just to the left of the picture).

Figure 2b. View of the project vicintiy looking to the southwest towards the Pacific Ocean, from the intersection of Main Street and Sycamore Avenue.

SOURCE: EX. 200

VISUAL RESOURCES - FIGURE 2e and 2f
Chula Vista Energy Upgrade Project - Landscape Character Photographs

Figure 2e. Residential development on the north side of Main Street near Albany Avenue.

Figure 2f. Commercial development on Main Street near Banner Avenue.

SOURCE: EX. 200

VISUAL RESOURCES - FIGURE 2g and 2h
Chula Vista Energy Upgrade Project - Landscape Character Photographs

Figure 2g. Residential development south of Main Street and west of the meat packing plant and project on Del Monte Avenue and Alvoca Street.

Figure 2h. Residential development on the south side of the Otay River Valley, on Lindberg Street at National Avenue.

SOURCE: EX. 200

1. Direct/Indirect Impacts and Mitigation

We evaluate the visual impacts from representative fixed vantage points, called key observation points (KOP). KOPs are selected to be representative of the locations from which the project would be seen. The KOPs selected for this analysis are:

- KOP 1 – Main Street near Banner Avenue looking Southeast;
- KOP 2 – Teena Drive at Ancurza Way looking Southeast;
- KOP 3 – Cochran Avenue near Lindbergh Street looking North;
- KOP 4 – Albany Avenue at Anita Street looking South;
- KOP 5 – Beyer Way at Southern City Boundary looking East.

a. Construction Impacts

Construction activities for the project would occur over an approximate 8-month period. Public visibility of the construction site and activities would be limited due to the 6-foot-high fencing that surrounds the site. People in the three-story commercial light-industrial building across the private access lane to the east would have views over the fence into the site. The only potential visual impact that would occur during the construction period but not during operations would come from lighting. (Ex. 200, p. 4.12-11.)

Project construction activity is proposed to occur from 6:00 a.m. to 7:00 p.m. Monday through Saturday, although construction periods of 24 hours a days, 7 days a week would occur during the start-up phase of the project. (Ex. 1, § 5.13.2.3.6). During night-time construction periods, illumination that meets state and federal worker safety regulations will be required. As a result, there would be times during the construction period that the project site would be brightly illuminated at night and would be noticeable from the surrounding area to varying degrees. (Ex. 200, p. 4.12-11.)

b. Impact Significance

Night lighting associated with project construction would result in a potentially significant visual impact. While the Applicant contends that such impacts would be less than significant based on various lighting design features, Staff expressed concern that night lighting impacts could potentially affect all foreground residential viewpoints.

Occupants of residences are considered to have high sensitivity to night lighting impacts. Typical bright industrial lighting could add a highly dominant, strongly contrasting element to the night-time landscape. Under worst-case conditions with bright, industrial lighting left on throughout the night, significant adverse impacts could be anticipated on at least those residents nearest the project site. To reduce such impacts to less than significant levels, we adopt Condition of Certification **VIS-2,** which requires that construction-phase lighting in the project site and construction lay-down areas be of minimum brightness consistent with safety; that lighting be shielded and directed to eliminate all direct off-site illumination and all upward illumination; and that lighting be turned off when not needed. With these measures, the night-time level of anticipated visual change would be low, resulting in insignificant impacts to residences. (Ex. 200, p. 4.12-11)

c. Operation Impacts

Operational impacts are assessed from the five KOPs. We summarize Staff's assessment of visual impact by discussing Visual Sensitivity and Visual Change from each KOP in our analysis of the visual impact of the proposed project.

KOP 1 − View from Main Street Near Banner Avenue

Visual Resources Figure 3 is a photo simulation of the project structures that would be visible from KOP 1 after completion of project construction. KOP 1 is located on Main Street, midway between Banner and Albany Avenues. KOP 1 is approximately 1,000 feet northwest of the CVEUP site. KOP 1 provides the most unobstructed view of the project from Main Street, the nearest major public roadway. Main Street is at approximately the same elevation as the project site. (Ex. 200, p. 4.12-12)

<u>Visual Sensitivity</u>

The existing views from KOP 1 are predominantly commercial and industrial in character. This area is in transition with older commercial and light industrial uses being replaced with well-designed and landscaped commercial and light industrial office parks. Visual intactness and unity are low, primarily due to the disparate old and new land uses that detract from a coherent view. (Ex. 200, p. 4.12-13)

There are approximately one dozen residents in the homes on and adjacent to Main Street in the neighborhood north of Main Street. The second story of the commercial building across the private lane would have views directly into the

project site. Residents near KOP 1, motorists on Main Street, and workers adjacent to the project site would be moderately concerned about these changes.

The duration of viewing toward the project site would be long term for residents along Main Street and for workers in the development across the private lane from the project site. Motorists and other workers and pedestrians would have short-term views. The limited number of long-term viewers and the intervening land uses and trees that would screen most of the project from this KOP lead us to the conclusion that overall viewer exposure would be moderate. (Ex. 200, p. 4.12-13.)

Weighing all of the above factors as shown by the undisputed evidence, we find there is a moderate degree of overall visual sensitivity at KOP 1.

Visual Change

From KOP 1 the upper portions of the two 70-foot-tall, 13-foot-wide, gray-colored cylindrical exhaust stacks would be visible. Other project features would not be seen from this location.

The stacks would extend above the trees that provide screening, but the difference in height would not be substantial enough to create a strong degree of contrast. The gray color of the stacks would be in contrast with the newer, light-colored buildings that are being developed in the area. The gray color may add a heavy industrial character to the stacks which could make them more noticeable. The flat unfinished texture of the stacks would be in contrast to the highly textured quality of the trees. However, the apparent size and scale of the project as seen from KOP 1 would not dominate the view. The combination of existing trees, power lines, and billboards that are part of the skyline would minimize the visual dominance of the CVEUP features. (Ex. 200, p. 4.12-14.)

There are no scenic views or vistas within the viewshed of KOP 1. The two exhaust stacks that would be seen from KOP 1 would not block or disrupt a scenic view or vista. (*Id.*) Visual change caused by the project as seen from KOP 1 would be low.

Impact Significance

Based upon the uncontroverted evidence, we find that the introduction of project structures would not substantially degrade the existing view from KOP 1. The moderate overall visual sensitivity, combined with the low overall visual change, would result in a less than significant visual impact.

VISUAL RESOURCES - FIGURE 3
Chula Vista Energy Upgrade Project - KOP1 - Main Street Near Banner Avenue

KOP1a - Existing view toward the project site from Main Street at the corner of Banner Avenue.

KOP1b - Simulated view toward the project site from Main Street at the corner of Banner Avenue.

SOURCE: EX. 200

KOP 2 – Ancurza Way at Teena Drive Looking Southeast

Visual Resources Figure 4 is a photo simulation of the project structures that would be visible from KOP 2 after completion of project construction. KOP 2 is located at the intersection of Teena Drive and Ancurza Way, approximately 800 feet northwest of the CVEUP site, in the small residential neighborhood off Del Monte Avenue, south of Main Street. This neighborhood is at approximately the same elevation as the project site.

Visual Sensitivity

The existing views from KOP 2 are predominantly residential in character. Views in this area are confined to the immediate foreground which is dominated by neighborhood views of streets, front yards, and homes. Looking toward the project site, one can see a 6-foot fence, a landscaped buffer area, and a 6-foot-high concrete-block wall that separate the residential area from the adjacent warehouse. The tops of trucks can be seen over the wall. (Ex. 200, p. 4.12-15.)

The neighborhood has a residential character due to the density of development and architectural character of the homes. However, there are no vivid landscape features or scenic views that can be experienced from this KOP. KOP 2 is within a residential neighborhood, leading us to the conclusion that the level of viewer concern will be moderately high. (Ex. 200, p. 4.12-15.)

The project site is within the immediate foreground of KOP 2, but the existing power plant cannot be seen due to intervening land uses and trees. The duration of viewing toward the project site could be long term for residents and could include views from within their homes and yards and from streets and walkways. The site itself and any structures within it below a certain height would not be visible from this viewing area, but the tallest features, notably the proposed exhaust stacks, would be visible. (Ex. 200, p. 4.12-15.)

Weighing all of the above factors as shown by the undisputed evidence, we find there is a moderate degree of overall visual sensitivity at KOP 1.

VISUAL RESOURCES - FIGURE 4

Chula Vista Energy Upgrade Project - KOP2 - Ancurza Way at Teena Drive, Looking Southeast

KOP2a - Existing view toward the project site from Ancurza Way.

KOP2b - Simulated view toward the project site from Ancurza Way.

SOURCE: EX. 200

Visual Change

The tops of the two 70-foot-tall, gray-colored cylindrical exhaust stacks would be visible from KOP 2. Other project features would not be seen from this location. The cylindrical form and vertical lines created by the stacks would be similar in structure to that of the trees that currently provide partial screening of the site from this KOP. The stacks would extend above the canopies of trees that provide screening, but the visible portion of stacks would not be substantial enough to create a strong degree of contrast. The gray color of the stacks would be in contrast with the newer, light-colored building warehouse adjacent to the neighborhood. The gray color and metallic texture of the stacks may add a heavy industrial character to the view which could make them more noticeable. (Ex. 200, p. 4.12-15.)

The relative narrowness of the two exhausts stacks (13 feet in diameter) in combination with the visibility of trees and other foreground features would minimize the visual dominance of the stacks. There are no scenic views or vistas seen from KOP 2. The two exhaust stacks that can be seen from KOP 2 would not block or disrupt a scenic view or vista. (*Id.*)

Impact Significance

The only portions of the CVEUP that would be visible from this KOP would be the two exhaust stacks. While the stacks would introduce views of a heavy industrial character, the size and scale of the visible portion of the stacks would not dominate the view nor would they block or disrupt any view. Based upon the uncontroverted evidence, we find that the introduction of project structures would not substantially degrade the existing view from KOP 1. The moderate overall visual sensitivity, combined with the low overall visual change, would result in a less than significant visual impact.

KOP 3 – Cochran Avenue Near Lindbergh Street Looking North

Visual Resources Figure 5 is a photo simulation of the project structures that would be visible from KOP 3 after completion of project construction. KOP 3 is located on Cochran Avenue where it dead-ends above the Otay Valley Regional Park. This KOP is about 120 feet above the elevation of the project site and is located approximately 1,400 feet to the south in a residential neighborhood that is part of the Otay Mesa area of the city of San Diego. KOP 3 is representative of the views toward the project site that could be experienced by residents of

Lindbergh Avenue from their homes and yards. KOP 3 should be considered representative of the worst-case scenario for residents of this area since it is a view that is not obstructed by a backyard fence, whereas nearly all the homes along Lindbergh Avenue have fences in their backyards due to the steep slope that drops off into the greenbelt area at their back lot lines. (Ex. 200, p. 4.12-16.)

From KOP 3, the project site can be identified in the center of the middle-ground view. The existing power plant appears as a gray rectangular structure with grid lines. To the west is a large light-colored warehouse, and to the east is a newly constructed office and commercial development. In the foreground is an exposed hillside that descends to the riparian corridor of the Otay River where a combination of evergreen and deciduous trees and shrubs dominate the view. Distant views from KOP 3 extend north across the City of Chula Vista. (*Id.*)

Visual Sensitivity

The view from KOP 3 is expansive and transitions from a foreground view of open space to middle-ground views of large, prominent industrial development to distant background views of the urbanized landscape of Chula Vista. The dominance of the foreground open space/vegetation and the panoramic views over the City provide these views with a moderately high level of visual quality. (Ex. 200, p. 4.12-17.)

There are 20 or more residences along Lindbergh Street that could have foreground views down onto the project site from their homes and/or yards. Residential viewers typically have high levels of viewer concern. While the degree of visibility is high, the number of affected viewers is relatively low. (*Id.*)

VISUAL RESOURCES - FIGURE 5

Chula Vista Energy Upgrade Project - KOP3 - Cochran Avenue near Lindberg Street Looking North

KOP3a - Existing view toward the project site from the northern end of Cochran Avenue.

KOP3b - Simulated view toward the project site from the northern end of Cochran Avenue.

SOURCE: EX. 200

Visual Change

The simulated trees depicted in **Visual Resources Figure 5** are depicted at a height that would likely not be attained for at least 10 to 20 years. We thus consider the level of landscape screening depicted in the simulations to be unrealistic. However, the simulation does depict the two 70-foot-tall, gray cylindrical exhaust stacks, thereby illustrating the visual prominence of the facility. Other project features would appear similar to those on the existing project site. While the exhaust stacks would rise above the surrounding buildings by 30 or more feet, from the elevated viewpoint of KOP 3, they would be viewed against the background of the city landscape and the commercial and industrial development in the foreground. Because of these other elements, the new stacks and other power plant structures would remain visually subordinate and would not significantly alter the overall view from this KOP.

In the photo simulation, the stacks appear a light beige color, in contrast to the gray color described in Exhibit 1and depicted on the other project features. The lighter beige color of the stacks appears to be more harmonious in color with the surrounding development in contrast to the gray color of the other project features. The use of a less contrastive, non-reflective color is thus called for in Condition of Certification **VIS-1**.

The size and scale of the project as seen from KOP 3 does not dominate the view from KOP 3. The exhaust stacks are not massive in size or scale and do not extend above the backdrop of the cityscape. As viewed from this location, they remain visually subordinate to the adjacent, existing development and blend moderately well into the surrounding landscape since they do not project above the horizon line into the sky.

Impact Significance

Based upon the uncontroverted evidence, we find that the visual effect of project structures from KOP 3 is minimal since the project would be visually absorbed to a large degree into the existing landscape as seen from this location. There would be no substantial change in visual quality as a result of the project since the visibility of the project would not substantially alter the composition, vividness, unity, or intactness of the view from KOP 3.

KOP 4 – Albany Avenue Near Anita Street Looking South

Visual Resources Figure 6a is a photograph of the view from KOP 4. None of the parties offered into evidence a photo simulation from this location. KOP 4 is located on Albany Avenue near the intersection with Anita Street, approximately one-half-mile north of the project site. The elevation of KOP 4 is approximately 40 feet above the project site. Views toward the site are thus open and unobstructed by intervening foreground development. (Ex. 200, p. 4.12-19.)

Visual Sensitivity

The view from KOP 4 is of the residential neighborhood and the Otay Valley Regional Park open space and Otay Mesa in the background. This is a cohesive residential neighborhood that is visually intact due to the dominance of single-family homes and associated trees and landscaping. The open space of Otay Park and Otay Elementary School is attractive and well maintained and contributes to the visual unity and intactness of the neighborhood. Residents of this area can be expected to have a high level of concern due to the combination of residential, school, and open space uses. (*Id.*)

Because of the elevated position of much of this neighborhood, there are numerous residences in the vicinity of Albany Street and above Otay Park that could have views of the stacks or other tall project features within foreground and near-middle-ground distances. Thus, we find that there will be a moderate-to-high degree of visual sensitivity from this KOP.

Visual Change

The structures on the lot located at the southwest corner of Main Street and the private lane would block views of some of the project features from KOP 4. However, the two 70-foot exhaust stacks would extend above those structures and could be seen amongst the massing of trees to the right extending upward to near the top of the lower bluff on the other side of the greenbelt in this view. (Ex. 200, p. 4.12-20.)

The visual effect of the stacks would be softened due to the highly textured backdrop of the greenbelt open space and the partial screening provided by existing vegetation.

While project contrast would be stronger from KOP 4 than KOP 3 due to silhouetting of the exhaust stacks over other surrounding features, we find that the size and scale of the stacks would not dominate the view.

Impact Significance

Based upon the uncontroverted evidence of record we find that the introduction of project structures would moderately, but not substantially, degrade the existing view from KOP 4. There would be no substantial change to the visual quality of the setting as a result of the project since the view of the project would not substantially alter the composition, vividness, unity, or intactness of the view from KOP 4.

KOP 5 – Beyer Way near the Otay River Looking Northeast

Visual Resources Figure 6b is a photograph of the view from KOP 5. None of the parties offered into evidence a photo simulation from this location. Instead, the simulation from KOP 3 was used to assess visual effects of the project from this location. This KOP is approximately 700 feet west of the project site. From this location, one is looking slightly up toward the project site, with the site being approximately 20 feet above the KOP elevation.

KOP 5 is representative of the views toward the project that could be experienced by travelers on Beyer Way. The general plan for the City of Chula Vista, at page LUT-24, identifies Beyer Way as a “Secondary Gateway” and identifies a specific area on Beyer Way for landscape and sign improvements. (Ex. 200, p. 4.12-21.)

Visual Sensitivity

The view from KOP 5 is expansive and transitions from a foreground view of trees, shrubs, and grasses to a middle-ground view dominated by buildings associated with the residential, light industrial and commercial uses that surround the project site. The backdrop to this scene consists of trees and power lines, with a distant view of San Miguel Mountain. The existing power plant is noticeable due to its gray color and large box-like form. (*Id.*)

VISUAL RESOURCES - FIGURE 6a and 6b
Chula Vista Energy Upgrade Project - Landscape Character Photographs

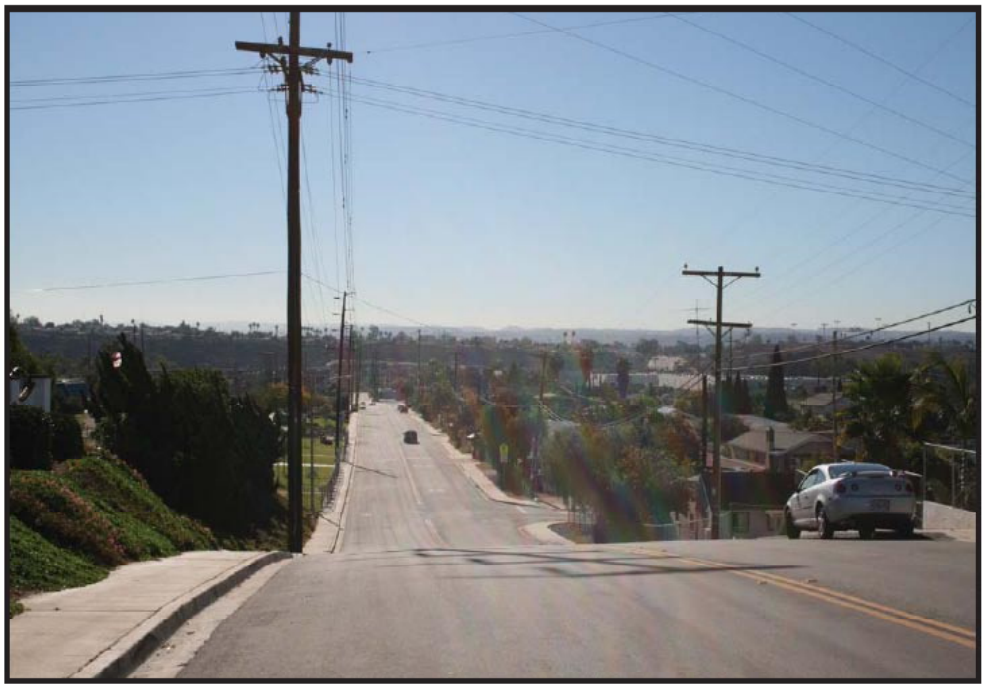


Figure 6a. KOP4 - Albany Avenue near Anita Street, Looking South.

Figure 6b. KOP5 - Beyer Way near the the Otay River, Looking Northeast.

SOURCE: EX. 200

The predominant viewers are northbound motorists on Beyer Way headed into the City of Chula Vista. There is an open, foreground view of the project site from this location, and significant numbers of travelers would experience this view. The duration of the view would be brief. (Ex. 200, pp. 4.12-21 – 4.12-22.) Although this general location is identified as a secondary gateway in the general plan, the view toward the site in this location is of compromised visual quality and brief duration, and for those reasons we find that it is not likely to be the object of substantial public concern.

Visual Change

The exhaust stacks would extend above the horizon and would be outlined against the sky from this location creating moderately high form and line contrast. The proposed gray color of the stacks and other project features would tend to accentuate the level of contrast with the adjacent light-colored buildings. Consequently, we adopt Condition of Certification **VIS-1** which requires that the stacks and other prominent project structures be painted in a light color that blends with the adjacent beige-colored industrial and commercial structures. (Ex. 200, p. 4.12-22.)

Although the landscape of the Otay Valley Regional Park in general is considered to be of high public value, and there is a distant view to San Miguel Mountain, overall the existing view toward the project site is visually compromised by the prominent existing industrial development in the foreground. The project features would not intrude into views of the greenbelt in the near foreground, nor would they block the distant view of San Miguel Mountain from this location for more than a brief moment. We consider this level of view intrusion to be minor.

Impact Significance

The evidence shows that the project could result in a potentially significant visual impact from KOP 5, requiring mitigation. We therefore adopt Condition of Certification **VIS-3**, Perimeter Landscape Screening, to reduce project visual exposure and thus contrast to these viewers. With these measures, potential contrast could be reduced to a moderate level, particularly in the long term with maturation of landscape screening. Reduction of color contrast of project structures would also be an important factor in reducing overall project contrast and dominance from this KOP. We therefore adopt Condition of Certification **VIS-1**, surface treatment of all project structures, to ensure the lowest feasible color contrast.

With implementation of Conditions of Certification **VIS-1** and **VIS-3**, the introduction of project structures would not substantially degrade the view from KOP 5. The resulting impact would be considered less than significant.

2. Light and Glare

According to the AFC, the CVEUP could be operated 24 hours per day, 7 days per week for undefined periods of time. (Ex. 1, § 5.13.2.3.6.) Project operation during times of darkness will require on-site night-time lighting for safety and security. As a result, night lighting from the project would be noticeable from the surrounding areas to varying degrees.

a. Impact Significance

Night lighting associated with project operation would result in a potentially significant visual impact. The AFC addresses potential light and glare impacts in relation to KOP 3 only. The AFC finds such impacts to be less than significant based on various lighting design features proposed by the Applicant. However, Staff's evidence shows that adverse light impacts could potentially occur from bright facility night lighting, particularly as seen from residences near to KOP 2, KOP 3, and KOP 4. (Ex. 200, p. 4.12-24.)

We adopt Condition of Certification **VIS-2** to reduce the impacts of perimeter and exterior lighting during hours of darkness at the project site. It requires that project lighting be of minimal brightness consistent with safety; that it be shielded and directed so as to eliminate all direct off-site illumination and all upward illumination, and that it be turned off when not needed. With adoption of this measure, impacts to residences would be reduced to less than significant levels.

3. Visible Vapor Plumes

The CVEUP project would employ simple cycle generation units with air cooling and no cooling towers. Therefore, no visible vapor plumes are anticipated to occur.

4. Cumulative Impacts and Mitigation

According to the AFC (Ex. 1, § 5.13.3) there are 26 proposed project applications filed with the City of Chula Vista. Most of these are residential development projects, with some commercial developments, one warehouse development, and one manufacturing development. The proposed manufacturing development

would be a sewing manufacturing and wholesale sales business and would be located within 1,000 feet of the CVEUP. None of these, however, would be visible within the same view as the CVEUP.

The CVEUP, as mitigated, would not result in significant project-specific adverse visual impacts. There are no known projects that would remove surrounding structures and make the project more visible. For these reasons, the CVEUP would not cause any adverse cumulative visual impacts.

The Main Street district in which the CVEUP project is located is identified in the City of Chula Vista General Plan as a “Focused Area of Change” in which revitalization and redevelopment is planned, is currently occurring, and can be anticipated to continue. Such anticipated future improvements to the Main Street commercial area would enhance its visual quality over the long term, and that general improvement would make industrial development, in general, less visually compatible than it appears at the present time. However, because the CVEUP is not anticipated to be a prominent visual feature from Main Street, as depicted in the simulation and analysis of KOP 1, the visual impact of the CVEUP on future improvements in the Main Street district would be limited, and any resulting potential cumulative impacts would be insignificant.

5. Environmental Justice

For all siting cases, Staff follows the U.S. Environmental Protection Agency’s guidance in conducting a two-step environmental justice analysis. The analysis assesses:

- Whether the potentially affected community has a population that is more than 50 percent minority and/or low-income, or has a minority or low-income population percentage that is meaningfully greater than the percent of minority or low income in the general population, or other appropriate unit of geographic analysis; and
- Whether the environmental impacts are likely to fall disproportionately on the minority and/or low-income population.

Even though low-income and minority populations exist in the immediate project area, Staff has not identified any significant unmitigated adverse visual impacts with the proposed project or cumulative impacts; therefore, no significant adverse impacts to minority or low-income populations are expected to occur.

6. Public Comments

Southwest Chula Vista Civic Association (SCVCA) Comment #1: "We believe you left off some significant visual viewpoints." The comment identifies views from the backyards on Anzura, corner of Banner and Main, corner of Teena and Anzura, at the end of Cochran, Anita and Albany, along Albany, Byer Way looking across Otay Valley Regional Park, Festival Court off of Hilltop, and along Conneley. (Ex. 200, p. 4.12-31.)

Committee Response: The SCVCA identifies many additional viewing locations from which the project could be seen. While it is likely that the project could be seen from many if not all these locations, the visual effect would not be significantly different from the visual effects associated with the KOPs in the Visual Resources section, which were selected to be representative of the locations from which the project would be seen. Since not every location from which the project can be seen can be analyzed, representative locations have to be identified. While the SCVCA identifies many additional locations, the visual effect of the project as seen from these locations would not be significantly different, nor would the visual impact result in a substantially adverse effect based on the methodology and threshold for determining significance.

SCVCA Comment #2: "The two 70 foot towers will create visual blight for businesses, homes and users of the OVRP. The building itself will be a significant blight for the commercial type buildings on the east and west." (Ex. 200, p. 4.12-31.)

Committee Response: This comment amounts to an allegation that the project would have an adverse visual effect. The evidence convinces the Committee, however, that with implementation of Conditions **VIS-1**, **VIS-2**, and **VIS-3**, the project would not result in a substantial adverse visual effect.

SCVCA Comment #3: "When the peaker was operating the plume was very visible and distressing from here. The plume from a larger facility with two 70 foot smoke stacks would be even more distressing and obvious." (Ex. 200, p. 4.12-31.)

Committee Response: The evidence shows that there would be no visible water vapor plume from the new facility. The Chula Vista Energy Upgrade Project would be a simple cycle, air-cooled project with no cooling tower. Therefore, no vapor plumes or associated visual impacts are anticipated.

FINDINGS AND CONCLUSIONS

Based on the evidence of record, we find and conclude as follows:

1. Construction of the proposed CVEUP will cause temporary visual impacts associated with night-time lighting.

2. The project's potential impacts on visual resources were analyzed from five defined key observation points (KOP) at different locations surrounding the project site.

3. The project owner will provide landscaping to screen some project features from view.

4. The project owner will treat project surfaces with colors that minimize visual intrusion and contrast.

5. The project owner will implement appropriate mitigation measures to reduce or eliminate visual impacts from night-time lighting and day-time glare.

6. The CVEUP will comply with all applicable laws, ordinances, regulations and standards regarding project design, architecture, landscaping, signage, and other requirements related to Visual Resources.

7. The introduction of proposed CVEUP structures and associated linear facilities would have a less than significant visual impact with implementation of the Conditions of Certification adopted herein.

8. The introduction of the proposed CVEUP structures and associated linear facilities would add a less than significant new source of light or glare to night-time or day-time views with implementation of the Conditions of Certification adopted herein.

9. With implementation of the mitigation measures adopted herein, the construction and operation of the CVEUP would not cause any significant visual impacts to adjacent land uses, or contribute considerably to a cumulative visual impact.

We therefore conclude that, with implementation of the following Conditions of Certification, the project will not cause any significant direct, indirect, or cumulative impacts to visual resources.

CONDITIONS OF CERTIFICATION

Surface Treatment of Project Structures and Buildings

VIS-1 The project owner shall treat the surfaces of all project structures and buildings visible to the public so that a) their colors minimize visual intrusion and contrast by blending with adjacent developments in both color and value; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances.

The project owner shall submit to the Compliance Project Manager (CPM) for review and approval, and simultaneously to the City of Chula Vista for review and comment, a specific surface treatment plan that will satisfy these requirements. The treatment plan shall include:

a) A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes;

b) A list of each major project structure, building, tank, pipe, wall, and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and number or according to a universal designation system;

c) One set of color brochures or color chips showing each proposed color and finish;

d) A specific schedule for completion of the treatment; and

e) A written procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the final finish treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project owner receives notification of approval of the treatment plan by the CPM. Subsequent modifications to the treatment plan are prohibited without CPM approval.

Verification: At least 90 days prior to specifying to the vendor the final colors and finishes of the first structures or buildings for which final finish will be applied during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a plan with the specified revision(s) for review and approval by the CPM before any final finish treatment is applied. Any modifications to the

treatment plan must be submitted to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment.

Prior to the start of commercial operation, the project owner shall notify the CPM that surface treatment of all listed structures and buildings has been completed and they are ready for inspection and shall submit one set of electronic color photographs from the same key observation points (KOPs) analyzed in this report.

The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a): the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

Permanent Exterior Lighting

VIS-2 Consistent with safety and security considerations, the project owner shall design and install all permanent exterior lighting so that: a) excessive light and glare from lamps and reflectors is minimized from public viewing areas beyond the project site, including any off-site construction laydown areas and security buffer areas; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky; d) illumination of the project and its immediate vicinity is minimized; e) lighting on the exhaust stacks shall be the minimum needed to satisfy safety and security concerns; and f) the plan complies with local policies and ordinances of the City of Chula Vista.

The project owner shall submit to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment, a lighting mitigation plan that includes the following:

1. Location and direction of light fixtures shall take the lighting mitigation requirements into account;
2. Lighting design shall consider setbacks of project features from the site boundary and construction laydown areas to aid in satisfying the lighting mitigation requirements;
3. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;
4. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;
5. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and

6. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.

Verification: At least 90 days prior to ordering any permanent exterior lighting, the project owner shall contact the CPM to discuss the documentation required in the lighting mitigation plan. At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment, a lighting mitigation plan. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM. The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan.

Prior to commercial operation, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed and are ready for inspection.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions, including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days.

The project owner shall provide a status report regarding permanent exterior lighting in the Annual Compliance Report. The report shall specify a): the condition of the lighting that has been installed under the lighting plan at the end of the reporting year; b) any deviations in lighting from the plan that occurred during the reporting year; and c) any proposed deviations from the lighting plan for the next year.

Perimeter Landscape Screening

VIS-3 The project owner shall develop a landscape plan that: a) reduces the visibility of the power plant structures; b) avoids species on the California Invasive Plant Council list of invasive species <www.cal-ipc.org>; and c) complies with the local policies and ordinances of the City of Chula Vista.

Trees and other vegetation consisting of informal groupings of fast- to moderate-growing evergreens, shall be strategically placed along the southern and eastern facility boundaries, as appropriate, and be of sufficient density and height to screen the power plant structures to the

greatest feasible extent within the shortest feasible time. The landscaping plan shall exclude non-native species that could invade habitats of the Otay River Preserve.

The project owner shall submit to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment, a landscaping plan providing proper implementation that will satisfy these requirements. The plan shall include:

1. A detailed landscape, grading, and irrigation plan, at a reasonable scale. The plan shall demonstrate how the requirements stated above shall be met. The plan shall provide a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction;
2. A list (prepared by a qualified professional arborist familiar with local growing conditions) of proposed species, specifying installation sizes, growth rates, expected time to maturity, expected size at five years and at maturity, spacing, number, availability, and a discussion of the suitability of the plants for the site conditions and mitigation objectives, with the objective of providing the widest possible range of species from which to choose;
3. Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project;
4. A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project; and
5. The plan shall not be implemented until the project owner receives final approval from the CPM.

Verification: The landscaping plan shall be submitted to the CPM for review and approval and simultaneously to the City of Chula Vista for review and comment, at least 90 days prior to installation. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM and simultaneously to the City of Chula Vista a revised plan for review and approval by the CPM. The planting must occur during the first optimal planting season following site mobilization. The project owner shall simultaneously notify the CPM and the City of Chula Vista within 7 days after completing installation of the landscaping, that the landscaping is ready for inspection. The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Compliance Report.

VIII. OVERRIDE

In the **LAND USE** section of this Decision, we determined that construction and operation of the CVEUP will not comply with applicable laws, ordinances, regulations, or standards (LORS). Under California law, we may not certify the facility unless we make other determinations that "override" the LORS inconsistencies and significant environmental impacts.

The statutory basis for the Commission's discretionary override authority is found in Public Resources Code section 25525, which states:

> The commission shall not certify any facility when it finds . . . 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 the determination, the Commission shall consider the entire record of the proceeding, including, but not limited to, the impacts of the facility on the environment, consumer benefits, and electric system reliability.[56]

The parties have touched on the issue of override in their briefs. At this time, there is insufficient evidence in the record to persuade us that the facility meets the requirements of section 25525. However, as the issue of override was not part of the evidentiary proceedings, we will refrain from making a final determination about it at this time. Should the Applicant wish to offer evidence on matters relevant to the issue of override, we would entertain a request to reopen the record for the limited purpose of receiving such evidence in our usual evidentiary hearing format, with the opportunity for cross-examination and rebuttal by the other parties, as well as comment by members of the public.

[56] Section 1752(k) of our regulations [20 Cal. Code Regs., § 1752(k)] requires that we first arrive at a determination as to whether noncompliance with LORS can be "corrected or eliminated." If a noncompliance cannot be corrected or eliminated, we must then make the determinations specified in Public Resources Code § 25525.

IX. ENVIRONMENTAL JUSTICE

California law defines environmental justice (EJ) as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." [Govt. Code § 65040.12(e); Pub. Res. Code, § 71116(j).]

The Office of Planning and Research (OPR) coordinates California's environmental justice program and consults with the Resources Agency, which directs entities under its jurisdiction including the Energy Commission to consider environmental justice in their decision-making processes if their actions have an impact on the environment. [Govt. Code, § 65040.12(b)(1).] The Resource Agency's guidance includes demographic screening, public outreach, and impact analysis as important factors in implementing its environmental justice policy. In conjunction with the Resources Agency's mandate, the California Environmental Protection Agency (Cal-EPA) established an action plan to address environmental justice in its programs, policies, and standards.[57] (Pub. Res. Code, §§ 71110-71116.)

Two federal directives also provide guidance on incorporating environmental justice concerns in the environmental analyses conducted by state agencies. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" requires the U.S. Environmental Protection Agency (U.S. EPA) and all other federal 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. To implement this policy, the U.S. EPA's 1998 "Final Guidance for Incorporating Environmental Justice Concerns in NEPA Compliance Analyses" calls for a two-step analysis: 1) does the potentially affected community include minority and/or low-income populations and, 2) if it does, are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community.[58]

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[57] October 2004, Cal-EPA Action Plan: http://www.calepa.ca.gov/EnvJustice/ActionPlan/ and Phase 2 updates: http://www.calepa.ca.gov/EnvJustice/ActionPlan/Phase2/default.htm

[58] Intervenor EHC argues that Staff *skipped step two* of the analysis by concluding that no populations would experience air quality or public health impacts. (EHC Opening Brief at 63.) We do not adopt the Intervenor's view in this case since we rely on the scientific evaluations of air quality and public health impacts based on the approved modeling protocols of the expert agencies.

According to the U.S. EPA's guidance, an environmental justice population exists if the low-income and/or minority populations of the affected area constitute 50 percent or more of the general population or if the minority population percentage in the area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. U.S. EPA's definition of environmental justice is:

> …the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people, including racial, ethnic, or economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. (U.S. EPA's 1998 Final Guidance for Incorporating EJ Concerns, et al.)

The Energy Commission staff's environmental justice approach is consistent with guidance from both the Resources Agency and the federal government. The Staff's approach consists of 1) specific public outreach to notify, inform, and involve community members, including non-English speaking individuals; 2) analysis of the applicable demographics to determine the percentage of minority and low-income population living in the potentially affected area; and 3) assessing the potential environmental and health impacts of the proposed project. (Ex. 200, pp. 1-3 to 1-4.)

1. Public Outreach

The Energy Commission's public outreach efforts are facilitated by Staff and the Public Adviser. (Ex. 200, p. 1-4.) The evidentiary record indicates that Staff conducted extensive public outreach in notifying the community about the CVEUP proceeding, holding all public workshops in the local community, and providing ample opportunity for public comment and participation. Notices were sent to adjacent landowners, local and state participating agencies, local newspapers, interested organizations, and local libraries. The Public Adviser also sent notices in English and Spanish and contacted community leaders, individuals, groups, schools, and activist organizations to inform them about the project, the licensing process, and workshops and hearings. The evidentiary hearings were conducted at the Chula Vista City Council Chambers, broadcast over local access TV, and publicized in the local media. Numerous letters and e-

mail comments from members of the community regarding the EEC project were submitted to the Energy Commission and scores of individuals appeared at workshops and at the Evidentiary Hearing to comment on the project. (10/2/08 RT 423 to 545.)

2. Demographic Analysis

Staff reviewed relevant 2000 Census data within a six-mile radius and one-mile radius of the site to determine whether low income/minority populations constitute more than 50 percent of the general population. The data indicate that the minority population by census block (the smallest geographic unit for which the Census Bureau collects and tabulates data) is 73.41 to 81.13 percent within a six-mile and one-mile radius of the project. (Ex. 200, p. 4.9-3.) Census 2000 by census block group (a combination of census blocks and a subdivision of a census tract) shows that the below-poverty population is 13.34 percent within a one-mile radius. (Ex. 200, p. 4.9-3.)

3. Impacts Assessment

Staff relies on its CEQA and LORS compliance analyses to determine whether a project would have significant adverse impacts on public health and the environment. According to Staff, these analyses also serve to identify the "high and adverse" impacts described in the U.S. EPA guidance and to consider whether the potential impacts fall "disproportionately" on minority or low-income populations. (Ex. 200, pp. 1-3 to 1-4.)

Staff reviewed the following technical areas for potential environmental justice impacts: air quality, public health, hazardous materials, noise, water, waste, traffic and transportation, visual resources, land use, and transmission safety and nuisance. (Ex. 200.) Each technical topic reflects Staff's approach to EJ by discussing the environmental setting, potential impacts on public health and safety, environmental impacts, environmental justice populations, compliance with applicable LORS, and mitigation measures.

Regarding land use, we have identified conflicts with the General Plan and Zoning Ordinance of the City of Chula Vista. We conclude, however, that these significant impacts do not disproportionately affect an environmental justice population since any person in the project vicinity could be adversely affected by such conflicts, regardless of ethnicity or income level.

Based on its independent analysis, Staff believes that project mitigation for all topics will reduce impacts to levels below significance for any potentially affected population and thus, there would be no disproportionate impacts on environmental justice populations.

Intervenor EHC argues that even if all impacts are mitigated to levels below significance, there still could be a violation of environmental justice principles, contending that our approach fails to acknowledge "existing disproportionate burdens, past environmental injustices, and relevant disparities in siting projects." (EHC Opening Brief at 64.) Thus, any impact, however, slight, if it contributes to existing environmental burdens, is an environmental justice concern.

Staff relies on the U.S. EPA guidance, which does not require further analysis if there are no impacts to the general population:

> The initial step in the analysis of potential effects is to assess whether there will indeed be potential physical or natural environmental impacts. (U.S. EPA's 1998 Final Guidance for Incorporating EJ Concerns, et al. cited in Staff's opening Brief at 15.)

Staff then points out that under the U.S. EPA Guidance, as well as the Guidelines issued by the Council on Environmental Quality (CEQ), "absent any unmitigated significant adverse environmental impacts from the proposed project affecting the identified minority population, there is no environmental justice issue." (Staff's Opening Brief at 17.)

While Intervenor EHC argues for expanding the environmental justice analysis beyond any published and accepted guidelines or regulations, it is undisputed that Staff's methodology reflects the approach recommended by the U.S. EPA, the California Resources Agency, and Cal-EPA. Further, we are satisfied that the public health analyses conducted by both Applicant and Staff conform with the scientifically approved methodology required by California Air Resources Board (CARB), Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA), and BAAQMD. Applicant's and Staff's reliance on existing California standards in conducting a health risk assessment is entirely within the legal requirements for such analyses.

FINDINGS AND CONCLUSIONS

Based upon the evidence of record, we make the following findings and conclusions:

1. Minority and low income populations exist within both a one and a six mile radius of the site.

2. All environmental impacts from the CVEUP will be mitigated to below a level of significance.

3. Siting of the CVEUP, and the analysis thereof, are consistent with the principles underlying environmental justice.

4. The CVEUP's contribution to cumulative impacts, in conjunction with the impacts from other reasonably foreseeable projects, is adequately addressed in the evidence of record and in appropriate portions of this Decision.

5. The CVEUP will not cause or contribute to disproportionate impacts upon minority or low income groups.

We therefore conclude that the project construction and operation activities will create some degree of benefit to the local area and will conform with principles of environmental justice. No Conditions of Certification are required for this topic.

Appendix A: *Laws, Ordinances, Regulations, and Standards*

Appendix B: *Exhibit List*

Appendix C: *Proof of Service List*

APPENDICES

AIR QUALITY

Applicable LORS	Description
Federal	
40 Code of Federal Regulations (CFR) Part 52	Nonattainment New Source Review (NSR) requires a permit and requires Best Available Control Technology (BACT) and offsets. Permitting and enforcement delegated to SDAPCD. Prevention of Significant Deterioration (PSD) requires major sources to obtain permits for attainment pollutants. A major source for a simple-cycle combustion turbine is defined as any one pollutant exceeding 250 tons per year. Since the emissions from CVEUP would not exceed 250 tons per year, PSD does not apply.
40 CFR Part 60 Subpart KKKK	New Source Performance Standard (NSPS) for gas turbines: 15 parts per million (ppm) NOx at 15 percent O_2 and fuel sulfur limit of 0.060 lb SOx per million Btu heat input. BACT will be more restrictive.
40 CFR Part 70	Title V: federal permit. Title V permit application is required within one year of start of operation. Permitting and enforcement delegated to SDAPCD.
40 CFR Part 72	Acid Rain Program. Requires permit and obtaining sulfur oxides credits. Permitting and enforcement delegated to SDAPCD.
State	
Health and Safety Code (HSC) Section 40910-40930	Permitting of source needs to be consistent with Air Resource Board (ARB) approved Clean Air Plans.
HSC Section 41700	Restricts emissions that would cause nuisance or injury.
Local – San Diego Air Pollution Control District (SDAPCD) Rules and Regulations	
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. Included in these requirements are the federally delegated requirements for New Source Review, Title V Permits, and the Acid Rain Program. Regulation II Rule 20.1 and 20.3 establishes the pre-construction review requirements for new, modified, or relocated facilities, in conformance with the federal New Source Review regulation 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 San Diego County is not unnecessarily restricted. This regulation establishes Best Available Control Technology (BACT) and emission offset requirements.

Regulation IV – Prohibitions	This regulation sets forth the restrictions for visible emissions, odor nuisance, various air emissions, and fuel contaminants. This regulation also specifies additional performance standards for stationary gas turbines. However, for this project these provisions are less strict than the new source rule requirements of Regulation II.
Regulation X – Standards of Performance for New Stationary Sources	Regulation X incorporates provisions of 40 CFR Part 60, Chapter I, and is applicable to all new, modified, or reconstructed sources of air pollution. Sections of this federal regulation apply to stationary gas turbines (40 CFR Part 60 Subpart KKKK) as described above in the federal LORS description. These subparts establish limits of NO_2 and SO_2 emissions from the facility as well as monitoring and test method requirements. SDAPCD has not yet been delegated enforcement authority for this NSPS, but expects delegation later this year.
Regulation XI – National Emission Standards for Hazardous Air Pollutants	Regulation XI adopts federal standards for hazardous air pollutants (40 CFR Part 63) by reference. No such standards presently exist that would apply to the project.
Regulation XII – Toxic Air Contaminants – New Source Review	Regulation XII, Rule 1200, establishes the pre-construction review requirements for new, modified, or relocated sources of toxic air contaminant, including requirements for Toxics Best Available Control Technology (T-BACT) if the incremental project risk exceeds rule triggers.
Regulation XIV – Title V Operating Permits	Regulation XIV, Rule 1401 defines the permit application and issuance as well as compliance requirements associated with the Title V federal permit program. Any new source which qualifies as a Title V facility must obtain a Title V permit within 12 months of starting operation modification of that source. Regulation II, Rule 1412 defines the requirements for the Acid Rain Program, including the requirement for a subject facility to obtain emission allowances for SOx emissions as well as monitoring SOx, NOx, and carbon dioxide (CO_2) emissions from the facility.

ALTERNATIVES

California Environmental Quality Act Criteria

The “Guidelines for Implementation of the California Environmental Quality Act,” Title 14, California Code of Regulation, Section 15126.6(a), provides direction by requiring an evaluation of the comparative merits of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” In addition, the analysis must address the “no project” alternative. [14 Cal. Code Regs., §15126.6(e).]

The range of alternatives is governed by the “rule of reason” which requires consideration only of those alternatives necessary to permit informed decision-making and public participation. CEQA states that an environmental document does not have to consider an alternative where the effect cannot be reasonably ascertained and whose implementation is remote and speculative. [14 Cal. Code Regs., §15126.6(f)(3).]

BIOLOGICAL RESOURCE

Applicable LORS	Description
Federal	
Clean Water Act (CWA) of 1977	Title 33, United States Code, Sections 1251-1376, and Code of Federal Regulations, Part 30, Section 330.5(a)(26), prohibit the discharge of dredged or fill material into the waters of the United States without a permit. The administering agency is the U.S. Army Corps of Engineers (USACE).
Endangered Species Act (ESA) 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 the protection of threatened and endangered plant and animal species and their critical habitat. The administering agency is the U.S. Fish and Wildlife Service (USFWS).
Migratory Bird Treaty Act	Title 16, United States Code, Sections 703 through 712, prohibit the taking of migratory birds, including nests with viable eggs. The administering agency is the USFWS.
Fish and Game Coordination Act	Title 16, United States Code, section 661 et seq. requires federal agencies to coordinate federal actions with the U.S. Fish and Wildlife Service (USFWS) to conserve fish and wildlife resources.
State	
	The administering agency for the following state LORS is the California Department of Fish and Game (CDFG), except for the CWA Section 401 certification, which is administered by the Regional Water Quality Control Board.
California Endangered Species Act (CESA) of 1984	Fish and Game Code Sections 2050 through 2098 protect California's rare, threatened, and endangered species.
California Code of Regulations	California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3, Sections 670.2 and 670.5, list plants and animals of California that are designated as rare, threatened, or endangered.
Fully Protected Species	Fish and Game Code Sections 3511, 4700, 5050, and 5515 prohibit the taking of animals that are classified as fully protected in California.
Nest or Eggs – Take, Possess, or Destroy	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.

Birds of Prey – Take, Possess, or Destroy	Fish and Game Code Section 3503.5 specifically protects California's birds of prey in the orders Falconiformes and Strigiformes by making it unlawful to take, possess, or destroy any such birds of prey or to take, possess, or destroy the nest or eggs of any such bird.
Migratory Birds – Take or Possession	Fish and Game Code Section 3513 protects California's migratory non-game 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.
Natural Community Conservation Plan (NCCP) Act of 1991	This act includes provisions for protection and management of state-listed threatened or endangered plants and animals and their designated habitats.
Native Plant Protection Act of 1977	Fish and Game Code Sections 1900 et seq. designate rare, threatened, and endangered plants in the State of California.
Streambed Alteration Agreement	Fish and Game Code section 1600 et seq. requires the CDFG to review project impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions, and other disturbances.
Regional Water Quality Control Board	By federal law, every applicant for a federal permit or license for an activity which may result in a discharge into a California water body, including wetlands, must request state certification that the proposed activity will not violate state and federal water quality standards.
Local	
San Diego Multiple Species Conservation Program (MSCP)	The MSCP is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP Sub-regional Plan was adopted by the City of San Diego and San Diego County in 1997. The City of Chula Vista (City) adopted the MSCP Subarea Plan as part of its General Plan in 2003. The Subarea Plan is a policy document through which the MSCP Sub-regional Plan is implemented within the City's jurisdiction; it provides a blueprint for habitat preservation and forms the basis for federal and state incidental take permits for 86 plant and animal species within the City. Habitat conservation land within the City is mapped as either 100 percent or 75 to 100 percent Conservation Areas in accordance with the MSCP Sub-regional Plan, which seeks to protect large, interconnected

	blocks of habitat. The 100 percent Conservation Areas are delineated by hard-line boundaries, while the 75 to 100 percent Conservation Areas are defined by a quantitative and a qualitative target for habitat conservation where final boundaries are not yet determined. Development or impact within the 75 to 100 percent Conservation Areas is limited to 25 percent or less of the mapped area, with the remainder managed for its biological resources.
City of Chula Vista General Plan and Habitat Ordinances	The overall goal of the Environmental Element of the Chula Vista General Plan is to improve sustainability through the responsible stewardship of Chula Vista's natural and cultural resources; promote environmental health; and protect persons and property from environmental hazards and the undesirable consequences of noise (City of Chula Vista 2005). Implementation of the Chula Vista MSCP Subarea Plan is the primary means of achieving the General Plan's objective of conserving Chula Vista's sensitive biological resources. The City has also adopted a habitat loss and incidental take ordinance (Chula Vista Municipal Code, Chapter 17.35.010). The purpose and intent of this ordinance is to protect and conserve native habitat within the City of Chula Vista and the viability of the species supported by those habitats. These regulations are intended to implement the City of Chula Vista MSCP Subarea Plan by placing priority on the preservation of biological resources within the planned and protected preserve.

CULTURAL RESOURCES

Applicable LORS	Description
State	
Public Resources Code, section 21083.2	The lead agency may require reasonable steps to preserve a unique archaeological resource in place. Otherwise, the project applicant is required to fund mitigation measures to the extent prescribed in this section. This section also allows a lead agency to make provisions for archaeological resources unexpectedly encountered during construction, which may require the project applicant to fund mitigation and delay construction in the area of the find (CEQA).
California Code of Regulations, Title 14, section 15064.5, subsections (d), (e), and (f)	Subsection (d) allows the project applicant to develop an agreement with Native Americans on a plan for the disposition of remains from known Native American burials impacted by the project. Subsection (e) requires the landowner [possibly the project applicant] to rebury Native American remains elsewhere on the property if other disposition cannot be negotiated within 24 hours of accidental discovery and required construction stoppage. Subsection (f) directs the lead agency to make provisions for historical or unique archaeological resources that are accidentally discovered during construction, which may require the project applicant to fund mitigation and delay construction in the area of the find (CEQA Guidelines).
California Code of Regulations, Title 14, section 15126.4(b)	This section describes options for the lead agency and for the project applicant to arrive at appropriate, reasonable, enforceable mitigation measures for minimizing significant adverse impacts from a project. It 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 advises 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 (CEQA Guidelines).

Public Resources Code 5024.1	The California Register of Historical Resources (CRHR) is established and includes: properties determined eligible for the National Register of Historic Places (NRHP) under four criteria (A. events; B. important persons; C. distinctive construction; and D. data); State Historic Landmark No. 770 and subsequent numbered landmarks; points of historical interest recommended for listing by the State Historical Resources Commission; and historical resources, historic districts, and landmarks designated or listed by a city or county under a local ordinance. CRHR eligibility criteria are: (1) events, (2) important persons, (3) distinctive construction, and (4) data.
Public Resources Code 5020.1(h)	“Historic district” means a definable unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.
California Health and Safety Code, Section 7050.5	This code makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.
Local	
City of Chula Vista, General Plan	Section 3.1.9 of the City of Chula Vista’s General Plan, Environmental Element Chapter 9 asserts that the history of a community is important to the community and warrants the protection of the City (City of Chula Vista 2007).

FACILITY DESIGN

Applicable LORS	Description
Federal	
	Title 29 Code of Federal Regulations (CFR), Part 1910, Occupational Safety and Health standards
State	
	2007 California Building Standards Code (CBSC) (also known as Title 24, California Code of Regulations)
Local	
	San Diego County regulations and ordinances
General	
	American National Standards Institute (ANSI) American Society of Mechanical Engineers (ASME) American Welding Society (AWS) American Society for Testing and Materials (ASTM)

GEOLOGY AND PALEONTOLOGY

Applicable LORS	Description
Federal	
	The proposed CVEUP is not located on federal land. There are no federal LORS for geologic hazards and resources for this site.
State	
California Building Code (CBC), 2007	The CBC (2007) includes a series of standards that are used in project investigation, design, and construction (including grading and erosion control).
Alquist-Priolo Earthquake Fault Zoning Act, Public Resources Code (PRC), section 2621–2630	Mitigates against surface fault rupture of known active faults beneath occupied structures. Requires disclosure to potential buyers of existing real estate and a 50-foot setback for new occupied buildings. The site is not located within a designated Alquist-Priolo Fault Zone.
The Seismic Hazards Mapping Act, PRC Section 2690–2699	Areas are identified that are subject to the effects of strong ground shaking, such as liquefaction, landslides, tsunamis, and seiches.
PRC, Chapter 1.7, sections 5097.5 and 30244	Regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.
Warren-Alquist Act, PRC, sections 25527 and 25550.5(i)	The Warren-Alquist Act requires the Energy Commission to "give the greatest consideration to the need for protecting areas of critical environmental concern, including, but not limited to, unique and irreplaceable scientific, scenic, and educational wildlife habitats; unique historical, archaeological, and cultural sites…" With respect to paleontologic resources, the Energy Commission relies on guidelines from the Society for Vertebrate Paleontology, indicated below.
California Coastal Act, sections 30244 and 30253	Section 30244 requires mitigation for adversely impacted archeological and paleontological resources. Section 30253 requires that risks to life and property that may result from geologic, flood and fire hazards be minimized, and that the "stability and structural integrity" of the site and natural landforms in the surrounding area be maintained.
California Environmental Quality Act (CEQA), PRC sections 15000 et seq., Appendix G	Mandates that public and private entities identify the potential impacts on the environment during proposed activities. Appendix G outlines the requirements for compliance with CEQA and provides a definition of significant impacts on a fossil site.

Applicable LORS	Description
Society for Vertebrate Paleontology (SVP), 1995	The “Measures for Assessment and Mitigation of Adverse Impacts to Non-Renewable Paleontological Resources: Standard Procedures” is a set of procedures and standards for assessing and mitigating impacts to vertebrate paleontological resources. The measures were adopted in October 1995 by the SVP, a national organization of professional scientists.
Local	
City of Chula Vista General Plan, 2005	Requires compliance with a number of development standards, including safety requirements. Also has established a special study zone in the vicinity of the Red Hill Fault.

HAZARDOUS MATERIALS MANAGEMENT

Applicable LORS	Description
Federal	
The Superfund Amendments and Reauthorization Act of 1986 (42 USC §9601 et seq.)	Contains the Emergency Planning and Community Right To Know Act (also known as SARA Title III).
The Clean Air Act (CAA) of 1990 (42 USC 7401 et seq. as amended)	Established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials.
The CAA section on risk management plans (42 USC §112(r)	Requires states to implement a comprehensive system informing local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of both SARA Title III and the CAA are reflected in the California Health and Safety Code, section 25531, et seq.
49 CFR 172.800	The U.S. Department of Transportation (DOT) requirement that suppliers of hazardous materials prepare and implement security plans.
49 CFR Part 1572, Subparts A and B	Requires suppliers of hazardous materials to ensure that all their hazardous materials drivers are in compliance with personnel background security checks.
The Clean Water Act (CWA) (40 CFR 112)	Aims to prevent the discharge or threat of discharge of oil into navigable waters or adjoining shorelines. Requires a written spill prevention, control, and countermeasures (SPCC) plan to be prepared for facilities that store oil that could leak into navigable waters.
Title 49, Code of Federal Regulations, Part 190	Outlines gas pipeline safety program procedures.
Title 49, Code of Federal Regulations, Part 191	Addresses transportation of natural and other gas by pipeline: annual reports, incident reports, and safety-related condition reports. Requires operators of pipeline systems to notify the DOT of any reportable incident by telephone and then submit a written report within 30 days.
Title 49, Code of Federal Regulations, Part 192	Addresses transportation of natural and other gas by pipeline and minimum federal safety standards, specifies minimum safety requirements for pipelines including material selection, design requirements, and corrosion

	protection. The safety requirements for pipeline construction vary according to the population density and land use that characterize the surrounding land. This part also contains regulations governing pipeline construction (which must be followed for Class 2 and Class 3 pipelines) and the requirements for preparing a pipeline integrity management program.
Federal Register (6 CFR Part 27) interim final rule	A regulation of the U.S. Department of Homeland Security that requires facilities that use or store certain hazardous materials to submit information to the department so that a vulnerability assessment can be conducted to determine what certain specified security measures shall be implemented.
State	
Title 8, California Code of Regulations, section 5189	Requires facility owners to develop and implement effective safety management plans that 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 Risk Management Plan (RMP) process.
Title 8, California Code of Regulations, section 458 and sections 500 to 515	Sets forth requirements for the design, construction, and operation of vessels and equipment used to store and transfer ammonia. These sections generally codify the requirements of several industry codes, including the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, the American National Standards Institute (ANSI) K61.1 and the National Boiler and Pressure Vessel Inspection Code. These codes apply to anhydrous ammonia but are also used to design storage facilities for aqueous ammonia.
California Health and Safety Code, section 25531 to 25543.4	The California Accidental Release Program (CalARP) requires the preparation of a Risk Management Plan (RMP) and off-site consequence analysis (OCA) and submittal to the local Certified Unified Program Agency for approval.
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.”

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)	Prevents certain chemicals that cause cancer and reproductive toxicity from being discharged into sources of drinking water.
California Public Utilities Commission General Order 112-E and 58-A	Contains standards for gas piping construction and service.
Local	
City of Chula Vista Municipal Code chapter 8.34	Adopts the San Diego County hazardous materials disclosure ordinance requiring all facilities that handle hazardous materials to prepare a Hazardous Materials Business Plan. This is then enforced by San Diego County Hazardous Materials Division which is the Certified Unified Program Agency

LAND USE

Applicable LORS	Description
Federal	
	None
State	
	None
Local	
Chula Vista General Plan	The Chula Vista General Plan functions as the "constitution" for future growth and development. It consists of six elements, including the Land Use & Transportation Element, Economic Development Element, Housing Element, Public Facilities & Services Element, Environmental Element, and Growth Management Element. The elements of the general plan are closely interrelated. Each element must be internally consistent as well as consistent with one another. The Land Use and Transportation Element addresses the location and compatibility of land uses and provides for a planned pattern of land uses.
Chula Vista Municipal Code	The Chula Vista Municipal Code consists of all of the regulatory and penal ordinances and certain administrative ordinances of the City, codified pursuant to the provisions of Sections 50022.1 through 50022.8 and 50022.10 of the Government Code. The Municipal Code includes the City's Subdivision Ordinance and Zoning Ordinance, including the Growth Management Ordinance. Zoning classifies the immediate, permissible uses of land and is one of the primary means of implementing the General Plan. The Chula Vista Zoning Ordinance divides the City into districts or zones specifying what uses are permitted, conditionally permitted, or prohibited within each zone.
Chula Vista Redevelopment Plan – Southwest Area Plan	The City of Chula Vista has three redevelopment plans encompassing redevelopment project areas. Redevelopment plans are implemented through a variety of means, including large to small scale projects, as well as focused strategic plans. The proposed CVEUP is located in the South Geographic Focus Area, which includes a myriad of land uses and historical development patterns. To create a comprehensive and consistent vision for the successful redevelopment of the South Geographic Focus Area, the Chula Vista Redevelopment Agency plans on preparing a Southwest Specific Plan, which would establish development

Applicable LORS	Description
	standards and design guidelines consistent with the land use policies and objectives identified in the Southwest Area Plan of the General Plan, which currently details the objectives for the redevelopment area. According to the City of Chula Vista, “at this time preparation of the Southwest Specific Plan has not begun and currently the timing for preparation of this plan has not been identified” (COCV 2008b).
Otay Valley Regional Park Concept Plan	The Otay Valley Regional Park (OVRP) Concept Plan, adopted in May 2001, established a plan for multi-jurisdictional regional open space of 8,700 acres that will contain a substantial preserve area, active recreation, and passive park opportunities. Equestrian, hiking, and biking trails are anticipated. The park will extend through the Otay River Valley, from San Diego Bay to the Upper and Lower Otay Lakes. While the park is regional in scope, the provision of certain park and recreational facilities will effectively serve as local neighborhood and/or community parks for Chula Vista residents.
Chula Vista Multiple Species Conservation Program Subarea Plan	The Multiple Species Conservation Program (MSCP) (the **Biological Resources** section of this Decision addresses consistency with the MSCP) is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP Sub-regional Plan was adopted by the City of San Diego and San Diego County in 1997, and conditionally approved by the City of Chula Vista in October 2000. The MSCP Sub-regional Plan encompasses an area of approximately 580,000 acres and 12 local jurisdictions, including the City of Chula Vista. On May 13, 2003, the City of Chula Vista City Council and Planning Commission approved the City of Chula Vista MSCP Subarea Plan (Subarea Plan) and formally adopted it as part of the City’s General Plan. The Subarea Plan is the policy document through which the MSCP Sub-regional Plan is implemented within the City's jurisdiction. The Subarea Plan provides the framework for habitat planning and specifically establishes areas of conservation and development within the Chula Vista MSCP Planning Area.

NOISE AND VIBRATION

Applicable LORS	Description
Federal	
(OSHA): 29 U.S.C. § 651 et seq; 29 CFR § 1910.95	Protects workers from the effects of occupational noise exposure.
State	
(Cal/OSHA): Cal. Code Regs., tit. 8, §§ 5095–5099; Government Code section 65302(f)	Protects workers from the effects of occupational noise exposure. Encourages each local governmental entity to perform noise studies and implement a noise element as part of its General Plan.
Local	
City of Chula Vista General Plan Noise Element, Ch. 9, § 3.5 Noise City of Chula Vista Municipal Code, Ch. 19.68, Noise Control Ordinance	Table 9-2 establishes Exterior Land Use/Noise Compatibility Guidelines for different land uses. Table III establishes Exterior Noise Limits for different land uses. Section 19.68.060(C)(2) exempts construction and demolition work from these limits.

POWER PLANT EFFICIENCY

No federal, state, local, or county laws, ordinances, regulations and standards (LORS) apply to the efficiency of this project.

POWER PLANT RELIABILITY

No federal, state, local, or county laws, ordinances, regulations and standards (LORS) pertain to the reliability of this project.

PUBLIC HEALTH

Applicable LORS	Description
Federal	
Clean Air Act section 112 (42 U.S. Code section 7412)	Requires new sources that emit more than 10 tons per year of any specified hazardous air pollutant (HAP) or more than 25 tons per year of any combination of hazardous air pollutants (HAPs) to apply Maximum Achievable Control Technology (MACT).
State	
California Health and Safety Code sections 39650 et seq.	These sections mandate the California Air Resources Board (ARB) and the Department of Health Services to establish safe exposure limits for toxic air pollutants and identify pertinent best available control technologies (BACT). 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.”
California Code of Regulations, Title 22, section 60306	Requires that whenever a cooling system uses recycled water in conjunction with an air conditioning facility and a cooling tower that creates a mist that could come into contact with employees or members of the public, a drift eliminator shall be used, and chlorine, or other biocides shall be used to treat the cooling system re-circulating water to minimize the growth of Legionella and other micro-organisms.
Local	
San Diego Air Pollution Control District (SDAPCD) Rules 1200 and 1210	Require that Best Available Control Technology (BACT) for Toxic Air Pollutants (TACs) be applied to major sources of these pollutants and that a risk assessment or risk screening analysis be conducted for new or modified sources through the new source review (NSR) process.

SOCIOECONOMICS

Applicable LORS	Description
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 federal agencies to achieve environmental justice as part of this mission. The order requires the U.S. 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 United States Code)	Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national programs in all programs or activities receiving federal financial assistance.
EPA's 1998 "Final Guidance for Incorporating Environmental Justice Concerns"	Minority (people of color) and low-income populations are identified where either the minority or low-income population of the affected area is greater than 50 percent of the affected area's general population; or the minority or low-income population percentage of the area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.
State	
California Statute, Section 65040.12 (c)	Section 65040.12 (c) defines "environmental justice" to mean "fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

California Resources Agency Environmental Justice Policy	It is the policy of the Resources Agency that the fair treatment of people of all races, cultures and income shall be fully considered during the planning, decisionmaking, development and implementation of all Resources Agency programs, policies and activities. The intent of this policy is to ensure that the public, including minority and low-income populations, are informed of opportunities to participate in the development and implementation of all Resources Agency programs, policies and activities, and that they are not discriminated against, treated unfairly, or caused to experience disproportionately high and adverse human health or environmental effects from environmental decisions.
California Education Code, Section 17620	The governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement for the purpose of funding the construction or reconstruction of school facilities.
California Government Code, Sections 65996-65997	These sections include provisions for school district levies against development projects. As amended by Senate Bill (SB) 50 (Statutes of 1998, Chapter 407, § 23), these sections state that except for those fees established under Education Code 17620, public agencies at the state and local level may not impose fees, charges, or other financial requirements to offset the cost for school facilities.
Local	
Chula Vista General Plan, Economic Development Element	Designed to positively influence the types of jobs that will be created and retained and the balance between employment and housing.
Chula Vista Redevelopment Plan	To assist the city in eliminating blight from a designated area and to achieve desired development, reconstruction, and rehabilitation.

SOIL AND WATER RESOURCES

Applicable LORS	Description
Federal	
Clean Water Act (CWA) (33 United States Code section 1251 et seq.)	The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non point source discharges to surface water. This includes regulation of stormwater discharges during construction and operation of a facility normally addressed through a general National Pollutant Discharge Elimination System (NPDES) permit.
CWA section 401	Section 401 of the CWA requires that any activity that may result in a discharge into a water body must be certified by the Regional Water Quality Control Board (RWQCB)
CWA section 404	Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. The Corps issues site specific or general (nationwide) permits for such discharges.
Resource Conservation and Recovery Act (40 Code of Federal Regulations Part 260, et seq.)	The act seeks to prevent surface and groundwater contamination, sets guidelines for determining hazardous wastes, and identifies proper methods for handling and disposing of those wastes.
State	
California Constitution, Article X, section 2	The State Constitution requires that the water resources of the state be put to beneficial use to the fullest extent possible and states that the waste, unreasonable use, or unreasonable method of use of water is prohibited.
Porter Cologne Water Quality Control Act (Water Code § 13000 et seq.)	The act requires the State Water Resources Control Board (SWRCB) and the nine RWQCBs to adopt water quality criteria to protect state waters. These standards are typically applied to the proposed project through the Waste Discharge Requirements (WDRs) permit. These regulations require that the RWQCB issue WDRs specifying conditions regarding the construction, operation, monitoring, and closure of waste disposal sites, including injection wells and evaporation ponds for waste disposal.
California Water Code (CWC) section 13550	CWC section 13550 requires the use of recycled water for industrial purposes subject to recycled water being available and meeting certain

	conditions such as the quality and quantity of the recycled water being suitable for the use, the cost being reasonable, and the use not being detrimental to public health.
California Water Code (CWC) section 13552.6	CWC section 13552.6 prohibits the use of domestic water for cooling towers if suitable recycled water is available.
The California Safe Drinking Water and Toxic Enforcement Act (California Health & Safety Code § 25249.5 et seq.)	The California Safe Drinking Water and Toxic Enforcement Act prohibits actions contaminating drinking water with chemicals known to cause cancer or possessing reproductive toxicity.
Recycling Act of 1991 (Water Code § 13575 et seq.)	The Water Recycling Act of 1991 encourages the use of recycled water for certain uses and establishes standards for the development and implementation of recycled water programs.
California Code of Regulations, Title 22	Under Title 22 of the California Code of Regulations, the California Office of Environmental Health Hazard Assessment (OEHHA) reviews and approves wastewater treatment systems to ensure they meet tertiary treatment standards allowing use of recycled water for industrial processes such as steam production and cooling water. OEHHA also specifies secondary drinking water standards in terms of consumer acceptance contaminant levels, including total dissolved solids ranging from a recommended level of 500 milligrams per liter (mg/l), an upper level of 1,000 mg/l and a short-term level of 1,500 mg/l.
Warren-Alquist Act Public Resources Code section 25500 et seq.	The California Energy Commission has the exclusive authority to certify the construction and operation of thermal electric power plants 50 megawatts (MW) or larger. The Energy Commission certification is in lieu of any permit required by state, regional, or local agencies and federal agencies to the extent permitted by federal law (Pub. Resources Code, § 25500). The Energy Commission must review power plant applications for certification to assess potential environmental and public health and safety impacts, potential measures to mitigate those impacts (Pub. Resources Code, § 25519), and compliance with applicable governmental laws and standards (Pub. Resources Code, § 25523 [d]).
Energy Commission *2003 Integrated Energy Policy Report (IEPR)*	Consistent with State Water Resources Control Board Policy 75-58 and the Warren-Alquist Act, the Energy Commission will approve the use of fresh

	water for cooling purposes by power plants it licenses only where alternative water supply sources and alternative cooling technologies are shown to be “environmentally undesirable” or “economically unsound.” “Additionally, the Energy Commission will require zero liquid discharge technologies unless such technologies are shown to be “environmentally undesirable” or “economically unsound.”
State Water Resources Control Board (SWRCB) Policies: Resolution 75-58 & Resolution 88-63	The principal policy of the SWRCB that addresses the specific siting of energy facilities is the Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Power Plant Cooling (adopted by SWRCB on June 19, 1976, by Resolution 75-58). This policy states that use of fresh inland waters should only be used for power plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. Resolution 75-58 defines fresh inland waters as those “which are suitable for use as a source of domestic, municipal, or agricultural water supply and which provide habitat for fish and wildlife.” Resolution 88-63 defines suitability of sources of drinking water. The total dissolved solids must exceed 3,000 mg/l for it to be considered unsuitable, or potentially unsuitable, for municipal or domestic water supply.
Local	
City of Chula Vista General Plan, rev. 2005 Ord. 3005 § 1, 2005; Ord. 1797 § 1, 1978; Chula Vista Municipal Code (CVMC) 15.04.015	The City of Chula Vista regulates activities associated with excavation, grading, clearing, grubbing, filling, and erosion control.
City of Chula Vista General Plan, rev. 2005 Ord. 3005 § 1, 2005; Ord. 2678 § 2, 1996; Ord. 2128 § 3, 1985; Ord. 1797 § 1, 1978; CVMC 15.04.040	The purpose of these ordinances is to help control stormwater run-off through the use of ground cover plantings.
City of Chula Vista, Wastewater Ordinance (2466 § 7, 1991)	Regulates connections to the City of Chula Vista’s sewer system.

TRANSMISSION LINE SAFETY AND NUISANCE

Applicable LORS	Description
Aviation Safety	
Federal	
Title 14, Part 77 of the Code of Federal Regulations (CFR),"Objects Affecting the Navigable Air Space"	Describes the criteria used to determine the need for a Federal Aviation Administration (FAA) "Notice of Proposed Construction or Alteration" in cases of potential obstruction hazards.
FAA Advisory Circular No. 70/7460-1G, "Proposed Construction and/or Alteration of Objects that May Affect the Navigation Space"	Addresses the need to file the "Notice of Proposed Construction or Alteration" (Form 7640) with the FAA in cases of potential for an obstruction hazard.
FAA Advisory Circular 70/460-1G, "Obstruction Marking and Lighting"	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.
Interference with Radio Frequency Communication	
Federal	
Title 47, CFR, Section 15.2524, Federal Communications Commission (FCC)	Prohibits operation of devices that can interfere with radio-frequency communication.
State	
California Public Utilities Commission (CPUC) General Order 52 (GO-52)	Governs the construction and operation of power and communications lines to prevent or mitigate interference.
Audible Noise	
Local	
San Diego County General Plan, Noise Element	References the County's Ordinance Code for noise limits.
City of Chula Vista Municipal Code, Chapter 13.01.	Sets noise limits according to land use zoning and time of day.
Hazardous and Nuisance Shocks	
State	
CPUC GO-95, "Rules for Overhead Electric Line Construction"	Governs clearance requirements to prevent hazardous shocks, grounding techniques to minimize nuisance shocks, and maintenance and inspection requirements.
Title 8, California Code of Regulations (CCR) section 2700 et seq. "High Voltage Safety Orders"	Specifies requirements and minimum standards for safely installing, operating, working around, and maintaining electrical installations and equipment.
National Electrical Safety Code	Specifies grounding procedures to limit nuisance shocks. Also specifies minimum conductor ground clearances.

Applicable LORS	Description
Industry Standards	
Institute of Electrical and Electronics Engineers (IEEE) 1119, “IEEE Guide for Fence Safety Clearances in Electric-Supply Stations”	Specifies the guidelines for grounding-related practices within the right-of-way and substations.
Electric and Magnetic Fields	
State	
CPUC GO-131-D, ”Rules for Planning and Construction of Electric Generation Line and Substation Facilities in California”	Specifies application and noticing requirements for new line construction including EMF reduction.
CPUC Decision 93-11-013	Specifies CPUC requirements for reducing power frequency electric and magnetic fields.
Industry Standards	
American National Standards Institute (ANSI/IEEE) 644-1944 Standard Procedures for Measurement of Power Frequency Electric and Magnetic Fields from AC Power Lines	Specifies standard procedures for measuring electric and magnetic fields from an operating electric line.
Fire Hazards	
State	
14 CCR sections 1250–1258, “Fire Prevention Standards for Electric Utilities”	Provides specific exemptions from electric pole and tower firebreak and conductor clearance standards and specifies when and where standards apply.

TRAFFIC AND TRANSPORTATION

Applicable LORS	Description
Federal	
Code of Federal Regulations, Title 14 Aeronautics and Space, Part 77 Objects Affecting Navigable Airspace (14 CFR 77)	This regulation establishes standards for determining physical obstructions to navigable airspace; sets noticing and hearing requirements; and provides for aeronautical studies to determine the effect of physical obstructions to the safe and efficient use of airspace.
CFR, Title 49, Subtitle B	49 CFR Subtitle B includes procedures and regulations pertaining to interstate and intrastate transport (including hazardous materials program procedures) and provides safety measures for motor carriers and motor vehicles that operate on public highways.
State	
California Vehicle Code (CVC), Division 2, Chapter 2.5, Div. 6; Chap. 7, Div. 13; Chap. 5, Div. 14.1; Chap. 1 & 2, Div. 14.8, Div. 15	This code includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.
California Streets and Highway Code, Division 1 & 2, Chapter 3 & Chapter 5.5	This code includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits.
Local	
San Diego Association of Governments (SANDAG) Regional Transportation Plan	The plan includes public policies and strategies for the transportation system in the San Diego County region.
Chula Vista General Plan	This plan establishes regional transportation objectives, policies, and implementation measures for various modes of transportation.
Chula Vista Threshold Standard Policy	The policy requires maintenance of Level of Service (LOS) “C” or better as measured by observed average travel speed on all signalized arterial streets, except that during peak hours, an LOS “D” can occur for no more than any two hours of the day.

TRANSMISSION SYSTEM ENGINEERING

Applicable LORS	Description
The North American Electric Reliability Corporation (NERC)	Reliability standards for the bulk electric transmission systems of North America provide national policies, standards, principles, and guides to ensure the adequacy and security of the electric transmission system. The NERC planning standards provide for system performance levels for both normal and contingency conditions. While these standards are similar to the NERC/Western Electricity Coordinating Council's (WECC) planning standards, certain aspects of the NERC/WECC standards are either more stringent or more specific than the NERC standards alone for transmission system contingency performance. The NERC's planning standards apply not only to interconnected system operation but to individual service areas as well (NERC 2006).
Western Electricity Coordinating Council's (WECC)	The WECC's planning standards are merged with the NERC's reliability standards to provide the system performance standards used to assess the reliability of the interconnected system. These standards require the uninterrupted continuity of service as their first priority, and the preservation of interconnected operation as their second priority. Some aspects of the NERC/WECC standards are more stringent or specific than NERC standards alone. 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 WECC system is based to a large degree upon Section I.A of the standards, *NERC and WECC Planning Standards with Table I and WECC Disturbance-Performance Table,* and on Section I.D, *NERC and WECC 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 allowable variations in thermal loading, voltage and frequency, and the loss of load that could 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) to a level that seeks to prevent system cascading and the subsequent blackout of islanded areas during a major disturbance (such as the loss of either multiple 500 kV lines along a common right- of-way, and/or the loss of multiple generators). While controlled loss of generation or load or system separation is permitted under certain circumstances, uncontrolled loss is not permitted (WECC 2002).
California Public Utilities Commission (CPUC) General Order 95 (GO-95*), Rules for Overhead Electric Line Construction*	Specifies uniform requirements for the construction of overhead electric lines. Compliance with this order ensures both reliable service and a safe working environment for those working in the construction, maintenance, operation, or use of overhead electric lines, and for the safety of the general public.
CPUC General Order 128 (GO-128), *Rules for Underground Electric Line Construction*	Establishes uniform requirements for the construction of underground electric lines. Compliance with this order also ensures both reliable service and a safe working environment for those working in the construction, maintenance, operation, or use of underground electric lines, and for the safety of the general public.
National Electric Safety Code 1999	Provides electrical, mechanical, civil, and structural requirements for overhead electric line construction and operation.
California Independent System Operator (CAISO)	Provide the standards and guidelines that assure adequacy, security and reliability during the planning process of the California ISO's electric transmission facilities. The California ISO planning standards incorporate both the NERC and WECC planning standards. With regard to power flow and stability simulations, the California ISO's planning standards are similar to those of the NERC and WECC, and to the NERC's planning standards for transmission system contingency performance. However, the California ISO's standards provide additional requirements that are not found in the NERC, WECC, or NERC planning standards. The California ISO standards apply to all participating transmission owners that interconnect to both the

	California ISO-controlled transmission grid, and to neighboring grids not operated by the California ISO (California ISO 2002a).
	California ISO planning standards also California ISO and Federal Energy Regulatory Commission (FERC) electric tariffs provide guidelines for the construction of all transmission additions and upgrades (projects) within the California ISO-controlled grid. The California ISO also determines the need for a proposed project, its cost responsibility, and provides operational review for all facilities connected to the California ISO grid (California ISO 2003a).

VISUAL RESOURCES

Applicable LORS	Description
Federal	
Transportation Equity Act for the 21st Century of 1998 and Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2005	There are no federal lands within the region of potential visual effect, nor are there any recognized National Scenic Byways, or All American Roads within the project vicinity.
State	
California Streets and Highways Code, sections 260 through 263 – Scenic Highways	There are no state-eligible or designated scenic highway corridors within the effective viewshed of the project. The nearest scenic highways are State Routes (SRs) 5 and 94. Both are eligible scenic highways. SR 5 is almost 4 miles west of the project, and SR 94 is more than 10 miles east of the project.
Local	
City of Chula Vista Vision 2020 General Plan, adopted December 13, 2005. Chapter 5, Land Use and Transportation (LUT) Element, section 7.0, Planning, Factors, Objectives and Policies.	
Policy LUT 6.1: Ensure through adherence to design guidelines and zoning standards, that the design review process guarantees excellence in design and that new construction and alterations of existing buildings are compatible with the best character elements of the area.	*Objective – LUT 6:* Ensure adjacent land uses are compatible with one another.
Policy LUT 7.4: Require landscape and/or open space buffers to maintain a naturalized or softer edge for proposed private	*Objective – LUT 7:* Provide appropriate transitions between land uses.

development directly adjacent to natural and public open space areas. **Policy – LUT 9.1**: Create consistent entry features for City entryways and gateways so people recognize that they are entering Chula Vista.	*Objective – LUT 9:* Create enhanced gateway features for City entry points and other important areas, such as special districts.
Policy – LUT 9.3: As part of the approval process for projects within designated City entryway/gateway areas, the City shall confirm that the design conforms to applicable entryway/gateway design guidelines and standards.	*Discussion of Policies LUT 9.1 and 9.3:* There are three categories of entryways and gateways into the city: (1) overall entryways, (2) primary entryways, and (3) secondary gateways. There are no overall entryways or primary entryways within the effective viewshed of the project. However, a secondary gateway area is located on Beyer Way at the southern city boundary, less than one mile from the project site. While the project could be seen from this gateway, the project is not within the secondary gateway area as shown on Figure 5-6 of the Chula Vista General Plan.
Policy – LUT 11.1: Promote development that creates and enhances positive spatial attributes of major public streets; open spaces; cityscape; mountain and bay sight lines; and important gateways into the City.	*Objective – LUT 11:* Ensure that buildings and related site improvements for public and private development are well designed and compatible with surrounding properties and districts.

Policy – LUT 11.2: Promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista, and create a vital and attractive environment for businesses, residents, and visitors. **Policy – LUT 11.3**: The City shall, through the development of regulations and guidelines, ensure that good project landscape and site design creates places that are well planned; attractive; efficient; safe; and pedestrian-friendly. **Policy LUT 11.4**: Actively promote architectural and design excellence in buildings, open space and urban design. **Policy LUT 11.5**: Require a design review process for all public and private discretionary projects (which includes architectural, site plan, landscape and signage design) to review and evaluate projects prior to issuance of building permits to determine whether compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development plans.	

Policy LUT 13.1: Identify and protect important public viewpoints and viewsheds throughout the Planning Area, including features within and outside the planning area such as: mountain; native habitat areas; San Diego Bay; and historic resources.	*Objective LUT* – 13: Preserve scenic resources in Chula Vista, maintain the City's open space network, and promote beautification of the City.
Policy LUT 13.4: Any discretionary projects proposed adjacent to scenic routes, with the exception of single-family dwellings, shall be subject to design review to ensure that the design of the development proposal will enhance the scenic quality of the route.	*Discussion of Policy 13.4*: There are 14 road segments within the City that are classified as "Scenic Roadways." Except for Marina Parkway, all of the scenic roadways are located east of Interstate 805. None of the roadways are within the effective viewshed of the project.
Policy LUT 45.4: Continue ongoing code enforcement efforts to ensure acceptable property maintenance standards.	*Objective LUT – 45*: Provide for and enhance a strong business district along Main Street that can be balanced between meeting the community's economic needs and establishing a strong open space connection with the nearby neighborhoods.
Policy LUT 45.5: The City shall prepare, or cause to have prepared, a specific plan or plans, for the Main Street District area that address an increase in depth of Limited Industrial designated land uses on the north side of Main Street back to Zenith Street; establishes design and landscape guidelines and zoning-level standards; and addresses	*Discussion of Policy LUT 45.5:* There are two areas of Chula Vista identified as "Focused Areas of Change" where plans are for more development, revitalization, and/or redevelopment. One of these areas is the "Southwest Focus Area," which includes plans for the Main Street District. This district encompasses the project site and extends west to Industrial Boulevard, east to Hilltop Drive, south to the city boundary, and one block north of Main Street to the boundary of the Otay Town neighborhood.

the interface of the Otay Valley Regional Park with land uses on or near Main Street. The City will prepare an Implementation Program to define logical planning units within the overall Main Street District, and to assure establishment of the above plans/regulations for the overall District and the identified planning units. The Implementation Program will also include interim provisions for consideration of any projects within this area prior to completion and adoption of the applicable plans/regulations.	

WASTE MANAGEMENT

Applicable LORS	Description
Federal	
Title 42, United States Code, §§ 6901, et seq. Solid Waste Disposal Act of 1965 (as amended and revised by the Resource Conservation and Recovery Act of 1976, et al.)	The Solid Waste Disposal Act, as amended and revised by the Resource Conservation and Recovery Act (RCRA) et al., establishes requirements for the management of solid wastes (including hazardous wastes), landfills, underground storage tanks, and certain medical wastes. The statute also addresses program administration, implementation, and delegation to states, enforcement provisions, and responsibilities, as well as research, training, and grant funding provisions. RCRA Subtitle C establishes provisions for the generation, storage, treatment, and disposal of hazardous waste, including requirements addressing: • generator record keeping practices that identify quantities of hazardous wastes generated and their disposition; • waste labeling practices and use of appropriate containers; • use of a manifest when transporting wastes; • submission of periodic reports to the United States Environmental Protection Agency (U.S. EPA) or other authorized agency; and • corrective action to remediate releases of hazardous waste and contamination associated with RCRA-regulated facilities. RCRA Subtitle D establishes provisions for the design and operation of solid waste landfills. RCRA is administered at the federal level by U.S. EPA and its 10 regional offices. The Pacific Southwest regional office (Region 9) implements U.S. EPA programs in California, Nevada, Arizona, and Hawaii.
Title 42, United States Code, §§ 9601, et seq.	The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund, establishes authority and funding mechanisms for cleanup of uncontrolled or abandoned hazardous waste sites, as well as cleanup of accidents, spills, or emergency

Comprehensive Environmental Response, Compensation and Liability Act	releases of pollutants and contaminants into the environment. Among other things, the statute addresses: • reporting requirements for releases of hazardous substances; • requirements for remedial action at closed or abandoned hazardous waste sites and brownfields; • liability of persons responsible for releases of hazardous substances or waste; and • requirements for property owners/potential buyers to conduct “all appropriate inquiries” into previous ownership and uses of the property to 1) determine if hazardous substances have been or may have been released at the site and 2) establish that the owner/buyer did not cause or contribute to the release. A Phase I Environmental Site Assessment is commonly used to satisfy CERCLA “all appropriate inquiries” requirements.
Title 40, Code of Federal Regulations (CFR), Subchapter I – Solid Wastes	These regulations were established by U.S. EPA to implement the provisions of the Solid Waste Disposal Act and RCRA (described above). Among other things, the regulations establish the criteria for classification of solid waste disposal facilities (landfills), hazardous waste characteristic criteria and regulatory thresholds, hazardous waste generator requirements, and requirements for management of used oil and universal wastes. • Part 246 addresses source separation for materials recovery guidelines. • Part 257 addresses the criteria for classification of solid waste disposal facilities and practices. • Part 258 addresses the criteria for municipal solid waste landfills. • Parts 260 through 279 address management of hazardous wastes, used oil, and universal wastes (i.e., batteries, mercury-containing equipment, and lamps). U.S. EPA implements the regulations at the federal level. However, California is an authorized state so the regulations are implemented by state agencies and authorized local agencies in lieu of U.S. EPA.

Title 49, CFR, Parts 172 and 173 Hazardous Materials Regulations	U.S. Department of Transportation established standards for transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping of hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests. Section 172.205 specifically addresses use and preparation of hazardous waste manifests in accordance with Title 40, CFR, section 262.20.
State	
California Health and Safety Code, Chapter 6.5, §§ 25100, et seq. Hazardous Waste Control Act of 1972, as amended	This California law creates the framework under which hazardous wastes must be managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA program. It also provides for the designation of California-only hazardous wastes and development of standards (regulations) that are equal to or, in some cases, more stringent than federal requirements. The California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC) administers and implements the provisions of the law at the state level. Certified Unified Program Agencies (CUPAs) implement some elements of the law at the local level.
Title 22, California Code of Regulations (CCR), Division 4.5 Environmental Health Standards for the Management of Hazardous Waste	These regulations establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the California Hazardous Waste Control Act and federal RCRA. As with the federal requirements, waste generators must determine if their wastes are hazardous according to specified characteristics or lists of wastes. Hazardous waste generators must obtain identification numbers, prepare manifests before transporting the waste off site, and use only permitted treatment, storage, and disposal facilities. Generator standards also include requirements for record keeping, reporting, packaging, and labeling. Additionally, while not a federal requirement, California requires that hazardous waste be transported by registered hazardous waste transporters. The standards addressed by Title 22, CFR include: • Identification and Listing of Hazardous Waste (Chapter 11, §§ 66261.1, et seq.)

	• Standards Applicable to Generators of Hazardous Waste (Chapter 12, §§ 66262.10, et seq.) • Standards Applicable to Transporters of Hazardous Waste (Chapter 13, §§ 66263.10, et seq.) • Standards for Universal Waste Management (Chapter 23, §§ 66273.1, et seq.) • Standards for the Management of Used Oil (Chapter 29, §§ 66279.1, et seq.) • Requirements for Units and Facilities Deemed to Have a Permit by Rule (Chapter 45, §§ 67450.1, et seq.) The Title 22 regulations are established and enforced at the state level by DTSC. Some generator standards are also enforced at the local level by CUPAs.
California Health and Safety Code, Chapter 6.11 §§ 25404–25404.9 Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program)	The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the six environmental and emergency response programs listed below. • Aboveground Storage Tank Program • Business Plan Program • California Accidental Release Prevention (CalARP) Program • Hazardous Material Management Plan / Hazardous Material Inventory Statement Program • Hazardous Waste Generator / Tiered Permitting Program • Underground Storage Tank Program The state agencies responsible for these programs set the standards for their programs while local governments implement the standards. The local agencies implementing the Unified Program are known as Certified Unified Program Agencies (CUPAs). San Diego County Department of Environmental Health is the area CUPA. Note: The Waste Management analysis only considers application of the Hazardous Waste Generator/Tiered Permitting element of the Unified Program. Other elements of the Unified Program may be addressed in the **Hazardous Materials** and/or **Worker Health and Safety** analysis sections.

Title 27, CCR, Division 1, Subdivision 4, Chapter 1, §§ 15100, et seq. Unified Hazardous Waste and Hazardous Materials Management Regulatory Program	While these regulations primarily address certification and implementation of the program by the local CUPAs, the regulations do contain specific reporting requirements for businesses. • Article 9 – Unified Program Standardized Forms and Formats (§§ 15400–15410). • Article 10 – Business Reporting to CUPAs (§§ 15600–15620).
Public Resources Code, Division 30, §§ 40000, et seq. California Integrated Waste Management Act of 1989.	The California Integrated Waste Management Act of 1989 (as amended) establishes mandates and standards for management of solid waste. Among other things, the law includes provisions addressing solid waste source reduction and recycling, standards for design and construction of municipal landfills, and programs for county waste management plans and local implementation of solid waste requirements.
Title 14, CCR, Division 7, § 17200, et seq. California Integrated Waste Management Board	These regulations further implement the provisions of the California Integrated Waste Management Act and set forth minimum standards for solid waste handling and disposal. The regulations include standards for solid waste management, as well as enforcement and program administration provisions. • Chapter 3 – Minimum Standards for Solid Waste Handling and Disposal. • Chapter 3.5 – Standards for Handling and Disposal of Asbestos Containing Waste. • Chapter 7 – Special Waste Standards. • Chapter 8 – Used Oil Recycling Program. • Chapter 8.2 – Electronic Waste Recovery and Recycling.
California Health and Safety Code, Division 20, Chapter 6.5, Article 11.9, §25244.12, et seq. Hazardous Waste Source Reduction and Management Review Act of 1989	This law was enacted to expand the state's hazardous waste source reduction activities. Among other things, it establishes hazardous waste source reduction review, planning, and reporting requirements for businesses that routinely generate more than 12,000 kilograms (~ 26,400 pounds) of hazardous waste in a designated reporting year. The review and planning elements are required to be done on a 4-year cycle, with a summary progress report due to DTSC every 4th year.

(also known as SB 14).	
Title 22, CCR, § 67100.1 et seq. Hazardous Waste Source Reduction and Management Review.	These regulations further clarify and implement the provisions of the Hazardous Waste Source Reduction and Management Review Act of 1989 (noted above). The regulations establish the specific review elements and reporting requirements to be completed by generators subject to the act.
Local	
City of Chula Vista General Plan, Policies EE/17/1; 17.2; 19.1; 19.2; 20.1; 20.2; and 20.3	These policies provide guidance for remediation of contaminated sites and for siting and management of facilities that store, collect, treat, dispose or transfer hazardous waste.
San Diego County Integrated Waste Management Plan	The plan provides guidance for local management of solid waste and household hazardous waste (incorporates the county's Source Reduction and Recycling Elements, which detail means of reducing commercial and industrial sources of solid waste).
San Diego County Department of Environmental Health, Hazardous Material Division various programs	Hazardous Material Division is the Certified Unified Program Agency (CUPA) for San Diego County that regulates and conducts inspections of businesses that handle hazardous materials, hazardous wastes, and/or have underground storage tanks. Hazardous Material Division programs include assistance with oversight on property re-development (i.e., brownfields) and voluntary or private oversight cleanup assistance.
Chula Vista General Plan Chapter 9, section 3.4	The section describes the City of Chula Vista's hazardous materials and waste requirements.

WORKER SAFETY AND FIRE PROTECTION

Applicable LORS	Description
Federal	
29 U.S. Code § 651 et seq (Occupational Safety and Health Act of 1970)	This act mandates safety requirements in the workplace with the purpose of "[assuring] 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).
29 CFR sections 1910.1 to 1910.1500 (Occupational Safety and Health Administration Safety and Health Regulations)	These sections 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.
29 CFR sections 1952.170 to 1952.175	These sections provide 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 §§ 1910.1 to 1910.1500.
State	
8 CCR all applicable sections (Cal/OSHA regulations)	Requires that all employers follow these regulations as they pertain to the work involved. This includes regulations pertaining to safety matters during construction, commissioning, and operations of power plants, as well as safety around electrical components; fire safety; and hazardous materials use, storage, and handling.
24 CCR section 3, et seq.	Incorporates the current addition 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 a facility.
Health and Safety Code sections 25500 to 25541	Requires a Hazardous Material Business Plan detailing emergency response plans for hazardous materials emergency at a facility.

Local	
Title 24, California Code of Regulations (24 CCR § 3, et seq.)	The 2007 edition of the California Building Code is enforced by the City of Chula Vista and is comprised of 11 parts containing building design and construction requirements as they relate to fire, life, and structural safety. It incorporates the current edition of the 2006 International Building Code.
2007 Edition of California Fire Code (24 CCR Part 9)	The California Fire Code is based upon the standards of the 2006 International Fire Code. The fire code contains general provisions for fire safety, including: 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 2007 edition is enforced by the Chula Vista Fire Department as of Jan. 1, 2008.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE

CHULA VISTA ENERGY UPGRADE PROJECT

Docket No. 07-AFC-4

EXHIBIT LIST

APPLICANT'S EXHIBITS

EXHIBIT 1 Application for Certification – Chula Vista Energy Upgrade Project. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 2 Supplement in Response to Data Adequacy Comments on the Application for Certification for the Supplement to AFC – Response to Data Adequacy Review, dated September 24, 2007, and docketed September 24, 2007. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 3 Response to Energy Commission's Data Request 1-47 and Workshop Query 1, dated December 7, 2007, and docketed December 7, 2007**.** Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 4 Response to Energy Commission's Data Requests 2-5 and 25, dated January 25, 2008, and docketed January 25, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

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EXHIBIT 5 Response to Environmental Health Coalition's Data Requests 1-35, dated February 6, 2008, docketed February 6, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 6 Response to Energy Commission's Data Request 6, dated March 7, 2008, docketed March 7, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 7 Response to Environmental Health Coalition's Data Requests 36-54, dated February 29, 2008, docketed February 29, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 8 Response to Environmental Health Coalition's Data Requests 55, 56, dated April 2, 2008, docketed April 2, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 9 Appendix 3A – System Impact Study, dated March 21, 2007, docketed August 10, 2007. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 10 MMC Fact Sheet for the Chula Vista Energy Upgrade Project (English and Spanish Version), dated August 2007 (English) and March 2008 (Spanish), docketed March 21, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 11 Appendices A – D, referenced in the CA-ISO Interconnection Facilities Study and MMC Comment Letter, 3/28/08, dated March 31, 2008, docketed March 31, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 12 Air Modeling Files, dated August 10, 2007, docketed August 10, 2007. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 13 MMC's objection to Energy Commission Staff Data Request 40, Sponsored by Applicant, not moved into evidence.

EXHIBIT 14 Letter from Downey Brand Re: Application for Confidential Designation of Confidential Cultural Resources Reports Provided in Response to Data Request 36, dated August 20, 2007, docketed August 21, 2007. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 15 Letter Approving Confidentiality for Cultural Resources, dated August 30, 2007, docketed August 31, 2007. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 16 Response to South West Chula Vista Civic Association Flyer, dated January 10, 2008, docketed January 10, 2008. Sponsored by Applicant, not moved into evidence.

EXHIBIT 17 CA-ISO Interconnection Facilities Study and MMC Comment Letter, dated March 27, 2008, docketed March 28, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 18 MMC Energy, Inc.'s Preliminary Comments on the Preliminary Staff Assessment – Chula Vista Energy Upgrade Project, dated May 7, 2008, docketed May 8, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 19 MMC Energy, Inc.'s Final Comments on the Preliminary Staff Assessment, dated June 6, 2008, docketed June 6, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 20 Letter CA – ISO Re: Reliability Must-Run Status, dated July 24, 2008, docketed July 25, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 21 Agreement with the City of Chula Vista on Mitigation and Consistency of the Project with the Chula Vista General Plan, dated August 4, 2008, docketed August 6, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 22 Form DPR523 for the Lorenzo Anderson House and Finding of Effect Memorandum, dated August 22, 2008, docketed August 22, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 23 Declarations and Testimony, dated September 2008, docketed, September 12, 2008. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 24 List of Power Plants in I-L Equivalent Zones. Technical Topic: Land Use. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 25 Topographic map of the CVEUP project site, demonstrating that the project site is above the elevation of the 100-year floodplain, dated September 26, 2008, docketed, September 26, 2008. Technical Topic: Reliability. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 26 Letters of Support for the Project. Technical Topic: Alternatives. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 27 Socioeconomic Conditions from the Prehearing Conference Statement. Sponsored by Applicant, and received into evidence on October 2, 2008.

EXHIBIT 28 Resume and Declaration of Matthew Frank on Land Use. Sponsored by Applicant, and received into evidence on October 2, 2008.

ENERGY COMMISSION STAFF'S EXHIBITS

EXHIBIT 200 Final Staff Assessment for the Chula Vista Energy Upgrade Project, dated August 2008, docketed August 28, 2008. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 201 Preliminary Determination of Compliance submitted by the San Diego Air Pollution Control District. Sponsored by Intervenor Environmental Health Coalition; received into evidence on October 2, 2008.

EXHIBIT 202 Final Determination of Compliance submitted by the San Diego Air Pollution Control District. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 203 The Chula Vista Elementary School District's Independent Air Quality Analysis. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 204 Letter from the City of Chula Vista to C. Meyer regarding CVEUP compliance with LORS. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 205 Addendum to the Final Staff Assessment. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 206 Chula Vista Fire Department Fire Marshall Review of CVEUP. Sponsored by Staff; received into evidence on October 2, 2008.

EXHIBIT 207 2000 Special Use Permit. Sponsored by Staff; received into evidence on October 2, 2008.

INTERVENOR CURE EXHIBITS

EXHIBIT 400
EXHIBIT 401
EXHIBIT 402
EXHIBIT 403
EXHIBIT 404

INTERVENOR ENVIRONMENTAL HEALTH COALITION (EHC) EXHIBITS

EXHIBIT 600 Environmental Health Coalition, Comments Re: Preliminary Staff Assessment for the Chula Vista Energy Upgrade Project (07-AFC-4) (with attachments), Technical Topics: Air Quality, Land Use, Environmental Justice, Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 601 Declaration of Joy Williams, Technical Topics: Public Health, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 602 Testimony of Joy Williams Re: CVEUP Public Health Impacts, Public Health, Technical Topics: Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 603 References Cited in Testimony of Joy Williams Re: CVEUP Public Health Impacts, Technical Topics: Public Health, Environmental Justices. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 604 Testimony of Joy Williams Re: Mapping of Generation Infrastructure Distribution San Diego County, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 605 Map: Megawatts per 10,000 People, by Metropolitan Statistical Area, Natural Gas & Landfill Gas Facilities Only (2000 Census, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 606 Map: Megawatts Per 10,000 People, by Metropolitan Statistical Area, Natural Gas & Landfill Gas Facilities Only (2007 Population Estimate), Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 607 Declaration of Diane Takvorian, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 608 Testimony of Diane Takvorian, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 609 References Cited in Testimony of Diane Takvorian, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 610 Declaration of Diana Vera, Technical Topics: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 611 Testimony of Diana Vera, Technical Topics: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 612 City of Chula Vista, Letter to Residents Re: "Free Energy and Water Home Conservation Program" (Aug. 18, 2008) (cited in Testimony of Diana Vera), Technical Topics: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 613 Declaration of Laura Hunter, Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 614 Community Statements of Opposition to CVEUP (referenced in Declaration of Laura Hunter), Technical Topics: Socioeconomics, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 615 Declaration of Bill Powers, P.E., Technical Topic: Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 616 Testimony of Bill Powers, P.E., Technical Topic: Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008

EXHIBIT 617 Attachments to Testimony of Bill Powers, P.E., Technical Topic: Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 618 California Air Resources Board, The Carl Moyer Program Guidelines (Rev. 2008) (excerpts), Technical Topic: Air Quality. Sponsored by Intervenor EHC; not moved into evidence.

EXHIBIT 619 City of Chula Vista General Plan (excerpts), Technical Topic: Land Use. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 620 City of Chula Vista Zoning Ordinance (excerpts), Technical Topic: Land Use. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 621 City of Chula Vista, Letter to Christopher Meyer, Cal. Energy Comm'n, Re: Chula Vista Energy Upgrade Project (Jan. 31, 2008), Technical Topic: Land Use. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 622 City of Chula Vista, Letter to Christopher Meyer, Cal. Energy Comm'n, Re: Chula Vista Energy Upgrade Project (June 13, 2008), Technical Topic: Land Use. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 623 Public Resources Code section 25305 (2002) (repealed), Technical Topic: Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 624 Stats.2002, c. 568 (SB 1389), Technical Topic: Alternatives. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 625 MMC Energy, Inc., Form 10-Q (Aug. 11, 2008) (excerpts), Technical Topic: Power Plant Reliability. Sponsored by Intervenor EHC; received into evidence on October 2, 2008

EXHIBIT 626 Declaration of Stephen Padilla (with attachments), Technical Topic: Land Use. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 627 Declaration of Sharon Ward, Technical Topic: Land Use, Environmental Justice. Sponsored by Intervenor EHC; not moved into evidence.

EXHIBIT 628 Testimony of Sharon Ward, Technical Topic: Land Use, Environmental Justice. Sponsored by Intervenor EHC; not moved into evidence.

EXHIBIT 629 Documents related to MMC Exhibit 24, Technical Topic: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 630 City of Chula Vista, Final Environment Impact Report: Chula Vista Vision 2020 General Plan Update (excerpt), Technical Topic: Noise, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 631 Declaration of Theresa Acerro, Technical Topic: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

EXHIBIT 632 Map Depicting Schools, Day Care Centers, Recreational Centers, and Similar Facilities Within One Mile of Project, Technical Topic: Land Use, Environmental Justice. Sponsored by Intervenor EHC; received into evidence on October 2, 2008.

INTERVENOR CITY OF CHULA VISTA EXHIBITS

EXHIBIT 800 Jones & Stokes Letter, Chula Vista Elementary School Consultant. Sponsored by Intervenor City of Chula Vista; not moved into evidence.

EXHIBIT 801 CAISO, California Independent System Operator Letter . to Jane Luckhardt, dated July 24, 2008. Sponsored by Intervenor City of Chula Vista; received into evidence on October 2, 2008.

EXHIBIT 802 RAMCO, Special Use Permit-Existing Facility. Sponsored by Intervenor City of Chula Vista; not moved into evidence.

EXHIBIT 803 MMC/City Agreement & Recommendations for Additional Conditions of Approval. Sponsored by Intervenor City of Chula Vista; received into evidence on October 2, 2008.

EXHIBIT 804 CAISO, California Independent System Operator Letter to Major Cheryl Cox, dated January 28, 2008. Sponsored by Intervenor City of Chula Vista; received into evidence on October 2, 2008.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

Application for Certification For the *CHULA VISTA ENERGY UPGRADE PROJECT*	***Docket No. 07-AFC-4*** **PROOF OF SERVICE**

<u>INSTRUCTIONS:</u> All parties shall either (1) send an original signed document plus 12 copies <u>or</u> (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed <u>or</u> electronic copy of the document, <u>which includes a proof of service declaration</u> to each of the individuals on the proof of service list shown below:

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DECLARATION OF SERVICE

I, _____, declare that on _____, I deposited copies of the attached _____ in the United States mail at _____with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

_____

Attachments