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ALMOND 2 POWER PLANT PROJECT

Presiding Member's Proposed Decision

CALIFORNIA
ENERGY COMMISSION
Arnold Schwarzenegger, Governor

NOVEMBER 2010
CEC-800-2010-018-PMPD

DOCKET NUMBER 09-AFC-2

CALIFORNIA
ENERGY COMMISSION
1516 Ninth Street
Sacramento, CA 95814

http://www.energy.ca.gov/sitingcases/almond/index.html

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

The Committee hereby submits its Presiding Member's Proposed Decision for the ***Almond 2 Power Plant Project*** (Docket No. 09-AFC-2). We have prepared this document pursuant to the requirements set forth in the Commission's regulations. (20 Cal. Code Regs., §§ 1749 - 1752.5.)

The Committee recommends that the Application for Certification be approved, subject to the Conditions of Certification set forth herein, and that the Energy Commission grant the Project Owner a license to construct and operate the Project.

Dated: November 5, 2010, at Sacramento, California.

KAREN DOUGLAS
Chairman and Presiding Member
Almond 2 AFC Committee

ANTHONY EGGERT
Commissioner and Associate Member
Almond 2 AFC Committee

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INTRODUCTION

A. SUMMARY OF THE DECISION

This Decision contains the Commission's rationale in determining that the proposed Almond 2 Power Plant (A2PP) Project will, as mitigated, have no significant impacts on the environment and complies with all applicable laws, ordinances, regulations, and standards (LORS). The project may therefore be licensed. Our Decision is based exclusively upon the record established during this certification proceeding and summarized in this document. We have independently evaluated the evidence, provided references to the record[1] supporting our findings and conclusions, and specified the measures required to ensure that the A2PP is designed, constructed, and operated in the manner necessary to protect public health and safety, promote the general welfare, and preserve environmental quality.

On May 11, 2009, Turlock Irrigation District (TID or Applicant), filed an Application for Certification (AFC) seeking approval from the California Energy Commission (Energy Commission) to develop the Almond 2 Power Plant (A2PP). On July 1, 2009, the Energy Commission accepted the AFC as complete, thus starting the Energy Commission's formal review of the proposed project.

The project will be a natural-gas-fired, simple-cycle peaking facility rated at a gross generating capacity of 174 megawatts (MW) and designed to provide TID with operating reserves. Primary equipment for the generating facility would include three 58-MW General Electric Energy LM6000PG turbines equipped with a water injection system to the turbine in order to reduce nitrogen oxide (NOx) formation, and a selective catalytic reduction system (SCR) to further control NOx emissions. Power will be transmitted to the grid at 115 kilovolts (kV) through two proposed new transmission lines which will connect to the proposed TID Grayson Substation, to be located approximately 3,300 feet from A2PP. The substation is expected to be complete before the A2PP project is operational and is not part of the A2PP project. Many existing facilities at the adjacent TID Almond Power Plant (APP) will be shared with the A2PP facility without modification. A2PP will receive process water from the Ceres Wastewater Treatment Plant (CWTP) through an existing pipeline at APP, as well as service

[1] The Reporter's Transcript of the evidentiary hearings is cited as "date of hearing RT page __." For example: 10/1/10 RT 77. 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.

water for domestic use provided by an existing onsite water well. Expansion of the existing natural gas service would be required for the proposed project. PG&E will construct an approximately 11.6-mile long natural gas pipeline to their supply line from the A2PP site.

The Energy Commission has exclusive jurisdiction to license this project and is considering the proposal under a review process established by Public Resources Code section 25540.6. The Energy Commission began review of the A2PP on July 1, 2009.

The A2PP site is located at 4500 Crows Landing Road, Modesto, California in the county of Stanislaus approximately 2 miles from the Ceres city center and 5 miles south of Modesto, in Stanislaus County. Although the site address identifies the project in Modesto, the project site is located within the city limits of Ceres.

The project will occupy a 4.6-acre site, adjacent to the existing 48-MW TID APP). The project site is bordered by the A1PP to the south, a WinCo distribution warehouse to the west, a farm supply facility to the north, and various industrial facilities to the east. The site is zoned for industrial use and is approximately 0.3 miles south of the nearest residential uses with several industrial buildings located nearby. The project site was previously used as a borrow pit and was filled and graded in 2008.

If approved by the Energy Commission, TID proposes to initiate construction of the A2PP in the fourth quarter of 2010, provided there are no delays. The construction period is expected to last approximately 12 months, with scheduled commercial operations beginning in the fourth quarter of 2011. The on-site construction workforce would peak at approximately 149 workers, and average 96 workers over the construction period. Operation and maintenance of the A2PP will require 16 full-time permanent staff. Construction costs are estimated to be approximately $175 million.

B. SITE CERTIFICATION PROCESS

The A2PP 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 environmental impact and conformity with applicable laws, ordinances, regulations, and standards 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 the applicant to discuss, clarify, and negotiate pertinent issues. In this proceeding, Staff published its initial technical evaluation of the A2PP project in its Staff Assessment (SA) and made it available for a 30-day comment period.

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 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.

On May 11, 2009, Turlock Irrigation District (TID) submitted an Application for Certification (AFC) to the California Energy Commission to construct and operate an electrical generating plant in the City of Ceres, Stanislaus County, California.

On July 1, 2009, the Energy Commission deemed the AFC data adequate (sufficient data to proceed) and assigned a Committee of two Commissioners to conduct proceedings.

The formal parties included the Applicant, Energy Commission staff (Staff), and Intervenors California Unions for Reliable Energy (CURE).

On July 1, 2009, the Committee issued a Notice of "Notice of Public Site Visit and Informational Hearing and Committee Order." 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 A2PP project. The Public Adviser's Office also advertised the public hearing and site visit and distributed information to local officials and sensitive receptors surrounding the project site.[2]

On July 30, 2009, the Committee conducted a site visit to tour the proposed A2PP site and then convened a public Informational Hearing at the Community Center Building in Ceres, California. At that event, the Committee, the parties, interested governmental agencies, and other public participants discussed issues related to development of the project, described the Commission's review process, and explained opportunities for public participation.

On August 10, 2009, the Committee issued an initial Scheduling Order. The Committee Schedule was based on both the Applicant's and Staff's proposed schedules and related discussion at the Informational Hearing. The schedule contained a list of events that must occur in order to complete the certification process within twelve months.

In the course of the review process, Staff conducted a public workshop on September 22, 2009. The purpose of the workshop was to provide members of the community and governmental agencies opportunity to obtain project information, and to offer comments regarding any aspect of the proposed project.

The Staff Assessment was issued on April 30, 2010. On May 18, 2010, Staff conducted a publicly noticed workshop to address topics contained in the Staff Assessment with a focus on: Biology, Cultural Resources, and Soil and Water.

[2] Sensitive receptors are people or institutions with people that are particularly susceptible to illness, such as the elderly, very young children, people already weakened by illness (e.g., asthmatics), and persons engaged in strenuous exercise.

The Energy Commission Revised Staff Assessment was published on July 30, 2010. The public was provided with an opportunity to comment on the document. On September 16, 2010, the Staff held a public workshop to discuss the Applicant's suggested changes to staff's recommended Conditions of Certification in the Revised Final Staff Assessment in the areas of Cultural Resources and Land Use.

The Committee conducted the Prehearing Conference and Evidentiary Hearing on October 1, 2010, in Sacramento at Commission headquarters.

The Committee published the PMPD on November 5, 2010, and held a Committee Conference in Sacramento at Commission Headquarters on November 22, 2010. The Full Commission adopted the PMPD and Errata at the December 15, 2010, business meeting.

D. COMMISSION OUTREACH

Several entities within the Energy Commission provide various notices concerning power plant siting cases. Staff provides notices of staff workshops and the release of the Staff Assessments. The Hearing Office notices Committee-led events such as the informational hearing and site visit, status conferences, the prehearing conference, and evidentiary hearings. The Public Adviser's Office provides additional outreach for critical events as well as provides information to interested persons that would like to become more actively involved in a power plant siting proceeding. Further, the Media Office provides notice of events to local and regional press through press releases. The public may also subscribe to the proceeding's e-mail List Server offered on the web page for each project which gives an immediate notification of documents posted to the project web page. Through the activities of these entities, the Energy Commission has made every effort to ensure that interested persons are notified of activities in this proceeding.

E. 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.

I. PROJECT DESCRIPTION AND PURPOSE

The Applicant, Turlock Irrigation District (TID), filed an Application for Certification (AFC) of the Almond 2 Power Plant (A2PP) project on May 11, 2009. The project is a natural-gas fired, simple-cycle peaking facility to be located in Ceres, California in Stanislaus County. TID will own and operate the project, which is proposed as a peaking facility rated at a gross generating capacity of 174 megawatts.

TID is a public agency operating under the authority of the California Water Code. More particularly, TID is an irrigation district that provides water and electricity within its service area located in Stanislaus and Modesto counties. As a Balancing Authority, TID integrates resources plans, maintains load-interchange-generation balance within its Balancing Authority Area, and supports interconnection frequency.

As required by the California Environmental Quality Act (CEQA), this section describes the project based on the evidence of record. (Cal Code Regs, tit. 14, §15124.)

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §§ 1, 2, 4, 5, 6, 7, 8; 300[1], §§ 3-1, 5-3.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting

The project site is on land zoned for industrial use. Nearby industrial uses include the existing 48-MW TID Almond Power Plant (APP) immediately adjacent to and south of the project site, a WinCo distribution warehouse to the west, a farm supply facility to the north, and various other industrial facilities to the east.

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

Some agricultural and residential uses are also in the vicinity of the project site. (Exs. 1, p. 2-1; 300, p. 3-1.)

The project site is comprised of disturbed land, most of which was recently used by WinCo as a borrow pit during construction of the nearby WinCo distribution center. In 2008, the pit was filled with commercially available fill and graded. The remainder of the site is currently used as a retention pond for the existing APP.

The project will occupy a 4.6-acre project site and a 6.4-acre construction laydown and parking area located directly west of the project site. (Exs.1, p. 2-1; 300, p. 4.5-5.) Approximately 1.4 acres of the APP site will be used by A2PP for components specific to the A2PP project such as one of the 58-MW turbines and for facilities to be shared by both plants.

Primary access to the site would be by way of Crows Landing Road off State Route 99. The laydown area will be accessed by the road the currently serves the APP site. **Project Description Figures 1 and 2,** respectively, provide a vicinity and site map for the A2PP project.

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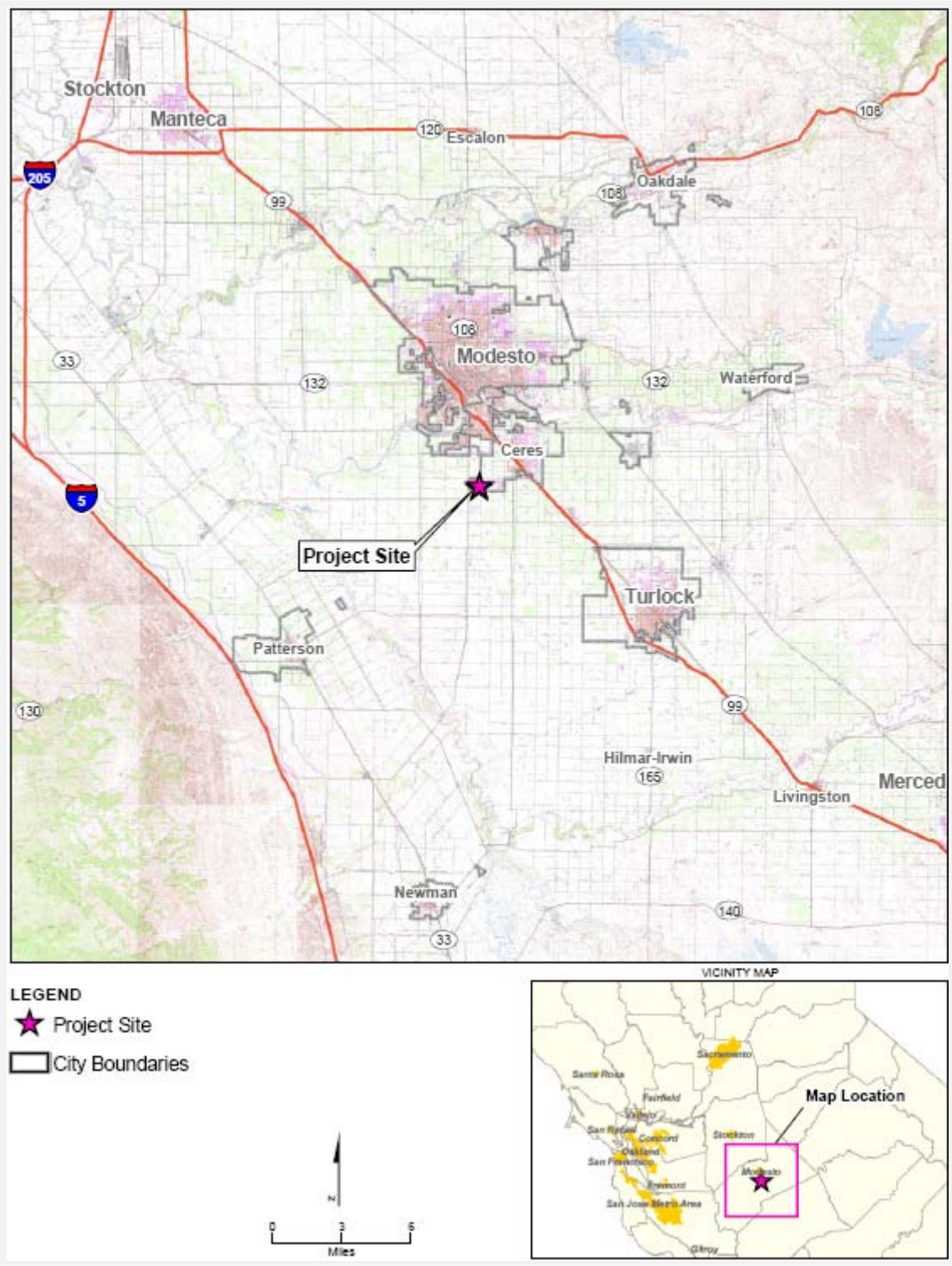
PROJECT DESCRIPTION – FIGURE 1

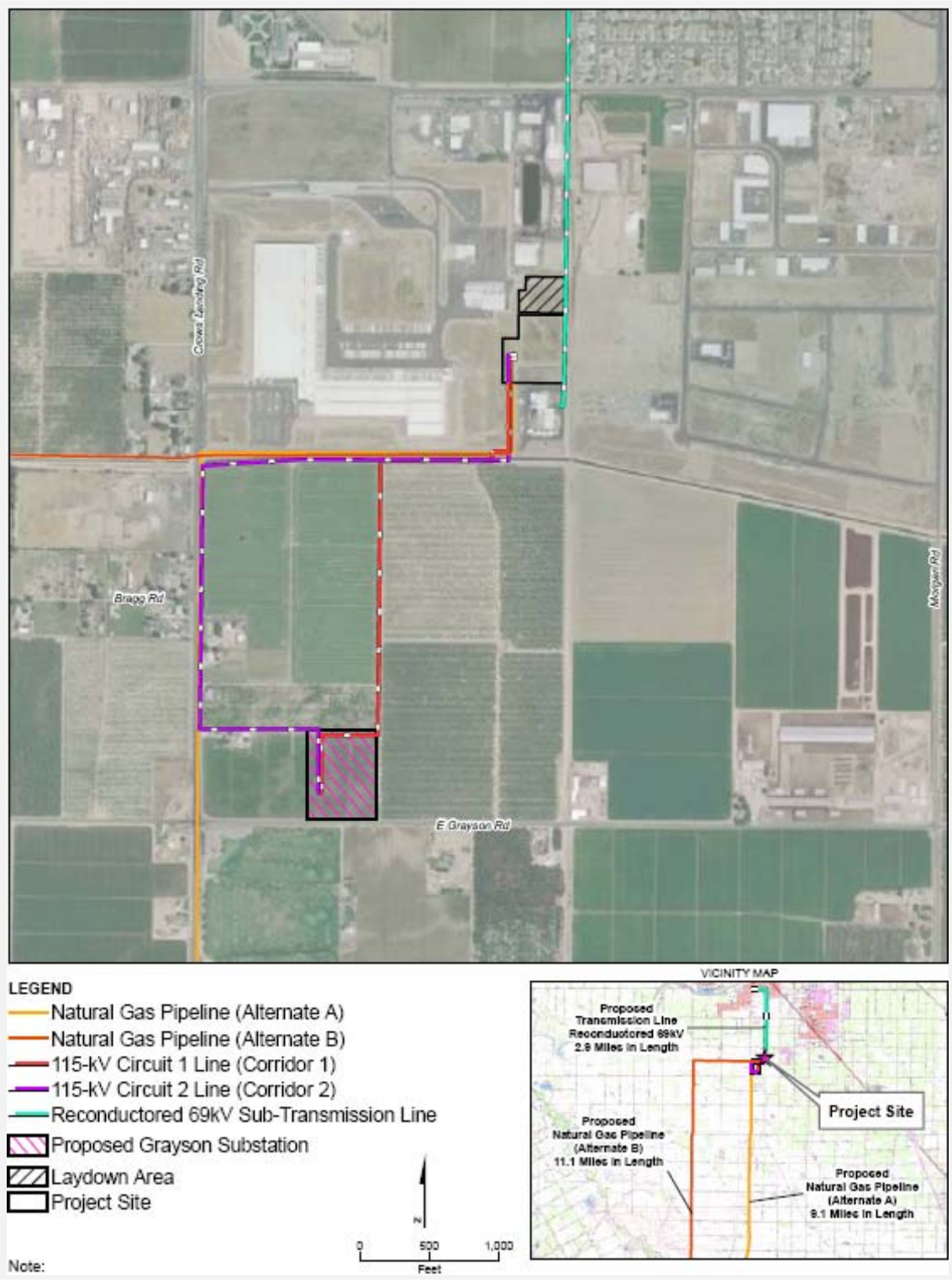
Project Vicinity Map



Source: Ex.1

PROJECT DESCRIPTION – FIGURE 2

Site Location



Source: Ex. 1. (**NOTE:** This map is solely intended to show the location of the project site within the region. The pipeline alignments shown in this map are superseded by the alignment as shown below in **Project Description Figure 3.)**

2. Project Objectives

The Applicant's stated project objectives are to:

- Safely construct and operate a 174-MW, natural-gas fired, simple-cycle, peaking generating facility within the TID service territory;
- Provide operating reserves and resulting reliability for TID's Balancing Authority requirements;
- Allow for better economic dispatch of TID's existing generation fleet system-wide;
- Provide fast-starting, load-following peaking generating units to help maintain TID's Balancing Authority tie line (interconnection) schedules with neighboring balancing Authorities (the California Independent System Operator [CAISO] and Sacramento Municipal Utility District [SMUD]);
- Help provide firming sources for TID's existing and future intermittent renewable resources in support of TID Renewable Portfolio Standard (RPS) and greenhouse gas (GHG) goals, as articulated by TID's Board as a goal of 20 percent by 2017;
- Provide additional generation to meet TID's growing load and meet the demands of customers within TID's service territory;
- Achieve economies of scale and maximize the use of TID assets by locating the project on an industrial site with the ability to use existing TID assets and power plant infrastructure;
- Minimize environmental and air quality impacts;
- Assist the State of California in developing increased local generation projects, thus reducing dependence on imported power; and
- Contribute to the diversification of the City of Ceres and Stanislaus County's economic base by providing increase employment opportunities and a reliable power supply. (Ex. 1, pp. 1-1– 1-2.)

3. Key Project Components and Features

The project's key components and features include the following:

- Three 58-MW General Electric LM6000PG turbines with SPRINT (spray intercooling) natural gas-fired combustion turbine; and associated support equipment.
- A new on-site 115-kilovolt (kV) switchyard.

- Two new 115-kV transmission line corridors.
- The re-rating of approximately 2.9 miles of an existing 69-kV sub-transmission line to enhance system reliability.
- A new natural gas supply that will be provided via an approximately 11.6 mile long pipeline.
- Natural gas pipeline reinforcement approximately 1.8 miles long.
- Onsite interconnection to APP's existing water treatment and discharge systems.
- Evaporative cooling using reclaimed water. (Exs. 1, pp. 1-2, 1-9, § 2; 300, p. 3-1.)

Given A2PP's close proximity to the existing APP site, A2PP will share the following existing facilities currently used by APP:

- Anhydrous ammonia system, including a 12,000 gallon storage and unloading facilities
- Fire protection system, including fire water storage tank and diesel-fired emergency fire pump
- Well water for service water and emergency shower/eyewash stations
- Water treatment system
- Recycled water supply and wastewater discharge system
- Instrument and service air systems
- Oil/water separator
- Demineralized and reverse osmosis water storage tanks
- Administration building. (Exs. 1, pp. 2-2; 300, p. 3-2.)

These facilities will not require modification to accommodate the addition of A2PP. The existing APP maintenance shop/warehouse building will be expanded to accommodate the A2PP. A new stormwater retention pond will be constructed for the A2PP and APP to share. (Ex. 1, p. 2-2.)

4. Interconnection to the TID System

A2PP will be interconnected to the TID system by way of two new 115-kV transmission lines identified as Corridor 1 and Corridor 2. Corridor 1 will be approximately 0.9 miles long and Corridor 2 will be approximately 1.2 miles long. Both transmission lines will connect to the proposed TID Grayson Substation, which will be located about 3,300 feet southwest of A2PP. (Ex. 1, p. 2-8.) The

Grayson Substation will consist of an approximately 10-mile long 115-kV transmission line, a 0.5-mile long 69-kV transmission line from APP, and a second 69-kV double-circuit transmission line that extends 0.8 miles east from the Grayson Substation. (Ex. 300, pp. 3-2 – 3-3.)

The Grayson Substation is a component of the TID Hughson-Grayson 115-kV Transmission Line and Substation project (Hughson-Grayson Project). (Ex. 1, pp. 2-1, 2-7.) The Hughson-Grayson project includes the substation and an approximately 10-mile long, 1115-kV transmission line, a 0.5 mile long 69-kV transmission line from the existing TID Almond Power Plant, and a second 69-KV transmission line that extends 0.8 miles east from the proposed substation.) (*Id*.) The evidence indicates that TIP will proceed with the Hughson-Grayson Project regardless of the outcome of the Commission's AFC process. (Ex. 1, p. 2-7.) The Hughson-Grayson Project is a separate project of TID and is not under the Energy Commission's jurisdiction. Thus, TID is the lead agency for the Hughson-Grayson project and in that role it has prepared several CEQA-required environmental documents and distributed them for public review. TID's environmental review of the Hughson-Grayson project is more fully discussed in the **Transmission System Engineering** section of this Decision.

The A2PP project will require TID to re-rate 2.9 miles of an existing 69-kV sub-transmission line from the existing APP to the TID Crows Landing Substation that currently serves parts of the cities of Ceres and Modesto and surrounding rural areas. The re-rating is intended to prevent possible thermal overloads. (Ex. 300, p. 3-2.)

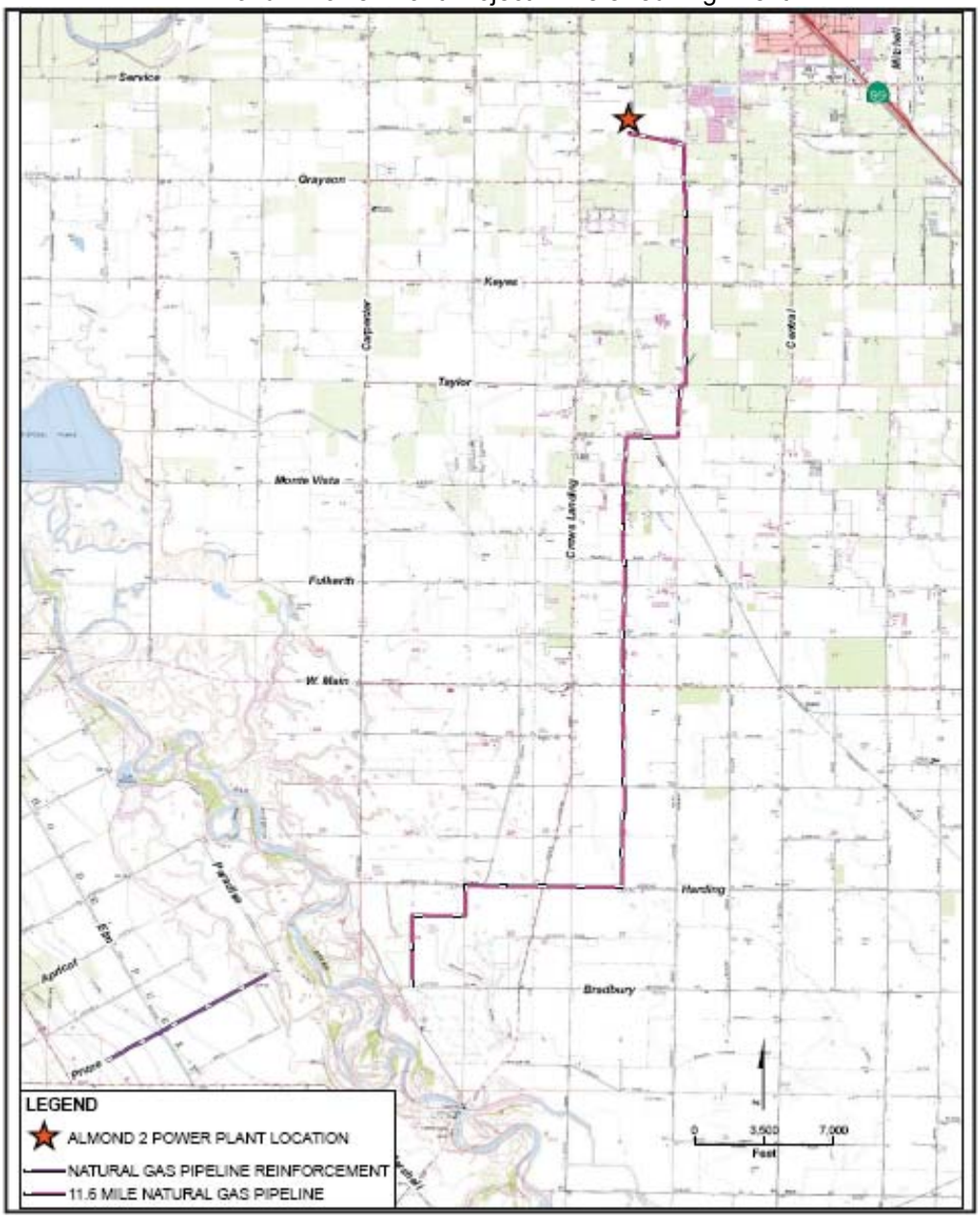
5. Associated Facilities and Processes

a. Gas Supply

Natural gas will be supplied to A2PP from existing and new pipelines that will be constructed and owned by Pacific Gas and Electric (PG&E). The new pipeline will be approximately 11.6 miles long and will run alongside paved roads, farm roads, and through agricultural fields. The existing pipeline requires reinforcement of a 1.8 mile long segment along the western side of the San Joaquin River. The pipelines will be underground, with trenchless construction under specified water crossings. (Exs. 1, p. 2-16; 300, p. 3-2.) The pipeline alignment is shown in **Project Description Figure 3**.

PROJECT DESCRIPTION – FIGURE 3

Almond 2 Power Plant Project – Preferred Alignment



Source: Ex. 300

b. Water Supply

The project proposes the use of approximately 293 acre-feet of process and cooling water per year, assuming operation of 5,000 hours per year. (Exs. 1, p. 2-17; 300, p. 3-2.) .) The APP project currently receives reclaimed water via a six inch diameter pipeline between APP and the City of Ceres Wastewater Treatment Plant (Ceres WWTP) for its process needs. (Ex. 300, p. 3-2.)

The A2PP will share service water with APP by tying into an existing onsite water well located in the southeast corner of the APP site. Drinking water will be provided by an outside water delivery service. Fire water will come from the existing APP fire system. (Exs. 1, pp. 1-12, 2-21.)

c. Water Discharge

Most of the plant process wastewater will be collected in a sump and pumped to the existing APP wastewater tank. Reverse osmosis reject and wastewater from backwashing the reverse osmosis media will also go to the wastewater tank. (Ex. 1, p. 2-21.) Tank water will be returned to the Ceres WWTP through the existing APP – Ceres WWTP pipeline. (Ex. 1, pp. 1-12, 2-21.)

The A2PP project proposes to discharge stormwater to a new onsite retention pond located on the north side of the project site. No stormwater will be disposed of offsite. (Ex. 1, p. 1-12; 300, p. 3-2.)

d. Inlet Cooling

The project's gas turbines incorporate evaporative air-cooling methods. This technique reportedly increase power input by cooling the gas turbine inlet air. (Exs. 1, p. 2-8, 300, p. 5.3-5.)

e. Non-Hazardous Solid Waste

Construction, operation, and maintenance of the A2PP project will generate non-hazardous solid wastes typical of power generation or other industrial facilities. These wastes include scrap metal and plastic, insulation material, paper, glass, empty containers, and other miscellaneous solid wastes. These materials would be disposed of through contracted refuse collection and recycling services. (Ex. 300, §4.13.)

f. Hazardous Waste Management

Construction and operation of the project requires use and storage of hazardous materials such as gasoline, diesel fuel, oil, lubricants, and small quantities of solvents and paints. All hazardous materials used during construction and operation would be stored onsite in storage tanks/vessels/containers specifically designed for this purpose.

The Applicant shall implement several different of safety-related plans and programs to ensure safe handling, storage, and use of hazardous materials. For instance, waste lubricating oil will be recovered and recycled by a waste oil recycling contractor. Spent lubrication filters and selective catalytic reduction (SCR) catalysis will be recycled or disposed of in accordance with regulatory requirements. (Exs. 1, pp. 2-21-2-22; 300, p. 3-2.)

Plant personnel will receive appropriate personal protective equipment. Plant personnel will also receive training on the proper use, handling and cleanup of hazardous materials and on the procedures to be followed in the event of a leak or spill.

g. Fire Protection

The A2PP fire protection systems will include a fire protection water system and portable fire extinguishers. The fire protection water system would be supplied from by a well locate on the APP site and stored in an existing fire water storage tank at the APP with a dedicated firefighting supply of 250,000 gallons. The fire water would feed an underground fire loop piping system that would be expanded to service the project with water pressure maintained by one electric jockey pump and one diesel-driven backup pump.

The piping network would supply fire hydrants and fixed suppression systems and shall be designed to provide up to two hours of protection for a single, worst-case fire. (Exs. 1, p. 2-23; 300, pp. 4.14-11 - 4.14-12.)

h. Facility Closure

The A2PP project has an expected operating life of between 30 years to 40 years. Whenever the facility is closed, whether temporarily or permanently, the closure procedures included in this Decision will ensure compliance with

applicable laws, ordinances, regulations, and standards (LORS). (Ex. 1, pp. 2-33 - 2-34.) **Appendix A** identifies the LORS applicable to this project.

6. Construction Timeline and Workforce

Construction of the A2PP facility, from site preparation and grading to commercial operation, is expected to take place over a 12-month period. Commercial service is expected by fourth quarter of 2011. (Ex. 300, pp. 3-1, 3-3.) Once the plant is operational, it is expected to employ approximately 16 full-time workers. The peak number of temporary workers needed for the project is 149 and the average number of construction workers per day is 96. (Ex. 300, p. 3-3.) Construction costs are projected to be approximately $175 million. (Ex. 300, p. 3-4.)

Project Description Figure 4 is an architectural rendering of the project site after construction.

PROJECT DESCRIPTION – FIGURE 4

Almond 2 Power Plant Project – Architectural Rendering

Source: Ex.300

FINDINGS OF FACT

Based on the evidentiary record, we find as follows:

1. Turlock Irrigation District will own and operate the A2PP project in the City of Ceres, Stanislaus County, California.

2. The project will be a natural-gas fired, simple-cycle peaking facility rated at a gross generating capacity of 174 MW.

3. The project will share specified existing facilities with TID's APP.

4. The project includes two transmission line corridors, a new natural gas supply line, and the re-rating of an existing transmission line to enhance system reliability.

5. The project and its objectives are adequately described by the relevant documents contained in the record.

6. The A2PP project will contribute to meeting the Applicant's goals that include providing operating reserves and resulting reliability for TID's Balancing Authority requirements; providing fast-starting, load-following peaking generating units to help maintain TID's Balancing Authority tie line (interconnection) schedules with neighboring balancing Authorities (the California Independent System Operator [CAISO] and Sacramento Municipal Utility District ([SMUD]; and helping to provide firming sources for TID's existing and future intermittent renewable resources in support of TID Renewable Portfolio Standard (RPS) and greenhouse gas (GHG) goals, as articulated by TID's Board as a goal of 20 percent by 2017

CONCLUSION OF LAW

1. We therefore conclude that the A2PP project is described at a level of detail sufficient to allow review in compliance with the provisions of both the Warren-Alquist Act and the California Environmental Quality Act.

II. PROJECT ALTERNATIVES

As a general rule, the California Environmental Quality Act (CEQA), its Guidelines, and the Energy Commission's regulations require an evaluation of the comparative merits of a range of feasible site and facility alternatives which meet the basic objectives of the proposed project but would avoid or substantially lessen potentially significant environmental impacts. (Cal. Code Regs., tit. 14, §§ 15126.6(c) and (e); *see also*, tit. 20, § 1765.)

We therefore evaluate the project alternatives. The range of alternatives, including the "No Project" alternative, 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. [Cal. Code Regs., tit. 14, § 15126.6(f)(3).]

The evidence in this case demonstrates that the project, as mitigated, will not create any significant adverse impacts. The evidence was undisputed[1]. (10/1/10 RT 11-12, Exs. 1, §§ 2.0, 6.0, 4 [Alternatives]; 300[2], §6-1.)

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[1] We note the Applicant's and Staff's contentions that the Warren-Alquist Act does not require an alternatives analysis for this project. (Ex. 1, p. 6-1; 300, pp. 6-2 6-3.) We agree that under the Warren-Alquist Act "[t]he commission may also accept an application for a noncogeneration project at an existing industrial site without requiring a discussion of site alternatives if the commission finds that the project has a strong relationship to the existing industrial site and that it is therefore reasonable not to analyze alternative sites for the project." (Pub. Res. Code, § 25540.6, subd. (b), emphasis added.) There is no evidence that the Applicant requested or received this exemption when it filed the AFC. Instead, the AFC includes a full alternatives analysis, which was subsequently evaluated by Staff in its data adequacy analysis and subsequent assessments. Thus, this issue is rendered moot by the Applicant's and Staff's admission of analyses and evidence regarding project alternatives.

[2] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as Exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its Exhibit numbers as 301-303 when entering its Exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Objectives

The Applicant's stated project objectives are to:

- Safely construct and operate a nominal 174-MW, natural-gas-fired, simple cycle generating facility within the TID service territory;
- Provide operating reserves and resulting reliability for TID's Balancing Authority requirements;
- Allow for better economic dispatch of TID's existing generation fleet system-wide;
- Provide fast-starting, load-following peaking generating units to help maintain TID's Balancing Authority tie line (interconnection) schedules with neighboring Balancing Authorities (the California Independent System Operator and Sacramento Municipal Utility District);
- Help providing firming sources for TID's existing and future intermittent renewable resources in support of TID's Renewable Portfolio Standard and greenhouse gas goals;
- Provide additional generation to meet TID's growing load and meet the demands of customers within TID's service territory.
- Achieve economies of scale and maximize the use of TID assets by locating the project on an industrial site, with the ability to use existing TID assets and power plant infrastructure; namely, facilities current used by TID's existing Almond Power Plant (APP).
- Minimize environmental and air quality impacts.
- Assist the State of California in developing increased local generation projects, thus reducing dependence on imported power.
- Contribute to the diversification of the economic bases of the City of Ceres and Stanislaus County by providing increased employment opportunities and a reliable power supply. (Ex. 6, p. 6-2.)

To achieve these objectives, the evidence indicates without contradiction that any alternative site should be within TID's service territory; adjacent to or near existing TID generating facilities to allow for sharing of facilities and infrastructure; located in an area appropriate for industrial development and compatible with Stanislaus County and City of Ceres general plans and zoning ordinances; in close proximity to water, transmission, and land gas infrastructure; and able to avoid significant impacts on the environment with implementation of reasonable mitigation measures. (Exs. 6, p. 6-3; 300, p. 6-4.)

2. Project Description

TID proposes a 174 MW natural gas-fired simple-cycle peaking facility in Stanislaus County within the city limits of Ceres. The A2PP would consist of three 58 MW General Electric LM6000PG SPRINT combustion turbine generators (CTGs) and associated equipment, including selective catalytic reduction (SCR) and oxidation catalyst emission control systems.

The A2PP would interconnect to the TID system via two 115-kilovolt (kV) lines (Corridor 1, 0.9 miles long, and Corridor 2, 1.2 miles long) to the proposed Grayson Substation. Natural gas would be provided via an approximately 11.6-mile-long gas pipeline that runs south along Carpenter Road. The line would connect to Pacific Gas and Electric (PG&E) Line #215. A 1.8-mile-long reinforcement segment of Line #215 would also be required, for a 13.4-mile-long total gas pipeline requirement.

The A2PP would require water in the amount of 293 AFY for process and cooling water. Reclaimed water from the City of Ceres Wastewater Treatment Plant (WWTP) will meet these project needs. The water will be accessed through an existing pipeline in the utility corridor connecting the APP and Ceres WWTP. Service water for domestic use would be provided by an existing well on the APP site. Potable drinking water would be delivered to the site.

Project wastewater would be collected in a sump and pumped to the existing wastewater tank on the APP site and from there returned to the Ceres WWTP through an existing pipeline.

Infrastructure shared between the A2PP and APP includes the following:

- Anhydrous ammonia system, including 12,000 gallon tank
- Fire protection system, including fire water storage tank
- Well water for service water and emergency shower/eyewash
- Water treatment system
- Recycled water supply and wastewater discharge systems
- Process water system
- Instrument and service air systems
- Oil/water separator

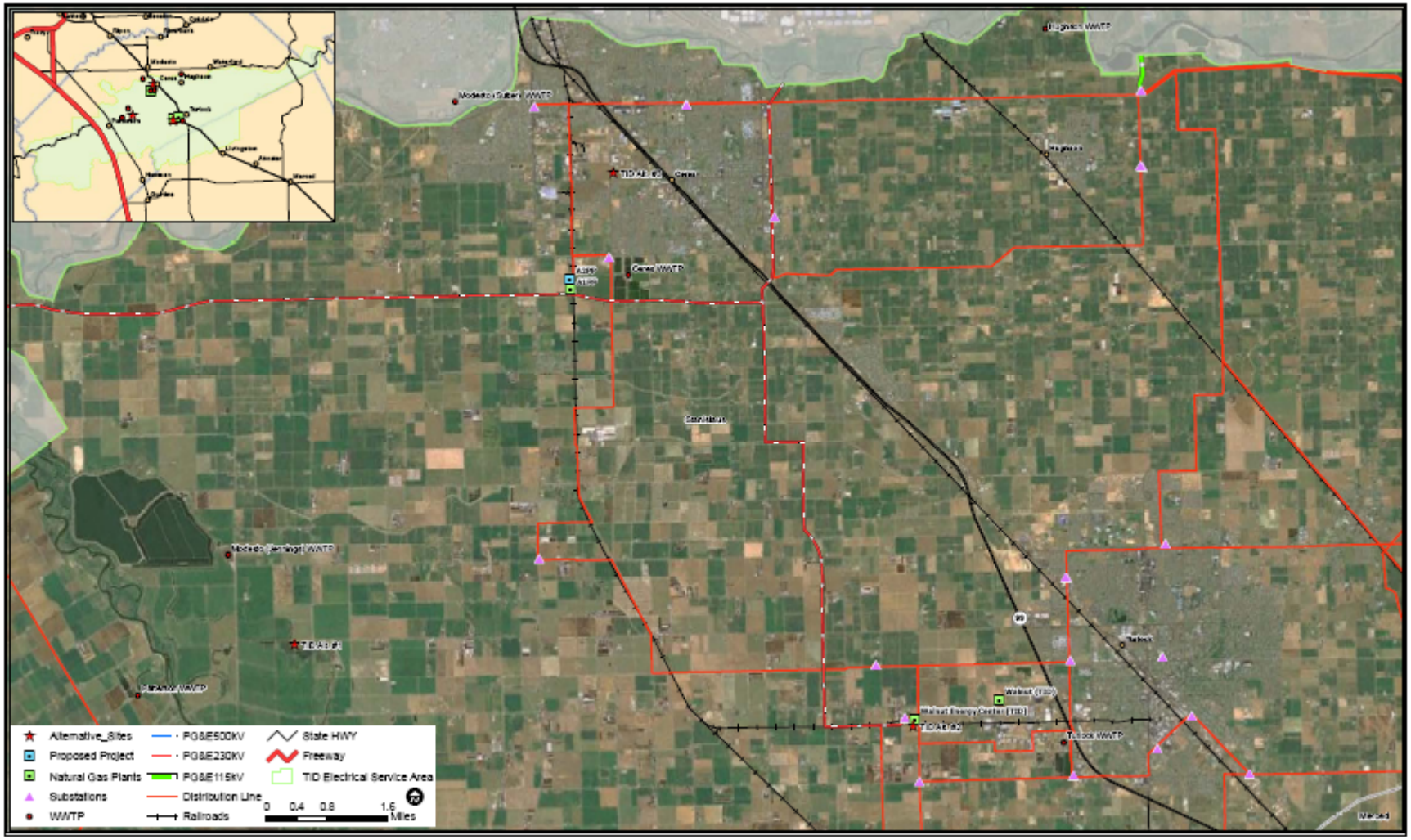
- Demineralized and reverse osmosis water storage tanks
- Administration building

(Exs. 1, § 2.0; 300, pp. 6-3 – 6.4.)

3. Alternative Sites

The evidence identifies and describes three alternative sites considered; all of which are located within TID service territory. (Exs. 1, pp. 6-7 – 6-18; 300, pp. 6-5 – 6-12.) For all sites, acquisition would be required, as TID does not have ownership. **Alternatives Figure 1** identifies the sites.

Almond 2 Power Plant - Alternatives – Figure 1



The evidence evaluates each site with respect to TID's stated project objectives and environmental impacts.

Alternative Site 1: Modesto Wastewater Treatment Plant (Modesto WWTP)

This site is located 8.4 miles west of the City of Ceres. This greenfield site (undeveloped land zoned for agriculture) is located on approximately eight acres of land elevated above the surrounding area. A power plant would likely be allowed under the zoning regulations under a conditional use permit. Water for the project would be provided from the Modesto WWTP by way of a new one-mile pipeline. Wastewater would be returned to Modesto WWTP or treated through a zero-liquid discharge system. The site would require two new nine-mile long transmission line interconnections to TID's Walnut Substation. A new six-mile long natural gas pipeline would be required to connect this site with PG&E's Line #215. (Exs, 1, pp. ,6-7 – 6-8, 6-9 - 6-26; 300, pp. 6-6 – 6-7.)

Alternative Site 2: Washington Road Site

This site located on a 40-acre parcel at the western edge of Turlock. The site is zoned for agricultural use and is currently farmed. Agricultural uses are to the south, east, and west of the site. Utility uses are to the north. An industrial area is nearby. It is characterized by several tall industrial structures within the context of mixed residential and industrial uses. The nearest residences are 800 feet from the site.

A 115-kV interconnection would be less than 0.1 mile. Natural gas would be supplied by a 3.7-mile long pipeline that would tie into PG&E's Line #215. Water supply would come from the Turlock Wastewater Treatment Plant located about two miles away. Effluent form the plant would be treated using a ZLD system

The site is adjacent to a major 115-kV line that connects to TID's existing Walnut peaking plant and substation. It is unknown if the Applicant could obtain site control. (Exs, 1, pp. ,6-7 – 6-8, 6-9 - 6-26; 300, pp. 6-7 – 6-9.)

Alternative Site 3: Morgan Road

This 18.7-acre site is located in Ceres, northeast of the junction of Morgan Road and East Whitmore Avenue. The site is bordered by a storage yard to the north, vacant industrial-designated land to the east, a residential subdivision to the south, and unincorporated agricultural land to the west. The majority of the site,

which is vacant land, is designated General Industrial. A portion of the site adjacent to Whitmore Avenue is addressed by a specific plan (PC-29). The nearest residence is located about 300 feet to the south.

Water for a project at this site would be provided from the Ceres WWTP via a new 2.0 mile pipeline. Wastewater would be treated through a ZLD system. Interconnection would be less than 0.1 mile. Installation of a new 3.7-mile-long pipeline would be required in order to connect with PG&E's Line #215 located along Bradbury Road.

For the reasons given in **Alternatives Tables 1** and **2** below, the Applicant and Staff determined that none of the alternative site is superior to the proposed A2PP site.

Alternatives Table 1
Comparison of Approximate Length Linears/Distance to Receptors

	A2PPSite	TID Alternative Site 1	TID Alternative Site 2	TID Alternative Site 3
Transmission Line Length	2 lines, 0.9 miles & 1.2 miles	2 lines, 9 miles long	2 lines, 0.1 mile	2 lines, 3.2 miles
Gas Pipeline Length	13.4 miles	6 miles	3.7 miles	11.5 mile
Water/Sewer Connections	Adjacent	1 mile	2 miles	1.5 miles
Distance to Sensitive Receptors	1,580 feet	1,300 feet	800 feet	300 feet
Distance to Schools	1.4 miles	3.2 miles	1.7 miles	0.44 miles

Alternatives Table 2
Comparison of Impacts of Alternatives to the Proposed A2PP

Issue Area	TID Alternative Site 1	TID Alternative Site 2	TID Alternative Site 3
Environmental Assessment			
Air Quality	Slightly greater than proposed site	Slightly greater than proposed site	Greater than proposed site
Biological Resources	Greater than proposed site	Similar to proposed site	Greater than proposed site
Cultural Resources	Greater than proposed site	Similar to proposed site	Similar to proposed site
Hazardous Materials	Greater than proposed site	Slightly greater than proposed site	Slightly greater than proposed site
Land Use and Agriculture	Slightly greater than proposed site	Greater than proposed site	Similar to proposed site
Noise and Vibration	Greater than proposed site	Greater than proposed site	Greater than proposed site
Public Health	Slightly greater than proposed site	Slightly greater than proposed site	Slightly greater than proposed site
Socioeconomic Resources	Similar to proposed site	Similar to proposed site	Similar to proposed site
Soil and Water Resources	Slightly greater than proposed site	Slightly greater than proposed site	Similar to proposed site
Traffic and Transportation	Slightly greater than proposed site	Similar to proposed site	Similar to proposed site

We concur that that none of the alternative sites considered are superior to the proposed site.

4. Alternative Fuels and Technologies

The record examines various generation technology alternatives, as well as conservation and demand side management. (Exs. 1, p. 6-27; 330, pp. 6-12 – 6-14.) The various generation alternatives considered by the parties were all deemed inferior to the project site due to infeasibility, failure to conform to the project objectives, or lack of environmental benefit.

Although viable, solar and wind technologies would require significantly greater land use and would not provide peaking capacity. The evidence further established that geothermal and hydroelectric generation technologies would not be feasible in Stanislaus County. Similarly, biomass is not feasible given the project objectives because of the limited energy production and potential increases in air emissions. No evidence suggests that an alternative fuel source would be superior to that proposed. (Exs. 1, p. 6-27, pp. 8-4 to 8-6; 300, pp. 6-13 – 6-14.)

One alternative to meeting California's electricity demand with new generation is to reduce the demand for electricity. Such conservation and demand side measures include reducing energy use by increasing energy efficiency and conservation, implementing commensurate building and appliance standards, and addressing load management and fuel substitution. (Ex. 300, pp. 6-12 – 6-13.)

Even with a 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 and business expansion. Current demand side programs are not sufficient to satisfy future electricity needs, nor is it likely that even more aggressive demand side programs could accomplish this, given the economic and population growth rates in recent years. Therefore, although it is likely that federal, state, and local demand side programs will receive even greater emphasis in the future, both new generation and new transmission facilities are needed in the immediate future and beyond to maintain adequate supplies. (*Ibid*.)

5. No Project Alternative

The “No Project” alternative assumes that the project is not constructed. The purpose of this analysis is to provide a comparison of the impacts of approving the proposed project against the impacts of not approving it. [14 Cal. Code Regs., § 15126.6(i).]

If the project were not built, the region would not benefit from the local and efficient source of 174 MW of new generation that this facility would provide nor would jobs be created in support of project construction and operation. The primary advantages of the A2PP Project are that it would utilize a previously disturbed site and would capitalize on existing infrastructure at the existing APP site. As noted above, the A2PP Project would also increase reliability and compensate for the intermittency of renewable energy sources.

In the absence of the A2PP Project, however, other power plants could likely be constructed in the project area or in California to serve the demand that could have been met with the A2PP Project. New plants constructed in the area could utilize undeveloped land (greenfield sites), possibly creating significant environmental impacts. New plants would be less efficient since they would not share infrastructure as is expected of the APP and A2PP. If no new natural gas plants were constructed, TID may have to rely on older power plants. These plants could consume more fuel and emit more air pollutants per kilowatt-hour generated than the proposed project. In the near term, the more likely result is that existing plants, many of which produce higher level of pollutants, could operate more than they do now. Thus, the “No Project” alternative is not environmentally superior to the A2PP Project.

FINDINGS OF FACT

Based upon the evidence, including that presented on each subject area described in other portions of this Decision, we find and conclude as follows:

1. The record contains an acceptable analysis of a reasonable range of alternatives to the project as proposed.

2. The record contains an adequate review of alternative sites, linear routings, fuels, technologies, and the “No Project” alternative.

3. Alternative fuels and technologies are not capable of meeting project objectives.

4. No site alternative identified is capable of meeting the stated project objectives and applicable siting criteria.

5. No feasible alternative site has been identified which would lessen project impacts.

6. The “No Project” alternative would not avoid or substantially lessen potentially significant environmental impacts.

7. Implementation of the Conditions of Certification contained in this Decision will ensure that the A2PP Project does not create any significant direct, indirect, or cumulative adverse environmental impacts.

CONCLUSION OF LAW

1. We conclude, therefore, that the record contains a sufficient analysis of a reasonable range of alternatives and complies with the requirements of the California Environmental Quality Act, the Warren-Alquist Act, and their respective regulations.

No Conditions of Certification are required for this topic.

III. COMPLIANCE AND CLOSURE

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

SUMMARY OF THE EVIDENCE

The 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 Almond 2 Power Plant (A2PP) Project is constructed and operated according to the Conditions of Certification. It essentially describes the respective duties and expectations of the Project Owner and the Staff Compliance Project Manager (CPM) in implementing the design, construction, and operation criteria set forth in this Decision.

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

The Compliance Plan is composed of two broad elements. The first element 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 OF FACT

The record establishes:

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

2. We adopt the following Compliance Plan as part of this Decision.

CONCLUSIONS OF LAW

1. The compliance and monitoring provisions incorporated as a part of this Decision satisfy the requirements of Public Resources Code section 25532.

2. The Compliance Plan and the specific Conditions of Certification contained in this Decision assure that the A2PP will be designed, constructed, operated, and closed in conformity with applicable law.

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/or light vehicles is allowable during site mobilization.

CONSTRUCTION

Onsite work to install permanent equipment or structures for any facility.

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.

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.

Notwithstanding the definitions of ground disturbance, grading, boring, and trenching above, construction 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 .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, when the power plant has reached reliable steady-state production of electricity at the rated capacity. 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) shall oversee the compliance monitoring and is 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 compliance files are maintained and accessible.

The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies, Energy Commission, and staff 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 MS 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 is to assemble both the Energy Commission's and 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. This is to confirm that all applicable conditions of certification 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 the following documents and information 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 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 delegated 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)

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

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

1. Monthly and/or annual compliance reports, filed by the project owner or authorized agent, reporting on work done and providing pertinent documentation, as required by the specific conditions of certification;
2. 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 appropriate condition(s) of certification by condition number(s), and 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:

Chris Davis, CPM
(09-AFC-2C)
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

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

If the project owner desires Energy Commission staff action by a specific date, that request shall be made in the submittal cover letter and shall include a detailed explanation of the effects on the project if that date is not met.

Pre-Construction Matrix and 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;
7. the compliance status of each condition, e.g., “not started,” “in progress” or “completed” (include the date); and
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** form found at the end of this section of the Decision.

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;
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 or as acceptable by the CPM.

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); 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 Executive Director 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. Current compliance fee information is available on the Energy Commission's website http://www.energy.ca.gov/siting/filing_fees.html. You may also contact the CPM for the current fee information. The initial payment is due on the date of the Business Meeting at which the Energy Commission adopts the final decision. 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-02, 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 a 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. 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 the 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 if 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 a 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, Staff Approved Project Modifications 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 staff approved project modifications as specified below. Both 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 laws, ordinances, regulations or standards, 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 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 a sample petition to use as a template.

Staff Approved Project Modification

Modifications that do not result in deletions or changes to conditions of certification, that are compliant with laws, ordinances, regulations, and standards and will not have significant environmental impacts may be authorized by the CPM as a staff approved project modification pursuant to section 1769(a)(2). This process usually requires minimal time to complete, and requires a 14-day public review of the Notice of Petition to Amend that includes staff's intention to approve the proposed project 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.

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 an 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, the project owner shall 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.

COMPLIANCE TABLE 1
SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION

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	

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.
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 executive director 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 TABLE 1
SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION

CONDITION NUMBER	SUBJECT	DESCRIPTION
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.

COMPLAINT LOG NUMBER:_____ DOCKET NUMBER:_____

PROJECT NAME:_____

COMPLAINANT INFORMATION

NAME:_____ PHONE NUMBER:_____

ADDRESS:_____

COMPLAINT

DATE COMPLAINT RECEIVED:_____ TIME COMPLAINT RECEIVED:_____

COMPLAINT RECEIVED BY: ☐ TELEPHONE ☐ IN WRITING (COPY ATTACHED)

DATE OF FIRST OCCURRENCE:_____

DESCRIPTION OF COMPLAINT (INCLUDING DATES, FREQUENCY, AND DURATION):_____

FINDINGS OF INVESTIGATION BY PLANT PERSONNEL:_____

DOES COMPLAINT RELATE TO VIOLATION OF A CEC REQUIREMENT? ☐ YES ☐ NO

DATE COMPLAINANT CONTACTED TO DISCUSS FINDINGS:_____

DESCRIPTION OF CORRECTIVE MEASURES TAKEN OR OTHER COMPLAINT RESOLUTION:_____

DOES COMPLAINANT AGREE WITH PROPOSED RESOLUTION? ☐ YES ☐ NO

IF NOT, EXPLAIN:_____

CORRECTIVE ACTION

IF CORRECTIVE ACTION NECESSARY, DATE COMPLETED:_____

DATE FIRST LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

DATE FINAL LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

OTHER RELEVANT INFORMATION:_____

"This information is certified to be correct."

PLANT MANAGER SIGNATURE:_____ DATE:_____

IV. ENGINEERING ASSESSMENT

The broad engineering assessment conducted for the A2PP project consists of separate analyses that examine facility design, engineering, efficiency, and reliability aspects. 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 and construction. In considering the adequacy of the design plans, the Commission reviews whether the power plant and linear facilities are described with sufficient detail to ensure that the project can ultimately be designed and constructed in accordance with applicable engineering laws, ordinances, regulations, and standards (LORS). The review also includes, as appropriate, the identification of special design features that are necessary to address unique site conditions that could adversely impact public health and safety, the environment, or the operational reliability of the project. The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, § 2, Appendix 2B, 4, 300[4], §5.1.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

As is more fully discussed in the **Project Description** section of this Decision, the A2PP project will be located on approximately 4.6 acres adjacent to the existing TID Almond Power Plant (APP). The site is classified as Seismic Design Category D. (Ex. AFC, 1, p. 2-28.)

The facility design includes a new natural gas supply provided by Pacific Gas and Electric (PG&E). A2PP will be interconnected to the existing TID system by way of two new 115-kV transmission lines, which will extend south the proposed Grayson Substation that will be owned and constructed by TID as project separate and distinct from the A2PP project. The proposed Grayson Substation

[4] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

is not part of the A2PP project even thought A2PP will tie into this substation. Instead, the Grayson Substation project is part of a larger TID project known as the Hughson-Grayson project. (Ex. 1, p. 2-1, 300, p. 3-1.)

The A2PP project requires TID to re-rate 2.9 miles of an existing 69-kV sub-transmission line from the existing APP to the TID Crows Landing Substation that currently serves parts of the cities of Ceres and Modesto and surrounding rural areas. (Ex. 1, pp. 2-1- 2-2.)

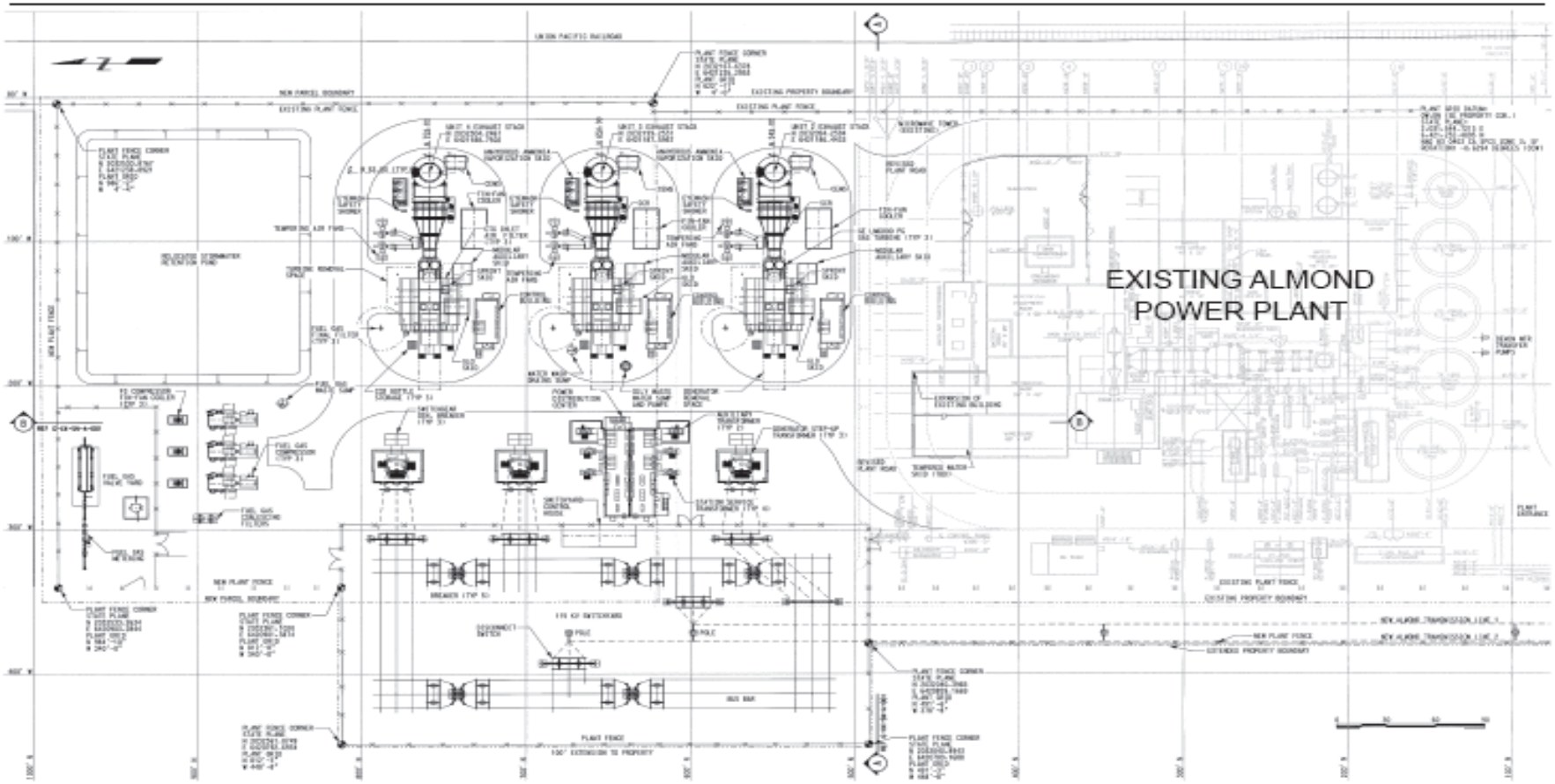
Facility Design Figure 1 below depicts the proposed general arrangement of A2PP.

Because the existing APP and proposed A2PP facilities will be adjacent to one another – although on different sites –existing APP facilities will be shared with A2PP. The following existing elements of APP will be shared with A2PP without need for modification:

- Anhydrous ammonia system, including the 12,000 gallon storage tank and unloading facilities.
- Fire protection system, including the fire water storage tank and diesel-fired emergency fire pump.
- Well water for service water and emergency shower/eyewash stations.
- Water treatment system.
- Process water supply and wastewater discharge system.
- Instrument and service air systems
- Oil/water separator
- Demineralized and reverse osmosis water storage tanks
- Administration building, including the control room and office space. (Ex. 1, p. 2-2.)

Modified, shared facilities include the maintenance shop/warehouse building, which will be expanded. A new stormwater retention pond will be constructed for the A2PP and APP plants to share. (Ex. 1, p. 2-2.)

FACILITY DESIGN – FIGURE 1



Notes:
"Shaded" facilities indicate the existing Almond Power Plant
Dark lines indicate the proposed A2PP

Source: CH2M HILL, Drawing G-XX-PL-1-A-003, Revision F

FIGURE 2.1-1
GENERAL ARRANGEMENT
ALMOND 2 POWER PLANT
CERES, CALIFORNIA

CH2MHILL

1. Site Preparation and Development

The Applicant proposes to use accepted industry standards, design standards, and construction methods. (Ex. 1, pp. 2-27 – 2-28, Appendix 2B.) The evidence establishes that Staff evaluated the Applicant's proposed design criteria and construction methods for grading, flood protection, erosion control, site drainage, and site access as well as design criteria for constructing linear support facilities. (Ex. 300, p. 5.1-2.)

Staff reviewed the Applicant's project description and engineering design criteria within the context of the applicable LORS. The primary LORS are identified below in **Facilities Design Table 1**.

FACILITY DESIGN Table 1
Key Engineering Laws, Ordinances, Regulations, and Standards (LORS)

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	Stanislaus 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)

Staff concluded that the project and its linear facilities as proposed in preliminary design form, will comply with all applicable site preparation LORS with implementation of .Staff-proposed Conditions of Certification **GEN-1** through **GEN-8**, **CIVIL-1** through **CIVIL-4**, **STRUC-1** through **STRUC-4**, **MECH-1** through **MECH-3**, and **ELEC-1** below and **Geology and Paleontology** Conditions of Certification **PAL-1** through **PAL-4**. (Exs. 1, pp. 300, pp. 5.1-3, 5-1-5.)

We concur with Staff's determination. Collectively, these conditions (1) require the A2PP project to be designed and constructed in accordance with specified engineering LORS and (2) mandate design review, plan checking, and field inspections by the chief building official (CBO) or an Energy Commission delegate. For instance, Condition **GEN-1** requires the project owner to design, construct, and inspect the project in accordance with the 2007 California Building Standards Code, which encompasses the California Building Code (CBC), California Building Standards 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 other applicable codes and standards in effect when the design and construction of the project actually begin.

If the initial designs are submitted to the chief building official (CBO) for review and approval after the update to the 2007 CBSC takes effect, the 2007 CBSC provisions shall be superseded and replaced by the updated provisions.

GEN-2, GEN-3, GEN-7, GEN-8, STRUC-1 – **STRUC-3, MECH-1, MECH-3, ELEC-1** require specified reviews by and approvals from the CBO, Energy Commission Compliance Program Manager (CPM), or both. **GEN-4** – **GEN – 6** require registered engineers and qualified inspectors to supervise various aspects of design and implementation. **STRUC-4** mandates that tanks and vessels containing quantities of toxic or hazardous material must comply with the 2007 version of the California Building Code.

Compliance with federal and state Occupational Safety and Health Standards (OSHS) is mandated by Condition **MECH-2**.

Implementation of **Geology and Paleontology** Conditions of Certification **PAL-1** through **PAL-4** will mitigate potential construction-related impacts to paleontological resources to less than significant levels. Their implementation requires significant information sharing and interaction among the project owner, paleontological resource monitors, and the CPM.

2. Major Structures, Systems, and Equipment

Major structures, systems, and equipment are necessary for power production, costly or time consuming to repair or replace, used for the storage, containment, or handling of toxic/hazardous materials, or could become potential health and safety hazards if not constructed according to applicable engineering LORS. More particularly, the Applicant provided design and engineering information and data for each of the following major systems:

- Power generation
- Heat dissipation
- Air emission control system
- Waste disposal system
- Noise abatement system

- Switchyard/transformer systems
- Natural gas supply. (Exs. 1, §§ 2.1.4, 2.1.5, 2.1.13, Appendix 2B, 2.2.10, 5.1, 2.1.8, 5.14, 5.7, 2.1.5, 2.1.12.2., 2.1.5.1, 2.1.13, 3.0, 4.0.)

With implementation of Conditions of Certification **GEN-1** and **GEN-2** described above, the project must be designed and constructed in accordance with the most current version of the California Building Standards Code in effect at the time of project construction. Furthermore, the project owner must submit a schedule of facility design submittals and master drawings and master specification lists to the CPM and CBO before submitting initial engineering designs for CBO review and approval.

And, because the California Building Code requires certain power plant structures to undergo dynamic lateral force (structural) analysis to determine their seismic design criteria while allowing others to be designed using a static analysis procedure, Condition of Certification **STRUC-1** ensures the project will submit its proposed lateral force procedures to the CBO for review and approval before construction begins. (Ex. 300, p. 5.1-3.)

We find that implementation of the above-described mitigation measures will ensure that the project's major structures, systems, and equipment are designed and constructed to reduce or avoid impacts that include potential health and safety hazards.

3. Project Quality Procedures

The Applicant generally described the quality control plan that it would implement at the A2PP facility. (Ex. 1, pp. 2-31 – 2-33.) The Applicant identified nine categories or stages of activities to which the quality assurance planning will apply. These categories encompass conceptual design criteria, detail design, procurement specification preparation, manufacturer's control and surveillance, manufacture data review, receipt inspection, construction/installation, system/component testing, and plant operation. (Ex. 1, p. 2-32.)

Staff evaluated the Applicant's project quality control plans and independently determined that the quality program is adequate to ensure that systems and components will be designed, fabricated, stored, transported, installed, and tested in accordance with all appropriate power plant technical codes and standards. Thus, to ensure that the Applicant's does in fact implement the proposed quality assurance/quality control (QA/QC) program, we find that it

necessary to explicitly require compliance with the design and construction – related Conditions of Certification set forth below. (Ex. 300, pp. 5.1-3, 5.1-6 – 5.1-20.)

4. Compliance Monitoring

The California Building Code authorizes and directs the CBO to enforce the Code's provisions. (Ex. 300, p. 5.1-3.) The Energy Commission serves as the CBO for project's under its jurisdiction and as appropriate, interprets the Code and adopts clarifying regulations.

The Commission may delegate CBO authority to local building officials and/or independent consultants to carry out design review and construction inspections. For this project, engineering and compliance staff will invite Stanislaus County, the City of Ceres or a third-party engineering consultant to act as delegate CBO.

Staff has proposed – and we have adopted - Conditions of Certification to ensure public health and safety and compliance with engineering design LORS. Some of these conditions address the roles, responsibilities, and qualifications of the engineers who will design and build the proposed project. Under the Conditions of Certification below, each element of the project's construction must be approved by the CBO before it is performed. The Conditions also require qualified special inspectors perform or oversee special inspections required by all applicable LORS.

While the Energy Commission and delegate CBO have the authority to allow some flexibility in scheduling construction activities, these conditions are written so that no element of construction (of permanent facilities subject to CBO review and approval) that could be difficult to reverse or correct can proceed without prior CBO approval. Elements of construction that are not difficult to reverse may proceed without approval of the plans. The Applicant bears the responsibility to fully modify construction elements in order to comply with all design changes resulting from the CBO's subsequent plan review and approval process. (Ex. 300, pp. 5.1-3 5.1-4.)

5. Facility Closure

The evidentiary record also addresses project closure activities, which could range from "mothballing" the facility (i.e., closing or not using for a long time with the possibility of opening or being used again in the future) to removing all equipment and restoring the site. (Ex. 300, pp. 5.1-4 – 5.1-5.) To ensure that

decommissioning of the A2PP will conform to applicable LORS and be completed in a manner that protects the environment and public health and safety, the project owner is required to submit a decommissioning plan which will identify: decommissioning activities; applicable LORS in effect when decommissioning occurs; activities necessary to restore the site, if appropriate; and decommissioning alternatives. (Ex. 300, p. 5.1-5.) Related requirements are discussed in the **Compliance** section of this Decision.

6. Compliance with LORS

As discussed above and shown by the language of the Conditions of Certification, the project will comply with the federal and state occupational safety and health requirement and the requirements of the most current California Building Standards Code (and the codes contained therein) requirements.

The evidence also shows that the project's design and construction will comply with the applicable local and general codes identified in **Facility Design Table 1**. Appendix 2B to the Applicant's AFC contains a detailed discussion of these codes and the practices that will be undertaken to ensure compliance.

FINDINGS OF FACT

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

1. The A2PP project is currently in the preliminary design stage.

2. The evidentiary record identifies the applicable laws, ordinances, regulations, and standards (LORS) that apply to this project.

3. The evidentiary record contains and independent evaluation of the applicant's proposed design criteria, including identification of criteria essential to public health and safety.

4. The evidentiary 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 portion of **Appendix A** of this Decision.

5. The Conditions of Certification set forth below provide, in part, that independent qualified personnel will perform design review, plan checking, and field inspections of the proposed project.

6. 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.

7. The **General Conditions,** included in the **Compliance** section of this Decision, establish requirements to be followed in the event of facility closure.

CONCLUSION OF LAW

1. Implementation of the Conditions of Certification listed below will ensure that the A2PP project will be designed and constructed in conformance with the applicable laws pertinent to the engineering aspects summarized in **Appendix A** of this 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 document.

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 designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO (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, or demolition 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, and master drawings and master specifications list. The master drawings and master specifications list shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures, systems, and equipment. Major structures, systems, and equipment are structures and their associated components or equipment that are necessary for power production, costly or time consuming to repair or replace, are used for the storage, containment, or handling of hazardous or toxic materials, or could become potential health and safety hazards if not constructed according to applicable engineering LORS. The schedule shall contain the date of each submittal to the CBO. 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 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, and the master drawings and master specifications list of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures, systems, and equipment defined above in Condition of Certification **GEN-2**. Major structures and equipment shall be added to or deleted from the list only with CPM approval. The project owner shall provide schedule updates in the monthly compliance report.

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.

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

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.) All transmission facilities (lines, switchyards, switching stations, and substations) are handled 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 handled 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 for corrective action (2007 CBC, Chapter 17, § 1704.1.2, Report Requirements); and

4. Submit a final signed report to the resident engineer, and CBO 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.

Verification: The discrepancy documentation shall reference this condition of certification and, if appropriate, applicable sections of the CBC and/or other

LORS. The project owner shall inform the CPM, in the next monthly compliance report, of any corrective action taken to resolve a discrepancy.

GEN-8 The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall request the CBO to inspect the completed structure and review the submitted documents. 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 (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.

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.

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, 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 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. A list of NCRs, for the reporting month, shall also be included in the following monthly compliance report.

CIVIL-4 After completion of finished grading and erosion and sedimentation control and drainage 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 sediment 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. 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, the project owner shall submit plans, calculations and other supporting documentation to the CBO for design review and acceptance for all project structures and equipment identified in the CBO-approved master drawing and master specifications lists. The design plans and calculations shall include the lateral force procedures and details as well as vertical calculations.

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 project owner- and CBO-approved alternative time frame) prior to the start of any increment of construction of any structure or component listed in the CBO-approved master drawing and master specifications list, the project owner shall submit to the CBO the above final design plans, specifications and calculations. The project owner shall submit to the CPM, in the next monthly compliance report, a list of the structural plans and specifications that have been approved by the CBO.

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.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans required by the 2007 CBC, 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.

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 include a list of the CBO-approved plans in the following monthly compliance report.

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 the CBO-approved master drawing and master specifications list. 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.

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/NFPA Z223.1 (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);
- Stanislaus County codes; and
- City of Ceres 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 project owner- and CBO-approved alternative time frame) prior to the start of any increment of major piping or plumbing construction listed in the CBO-approved master drawing and master specifications list, 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.

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

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.

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.

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 handled 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.

B. POWER PLANT EFFICIENCY

The A2PP Project will use substantial amounts of natural gas for its fuel. Pursuant to the California Environmental Quality Act (CEQA), we must determine whether the consumption of this non-renewable form of energy will result in substantial impacts upon energy resources. (Cal. Code Regs., tit. 14, § 15126.4(a)(1), Appendix F.)

CEQA Guidelines state that the environmental analysis "…shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy" (Cal. Code Regs., tit. 14, § 15126.4[a][1]). Appendix F of the Guidelines further suggests consideration of such factors as the project's energy requirements and energy use efficiency; its effects on local and regional energy supplies and energy resources; its requirements for additional energy supply capacity; its compliance with existing energy standards; and any alternatives that could reduce wasteful, inefficient, and unnecessary consumption of energy. (Cal. Code Regs., tit. 14, § 15000 et seq., Appendix F).

The inefficient and unnecessary consumption of energy, in the form of non-renewable fuels such as natural gas and oil, constitutes an adverse environmental impact. An adverse impact can be considered significant if it results in:

- adverse effects on local and regional energy supplies and energy resources;
- a requirement for additional energy supply capacity;
- noncompliance with existing energy standards; or
- the wasteful, inefficient, and unnecessary consumption of fuel or energy.

No federal, state or local/county laws, ordinances, regulations, and standards (LORS) apply to the efficiency of this project.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Energy Requirements and Use Efficiency

The evidence is uncontested and examines the project's energy requirements and energy use efficiency; effects on local and regional energy supplies and resources; requirements for additional energy supply capacity; and compliance with applicable energy standards. (10/1/10 RT 11-12, Exs. 1, §§ 2.0, 4.0, 300[1] §5.3.) In addition, the

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits

evidence addresses whether there are feasible alternatives which would reduce any wasteful, inefficient, or unnecessary energy consumption attributable to the project.

The project objectives include providing approximately 174 MW of flexible peaking electrical power and ancillary services (such as rapid start capability and automatic generation control) within the TID service territory. (Ex. 300, p. 5.3-1.)

Project fuel efficiency, and therefore its rate of energy consumption, is determined by the configuration of the power producing system and by the selection of equipment used to generate power. The project will burn natural gas at a rate of approximately 1,405 million Btu (British Thermal Units) per hour LHV. Under average annual ambient conditions, A2PP will generate electricity at a full load efficiency of approximately 39 percent LHV at full load operation. (Ex. 300, p. 5.3-2.)

A2PP proposes to use three General Electric (GE) LM6000PG SPRINT combustion turbine generators and ancillary equipment. The gas turbines will be equipped with evaporative inlet air cooling and compressor intercooling to enhance power, as well as combustor water injection, selective catalytic reduction (SCR), and a combustion catalyst to control emissions of oxides of nitrogen and carbon monoxide, respectively.

The project will be configured as three simple cycle power trains in parallel, in which electricity is generated by one natural gas-fired turbine generator per train. (Ex. 300, p. 5.3-3.) The evidence establishes that the project's simple cycle configuration, with its short start-up time and fast ramping capability,[2] is well suited to providing peaking power in an efficient manner. Further, when reduced output is required, one or more of the turbine generators can be shut down, allowing the remaining machines to produce a percentage of the full power at optimum efficiency. (Ex. 300, p. 5.3-3.)

The Applicant intends for A2PP to operate as a peaking facility up to a total of approximately 5000 engine hours per year per combustion turbine generator. This is equivalent to each of the three turbines operating approximately 57 percent of the year. (Ex. 300, p. 5.3-1.)

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300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

[2] "Ramping" is increasing and decreasing electrical output to meet fluctuating load requirements.

The evidence indicates that the proposed turbines embody the most fuel-efficient electric generation technology available. And, with respect to the efficiency of the selected gas turbine inlet air-cooling method, the evidence establishes that there are no alternatives to the chosen evaporative cooling technology that could significantly reduce energy consumption. According to the evidence, commonly used inlet air-cooling techniques include the evaporative cooler (or fogger) and the chiller. Both techniques increase power output by cooling the gas turbine inlet air. Specifically with regard to the LM6000 SPRINT, the evidence shows that it produces peak power at 50°F and that this peak output can be maintained in much hotter weather by cooling the inlet air. An evaporative cooler, such as the one selected, boots power output on dry days. (Ex. 300, pp. 5.3-3, 5.3-5.)

Thus, the evidence establishes that the project's simple cycle configuration and the chosen generating equipment represent the most efficient feasible combination to satisfy the Applicant's stated project objectives. There is no evidence of any alternatives that could significantly reduce energy consumption.

2. Impacts on Energy Supplies

The natural gas will be delivered by way of a new offsite 11.6 mile long natural gas pipeline, which will be constructed and owned by Pacific Gas and Electric (PG&E). The evidence establishes that PG&E's present energy supply capacity is sufficient to meet the demands of the A2PP project. Thus, it is unlikely that the A2PP project would require the development of additional energy supply delivery capacity. (Ex. 300, pp. 5.3-2 - 5.3-3.)

Moreover, the evidence shows that only natural gas burning technologies are feasible for this project. Other technologies are either incapable of providing the A2PP project's ancillary services (*e.g.,* solar), are unavailable in the area (*e.g*., wind, geothermal, biomass), or are too highly polluting (e.g., coal, oil). (Ex. 300, p. 5.3-4, see also the **Alternatives** section of this Decision.)

3. Cumulative Impacts

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, § 15065(a)(3).]

Neither the Applicant nor Staff identified nearby projects that could potentially combine with the A2PP project to create cumulative impacts on natural gas resources. The evidence establishes, however, that PG&E is capable of delivering natural gas to the A2PP project and its other customers such that other customers will not be adversely impacted by A2PP's required supply.

4. Noteworthy Project Benefits

The evidence shows that the A2PP will benefit the State's electrical system by providing peaking power and ancillary services during periods of high demand. It will do so in the most fuel efficient manner practicable, without creating adverse effects on energy supplies or resources. Furthermore, the project will not require additional sources of energy supply or consume energy in a wasteful or inefficient manner. (Ex. 300, p. 5.3-6.)

FINDINGS AND CONCLUSIONS

Based on the uncontroverted evidence of record, we make the following findings and reach the following conclusions:

1. The A2PP Project will provide approximately 174 MW of peaking power and ancillary services, operate in a simple cycle mode, and use three GE LM6000PG SPRINT gas turbines.
2. Under average annual ambient conditions, the project will generate electricity at a full load efficiency of approximately 39 percent LHV.
3. The project's simple cycle configuration, short start-up time, and fast ramping capability are appropriate for providing peaking power in an efficient manner.
4. The project will not require the development of new fuel supply resources.
5. The project will consume natural gas in as efficient a manner as practicable.
6. The evidence contains a comparative analysis of alternative fuel sources and generation technologies, none of which is superior at meeting project objectives in an efficient manner.
7. The project will benefit TID's electrical system by providing peaking power and ancillary services in the most efficient manner practicable.
8. No federal, state, or local laws, ordinances, regulations, or standards apply to the efficiency of this project.

CONCLUSION OF LAW

1. We therefore conclude that the A2PP will not create adverse effects upon energy supplies or resources, require additional sources of energy supply, or consume energy in a wasteful or inefficient manner. No Conditions of Certification are required for this topic.

C. POWER PLANT RELIABILITY

We must determine whether the project will be designed, sited, and operated to ensure safe and reliable operation. [Pub. Res. Code, § 25520(b); Cal. Code Regs., tit. 20 § 1752(c) (2).] However, there are no LORS that establish either power plant reliability criteria or procedures for attaining reliable operation. Therefore, we look to typical industry norms for reliability of power generation as a benchmark against which to evaluate this proposal. Where a power plant compares favorably to industry norms, it is not likely to degrade the overall reliability of the electric system it serves. The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §§ 1.0, 2.0, 3.0, 4.0; 300[1], p. 5.4-2.)

As a state control area operator, the California Independent System Operator (CAISO) bears responsibility for responsible for maintaining system reliability. CAISO has begun to establish specific criteria for each load-serving entity under its jurisdiction to help the entities decide how much generating capacity and ancillary services to build or purchase. Load serving entities then issue power purchase agreements to satisfy these needs. As a load serving entity, TID is obligated to satisfy the criteria established by CAISO to reduce reliance on imported power. (Exs. 1, p. 1-9; 300, p. 5.4-2.)

The CAISO criteria are designed to maintain system-wide reliability. However, it is possible that, if numerous power plants operated at reliability levels sufficiently lower than historical levels, the assumptions used by CAISO to ensure system reliability would prove invalid. As a result, the Commission must ensure that individual power plant owners continue to build and operate their projects to the traditional level of reliability reflected in the power generation industry.

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision..

SUMMARY AND DISCUSSION OF THE EVIDENCE

Applicant has predicted an availability factor of 92 to 98 percent for A2PP.[2] Commission staff evaluated this claim against typical industry norms as a benchmark for plant reliability. (Exs. 1, p. 2-7; 300, p. 5.4-2.)

The availability factor for a power plant is the percentage of time that it is available to generate power. Both planned and unplanned outages subtract from a plant's availability. For practical purposes, a reliable power plant is one that is available when called upon to operate. The evidence of record shows that delivering acceptable reliability entails: 1) adequate levels of equipment availability; 2) plant maintainability with scheduled maintenance outages; 3) fuel and water availability; and 4) resistance to natural hazards. (Ex. 300, pp. 5.4-3 - 5.4-5.) If these factors compare favorably to industry norms, then we can reasonably infer that the power plant would be at least as reliable as other power plants on the electric system and would therefore not degrade overall system reliability.

1. Equipment Availability

Equipment availability will be ensured by use of appropriate quality assurance/quality control (QA/QC) programs during design, procurement, construction, and operation of the plant and by providing adequate maintenance and repair of the equipment and systems. The project owner will use a QA/QC typical in the power industry. Equipment will be purchased from qualified suppliers and the project owner will perform receipt inspections, test components, and administer independent testing contracts. To ensure these measures are taken, we have incorporated Conditions of Certification in the **Facility Design** section of this Decision. (Ex. 300, p. 5.4-3.)

2. Plant Maintainability

A peaking generating facility such as A2PP usually offers adequate opportunity for maintenance work during its extensive downtime. However, during periods of extended dispatch, the facility may be required to operate for long periods. A typical approach for achieving reliability in such circumstances is to provide redundancy for those pieces of equipment most likely to require service or repair. (Ex. 300, p. 5.4-3.)

[2] The project, as a peaker unit, is expected to operate approximately 5,000 machine hours per year (57 percent of the year per machine.) (Ex. 300, p. 5.4-3.)

The evidence shows that the project incorporates an appropriate redundancy of function. It consists of three simple-cycle combustion turbine generators operating in parallel as independent equipment trains. A single equipment failure cannot disable more than one train, thus allowing the plant to continue to generate at reduced output. In addition, all plant ancillary systems are designed with adequate redundancy to ensure continued operation in the face of equipment failure. (Exs. 1, p. 2-30; 300, p. 5.4-4.)

The project owner will base its maintenance program on recommendations from the various equipment manufacturers. This will encompass both preventive and predictive maintenance techniques. Maintenance outages will be planned for periods of low electricity demand. The evidence establishes that the planned maintenance measures will ensure acceptable reliability. (Exs. 1, pp. 2.30-2-32; 300, p. 5.4-4.)

3. Fuel and Water Availability

For any power plant, the long-term availability of water for cooling or process use and fuel is necessary to ensure reliability. The project will burn natural gas supplied by Pacific Gas & Electric (PG&E). This fuel will be supplied via a new 11.6-mile long natural gas pipeline that will connect to PG&E's Line #215, which is south of the project site. (Ex. 300, p. 5.4-4.) The line offers access to adequate supplies of gas to meet the project's needs. (Ex. 300, p. 5.4-4.)

A2PP will use process cooling water from the City of Ceres Waste Water Treatment Plant. Potable water will be supplied by a drinking water delivery service. Water will be pumped form an extraction well located beneath the WWTP percolation pond. The evidence indicates that the project's water supply will be reliable. (Ex. 300 p. 5.4.4.) The **Soil and Water Resources** section of this Decision more fully discusses the mechanics and reliability of the project water supply.

4. Natural Hazards

Neither the project site nor its linears are located within an Alquist-Priolo Earthquake Fault Zone or within the trace of any known active fault. (Ex. 300, p. 5.4-5.) Nonetheless, the project shall de designed and constructed to the seismic requirements of the most current LORS. (Ex. 300, p. 5.4-5.) This requirement is set forth in **Facility Design** Conditions of Certification. By

implementing these seismic design criteria, this project will likely perform at least as well as, and perhaps better than, existing plants in the electric power system.

The project site is located within Zone X floodplain, which is outside of the 100-year floodplain. (Ex. 300, p. 5.4-5.) Grading and construction performed as required by the **Facility Design** Conditions of Certification will ensure proper drainage to prevent on-site flooding. Thus, the evidence supports our determination that that there should be no significant concerns with power plant functional reliability due to flooding. (Ex. 300, p. 5.4-5.)

5. Comparison to Industry Norms

The North American Electric Reliability Corporation (NERC) maintains statistics for availability factors and other related reliability data. NERC reports generating unit statistics for the years 2002 through 2006 for gas turbine units (50 MW and larger). These statistics demonstrate an availability factor of 91.82 percent. (Ex. 300, p. 5.4-5.) The evidence shows that the gas turbines used by A2PP have been commercially available to several years and are demonstrated to have an availability factor approaching 98 percent. (Ex. 300, p. 5.4-6.)

6. Noteworthy Public Benefits

A2PP will provide peaking power and intermediate duty generation to allow TID to satisfy its obligations. The project will also provide additional local generating capacity and offer ancillary services to CAISO. (Ex, 300, p. 5.4-6.)

7. Public and Agency Comments

No comments were received on the topic of power plant reliability.

FINDINGS AND CONCLUSIONS

Based on the evidence, we make the following findings:

1. No federal, state, or local/county LORS apply to the reliability of A2PP.

2. A project's reliability is acceptable if it does not degrade the reliability of the utility system to which it is connected.

3. The North American Electric Reliability Corporation (NERC) reports that for the years 2002 through 2006 gas turbine units (50MW and larger) exhibited an availability factor of 91.82 percent.

4. The evidence indicates that an availability factor of 92 to 98 percent is achievable by A2PP.

5. Implementation of Quality Assurance/Quality Control (QA/QC) 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.

6. Appropriate Conditions of Certification included in the **FACILITY DESIGN** portion of this Decision ensure implementation of the QA/QC programs and conformance with seismic design criteria.

7. The project's fuel and water supply will be reliable.

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

9. The project, as a peaker unit, is expected to operate approximately 5,000 machine hours per year (57 percent of the year per machine.)

10. The project will enhance TID's power supply reliability, contribute to electricity reserves in the region, and provide operating flexibility.

11. The use of three combustion turbine generators, configured as independent equipment trains, provides the project inherent reliability.

CONCLUSION OF LAW

1. We therefore conclude that the project will be constructed and operated in accordance with typical power industry norms for reliable electricity generation and will not degrade overall system reliability. No Conditions of Certification other than those included in the **FACILITY DESIGN** portion of this Decision are required for this topic.

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.) In conducting its review of a power plant AFC, the Commission assesses the engineering and planning design of new transmission facilities associated with a proposed project to ensure compliance with applicable LORS required for safe and reliable electric power transmission. 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. (Cal. Code Regs., tit. 14 § 15378.)

Additionally, under the CEQA, the Commission must conduct an environmental review of the "whole of the action," which may include facilities not licensed by the Energy Commission. (Cal. Code Regs., tit. 14, § 15378.) Thus, the Commission must identify the system impacts and necessary new or modified transmission facilities required downstream of the proposed interconnection. The record indicates that the Applicant in this case has adequately identified all necessary interconnection facilities based on the information currently available.

The California Independent System Operator (California ISO) is typically 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 Energy Commission routinely works in conjunction with the California ISO in assessing a project. Commission staff normally relies on the California ISO, or the interconnecting utility for the analysis of impacts on the transmission grid as well as the identification and approval of required new or modified facilities downstream from the proposed interconnection.

For this project, TID is the interconnecting authority for the analysis of impacts on the transmission grid from the proposed interconnection as well as the identification and approval of new or modified downstream facilities that may be required as mitigation measures. Because the proposed A2PP would connect to the TID transmission network and requires analysis and approval by TID, TID is responsible for ensuring electric system reliability in its system for addition of the proposed transmission modifications and determines both the standards

necessary to achieve reliability and whether the proposed transmission modifications conform to those standards. (Ex. 300[7], p. 5.5-1 – 5.5-2.)

TID is not part of the California ISO grid. As a result, the California ISO is not directly responsible for ensuring electric system reliability for the generator interconnection and does not plan to provide analysis and testimony for this project. (Ex. 300, p. 5.5-2.)

In addition to evaluating the results of TID's analyses, we also evaluate the project's compliance with the following applicable laws, ordinances, regulations, and standards (LORS):

- California Public Utilities Commission General Order 95, *Rules for Overhead Electric Line Construction* – Establishes uniform requirements for construction of overhead transmission lines. Compliance with this order ensures adequate service and safety to persons engaged in the construction, maintenance, and operation or use of overhead electric lines and to the public generally.
- California Public Utilities Commission General Order 128, *Rules for Construction of Underground Electric Supply and Communications Systems* - Establishes uniform requirements and minimum standards to be used for underground supply systems to ensure adequate service and safety to persons engaged in the construction, maintenance, and operation or use of underground electric lines and public generally.
- National Electric Safety Code (1999) – Provides electrical, mechanical, civil, and structural requirements for overhead electric line construction and operation.
- Western Electricity Coordinating Council (WECC) Planning Standards and North American Electric Reliability Corporation (NERC) Planning Standards – These merged standards require the continuity of service to loads as the first priority, and preservation of interconnected operation as a secondary priority. The standards provide planning for electric systems to withstand the more probable forced and maintenance outage system contingencies at projected customer demand and anticipate electricity

[7] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

transfer levels, while continuing to operate reliably within equipment and electric system thermal, voltage, and stability limits.

- NERC Reliability Standards for the Bulk Electric Systems of North America – Provide national policies, standards, principles, and guidelines to ensure the adequacy and security of the electric transmission system. These standards provide for system performance levels under normal and contingency conditions. (Ex. 300, pp. 5.5-2 – 5.5-3.)

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §3.0, Appendix 3A, 3 [§5.3], 4 [Transmission System Engineering], 8 [pp. 61-62, 64-68], 15 [Data Responses 72-74], 20 [Data Responses 5-62, 77-80], 25, 30, 31, 42, 43 [Data Response 72], 300, § 5.5.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Transmission Facilities Description

A2PP is a simple-cycle power generating facility to be located in the City of Ceres, Stanislaus County, California. Three combustion turbine generators (CTG), expected to generate a combined 174 MW output. The proposed commercial operation date for A2PP is the fourth quarter of 2011.

Each combustion turbine generator is rated at 68 MVA with a power factor of 0.85. The CTGs would connect through a 4,000 Amps generator circuit breaker and 15 kV underground cable to the low side of its dedicated 60/80/100 MVA generator step-up (13.8/120 kV) transformer. The high side of the transformer would be connected through a 2,000 Amps disconnect switch to the new A2PP switchyard. (Exs. 1, §§ 1.3, 2.0, Figure 3.1-3A, 300, p. 5.5-3.)

In a ring bus configuration, the project switchyard consists of five 2,000 A circuit breakers and 12 2,000 A disconnect switches. Two 115 kV overhead generator tie-lines connecting from the project switchyard to the new TID Grayson Substation will be 0.9 mile and 1.2 miles in length, respectively. These transmission lines are referred to as Corridor 1 (the 0.9-mile segment) and Corridor 2 (the 1.2-mile segment). The proposed conductor size is 954 kcmil aluminum alloy. (Ex. 300, p. 5.5-3.)

The proposed TID Grayson Substation is a project separate and distinct from the proposed A2PP project; however, they are interconnected insofar as the A2PP project's transmission lines will connect to the Grayson Substation. Grayson

Substation consists of 12-kV, 69-kV, and 115-kV buses. Its originally designed 115-kV bus would need to be expanded to accommodate A2PP's two generator tie-lines. The generator tie-lines would be supported by single and double wood or steel pole structures. Power from A2PP will be distributed to TID's grid via transmission lines from the Grayson Substation. (Ex, 1, § 3.2, Figure 3.1-3B, Figure 3.1-4A.)

Transmission System Engineering Figure 1 below shows the locations of Corridors 1 and 2 in relation to the Grayson Substation.

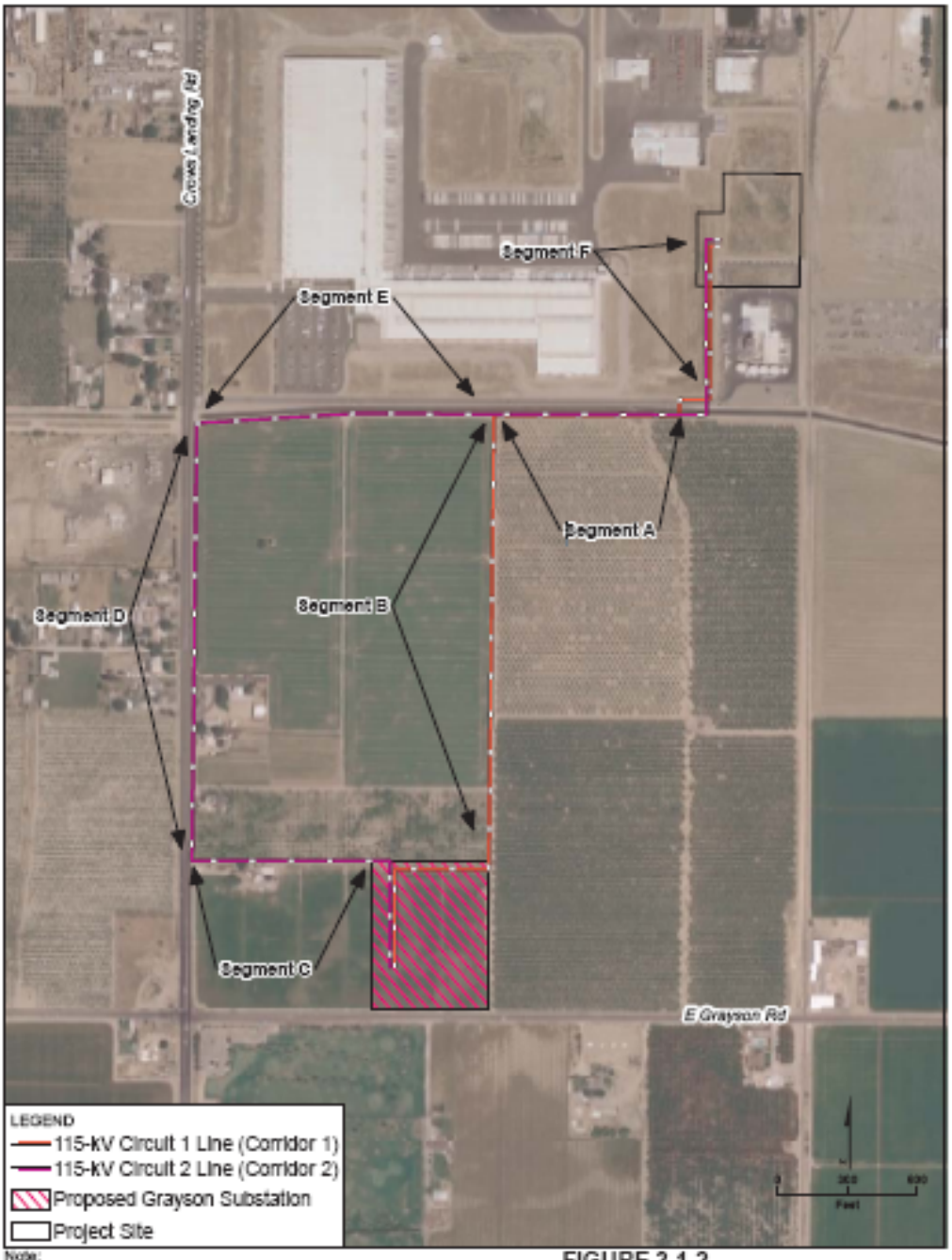
To ensure compliance with applicable LORS, we require implementation of Staff-proposed Conditions of Certification **TSE-1** through **TSE-5**. Condition of Certification **TSE-1** requires the project owner to submit to the Compliance Program Manager and Chief Building Official documents that include a schedule of transmission facility and design submittals, a master drawing list, a master specifications list, and a major equipment and structure list. Condition **TSE-2** requires the project owner to assign specified engineers to the project who will be responsible for various aspects of project design and implementation. Condition **TSE-3** and **TSE-4** collectively require the CBO to resolve discrepancies and review and approve all plans and plan changes. Condition **TSE-5** imposes requirements that include the following:

- The project will interconnect to the Grayson Station by way of the above-described transmission lines, with 954 kcmil aluminum alloy, Magnolia conductor or conductors with higher ratings.
- The outlet line must meet or exceed the requirements of CPUC General Order 95 or National Electric Safety Code, Title 8 of the California Code of Regulations, articles 35, 36 and 37 of the High-Voltage Electric Safety Orders, and related industry standards.
- Breakers and busses in the switchyard must be sized to comply with a short-circuit analysis.
- Outlet line crossings an line parallels with transmission and distribution facilities must be coordinated with the transmission line owner and comply with the owner's standards.
- Project conductors must be sized to accommodate the full output from the project.
- Termination facilities must comply with applicable TID interconnection standards.

2. System Impact Study

The evidence establishes that TID performed a System Impact Study (SIS or Study) in accordance with the NERC planning standards and WECC reliability criteria, to determine the impacts of the project on the transmission grid. We rely on the Study and Staff's evaluation of the Study, in assessing the project's effect on the transmission grid and identifying any necessary downstream facilities or indirect project impacts. (Ex. 300, p. 5.5-4.)

Transmission System Engineering – FIGURE 1



Note:
The Grayson Substation is being developed as a separate Project

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

FIGURE 3.1-2
NEW A2PP 115kV
TRANSMISSION LINE SEGMENTS
ALMOND 2 POWER PLANT
CERES, CALIFORNIA

The SIS is included in the record. (Ex. 31, Data Response Attachment DR72-1.) The Study analyzes the grid with and without the A2PP project under conditions that are fully described in the SIS.

The evidence shows that the Study analyzed the impact of the project for the first year of operation based on a forecast of loads, generation, and transmission. The load forecasts were developed by the interconnecting utility and the California ISO and the generation and transmission forecasts were established by an interconnection queue. The Study focused on thermal overloads, voltage deviations, system stability (excessive oscillations in generators and transmission system, voltage collapse, loss of loads, or cascading outages), and short circuit duties.

The SIS was performed to identify the transmission system impacts caused by the A2PP project on TID and neighboring utilities including Modesto Irrigation District (MID), Merced Irrigation District (MelD), Sacramento Municipal Utility District (SMUD), Pacific Gas and Electric Company (PG&E), and Western Area Power Administration (Western) transmission systems. These entities' on–line schedules are concurrent with or will precede the A2PP project.

The SIS includes Power Flow analysis, Transient Stability analysis, Voltage Stability analysis, and Short Circuit analysis, the results of which are summarized below. (Ex. 300, pp. 5.5-4 – 5.5-7.)

a. Power Flow Analysis

The Power Flow analysis was conducted with and without the A2PP connected to the TID transmission system at the new Grayson Substation using full loop-base cases modeling with projected 2012 summer peak, summer off-peak, and spring peak conditions in Central Valley area.

The Power Flow analysis assessed the project's impact on thermal loading and voltage deviation of the transmission lines and equipment. (Ex. 300, pp. 5.5-4 – 5.5-5.)

The analysis indicates that there will be no project overload criteria violations under after re-rating the 2.9 mile-long Almond-Crows Landing 69 kV single circuit transmission line. The line will be re-rated from a two feet per second wind speed to a four feet per second wind speed. (Ex. 300, p. 5.5-5.)

The Study specifically shows that under normal (Category A) conditions, the addition of the A2PP project will not cause any new overloads or exacerbate any existing overloads under normal operating conditions. As a result, no mitigation is required for the A2PP.

Under N-1 (Category B) contingency conditions, the study shows that the Walnut – WEC 115 kV line #1 is loaded to 90 percent before the addition of the A2PP project. With the project, line loading will increase to 100.68 percent. Similarly, under N-2 (Category C) contingency conditions, the Walnut – WEC 115 kV line #1 is loaded to 90 percent before the addition of the A2PP. Addition of the A2PP will increase the line loading to 102.98 percent. And, under Category C contingency conditions, the Grayson – Westport 69 kV line is loaded to 90 percent before the addition of the A2PP. Adding the A2PP project will increase the line loading to 105.09 percent. Even so, the evidence establishes that no mitigation is required for these marginal line overloads because the overloads occur only during summer off-peak conditions and with the **Almond CT** turned on. When the Almond CT was modeled off line the marginal line overload did not appear. This unit is expected to operate only during peak load conditions. Consequently, no mitigation is required for these impacts. (Ex. 300, pp. 5.5-5 – 5.5-6.)

The System Impact Study also identified some pre-project transmission line overloads under N-2 contingency conditions in the 2012 summer peak case when MID's McClure generation units were modeled off line. However, according to the evidence, the McClure generation units are normally on during summer peak. Once the McClure generation units were modeled on line, no pre-project or post-project overloads occurred. (Ex. 300, p. 5.5-6.)

Finally, the power flow thermal analysis performed using 2012 spring peak, summer peak, summer off-peak, and summer off-peak sensitivity cases, show that the addition of the A2PP to the TID grid would not cause adverse impacts to the transmission system. (Id.)

b. Voltage Stability

Voltage Stability analysis was performed using the 2012 spring peak, summer peak, and summer off-peak cases. The purpose of the analysis was to determine the voltage drop caused by selected outages and how sloe the system is form collapse for selected contingencies based on reactive limit. (Ex. 300, p. 5.5-5.) The analysis results indicate that the interconnection of the A2PP would not

cause adverse impacts to the existing TID transmission system following. Instead, adding the A2PP to the TID system would improve the TID's reactive margin by 32 Mvar and would increase the load handling capability by 214 MW. (Ex. 300, p. 5.5-6.)

c. Transient Stability Analysis

Transient Stability analysis was conducted using the projected 2012 summer peak full loop base case to determine whether the A2PP would create instability in the system following selected N-1 and N-2 outages. The results indicate there are no adverse impacts on the stable operation of the transmission system following the selected disturbances. (Ex. 300, p. 5.5-5, 5.5-6.)

d. Short Circuit Analysis.

Short Circuit analysis was conducted with and without the A2PP project to determine the degree to which the addition of the A2PP project increases fault duties at TID's substations, adjacent utility substations, and other 500 kV, 230 kV, 115 kV, and 69 kV busses within the study area. The analysis simulated faults at selected busses.

The analysis indicates that with the addition of the A2PP, three circuit breakers exceed the 27,000 Ampere interrupting capability in the single line-to-ground fault analysis: CB 510, CB 530, and CB 550 at the Walnut 69 kV Substation. These three circuit breakers may require upgrades. TID provided the short circuit analysis to PG&E, MID, and Western but no comments have been received to date from these agencies. We do not anticipate additional circuit breaker upgrades as the evidence indicates that the existing breakers are adequate to withstand any post-project incremental fault currents identified in the Short Circuit analysis. (Ex. 300, p. 5.5-7.)

Thus, we find that the System Impact Study indicates that he project interconnection will comply with NERC/WECC planning standards.

3. Downstream/Related Facilities

In evaluating the project's transmission system engineering, we also review the "whole of the action" related to the A2PP proposal. This review includes examining the environmental effects of facilities made necessary by the construction and operation of the proposed power plant but not licensed by the

Commission. (Cal. Code Regs., tit. 14 § 15378.) Thus, we consider whether the proposed Grayson Substation is within the "whole of the action."

As previously discussed, TID will be responsible for construction, maintenance and operation of the Grayson Substation. (Ex. 300, p. 5.5-10.) The Grayson Substation and linears a are not part of the A2PP project. Rather, they are part of TID's Hughson-Grayson 115-kV Transmission Line and Substation Project (Hughson-Grayson Project). (Exs. 1, p. 3-1, fn. 1, 15, 42, 43.) In addition to the Grayson Substation, the Hughson-Grayson Project consists of an approximately 10-mile long, 115-kV transmission line; a 0.5-mile long, 69-kV transmission line form the existing APP, a second 69-kV transmission line that will extend 0.8 miles east from the proposed substation. TID has prepared three environmental impact documents for the Hughson-Grayson project and made publicly available. (*Id*.)

Although we find that the Hughson-Grayson Project, including the Grayson Substation, are not within the ambit of the "whole of the action," and need not be analyzed by this Decision,[8] we nonetheless consider the evidence on the environmental analysis of the Hughson-Grayson project. The Applicant submitted abundant evidence to establish that TID is the lead agency under CEQA for the environmental analysis of the Hughson-Grayson project and the project is anticipated to have minimal environmental impacts that will be mitigated to less than significant levels with implementation of TID-imposed conditions of certification. (See, e.g., Exs. 42, pp. 2-6 – 2-19, 3-1- 6-8, 43.)

The evidence further establishes that the Hughson-Grayson project is not a consequence of the A2PP project. Instead, TID designed the project to accommodate current and projected demand for power distribution within TID's service territory. In addition to increasing power supply, the project is intended to promote safety and reliability of TID's system. (See, e.g., Ex. 42, pp. 2-1 – 2-2.) According to TID, the project is expected to reduce system constraints in the following ways:

[8] Under *Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376 the California Supreme Court created a two-prong test: An EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable *consequence* of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects. Absent these two circumstances, the future expansion need not be considered in the EIR for the proposed project." (emphasis added). (*Laurel Heights* at p. 396). The Hughson-Grayson project is not a foreseeable consequence of the A2PP project.

- The new 115-kV transmission line extending from the Hughson Substation to the Grayson Substation would enable the Ceres area to be served by TID 115-kV system, thereby increasing system reliability and reducing strain on the existing 69-kV system that serves the Ceres area.
- The Section One 69-kV transmission line from Morgan Road to the Grayson Substation would provide a means of interconnecting the Grayson Substation to the existing Gilstrap-Westport 69-kV line, thereby increasing reliability by proving another means of bringing electricity in and out of the area and providing voltage support to the west Ceres area to serve forecasted load growth.
- The Section Two 69-kV transmission line from the existing Almond Power Plant to the Grayson Substation would provide another means of transmitting electricity generated by the APP to the Ceres area and TID transmission system.
- The project will provide additional reliability through a dedicated crossing over SR 99, allowing TID to move electricity east-to-west and west-to-east as system conditions dictate. (id.)

TID represents that given the nature and scope of the Hughson-Grayson project, it would move forward with this project regardless of the outcome of the A2PP AFC process. (CITE)

4. Cumulative Impacts

Potential cumulative impacts on the transmission network are identified through the utility generator interconnection process. This process analyzes not only the impacts of the proposed project but also all other projects ahead of the studied project in the generation interconnection queue

As shown herein, TID has evaluated whether the A2PP project will meet required codes and standards as it is TID's responsibility to ensure that the transmission grid remains in compliance with reliability standards at all times, whether one project or many projects interconnect.

In cases where a significant number of proposed generation projects could affect a particular portion of the transmission grid, TID can study the cluster of projects in order to identify the most efficient means to interconnect all the proposed projects. It is apparent from the System Impact Study results that impacts of other projects in the generation queue require mitigation but that the

interconnection of the A2PP does not require significant mitigation beyond that needed for other projects. (Ex. 300, p. 5.5-7.)

5. Compliance with LORS

The System Impact Study indicates that the project interconnection would comply with NERC/WECC planning standards. For the reasons discussed above in this analysis, we also find that the project will meet all applicable LORS with implementation of the Conditions of Certification.

6. Public and Agency Comment

No comments were received on Transmission System Engineering.

FINDINGS OF FACT

Based on the uncontroverted evidence of record, the Commission makes the following finding:

1. The proposed A2PP interconnection facilities and their terminations at the proposed new Grayson Substation, will all be adequate in accordance with NESC standards, GO-95 Rules, industry standards, and good utility practices, and are acceptable according to the engineering LORS identified in **Appendix A**.

2. The record includes a System Impact Study (SIS) which analyzes potential reliability and congestion impacts that could occur when the A2PP Project interconnects to the grid.

3. The System Impact Study performed by TID demonstrates that the addition of the A2PP Project would cause marginal new N-1 contingency overload on the Walnut-WEC 115-kV line #1 and N-2 contingency overloads on the Walnut-WEC 115-kV line #1 and Grayson-Westport 69-kV line that do not require mitigation beyond TID complying with its own operating standards.

4. The A2PP will meet the requirements and standards of all applicable LORS upon compliance with the Conditions of Certification.

CONCLUSIONS OF LAW

1. With the implementation of the various mitigation measures specified in this Decision, and the Conditions of Certification which follow, the proposed transmission interconnection for the A2PP Project will not contribute to significant adverse direct, indirect, or cumulative impacts.

2. The Conditions of Certification below ensure that the transmission-related aspects of the A2PP Project will be designed, constructed, and operated in conformance with the applicable laws, ordinances, regulations, and standards identified in the appropriate portion of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

TSE-1 The project owner shall furnish to the Compliance Project Manager (CPM) and to the Chief Building Official (CBO) a schedule of transmission facility design submittals, a master drawing list, a master specifications list, and a major equipment and structure list. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested.

Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction, the project owner shall submit the schedule, a master drawing list, and a master specifications list to the CBO and 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 **Transmission System Engineering Table 1** below). Additions and deletions shall be made to the table only with CPM and CBO approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

TRANSMISSION SYSTEM ENGINEERING 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 Prior to the start of construction the project owner shall assign an electrical engineer and at least one of each of the following to the project:

- a civil engineer;
- a geotechnical engineer, or a civil engineer experienced and knowledgeable in the practice of soils engineering;
- 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; and

Business and Professions Code, sections 6704 et seq. require state registration to practice as a civil engineer or structural engineer in California.

The tasks performed by an electrical, civil, geotechnical or design engineers may be divided between two or more engineers, as long as a single engineer is responsible for each segment of the project (e.g., electrical, civil, geotechnical, and design). The transmission line may be the responsibility of a separate California registered electrical engineer. The engineer assigned in conformance with **Facility Design** Condition of Certification **GEN-5**, may be responsible for design and review of the TSE (Transmission System Engineering) facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit

the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations.

The electrical engineer shall:

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

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

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

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.

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 (pursuant to 2001 California Building Code, chapter 1, section 108.4; chapter 17, section 1701.3; appendix chapter 33, section 3317.7).

Verification: The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and shall reference this condition of certification. The project owner shall submit a copy of the final CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM

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

- receipt or delay of major electrical equipment;

- testing or energizing of major electrical equipment; and
- the number of electrical drawings approved, submitted for approval, and still to be submitted.

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

TSE-5 The project owner shall ensure that the design, construction, and operation of the proposed transmission facilities will conform to all applicable LORS, including the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations as determined by the CBO.

The A2PP project will be interconnected to the new TID Grayson Substation via two new 115 kV overhead transmission lines, approximately 0.9 mile and 1.2 miles in length, respectively with 954 kcmil aluminum alloy, Magnolia conductor or conductors with higher ratings.

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

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

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.

The project conductors shall be sized to accommodate the full output from the project.

Termination facilities shall comply with applicable TID interconnection standards.

A request for minor changes to the facilities described in this condition may be allowed if the project owner informs the CBO and CPM and receives approval for the proposed change. A detailed description of

the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or substation configurations shall not begin without prior written approval of the changes by the CBO and the CPM.

Verification: At least 60 days prior to the start of construction of transmission facilities (or a lesser number of days mutually agreed to by the project owner and CBO), the project owner shall submit the following to the CBO for approval.

1. The project owner shall submit design drawings, specifications and calculations conforming with California Public Utilities Commission General Order 95 or National Electric Safety Code; Title 8 of the California Code of Regulations; articles 35, 36, and 37 of the High Voltage Electric Safety Orders; National Electric Code; and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment.

2. 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,[9] and a statement signed and sealed by the registered engineer in charge, or other acceptable alternative verification, that the transmission element(s) will conform with California Public Utilities Commission General Order 95 or National Electric Safety Code; Title 8 of the California Code of Regulations, articles 35, 36, and 37 of the High-Voltage Electric Safety Orders; National Electric Code and related industry standards.

3. The project owner shall submit electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, an engineering description of equipment, and the configurations covered by requirements 1 through 7 in Condition of Certification **TSE-5** above.

4. Any letters received from PG&E, MID, and WAPA stating that the TID Short Circuit Study had been reviewed for existing interrupting capability with the integration of the A2PP.

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 that may not conform to the facilities described in this condition, and shall request approval to implement such changes.

TSE-6 The project owner shall be responsible for the inspection of the transmission facilities during and after project construction, and any subsequent CPM- and CBO-approved changes thereto, to ensure conformance with California Public Utilities Commission General Order

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

95 or National Electric Safety Code, Title 8 of the California Code of Regulations, articles 35, 36, and 37 of the High Voltage Electric Safety Orders, National Electric Code and related industry standards. In case of nonconformance, the project owner shall inform the CPM and CBO in writing, within 10 days of discovering such nonconformance, and describe the corrective actions to be taken.

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

1. "As built" engineering description(s) and one-line drawings of the electrical portion of the transmission facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with California Public Utilities Commission General Order 95 or National Electric Safety Code; Title 8 of the California Code of Regulations; articles 35, 36, and 37 of the High Voltage Electric Safety Orders; National Electric Code Standards; and related industry standards;

2. 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 acceptable alternative verification. "As built" drawings of the electrical, mechanical, structural, and civil portions 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

3. 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.

4. refer to requirements of GEN-8.

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 record concerning the 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. The evidence presented was undisputed. (10/1/10 RT 11-12, Exs. 1, § 3.0; 300[1], § 4.11.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

The Almond 2 Power Plant (A2PP) facility is a 174 MW power generating project. The site is adjacent to the existing Almond Power Plant (APP) to the south. The Applicant proposes to transmit power from A2PP to the transmission grid through TID's proposed Grayson Substation, which is located approximately 3,300 feet southwest of the site. (Ex. 300, p. 4.11-1.)

The project's key transmission components include:

- One new overhead 115-kV line that would separate into two segments (lines) after leaving the A2PP site. The lines would be located in separate corridors known as Corridor 1 and Corridor 2. Corridor 1 will be 0.9 miles long and Corridor 2 will be 2.12 miles long.

- Re-rating an existing 2.9 mile 69-kV sub-transmission line that would extend from the existing TID Almond Power Plant (APP) to TID's existing Crows Landing Substation.

- On-site 115-kV switchyard from which the conductors would extend to their respective connection points at the Grayson Substation. (Exs. 1, p. 3-2 – 3-11; 300, pp. 4.11-1, 4.11-3 – 4.11-4.)

The two overhead transmission lines will traverse an agricultural area, commercial and industrial areas, and areas with few rural residences as they

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole as Exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers when entering its exhibits into the record as exhibits 301-303. The Reporter's Transcript of the hearing makes it clear that Staff intended to, and is understood to have entered exhibits 300 through 302 into the record. We therefore reference Staff's exhibits 300 through 302 in this Decision.

proceed from the on-site switchyard to their respective connecting points at the proposed Grayson Substation. The nearest residence is 0.3 miles from the project site to the northeast. (Ex. 300, p. 4.11-3.)

The Grayson Substation is part of TID's Hughson-Grayson 115-kV Transmission Line and Substation Project. This project is not part of the A2PP project but it is expected to be completed before A2PP is operational. (Exs. 1, p. 3-2; 300, p. 4.11-3.)

Because the new 115-kV line and re-rated 69-kV line will connect to TID's power grid, their conductors will be standard low-corona aluminum alloy cables typical of similar TID lines. The conductor configuration will follow TID's guidelines that ensure line safety, efficiency, reliability, and maintainability. (Exs. 1, pp. 3-11 – 3-25; 300, p. 4.11-4.)

The transmission lines will be supported on new steel or wood poles/structures. The pole/structure heights will not exceed 80 feet. (Ex. 300, p. 4.11-4.)

1. Potential Impacts

Laws, ordinances, regulations, and standards (LORS) have been established to ensure that transmission line impacts are below levels of potential significance. As summarized below, the record shows that the project will comply with all applicable LORS. If the project complies with applicable LORS, any transmission line-related safety and nuisance impacts would not be significant. (Ex. 300, p. 4.11-4.)

a. Aviation Safety

When transmission lines or their support structures intrude into the navigable air space there is potential for aircraft to collide with these structures. In this case, the record shows that the project's lines and support structures are neither near nor within restricted air space. Nor are there airports or runways in the area around the A2PP site. The nearest airport is the Modesto City-County Airport approximately 3.8 miles north of the project site and facilities. The nearest heliport is the Emmanuel Medical Center Heliport located eight miles away. (Ex. 1, p. 3-18.0.)

Further, because the transmission line supports are not expected to exceed a maximum height of 80 feet, the project will not trigger the Federal Aviation

Administration's requirement for a Notice of Proposed Construction or Alteration. This Notice is required when lines or supports reach 200 feet in height. (Exs. 1, pp. 3-28 – 3-41; 300, p. 4.11-4.) Also, because the heliport is regulated by the California Department of Transportation, Division of Aeronautics and not the FAA, notification to the FAA is not required.

Based on the evidence, we find that the project does not pose an aviation hazard under FAA criteria and there are no impacts requiring mitigation.

b. Interference with Radio-Frequency Communication

Radio-frequency interference is an indirect effect of line operation. This interference is due to radio noise produced by the action of electric fields on the surface of the energized conductor. This process is known as corona discharge. The noise caused by this discharge causes interference with radio or television signal reception or interference with other forms of radio communication.

The level of any such interference usually depends on the magnitude or the electric fields involved and the distance from the line. As a result, the potential for such impacts is minimized by reducing the line electric fields and locating the line away from inhabited areas. (Ex. 300, pp. 4.11-4 – 4.11-5.) And, as discussed above, because of the absence of residences in the immediate vicinity of the A2PP transmission lines there would not be the residential electric and magnetic field exposures that trigger concern about human health effects. (Ex. 300, p. 4.11-1.)

The evidence shows that the A2PP project's transmission lines will be built and maintained in accordance with standard TID practices that minimize surface irregularities and discontinuities. The low-corona design proposed for the A2PP project is consistent with the designs used for other TID lines of similar voltage ratings to reduce surface-field strengths and the related potential for corona effects. (Exs. 1, pp. 3-25 – 3-27; 300, p. 4.11-5.)

Furthermore, potential for corona-related interference typically occurs when lines of 345-kV and above are involved. Because the project proposes use of 115-kV and 69-kV lines, such potential is minimized with respect to the A2PP project. (*Id*.)

Although the project is not likely to cause corona-related radio-frequency interference, we have adopted Condition of Certification **TLSN-2**, which requires the project owner to ensure that every reasonable effort will be made to identify

and correct on a case-specific basis, any complaints of interference with radio or television signals from operation of the project-related lines and associated switchyards. (Ex. 300, p. 4.11-5.)

c. Audible Noise

The record includes an evaluation of the causes of audible radio noise and methods of reduction. Since the low-corona designs to be implemented by the A2PP project minimize field strengths, the project's line operation is not expected to significantly contribute to existing background noise levels in the project area. (Ex. 300, p. 4.11-5.)[2]

d. Fire Hazards

The applicable LORS address fire hazards including those caused by sparks from conductors of overhead lines and resulting from direct contact between a line and nearby trees and other combustible objects. There is evidence that the A2PP project lines are subject to standard fire prevention and suppression measures for similar TID lines. (Exs.1, p. 3-41; 300, pp. 4.11-5 – 4.11-6.) And, as required by Condition of Certification **TLSN-4**, the project owner will implement CPUC General Order 95 (GO-95) and Title 14, California Code of Regulations, Section 1250, which individually and collectively govern clearance requirements to prevent hazardous shocks, grounding techniques to minimizes nuisance shocks, and installation, maintenance and inspections.

Regarding possible contact between project lines and nearby trees, and other combustible objects, the evidence shows that the project lines would traverse a mostly agricultural or commercial area with no trees of sufficient size to pose a contact-related fire hazard. (Ex. 300, p. 4.11-6.)

e. Hazardous Shocks

Hazardous shocks can result from direct or indirect contact between an individual and an energized line. These shocks can cause serious physiological harm or death and remain a motivating force in the design and operation of transmission and other high-voltage lines. However, no design-specific federal or state regulations exist to prevent hazardous shocks from overhead power lines. Instead, safety is ensured within the industry by compliance with requirements

[2] The **Noise and Vibration** section of this Decision more fully evaluates project-induced noise.

specifying the minimum national safe operating clearances applicable in areas where the line might be accessible to the public.

As required by Condition of Certification **TLSN-1**, the project owner will implement the measures of GO-95 for preventing direct contact with energized lines **and comply with TID's EMF-reduction guidelines**. Compliance with this Condition will mitigate any risk of hazardous shock to a less than significant level. (Ex. 300, p. 4.11-6.)

f. Nuisance Shocks

Nuisance shocks, which are caused by current flow, primarily result from direct contact with metal objects electrically charged by fields from the energized line. These shocks are generally incapable of causing significant physiological harm.

As with hazardous shocks, there are no design-specific federal or state regulations to limit transmission line-related nuisance shocks. But, as the evidence shows, these shocks are effectively minimized for modern overhead high-voltage lines through standard grounding procedures. The procedures are set forth in the National Electrical Safety Code (NESC) and in guidelines jointly promulgated by the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE). (Ex. 300, p. 4.11-6.)

The project owner's compliance with these procedures as required by Condition of Certification **TLSN-5** will minimize the potential for nuisance shocks. **TLSN-5** specifically requires the project owner to ensure that all permanent metallic objects within the right-of-way of the project-related lines are grounded according to industry standards. (Ex. 300, p. 4.11-6.)

g. Electric and Magnetic Field Exposure

Possible adverse health effects from exposure to electric and magnetic fields (EMF) raise public health concerns about people living near high-voltage lines. However, there is no clear evidence establishing that EMF fields pose a significant health hazard to exposed humans. Indeed, even the short-term exposures of plant workers, regulatory inspectors, maintenance personnel, and individuals in the immediate vicinity of lines, are not significantly related to the above-stated health concern. (Ex. 300, p. 4.11-6.)

Even though there is considerable uncertainty about EMF health effects, current policies and practices are informed by the available information showing that:

- Any exposure-related health risk to the exposed individual will likely be small.
- The most biologically significant types of exposures have not been established.
- Most health concerns are about the magnetic field.
- The measures employed for such field reduction can affect line safety, reliability, efficiency, and maintainability, depending on the type and extent of such measures. (Ex. 300, p. 4.11-7.)

The CPUC regulates the installation and operation of high-voltage lines and has determined that only no-cost or low-cost measures are justified in any effort to reduce power line fields to address EMF-related health concerns, and that these measures should be should be made only in connection with new or modified lines. (Ex. 300, p. 4.11-7.) In this regard, the CPUC requires each utility within its jurisdiction to establish EMF-reducing measures and incorporate them into the design of new or modified powerlines for each service area. By designing the proposed project line according to existing field strength-reducing guidelines, A2PP would comply with CPUC requirements for line field management. (Ex. 300, p. 4.11-7 – 4.11-9.)

The record shows that the Applicant calculated the maximum field strengths at representative points along the proposed routes to determine whether operating the proposed project lines would cause any significant increases in area fields **above existing lines**. Field intensities were calculated before and during the A2PP project's line operation and a manner that reflects the interactive effects of fields from all contributing conductors. (Exs. 1, pp. 3-26-3-27; 300, p. 4.11-9.)

Based on the calculations, the maximum field intensity in the vicinity of the existing 230-kV line would be 82 mG which represents an 8.1 increase over existing levels. The maximum electric field strength was calculated as 2.6-kV/m at the point of maximum interaction with the existing 230-kV line to reflect an increase of 0.5-kV/m. (Exs. 1, Figures 3.1-5A – 3.1-5.F; 300, p. 4.11-9 - 4.11-10.)

Since these field strengths are as expected for similar TID lines, no additional mitigation is required. However, we concur with Staff's recommendation that the

Applicant validate its current assumptions about reduction efficiency both before and after energization. We have therefore adopted Condition of Certification **TLSN-3**.

2. Cumulative Impacts

When field intensities are measured or estimated for a particular location, they necessarily reflect the cumulative effects of fields from all contributing conductors. As discussed above, because the A2PP project's proposed lines and switchyard will be designed pursuant to TID guidelines as required by the CPUC for effective field management, A2PP's expected contribution to cumulative area exposures will be at levels for TID lines of similar voltage and current-carrying capacity.

With implementation of the Conditions of Certification, any potential cumulative impacts would be less than significant.

FINDINGS OF FACT

Based on the evidence, we find that:

1. Long-term electromagnetic field exposure is insignificant in this case because of the general absence of residences along the proposed route. On-site worker or public exposure will be short-term and at levels expected for lines of similar design and current-carrying capacity. This type of exposure has not been established as posing a significant human health hazard.

2. The potential for nuisance shocks will be minimized through grounding and other field-reducing measures performed in accordance with TID guidelines.

3. The potential for hazardous shocks will be minimized with compliance with the height and clearance requirements of CPUC General Order 95.

4. There are no potential fire hazards associated with the project's transmission lines. However, compliance with Title 14, California Code of Regulations, section 1250, will minimize possible fire hazards.

5. Neither the project location nor the proposed related lines and line supports poses a significant aviation hazard.

6. Building and maintaining the project's lines in accordance with standard TID practices minimizes the potential for corona noise and its related interference with radio-frequency communication.

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

CONCLUSION OF LAW

1. We therefore conclude that, with implementation of the Conditions of Certification below, the project will conform to all applicable laws, ordinances, regulations, and standards relating to Transmission Line Safety and Nuisance as identified in the pertinent portion of **APPENDIX A** of this Decision.

CONDITIONS OF CERTIFICATION

TLSN-1 The project owner shall construct the proposed new 115-V line and upgrade the identified 69-kV according to the requirements of California Public Utility Commission'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 TID's EMF-reduction guidelines.

Verification: At least 30 days before starting construction of the transmission lines or related structures and facilities, the project owner shall submit to the Compliance Project Manager (CPM) a letter signed by a California registered electrical engineer affirming that the lines will be constructed according to the requirements stated in the Condition.

TLSN-2 The project owner shall ensure that every reasonable effort will be made to identify and correct, on a case-specific basis, any complaints of interference with radio or television signals from operation of the project-related lines and associated switchyards. The project owner shall maintain written records for a period of five years, of all complaints of radio or television interference attributable to line operation together with the corrective action taken in response to each complaint. This record shall be submitted in an Annual Report to the Compliance Project Manager on transmission line safety and nuisance-related requirements.

Verification: All reports of line-related complaints shall be summarized for the project-related lines and included during the first five years of plant operation in the Annual Compliance Report.

TLSN-3 The project owner shall use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity identified by the applicant on page 3-27, and in Figures 3.1-5A through 3.15-5F. 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.

Verification: The project owner shall file copies of the pre-and post-energization measurements with the CPM within 60 days after completion of the measurements.

TLSN-4 The project owner shall ensure that the rights-of-way of the proposed transmission line are 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: During the first five years of operation, the project owner shall provide a summary of inspection results and any fire prevention activities carried out along the right-of-way and provide such summaries in the Annual Compliance Report.

TLSN-5 The project owner shall ensure that all permanent metallic objects within the right-of-way of the project-related lines are grounded according to industry standards regardless of ownership.

Verification: At least 30 days before the lines are energized, the project owner shall transmit to the CPM a letter confirming compliance with this Condition.

V. PUBLIC HEALTH AND SAFETY

Operation of the Almond 2 Power Plant (A2PP) project will create combustion products and utilize certain hazardous materials that pose health risks to the general public and to the workers at the facility. The following discusses the regulatory programs, standards, protocols, and analyses pertaining to these issues.

A. GREENHOUSE GAS (GHG) EMISSIONS

1. Introduction and Summary

The generation of electricity using fossil fuels, such as the natural gas that the A2PP project will consume, produces both "criteria pollutants" and greenhouse gas (GHG) emissions. Criteria pollutants are emissions that are known to adversely affect public health and for which regulatory agencies have established legal "criteria" which limit both the amount of the pollutants that may be emitted as well as the concentrations of the pollutants in the air. The project's criteria pollutant emissions and its compliance with applicable air quality laws are discussed in the **Air Quality** section of this Decision. This section assesses the GHG emissions that are likely to result from the construction and the operation of the project. (Exs. 300, p. 4.1-60; 301, § 4.1.)

The GHG's consist of carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFC), and perflurocarbons (PFC). CO_2 emissions are far and away the most common of these emissions. As a result, even though the other GHGs have a greater impact on climate change on a per-unit basis, GHG emissions are often expressed in terms of "metric tons of CO_2-equivalent" ($MTCO_2e$) for simplicity. (Ex. 301, § 4.1.)

There is general scientific consensus that climate change is occurring and that man-made emissions of GHG, if not sufficiently curtailed, are likely to contribute further to continued increases in global temperatures. (Ex. 300, p. 4.1-61.) Adding GHG to the atmosphere increases the insulating power of the air and thereby traps more heat at and near the earth's surface. The California Legislature has declared that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." [Health & Saf. Code, § 38501(a).]

In this part of the Decision we determine that:

- The A2PP project's construction-produced GHG emissions will be insignificant;

- From a physical standpoint, the GHG emissions from a power plant's operation should be assessed not by treating the plant as a standalone facility operating in a vacuum, but rather in the context of the operation of the entire electricity system of which the plant is an integrated part;

- From a policy and regulatory standpoint, the GHG emissions from a power plant's operation should be assessed in the context of the state's GHG laws and policies, such as AB 32; and

- The A2PP project's operation will be consistent with the state's GHG policies and will help achieve the state's GHG goals, by (1) causing a decrease in overall electricity system GHG emissions; and (2) fostering the addition of renewable generation into the system, which will further reduce system GHG emissions.

As a result we find that the A2PP's GHG emissions will comply with all applicable laws, ordinances, regulations, and standards (LORS) identified below in **Greenhouse Gas Table 1** and will not result in any significant environmental impacts. We also find that the project is consistent with California's ambitious GHG goals and policies.

The evidence on this topic was undisputed. (10/1/10 RT 11-12, Exs.1, §§ 2.0 and 5.1, 300[1], Air Quality Appendix AIR-1, 301, § 4.1.)

2. Policy and Regulatory Framework

As the Legislature stated 35 years ago, "it is the responsibility of state government to ensure that a reliable supply of electrical energy is maintained at a level consistent with the need for such energy for protection of public health and safety, for promotion of the general welfare, and for environmental quality

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

protection." (Pub. Res. Code, § 25001.) Today, as a result of legislation, the most recent aspect of "environmental quality protection" is the reduction of GHG emissions. Several laws and statements of policy are applicable as shown by **Greenhouse Gas Table 1** below.

Greenhouse Gas Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable Law	Description
Federal	
Mandatory Reporting of Greenhouse Gases (40 CFR 98, Subpart D)	This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO_2 equivalent emissions per year.
State	
California Global Warming Solutions Act of 2006, AB 32 (Stats. 2006; Chapter 488; Health and Safety Code sections 38500 et seq.)	California Global Warming Solutions Act of 2006. This act requires the California Air Resources Board (ARB) to enact standards that will reduce GHG emissions to 1990 levels. Electricity production facilities will be regulated by the ARB.
California Code of Regulations, tit. 17, Subchapter 10, Article 2, sections 95100 et. seq.	ARB regulations implementing mandatory GHG emissions reporting as part of the California Global Warming Solutions Act of 2006 (Stats. 2006; Chapter 488; Health and Safety Code sections 38500 et seq.)
California Code of Regulations, tit. 20, section 2900 et seq.; CPUC Decision D0701039 in proceeding R0604009	The regulations prohibit utilities from entering into long-term contracts with any base load facility that does not meet a greenhouse gas emission standard of 0.5 metric tonnes carbon dioxide per megawatt-hour (0.5 $MTCO_2$/MWh) or 1,100 pounds carbon dioxide per megawatt-hour (1,100 lb CO_2/MWh).

a. AB 32

The organizing framework for California's GHG policy is set forth in the California Global Warming Solutions Act of 2006. [Assembly Bill 32, codified in Health & Saf. Code, § 38560 et seq. (hereinafter AB 32).] AB 32 requires the California Air Resources Board ("CARB") to adopt regulations that will reduce statewide GHG emissions, by the year 2020, to the level of statewide GHG emissions that existed in 1990. Gubernatorial Executive Order S-3-05 (June 1, 2005) requires a further reduction, to a level 80 percent below the 1990 GHG emissions, by the year 2050. (Ex. 300, p. 4.1-62).

Along with all other regulatory agencies in California, the Energy Commission recognizes that meeting the AB 32 goals is vital to the state's economic and environmental health

While AB 32 goals have yet to be translated into regulations that limit GHG emissions from generating facilities, the scoping plan adopted by ARB relies heavily on cost-effective energy efficiency and demand response, renewable energy, and other priority resources in the loading order (discussed below) to achieve significant reductions of emissions in the electricity sector by 2020. Even more dramatic reductions in electricity sector emissions would likely be required to meet California's 2050 greenhouse gas reduction goal. Facilities under our jurisdiction, such as the A2PP project, must be consistent with these policies. (Ex. 300, pp. 4.1-61 - 4.1-62.)

In addition to AB 32, there are several other important components of the GHG policy and regulatory structure.

b. Renewable Portfolio Standard

California statutory law requires the state's utilities to provide at least 20 percent of their electricity supplies from renewable sources by the year 2020. (Pub. Util. Code, § 399.11 et seq.) Recent gubernatorial Executive Orders increase the requirement to 33 percent and require CARB to adopt regulations to achieve the goal. [Governor's Exec. Orders Nos. S-21-09 (Sept. 15, 2009), S-14-08 (Nov. 17, 2008).] (Ex. 300, p 4.1-62.)

c. Emissions Performance Standard

Senate Bill (SB) 1368 was 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 facilities having a capacity factor greater than or equal to a 60 percent that exceed an Emission Performance Standard (EPS) of 0.500 metric tonnes of CO_2 per megawatt-hour. This is the equivalent of 1,100 pounds CO_2/MWh. (Ex. 300, pp. 2.1-97-2.1-98, Pub. Util. Code, § 8340 et seq.; Cal. Code Regs., tit. 20, § 2900 et seq.; CPUC D0701039.) Currently, the EPS is the only LORS that limits power plant emissions. (Ex. 300, pp. 4.1-62 -4.1-63.)

d. Loading Order

In 2003 the Energy Commission and the CPUC agreed on a "loading order" for meeting electricity needs: the first resources that should be added are energy efficiency and demand response (at the maximum level that is feasible and cost-

effective); followed by renewables and distributed generation, and combined heat and power (also known as cogeneration); and finally efficient fossil sources and infrastructure development. (California Energy Commission 2008, *2008 Integrated Energy Policy Report Update*, (IEPR) (CEC-100-2008-008-CMF). CARB's AB 32 Scoping Plan reflects these policy preferences. (California Air Resources Board, *Climate Change Scoping Plan*, December 2008).

e. Energy Commission Policy on New Gas-Fired Power Plants

Implementation of the state and Energy Commission policies discussed above should result in increasing availability and flexibility of renewable generation. Gas-fired power plants such as A2PP currently play a vital role in advancing the state's climate and energy goals by displacing less-efficient generation resources and facilitating the integration of renewables into the system. However, as the Energy Commission observed in its recent decision on the *Avenal* Energy Plant project (08-AFC-1)[2], the ability of gas-fired generation to contribute to the State's climate and energy goals is limited. The availability of renewable generation will increase as new projects are licensed and built and the technology develops. Efficiency and conservation measures have already had a substantial impact on California's energy consumption, and new measures continue to be implemented. We therefore expect that the proportion of gas generation in the state's generation mix will gradually diminish. Accordingly, we must evaluate the consistency of each proposed gas-fired power plant with these policies in order to ensure that we license only those plants which will help to reduce GHG.

In the *Avenal* decision, the Energy Commission established a three-part test to aid in its analysis of a proposed gas-fired plant's ability to advance the goals and policies described above. Gas-fired plants must:

1. not increase the overall system heat rate for natural gas plants;

2. not interfere with generation from existing renewable facilities nor with the integration of new renewable generation; and

3. reduce system-wide GHG emissions and support the goals and policies of AB 32.

We now turn to a discussion of whether, and how well, the A2PP project would comply with the above-stated policies.

[2] California Energy Commission, 2009 Final Commission Decision for the Avenal Energy Plant (CEC-800-2009-006-CMF, December 2009).

3. Construction Emissions

Power plant construction involves vehicles and other equipment that emit GHG. The A2PP project's construction emissions are projected at 2,880 metric tons of CO_2-equivalent GHG during the 12-month construction period as shown below in **Green House Gas Table 2** below. By way of comparison, as discussed in the next section, the project's GHG emissions from operations are estimated to be 727,671 metric tons annually, over 200 times the construction emissions. (Ex. 301, pp. 4.1-65 – 4.1-66.)

Greenhouse Gas Table 2
A2PP, Estimated Potential Construction Greenhouse Gas Emissions

Construction Source	Construction-Phase GHG Emissions (MTCO2E) [a]
Onsite construction	1,070
Deliveries to construction site	342
Worker travel to/from construction site	1,282
Construction of linear facilities	18
Deliveries to linear facilities construction areas	8
Worker travel to/from linear facilities construction areas	160
Construction Total	2,880

Source: AFC Table 5.1E-5 and Response to Data Request 7, Attachment DR7-1 (CH2M2009f, CH2M2009k).

Notes: a. One metric tonne (MT) equals 1.1 short tons or 2,204.6 pounds or 1,000 kilograms

There are no adopted, enforceable federal or state LORS applicable to the project's construction emissions of GHG. Nor is there a quantitative threshold over which GHG emissions are considered "significant" under CEQA. Nevertheless, there is guidance from regulatory agencies on how the significance of such emissions should be assessed.

We understand that "best practices" include the implementation of all feasible methods to control construction-related GHG emissions. As the "best practices" approach is currently recommended by CARB (i.e., the state agency primarily responsible for air quality standards and GHG regulation), we use it here to assess the GHG emissions from the A2PP project's construction.

In order to limit vehicle emissions of both criteria pollutants and GHG during A2PP construction, the project owner will use (1) operational measures, such as limiting vehicle idling time and shutting down equipment when not in use; (2) regular preventive maintenance to manufacturer specifications; (3) low-emitting diesel engines meeting federal emissions standards for construction equipment,

whenever available; and (4) equipment that meets the latest criteria emissions standards. These are the current "best practices" for limiting emissions from construction equipment; no party suggested otherwise. (Exs. 300, p. 4.1-67, **Air Quality** Condition of Certification **AQ-SC5**.)

We find that the measures described above to directly and indirectly limit the emission of GHGs during the construction of the A2PP project are in accordance with current best practices. We also note that the GHG emissions anticipated from construction are minimal compared with anticipated operational emissions. GHG emissions will be intermittent and mitigated during that time due to the implementation of the best practices incorporated into **Air Quality** Condition of Certification **AQ-SC5**. We therefore find that the GHG emissions from short-term construction activities will not result in a significant adverse impact.

4. Emissions During Operation of the Facility

a. A2PP Project Emissions

The primary sources of GHG emissions during the A2PP project's operation will be from the natural gas-fired combustion turbines. There will also be a small amount of GHG emissions from the sulfur hexafluoride emissions from electrical components. In operation, the project is expected to produce 727,671 metric tons of CO_2 equivalent annually as shown below in **Green House Gas Table 3** below. (Ex. 300, pp. 4.1-65 – 4.1-66.)

Greenhouse Gas Table 3
A2PP, Estimated Potential Greenhouse Gas (GHG) Emissions

Emissions Source	**Operational GHG Emissions (MTCO2E/yr)** [a]
Combustion Turbine Generators (Three CTGs)	727,633
Switchyard Breakers	38
Total Project GHG Emissions, excluding Off-Site Emissions (MTCO2E/yr)	**727,671**
Estimated Annual Energy Output (MWh/yr) [b]	1,425,217
Estimated Annualized GHG Performance (MTCO2/MWh)	**0.510**

Sources: AFC Appendix Table 5.1A-6 (TID2009a).
Notes: a. One metric tonne (MT) equals 1.1 short tons or 2,204.6 pounds or 1,000 kilograms.
b. Based on maximum permitted capacity of 8,760 hours of annual operation.
(TID2009a, AFC Table 5.1A-6).

The project's annual GHG emissions from operation equate to an emissions performance factor of 0.510 metric tons of CO_2 per megawatt hour. This is significantly higher than the Emission Performance Standard (EPS) of 0.500

metric tons of CO_2 per megawatt-hour described above. (*Id*.) However, that standard does not apply to this project, which is intended to operate in a peaking scenario as opposed to operating as a base load facility. In other words, A2PP is a simple-cycle power plant, designed and intended to provide electricity at an annualized plant capacity factor of less than 60 percent. (Ex. 300, pp. 4.1-60, 4.1-65 – 4.1-66.)

As we also noted above, the EPS is the only GHG LORS currently applicable to the A2PP project's operation emissions and determining compliance was readily calculated. Assessing whether the project's operational emissions are "significant" under CEQA is a more complicated matter.

b. Determining Significance: the Necessity of a System Approach

The process of electricity generation, production, and consumption is unique compared to other industrial projects. As a result, assessing the GHG impacts of power plants requires an approach that is different from the approach taken to analyze any other type of project, whether the analysis is scientific or legal.

In general, when an agency conducts a CEQA analysis of a project such as a proposed factory, shopping mall, or residential subdivision, it does not need to analyze how the operation of the proposed project will affect the larger system or group of factories, malls, or houses in a large multistate region. Rather, such projects are generally analyzed and evaluated on a stand-alone basis. The analysis and evaluation for power plants is, by necessity, different.

California's electricity system – which is actually a system serving the entire western region of the U.S., Canada, and Mexico – is large and complex. Hundreds of power plants, thousands of miles of transmission and distribution lines, and millions of points of electricity demand operate in an interconnected, integrated, and simultaneous fashion. Because the system is integrated, and because electricity is produced and consumed instantaneously, and will be unless and until large-scale electricity storage technologies are available, any change in demand and, most important for this analysis, any change in output from any generation source, is likely to affect the output from all generators. (Committee CEQA Guidance (*Committee Guidance on Fulfilling California Environmental Quality Act Responsibilities for Greenhouse Gas Impacts in Power Plant Siting Applications),* CEC-700-2009-004.)[3]

[3] The report was issued in March 2009 and is found on the Commission website at: **http://www.energy.ca.gov/2009publications/CEC-700-2009-004/CEC-700-2009-004.PDF**

Not only is the electricity system integrated physically, but it also operates as such. The California Independent System Operator (CAISO) is responsible for operating the system so that it provides power reliably and at the lowest cost. Thus, the CAISO dispatches generating facilities generally in order of cheapest to operate (i.e., typically the most efficient) to most expensive (i.e., typically the least efficient). *(Id.)* Because operating cost is correlated with heat rate (the amount of fuel that it takes to generate a unit of electricity), and, in turn, heat rate is directly correlated with emissions (including GHG emissions), *when one power plant runs, it usually will take the place of another facility with higher emissions that otherwise would have operated.* (Committee CEQA Guidance, *2007 IEPR,* emphasis added.)

In sum, the unique way power plants operate in an integrated system means that we must assess their operational GHG emissions on a system-wide basis rather than on a stand-alone basis.

We now turn to the specifics of the project's operation.

c. A2PP's Effects on the Electricity System

(1) Providing Capacity and Ancillary Services

Power plants serve a variety of functions. Most obviously, they provide energy to keep lights shining and machinery working (typically referred to as "load"). But in order to keep the system functioning properly, they must also meet local needs for capacity and for the "ancillary services" of regulation, spinning reserve, non-spinning reserve, voltage support, and black start capability.

Even as more renewable generation is introduced into the system, gas-fired power plants such as A2PP will be necessary to provide intermittent generation support, grid operations support, extreme load and system emergencies support, and general energy support, as well as meet local capacity requirements. At this time, gas-fired plants are better able to provide such services than are most renewables because they can be called upon when they are needed (i.e., dispatchable). (Ex. 300, pp. 4.1-66, 4.1-68 – 4.1-73.)

(2) Displacement of More-Costly, Less-Efficient, and Higher-Emitting Power Plants

The A2PP project will have a heat rate of 9,835 Btu/kWhr. This heat rate is lower than the heat rates of several other peaking and boiler generating units in the TID Balancing Authority area, and would thus be more efficient and emit fewer GHG per MWh of generation that those other units. **Greenhouse Gas Emission Table 4** below compares the A2PP plant's heat rate to other power plants in San Joaquin and Stanislaus counties.

Greenhouse Gas Table 4
San Joaquin and Stanislaus Counties, Local Generation Heat Rates and 2008 Energy Outputs

Plant Name	Heat Rate (Btu/kWh) [a]	2008 Energy Output (GWh)	GHG Performance (MTCO2/MWh)
Lodi Energy Center (in development)	7,112	Approved in 2010	0.377
Walnut Energy Center	7,822	1,578	0.415
Woodland 1	8,761	416	0.465
Tracy Combined Cycle (in development)	8,056	Approved in 2010	0.474
Lodi STIG	9,000	72	0.477
Almond Power Plant	11,074	62	0.587
MID Ripon	11,908	33	0.631
McClure 1, 2	15,222	18	0.807
Tracy Peaker Plant	12,310	11	0.652
Walnut Power Plant (Peaker)	19,098	1	1.013
Proposed TID A2PP (at permitted limit)	9,835	1,425 (max est.)	0.510

Source: Energy Commission staff based on Quarterly Fuel and Energy Report (QFER); shows the proposed TID A2PP at the permitted capacity of 8,760 hours annually although it is only expected to operate up to 5,000 hours on annualized basis (CH2M2009h).
Notes: a. Based on the Higher Heating Value or HHV of the fuel.

Because local generating units with the best (lowest) heat rate or lowest GHG performance factor generally operate more than other units with higher hear rates, A2PP will most likely displace one or more of the other peaking and boiler generating plants, thus reducing the GHG emissions that would otherwise occur. More specifically, it will offer greater flexibility than the existing combined cycle Walnut Energy Center at a lower heat rate than existing peaker power plants in the area. (Ex. 300, p. 4.1-68.)

(3) Fostering Renewables Integration

Most new renewable generation in California will be wind and solar generated power. But the wind and the sun are not continuous, on-demand resources. As a result, in order to rely on such intermittent sources of renewable-generated power, utilities must have available other, nonrenewable generating resources or significant storage that can fill the gap when renewable generation decreases. Indeed, because of this need for backup generation, or if and when utility-scale storage becomes feasible and cost-effective, nonrenewable generation must increase in order for the state to meet the 20 percent renewable portfolio standard. (Ex. 300, p 4.1-69.)

As such, the A2PP facility is a needed, nonrenewable generating resource. Because it can start quickly, it will provide flexible, dispatchable power necessary to integrate some of the growing generation from intermittent wind and solar generation. And it can do so more effectively than the more GHG efficient but slower reacting combined–cycle generators. (Id.)

d. The Limited Benefits of Natural Gas Power Plants

At present, the California electricity system needs new efficient gas-fired generation to displace and replace less efficient generation, and to help integrate additional intermittent renewable generation. But as new gas plants are built to meet those needs, the system will change; moreover, the specific location, type, operation, and timing of each plant will be different. As a result, each plant will have somewhat different impacts. Furthermore, future implementation of efficiency and demand response measures, and new technologies such as storage, smart grid, and distributed generation, may also significantly change the physical needs and operation of the electrical system.

Therefore, we cannot and should not continue adding gas-fired plants *ad infinitum.* Here the evidence establishes that the A2PP project will not increase the system heat rate as it has a lower heat rate than several of the generators in the TID Balancing Authority area. (Compare the A2PP heat rate of 9,835 Btu/kWhr with those in **Greenhouse Gas Emissions Table 4** above). As we describe above, it will support, rather than interfere with, existing and new renewable generation. Finally, it will reduce system-wide GHG emissions and otherwise support the goals of AB 32.

We therefore find that GHG emissions from operation activities will not be significant.

FINDINGS OF FACT

1. The GHG emissions from the A2PP project construction are likely to be 2,880 $MTCO_2$ equivalent ("$MTCO_2E$") during the 12-month construction period.

2. There is no numerical threshold of significance under CEQA for construction-related GHG emissions.

3. Construction-related GHG emissions will be less than significant if they are controlled with best practices.

4. The project will use best practices to control its construction-related GHG emissions.

5. State government has a responsibility to ensure a reliable electricity supply, consistent with environmental, economic, and health and safety goals.

6. California utilities are obligated to meet whatever demand exists from any and all customers.

7. The maximum annual CO_2 emissions from the A2PP project's operation will be 727,671 $MTCO_2E$, which constitutes an emissions performance factor of 0.510 $MTCO_2E$ / MWh.

8. Under SB 1368 and implementing regulations, California's electric utilities may not enter into long-term commitments with base load power plants with CO_2 emissions that exceed the Emissions Performance Standard ("EPS") of 0.500 $MTCO_2$/MWh.

9. The EPS in SB 1368 is the only LORS that limits power plant emissions.

10. The A2PP project slightly exceeds the EPS of 0.500 $MTCO_2$/MWh with a rating of 0.451 $MTCO_2$/MWh, but the project is designed and intended to provide electricity at an annualized plant capacity factor of less than 60 percent.

11. The California Renewable Portfolio Standard (RPS) requires the state's electric utilities obtain at least 33 percent of the power supplies from renewable sources, by the year 2020.

12. California's power supply loading order requires California utilities to obtain their power first from the implementation of all feasible and cost-effective energy efficiency and demand response, then from renewables and distribution generation, and finally from efficient fossil-fired generation and infrastructure improvement.

13. Even as more renewable generation is added to the California electricity system, gas-fired power plants such as the will be necessary to meet local capacity requirements and to provide intermittent generation support, grid operations support, extreme load and system emergencies support, and general energy support.

14. There is no evidence in the record that construction or operation of the A2PP will be inconsistent with the loading order.

15. When it operates, A2PP will have a heat rate of 9,835 Btu/kWh.

16. When it operates, A2PP will displace generation from less-efficient (i.e., higher-heat-rate and therefore higher-GHG-emitting) power plants in the TID Balancing Authority Area.

17. The A2PP project's operation will reduce overall GHG emissions from the electricity system.

18. Intermittent solar and wind generation will account for most of the installation of renewables in the next few decades.

19. Intermittent generation needs dispatchable generation, such as the A2PP, in order to be integrated effectively into the electricity system.

20. The A2PP project's operation will foster the addition of renewable generation into the electricity system, which will further reduce system GHG emissions.

21. The addition of some efficient, dispatchable, natural-gas-fired generation will be necessary to integrate renewables into California's electricity system and meet the state's RPS and GHG goals, but the amount is not without limit.

CONCLUSIONS OF LAW

1. The A2PP project's construction-related GHG emissions will not cause a significant adverse environmental impact.

2. The GHG emissions from a power plant's operation should be assessed in the context of the operation of the entire electricity system of which the plant is an integrated part.

3. The A2PP project's operational GHG emissions will not cause a significant environmental impact.

4. The A2PP project's GHG emissions will comply with the SB 1368 EPS.

5. The A2PP project's operation will help California utilities meet their RPS obligations.

6. The A2PP's construction and operation will be consistent with California's loading order for power supplies.

7. The A2PP project's operation will foster the achievement of the GHG goals of AB 32 and Executive Order S-3-05.

8. The GHG emissions of any power plant must be assessed within the system on a case-by-case basis.

9. The A2PP project will not increase the overall system heat rate for natural gas plants.

10. The A2PP project will not interfere with generation from existing renewables or with the integration of new renewable generation; and

11. The A2PP project will reduce system-wide GHG emissions.

12. Any new natural-gas-fired power plant that we certify must:

    a) not increase the overall system heat rate for natural gas plants;

    b) not interfere with generation from existing renewables or with the integration of new renewable generation; and

    c) have the ability to reduce system-wide GHG emissions.

B. AIR QUALITY

Construction and operation of Almond 2 Power Plant (A2PP) Project will emit combustion products and use certain hazardous materials that could expose the general public and onsite workers to potential health effects. This section on air quality examines whether A2PP will likely comply with applicable state and federal air quality laws, ordinances, regulations, and standards (LORS), whether it will likely result in significant air quality impacts, and whether the proposed mitigation measures will likely reduce potential impacts to insignificant levels.

We specifically evaluate air quality impacts under the CEQA Guidelines, which identify significance criteria to determine whether a project will: (1) conflict with or obstruct implementation of the applicable air quality plan; (2) violate any air quality standard or contribute substantially to an existing violation; (3) result in a cumulatively considerable net increase of any criteria pollutant that is already in nonattainment; (4) expose sensitive receptors to substantial pollutant concentrations; or (5) create objectionable odors affecting a substantial number of people. (Cal Code Regs., tit. 14, § 15000 et seq., Appen. G.) The Guidelines note that the significance criteria established by the applicable Air District may be applied in a significance determination under CEQA review. (Ex. 301, p. 5.1-20.)

The applicable LORS are identified in **Air Quality Table 1** below. As summarized in the Table, the evidence examines the project's compliance with each LORS.

AIR QUALITY Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable Law	Description
Federal	**U.S. Environmental Protection Agency**
Federal Clean Air Act Amendments of 1990, Title 40 Code of Federal Regulations (CFR) Part 50	National Ambient Air Quality Standards (NAAQS).
Clean Air Act (CAA) § 160-169A and implementing regulations, Title 42 United State Code (USC) §7470-7491 40 CFR 51 & 52 (Prevention of Significant Deterioration Program)	Requires prevention of significant deterioration (PSD) review and facility permitting for construction of new or modified major stationary sources of pollutants that occur at ambient concentrations attaining the NAAQS. A PSD permit would not be required for the proposed A2PP Project because it would not exceed 100 tons per year of NO_2, CO, or PM10. The PSD program is within the jurisdiction of the U.S. EPA.
CAA §171-193, 42 USC §7501 et seq. (New Source Review)	Requires new source review (NSR) facility permitting for construction or modification of specified stationary sources. NSR applies to sources of designated nonattainment pollutants. This requirement is addressed through SJVAPCD Rule 2201.

Applicable Law	Description
40 CFR 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines, New Source Performance Standard (NSPS). Requires the proposed simple-cycle system to achieve 25 parts per million (ppm) NO_X and achieve fuel sulfur standards.
CAA §401 (Title IV), 42 USC §7651(Acid Rain Program)	Requires reductions in NO_X and SO_2 emissions, implemented through the Title V program. This program is within the jurisdiction of the SJVAPCD with U.S. EPA oversight [SJVAPCD Rule 2540].
CAA §501 (Title V), 42 USC §7661(Federal Operating Permits Program)	Establishes comprehensive federal operating permit program for major stationary sources. Application required within one year following start of operation. This program is within the jurisdiction of the SJVAPCD with U.S. EPA oversight [SJVAPCD Rule 2520].
State	**California Air Resources Board and Energy Commission**
California Health & Safety Code (H&SC) §41700 (Nuisance Regulation)	Prohibits discharge of such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance.
H&SC §40910-40930	Permitting of source needs to be consistent with approved clean air plan. The SJVAPCD New Source Review program is consistent with regional air quality management plans.
California Public Resources Code §25523(a); 20 CCR §1752, 2300-2309 (CEC & CARB Memorandum of Understanding)	Requires that Energy Commission decision on AFC include requirements to assure protection of environmental quality.
California Code of Regulations for Off-Road Diesel-Fueled Fleets (13 CCR §2449, et seq.)	General Requirements for In-Use Off-Road Diesel-Fueled Fleets – Requires owners and operators of in-use (existing) off-road diesel equipment and vehicles to begin reporting fleet characteristics to CARB in 2009 and meet fleet emissions targets for diesel particulate matter and NO_X in 2010.
Airborne Toxic Control Measure for Idling (ATCM, 13 CCR §2485)	ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling – Generally prohibits idling longer than five minutes for diesel-fueled commercial motor vehicles.
Local	**San Joaquin Valley Air Pollution Control District**
SJVAPCD Rule 2201 (New and Modified Stationary Sources)	Establishes the pre-construction review requirements for new, modified or relocated emission sources, in conformance with NSR to ensure that these facilities do not interfere with progress in attainment of the ambient air quality standards and that future economic growth in the San Joaquin Valley is not unnecessarily restricted. Establishes the requirement to prepare a Preliminary Determination of Compliance (PDOC) and Final Determination of Compliance (FDOC) during SJVAPCD review of an application for a power plant. This regulation establishes Best Available Control Technology (BACT) and emission offset requirements. The A2PP Project net emission increase of NO_X would exceed the federal major modification threshold (40 CFR 51.165). The SJVAPCD classifies the project as a Federal Major Modification for NO_X, and public notification requirements are triggered (SJVAPCD2010).

Applicable Law	Description
SJVAPCD Rule 2520 (Federally Mandated Operating Permits)	Establishes the permit application and compliance requirements for the federal Title V federal permit program. A2PP must submit an application to modify the existing Title V permit.
SJVAPCD Rule 2540 (Acid Rain Program)	Implements the federal Title IV Acid Rain Program, which requires subject facilities to obtain emission allowances for SO_X emissions and requires fuel sampling and/or continuous monitoring to determine SO_X and NO_X emissions.
SJVAPCD Regulation IV (Prohibitions)	Sets forth the restrictions for visible emissions, odor nuisance, various air emissions, and fuel contaminants. Regulation IV incorporates the NSPS provisions of 40 CFR 60, including standards for stationary combustion turbines (Subpart KKKK). These rules limit emissions of NO_X, VOC, CO, particulate matter, and sulfur compounds.
SJVAPCD Rule 4703 (Stationary Gas Turbines)	Limits the proposed stationary gas turbine emissions of NO_X to 5 ppmv over a 3-hour averaging period and CO to 25 ppmv. Provided certain demonstrations are made, the emission limits do not apply during startup, shutdown, or reduced load periods (defined as "transitional operation periods").
SJVAPCD Regulation VIII (Fugitive PM10 Prohibition)	Requires control of fugitive PM10 emissions from various sources.

The evidence was undisputed. (10/1/10 RT 11-14, Exs. 1 §§ 2, 4, 5, Appendixes 5.1A, 5.1B, 5.1C, 5.1D, 5.1E, 5.1F, 5.1G, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 41; 301, § 4.1; 302.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting and Features

The A2PP Project site is located in the City of Ceres in Stanislaus County, California. The site is comprised of a 3.2-acre vacant parcel of disturbed industrial land and 1.4 acres of the existing TID Almond Power Plant (APP) site, which is located immediately south of the A2PP site. The project laydown area will be located to the west of the project site and is comprised of approximately 6.4-acres of unpaved land.

The existing land uses surrounding the project site are primarily industrial, agricultural, and rural residential. Agricultural lands near the project site include fields of nuts trees, alfalfa, and grass. There are no agricultural lands within the A2PP site. However, portions of the proposed two transmission lines will be constructed on active agricultural land. The nearest single-family residence is 0.3 miles from the project site.

The A2PP Project includes the following new sources of stationary emissions:

- Three LM6000PG SPRINT natural-gas fired combustion turbine generators (CTGs) with a nominal capacity of 54.2 MW and a heat input capacity of up to 554.9 MMBtu/hr for each gas turbine, in a simple-cycle configuration.
- An administration building, including a control room, office space, expanded maintenance shop and warehouse, and communications systems, to be shared with APP. (Ex. 301, p. 4.1-12.)

APP's stationary emission sources include one 48 MW General Electric LM-6000 natural gas fire, steam injected combustion turbine engine and one 240 HP Cummins diesel fire pump engine. (Exs. 1, p. 5.1-21; 301, p. 4.1-11.)

2. Air Quality District Jurisdiction

The project is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD or District). SJVAPCD released its Final Determination of Compliance (FDOC) about February 16, 2010, stating that the project is expected to comply with applicable Air District rules, which incorporate state and federal requirements. (Exs. 301, p. 4.1-33; 302). The FDOC identifies each of the LORS to which it applies and explains how the project will comply with them. (Ex. 302, pp. 1 - 2.)

The SJVAPCD's permit conditions for the project are specified in the FDOC and incorporated into this Decision as as Conditions of Certification **AQ-1** through **AQ-95**. (Cal. Code Regs., tit. 20, §§ 1744.5, 1752.3.) These Conditions include emissions limitations, operating limitations, offset requirements, and testing, monitoring, record keeping, and reporting requirements that ensure compliance with federal and state air quality LORS.

3. Ambient Air Quality Standards

The federal Clean Air Act [1] and the California Clean Air Act[2] both require ambient air quality standards (AAQS) for the maximum allowable concentrations of "criteria air pollutants." Criteria air pollutants are defined as air contaminants for which the state

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

[2] California Health and Safety Code, section 40910 et seq.

and federal governments have established an ambient air quality standard to protect public health.

The criteria air pollutants analyzed in this Decision include nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), inhalable particulate matter (PM10), and fine particulate matter (PM2.5). Precursor pollutants for ozone include nitrogen oxides (NO_X, consisting of nitric oxide [NO] and NO_2) and volatile organic compounds (VOC) are evaluated as are precursors for particulate matter are primarily NO_X, sulfur oxides (SO_X) and ammonia (NH_3). (Ex. 301, pp. 4.1-1, 4.1-4 – 4.1-5.)

The California AAQS (CAAQS) established by the California Air Resources Board (CARB) are typically more protective and therefore more stringent than the National AAQS (NAAQS) established by the United States Environmental Protection Agency (U.S. EPA). (Ex. 301, pp. 4.1-4 – 4.1-5.)

The federal and state AAQS consist of two parts: an allowable pollutant concentration and an averaging time over which the concentration is measured. The averaging times are based on whether the damage caused by the pollutant is more likely to occur during exposures to a high concentration for a short time (one hour, for instance), or to a relatively lower average concentration over a longer period (8 hours, 24 hours, or 1 month). The standards are read as a concentration in parts per million (ppm) or as a weighted mass of material per unit volume of air, in milligrams (mg or 10^{-3} g) or micrograms (µg or 10^{-6} g) of pollutant in a cubic meter (m^3) of ambient air, drawn over the applicable averaging period. (Exs. 1, p. 5.1-4; 301, p. 4.1-5.)
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Air Quality Table 2 below identifies the current federal and state standards. (Ex. 301, p. 4.1-5.)

AIR QUALITY Table 2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone (O_3)	8 Hour	0.075 ppm (147 µg/m^3)[a]	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	0.053 ppm (100 µg/m^3)	0.03 ppm (57 µg/m^3)
	1 Hour	0.100 ppm [b]	0.18 ppm (339 µg/m^3)
Sulfur Dioxide (SO_2)	Annual	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	0.075 ppm [b]	0.25 ppm (655 µg/m^3)
Respirable Particulate Matter (PM10)	Annual	—	20 µg/m^3
	24 Hour	150 µg/m^3	50 µg/m^3
Fine Particulate Matter (PM2.5)	Annual	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 percent.

[a] On January 6, 2010, the U.S. EPA proposed to reduce the federal 8-hour ozone standard to 0.06 to 0.07 ppm.
[b] The U.S. EPA and SJVAPCD are in the process of implementing the new federal 1-hour NO_2 standard, which became effective April 12, 2010, and the new SO_2 standard became effective August 23, 2010. The NO_2 NAAQS is based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations. The SO_2 NAAQS is based on the three-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum concentrations.

4. Existing Ambient Air Quality

The federal and state attainment status of criteria pollutants in the San Joaquin Valley Air Pollution Control District are summarized in **Air Quality Table 3** below.

AIR QUALITY Table 3
Attainment Status of San Joaquin Valley Air Pollution Control District

Pollutants	**Attainment Status**	
	Federal Classification	**State Classification**
Ozone (1-hr)	No Federal Standard	**Nonattainment (Severe)**
Ozone (8-hr)	**Nonattainment (Serious)** [a]	**Nonattainment**
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM10	Attainment [b]	**Nonattainment**
PM2.5	**Nonattainment**	**Nonattainment**

Source: SJVAPCD 2008 (http://www.valleyair.org/aqinfo/attainment.htm)
Notes:
[a] In April 2007, the SJVAPCD Governing Board proposed to re-classify the region as "extreme" nonattainment, and the U.S. EPA is reviewing the request. The January 6, 2010, proposal to change the federal 8-hour ozone standard may affect this designation.
[b] In November 2008, EPA re-designated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

The evidence describes in detail the composition and significance of each of the attainment and nonattainment criteria pollutants. (Exs. 1, pp. 5.1-8 – 5.1-20; 301, pp. 4.1-6 – 4.1-10.) We note that the current CAAQS for NO_2 became effective in early 2008, and the U.S. EPA adopted a new 1-hour standard of 0.100 ppm (188 µg/m^3) in early 2010. Although the attainment designations have not yet been established for the new, more stringent standards, the San Joaquin Valley air basin appears likely to remain attainment for NO_2.

Data from 2003 to 2008 shows that the areas near the project site attain all current state and federal NO_2 standards. In addition, recent data shows that the areas near the project site would attain all current state and federal NO_2 standards. For instance, data from 2006 to 2008 for the Turlock monitoring station reflects an existing 1-hour concentration of 0.0497 ppm (93.8 µg/m^3).[3]

Likewise, with respect to sulfur dioxide (SO_2), a new federal 1-hour standard became effective in August 2010, but areas will not be given attainment designations until

[3] According to the evidence, the 2006 to 2008 1-hour NO_2 federal design value is preliminary information provided by CARB. The information might not reflect complete data or representative data under U.S. EPA rules, nor does the information reflect the higher concentrations that might be expected with the new near-roadway NO_2 monitoring requirements. (Ex. 301, p. 4.1-10.)

2012. Based on the current ambient data presented in the evidence, it appears that the area would be likely to attain this new standard. (Ex. 301, p. 4.1-10.)

5. Ambient Air Quality Baseline

As shown below in **Air Quality Table 4**, Staff established a baseline for evaluating the modeling results and analyses submitted by Staff and the Applicant.

AIR QUALITY Table 4
Staff-Recommended Background Concentrations (µg/m^3)

Pollutant	Averaging Time	Background	Limiting Standard	Percent of Standard
PM10	24 hour	**111.1**	50	**222**
	Annual	**31.7**	20	**159**
PM2.5	24 hour	**71.0**	35	**203**
	Annual	**16.0**	12	**133**
CO	1 hour	7,935	23,000	35
	8 hour	4,144	10,000	41
NO_2	1 hour	118.7	339	35
	1 hour Federal	93.8	188	50
	Annual	24.7	57	43
SO_2	1 hour	47.2	655	7
	1 hour Federal	47.2	196	24
	24 hour	18.4	105	18
	Annual	5.3	80	7

Source: Ex. 1 Table 5.1-26 (TID2009a), updated with ARB 2009.

Note that an exceedance is not necessarily a violation of the standard, and that only persistent exceedances lead to designation of an area as nonattainment.

According to Staff, it calculated the background values using the highest criteria pollutant concentrations from the last three years of available data collected from monitoring stations near the A2PP site. (Ex. 301, p. 4.1-10.) We find that these values provide an appropriate conservative baseline for evaluating the modeling and impacts data.

6. Modeling Methodology

Our analysis is guided by the dispersion modeling analyses and data provided by the Applicant and Staff. (Ex. 1, pp. 5.1-30 – 5.1-40. Appen. 5.1; 301, p.p. 4.1-18 -4.1-19.) Dispersion models allow for complex, repeated calculations that consider emission in the context of various ambient meteorological conditions, local terrain, and nearby

structures that affect airflow. The record identifies Modesto and Oakland International Airport monitoring stations as sources of meteorological input data. (Ex. 301, p. 4.1-17.)

The evidence establishes that the Applicant performed the air dispersion modeling analysis using the U.S. EPA *Guideline on Air Quality Models* and the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (version 07026) to evaluate potential impacts on ambient air quality. (Exs. 1, pp. 5.1-30 – 5.1-31; 301, p. 4.1-17.) The evidence also establishes that Staff independently conducted air dispersion modeling for NO_2 using an updated version of the AERMOD model (version 09292) and Ozone Limiting Method (OLM). (Ex. 301, p. 4.1-18.)

7. Construction Impacts and Mitigation

The construction phase is temporary and will occur over a period of 12 months. Onsite construction activities include site preparation, foundation work, installation of major equipment and structures. (Ex. 301, p. 4.1-12.) Combustion-related emissions will come from sources such as construction equipment and onsite vehicles. (Ex. 301, p. 4.1-13.) Fugitive dust emissions will be caused by site grading and excavation activities, installation of new on-site transmission lines, water and gas pipelines, construction of power plant facilities, roads, and substations, and vehicle travel on paved and unpaved roads. (Ex. 301, pp. 4.1-12 – 4.1-13.)

The Applicant estimated maximum construction emissions as shown in **Air Quality Table 5** below. (Ex. 1, pp. 5.1-18, Appen. 5.1E.)

AIR QUALITY Table 5
A2PP, Estimated Maximum Construction Emissions

Construction Activity	NOx	VOC	PM10	PM2.5	CO	SOx
On-site Construction Equipment (lb/day)	60.4	6.5	3.9	3.9	95.8	0.5
On-site Fugitive Dust (lb/day)		---	11.4	4.7	---	---
Off-site (On-road) Worker Travel, Truck Deliveries, Dust (lb/day)	46.0	5.2	1.2	1.2	32.7	<0.1
Off-site Linear Facility and Pipeline Equipment, Fugitive Dust, Worker Travel and Truck Delivery (lb/day)	68.7	7.5	11.0	3.6	48.0	0.1

Maximum Daily Construction Emissions (lb/day)	**175.1**	**19.2**	**27.5**	**13.4**	**176.5**	**0.6**
On-site Construction Equipment (tpy)	6.9	0.7	0.4	0.4	10.3	0.05
On-site Fugitive Dust (tpy)	---	---	1.1	0.4	---	---
Off-site (On-road) Worker Travel & Truck Deliveries (tpy)	3.4	0.4	0.1	0.1	2.9	0.01
Off-site Linear Facility and Pipeline Equipment and Fugitive Dust, Worker Travel and Truck Delivery (tpy)	2.9	0.3	0.5	0.1	2.0	0
Peak Annual Construction Emissions (tpy)	**13.2**	**1.4**	**2.1**	**1.0**	**15.2**	**0.06**

Source: Ex. 1, Appendix 5.1E Tables 5.1E-1 to 5.1E-5, Attachment 5.1E-1 (TID2009a, CH2M2009f, and CH2M2009k). Worst-case totals assume simultaneous maximum emissions during linear facility construction.
Note: Different activities have maximum emissions at different time during the construction period; therefore, total maximum daily, monthly, and annual emissions might be different from the summation of emissions from individual activities.

Air Quality Table 6 summarizes the modeling results for construction-phase maximum impacts. The figures in the "Total Impact" column of the Table represent the sum of the existing background conditions as calculated by Staff and the maximum impacts predicted by the modeling analysis for project activity. (Ex. 301, p. 4.1-18.) The values shown in bold type are equal to or exceed the corresponding air quality standard.

AIR QUALITY Table 6
A2PP, Construction-Phase Maximum Impacts (µg/m^3)

Pollutant	Averaging Time	Modeled Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24 hour	17.2	**111.1**	**128.3**	50	**257**
	Annual	2.1	**31.7**	**33.8**	20	**169**
PM2.5	24 hour	9.7	**71**	**80.7**	35	**231**
	Annual	1.1	**16.0**	**17.1**	12	**143**
CO	1 hour	1,345	7,935	9,280	23,000	40
	8 hour	233	4,144	4,377	10,000	44
NO_2 [a]	1 hour [a]	156.2	118.7	274.9	339	81
	Annual [a]	9.4	24.7	34.1	57	60
SO_2	1 hour	7.3	47.2	54.5	655	8
	24 hour	0.6	18.4	19	105	18
	Annual	0.1	5.3	5.4	80	7

Source: AFC Appendix 5.1E Table 5.1E-7 (TID2009a), with independent staff assessment for NO_2, December 2009.
Note: a. The maximum 1-hour NO_2 concentration is based on AERMOD OLM output, and the ambient ratio method (ARM) is applied for annual NO_2, using national default 0.75 ratio.

As shown, construction will not cause new violations of NO_2, CO, SO_2, or ambient air quality standards or contribute to existing violations. As a result, direct NO_2, CO, and SO_2 impacts are less than significant. With respect to the new federal standards, it is important to note that the A2PP construction phase impacts would occur over a proposed schedule lasting about 12 months. Because the new federal one-hour NO_2 standard requires averaging the concentrations over three years, the NO_2 impacts during the single year construction would not be likely to cause a new violation of the federal one-hour NO_2 standard.[4] There would be no construction impacts during the second and third years of a compliance assessment with the new federal one-hour NO_2 and SO_2 standards. (Ex. 301, p. 4.1-20.)

In contrast, construction emissions will contribute to the existing violations of PM10 and PM2.5 standards. (Ex. 301, p. 4.1-19, See also "Existing Ambient Air Quality" above.) The impact of this contribution is significant and requires mitigation.

The modeling results further indicate that construction-phase emissions of particulate matter precursors (including SO_X) and ozone precursors (NO_X and VOC) would also contribute to existing violations of the PM10, PM2.5, and ozone standards. Although these contributions are deemed secondary impacts, the impacts are significant and require mitigation. (Ex. 301, p. 4.1-19.)

The evidence includes mitigation proposals from both the Applicant and Staff. (Exs. 1 pp. 5.1-28 – 5.1-29; 301, pp. 4.1-19 -4.1-21.) In summary, the Applicant proposes to reduce construction-related emissions of particulate matter (PM10 and PM2.5), particulate matter precursors (including SO_X) and ozone precursors (including NO_X and VOC) by implementing measures and techniques such as:

- Limiting equipment idling time.
- Engaging in regular preventive maintenance for equipment.
- Using low-emitting gasoline and diesel engines.
- Using a water or chemical dust suppressant application for dust control.
- Using vacuum sweeping or water flushing, or both, to remove buildup of loose material to control dust emissions on paved roads and parking areas.

[4] The results shown for 1-hour NO_2 reflect the maximum concentration for any one year. We recognize that these results are not comparable to the NO_2 standard recently promulgated by the U.S. EPA (which took effect after the AFC was filed). Under the U.S. EPA standard, the NO_2 concentration is expressed as a three-year average of the 98^{th} percentile value of the daily maximum 1-hour NO_2 concentrations. It appears nonetheless that Staff's analysis and results likely overstate the concentrations and are therefore represent a more conservative estimate than would result from the new federal standard. (Ex. 301, p. 4.1-18.)

- Installing sandbags or other control measures to prevent silt runoff to roadways. (Exs. 1, pp. 5.1-28; 301, p. 4.1-20.)

We find that implementation of these measures will reduce the identified impacts. We have also evaluated Staff's proposed additional mitigation measures and have similarly determined that their implementation will further ensure that construction-phase impacts are reduced to less than significant levels. We have incorporated the Applicant's and the Staff's proposed measures, as Conditions of Certification **AQ-SC1** through **AQ SC5**.

Conditions **AQ-SC1** and **AQ-SC2** require the project owner to prepare and implement an Air Quality Construction Mitigation Plan (AQCMP) and to employ a construction mitigation manager to monitor compliance with the AQCMP. Condition **AQ-SC3** includes fugitive dust control requirements, which include paving the main access road to the main power block prior to construction, using durable non-toxic soil stabilizers on unpaved plant roads as soon as they are constructed, and using water trucks to wet the soils during earthmoving activities. Condition **AQ-SC4** limits potential off-site impacts from visible dust emissions.

Condition **AQ-SC5** requires the project owner to reduce PM and NO_X emissions from large diesel-fueled construction equipment by using EPA/ARB Tier 3 engine compliant equipment for engines between 50 and under 750 horsepower (hp) and Tier 2 emission standards for engines over 750 hp. This Condition also includes equipment idle time restrictions and engine maintenance provisions.

The evidence also indicates that the maximum modeled project construction impacts are expected to occur near the northern fence lines for the worst 1-hour impacts and the western fence line for the 24-hour impacts. (Ex. 301, p. 4.1-19.) However, for each pollutant, the concentrations would decrease with distance from the project site. There are no residential receptors near either fence line and indeed, the nearest residence is 0.3 miles from the project site. Thus, project construction will not expose sensitive receptors to substantial pollution concentrations.

8. Operation Impacts and Mitigation

Our evaluation of operation-phase impacts encompasses routine operations and fumigation conditions.

a. Routine Operation Impacts

Air Quality Table 7 summarizes the conservative results of the Applicant's and the Staff's independently-performed modeling analyses for maximum operation impacts. (Exs. 1, p. 5.1-37, Appen. 5.1B; 301, p. 4.1-22.)[5] The figures in the "Total Impact" column of the Table represent the sum of the existing background conditions as calculated by Staff and the maximum impacts predicted by the modeling analysis for project activity. The values shown in bold type are equal to or exceed the corresponding air quality standard. (*Id.*)

AIR QUALITY Table 7
A2PP, Routine Operation Maximum Impacts (µg/m^3)

Pollutant	Averaging Time	Modeled Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24 hour	1.2	**111.1**	**112.3**	50	**225**
	Annual	0.1	**31.7**	**31.8**	20	**159**
PM2.5	24 hour	1.2	**71**	**72.2**	35	**206**
	Annual	0.1	**16.0**	**16.1**	12	**134**
CO	1 hour	65.9	7,935	8,000.9	23,000	35
	8 hour	6.4	4,144	4,150.4	10,000	42
NO_2 [a]	1 hour [a]	41.2	118.7	159.9	339	47
	1 hour Federal	41.2	93.8	135.0	188	72
	Annual	0.3	24.7	25.0	57	44
SO_2	1 hour	1.8	47.2	49.0	655	7
	1 hour Federal	1.8	47.2	49.0	196	25
	24 hour	0.5	18.4	18.9	105	18
	Annual	0.1	5.3	5.4	80	7

Source: Ex. 1, Table 5.1-26 (TID2009a), with independent Staff assessment for NO_2, December 2009.
Note: a. The maximum 1-hour NO_2 concentration is based on AERMOD OLM output.

As shown, project operation will cause no new violations of NO_2, CO, SO_2, or ambient air quality standards or contribute to existing violations. As a result, direct NO_2, CO, and SO_2 impacts are less than significant.

In contrast, operation emissions will contribute to the existing violations of PM10 and PM2.5 standards. (Ex. 301, p. 4.1-21, See also "Existing Ambient Air Quality" above.) The impact of this contribution is significant and requires mitigation.

The results presented in the Table further indicate that routine operation emissions of particulate matter precursors (including SO_X) and ozone precursors (NO_X and VOC)

[5] The worst-case 1-hour NO_2 and CO impacts reflect startup impacts. All other impacts related to routine operation. (Ex. 301, p. 4.1-21.).

would also contribute to existing violations of the PM10, PM2.5, and ozone standards. (*Id.*) Although these contributions are deemed secondary impacts, the impacts are significant and require mitigation. (Ex. 301, p. 4.1-21-4.1-22.)

Because ammonia (NH_3) is not a criteria pollutant, is it not presented in the table above. However, the evidence establishes that ammonia is a particulate precursor whose emissions have a known relationship to secondary PM10 and PM2.5 formation. Specifically with respect to project operation, ammonia is injected into the flue gas stream as part of the SCR system that controls NO_X emissions. In the presence of the catalyst, the ammonia and NO_X react to form harmless elemental nitrogen and water vapor. However, not all of the ammonia reacts with the flue gases to reduce NO_X. Instead, a portion of the ammonia passes through the SCR and is emitted unaltered from the stacks. These ammonia emissions are known as ammonia slip. (Ex. 301, p. 4.1-18.)

Unmitigated emissions of ammonia would likely contribute to higher PM10 and PM2.5 levels in the region. (Ex. 301, p. 4.1-22.) According to the evidence, ammonia is abundant in the San Joaquin valley from natural sources, agricultural sources, and as a byproduct of tail pipe controls on motor vehicles. (Ex. 301, p. 4.1-22.) Thus, the secondary impacts of ammonia are potentially significant also require mitigation.

Our mitigation evaluation first recognizes SJVAPCD's requirements and regional plans. SJVAPCD Rule 2201 requires A2PP to provide emission reduction credits to offset the new emissions of NO_X, VOC, and PM10. (Ex. 301, p. 4.1-25 – 4.1-26.) **Air Quality Table 8** below summarizes SJVAPCD's offset determinations and requirements for the A2PP Project.

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AIR QUALITY Table 8

A2PP, SJVAPCD Offset Determination and Requirements (lb/yr)

Source	NOx	VOC	PM10	CO	SOx
Three CTGs	141,561	33,993	65,703	154,857	38,736
A2PP Potential to Emit	141,561	33,993	65,703	154,857	38,736
Offset Requirements					
Existing APP Potential Emissions	52,146	10,461	17,524	136,436	11,459
SJVAPCD Offset Threshold	20,000	20,000	29,200	200,000	54,750
Offsets Required by SJVAPCD for A2PP [a, b]	141,561	24,454	54,027	---	---
Offsets Required by SJVAPCD at A2PP [c]	212,342	36,682	81,042	---	---

Source: SJVAPCD 2010; Independent Staff Assessment.

Note: a. Emission offsets are not required for CO since the applicant has demonstrated to the satisfaction of the Air Pollution Control Officer (APCO) that the ambient air quality standards are not violated in the areas to be affected, and such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of the standards.

b. SJVAPCD's offsetting rules exempt sources that have potential emissions below the offset threshold, allowing a credit for VOC and PM10 from the existing APP in this case. This reduces the amount of offsets required by SJVAPCD for VOC and PM10 caused by A2PP. NO_X emissions must be offset at the level of A2PP's potential to emit because existing APP's potential NO_X emissions exceed the SVJAPCD offset threshold.c. Includes a distance ratio factor of 1.5 for ERCs that would originate from sources over 15 miles away.

The evidence establishes that A2PP can comply with the District's offset surrender requirements by using TID's existing NO_X, VOC, and SO_X emission reduction credits (ERCs). (Ex. 301, pp. 4.1-25, 4.1-26.) **Air Quality Table 9** below summarizes TID's NO_X and VOC ERC holdings and how they will be applied to satisfy the District's quarterly offset requirements. (Ex. 301, p. 4.1-26.)

AIR QUALITY Table 9

A2PP, NOx and VOC Offset Holdings and Quarterly Offset Requirements (lb/qtr)

Name of Offset/Site of Reduction	ERC Number	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NOx Offsets Held by TID					
Elk Hills, Tupman, CA	S-3113-2	55,800	55,800	55,800	55,800
NOx Mitigation Total	---	**55,800**	**55,800**	**55,800**	**55,800**
Proposed NOx Emissions	---	**34,905**	**35,292**	**35,682**	**35,682**
NOx Fully Offset?	---	Yes	Yes	Yes	Yes
VOC Offsets Held by TID					
E North Ave, Fresno, CA	C-1008-1	10,250	10,250	10,250	10,250
VOC Mitigation Total	---	**10,250**	**10,250**	**10,250**	**10,250**
Proposed VOC Emissions	---	**8,382**	**8,475**	**8,568**	**8,568**
VOC Fully Offset?	---	Yes	Yes	Yes	Yes

Source: SJVAPCD 2010; Independent Staff Assessment.

Air Quality Table 10 below summarizes TID's SO_X and PM10 ERC holdings and how they will be applied to satisfy the District's quarterly offset requirements. (Ex. 301, pp. 4.1-22- 4.1-28.)

AIR QUALITY Table 10
A2PP, PM10 and SOx Offset Holdings and Quarterly Offset Requirements (lb/qtr)

Name of Offset/Site of Reduction	ERC Number	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
PM10 Offsets Held by TID					
No ERCs	---	---	---	---	---
Surplus SOx ERCs (to offset PM10)	(below)	46,065	30,493	10,496	54,910
Convert Q4 ERC to Q3	---	---	---	6,064	-6,064
PM10 Mitigation Total	---	**46,065**	**30,493**	**16,560**	**48,846**
Proposed PM10 Emissions	---	**16,200**	**16,383**	**16,560**	**16,560**
PM10 Fully Offset?	---	Yes	Yes	Yes	Yes
SOx Offsets Held by TID					
Panama Ln, Bakersfield	S-3129-5	55,614	40,150	0	84,936
Convert Q_4 ERC to Q_3	---	---	---	20,261	-20,261
SOx Mitigation Total	---	**55,614**	**40,150**	**20,261**	**64,675**
Proposed SOx Emissions	---	**9,549**	**9,657**	**9,765**	**9,765**
SOx Fully Offset?	---	Yes	Yes	Yes	Yes

Source: SJVAPCD 2010; Independent Staff Assessment.

The evidence also establishes that the District has authorized the Applicant's proposed use of SO_X ERCs to offset PM10 and PM2.5 increases. (Ex. 301, p. 4.1-27; 302, pp. 17 - 22.) Based on a district-wide analysis performed by the District in March 2009, the District established an interpollutant offset ratio applicable to this project. More particularly, the District concluded that a one-to-one interpollutant ratio would advance the management of regional PM10 and PM2.5 impacts and progress toward achieving attainment status. (Ex. 301, p. 4.1-27.) The District's offset ratio is in accord with Commission policy as established by the precedential Avenal the Avenal Energy Plant Project (08-AFC-1),[6] recognizing the necessity of reducing emission reductions for all nonattainment pollutants and their precursors at a minimum overall one-to-one ratio. -(Ex. 301, pp. 4.1-27 – 4.1-28.)

As more fully discussed in Cumulative Impacts below, we note that the U.S. EPA is engaged in an ongoing review of the District's *2007 PM10 Maintenance Plan* and *2008 PM2.5 Plan* and that in the future, the one-to-one interpollutant trading ratio might be raised. Conditions of Certification **AQ-SC6** and **AQ-SC7** address this

[6] California Energy Commission, 2009 Final Commission Decision for the Avenal Energy Plant (CEC-800-2009-006-CMF, December 2009).

possibility by requiring A2PP's license to be amended as necessary to incorporate future changes to the air quality permits and to ensure ongoing compliance during commissioning and routine operation through quarterly reports.

District Conditions of Certification **AQ-21**, **AQ-25**, **AQ-28**, **AQ-29**, and **AQ-31** through **AQ-36** impose limits on A2PP's emission amounts. In addition, regarding the project's ammonia slip, District Condition **AQ-26** specifies that ammonia emission shall not exceed 10.0 ppmvd at 15 percent O_2 over a 24-hour rolling period. Notably, Staff and the Applicant evaluated the practical and economic feasibility of achieving ammonia slip levels of less than five ppmvd. The evidence indicates that achieving this objective would be economically infeasible. (Ex. 301, p. 4.1-23.)

Although we find that it appears that A2PP would be in compliance with the District's emission offset requirements and would likely reduce the above-identified direct and secondary impacts to less than significant levels, the totality of evidence shows that the implementation of additional measures proposed by the Applicant and Staff will further ensure the impacts would be reduced to less than significant levels and comply with District requirements. Staff and the Applicant both proposed mitigation measures to address routine operation emissions.

The Applicant proposes implementation of a combination of Best Available Control Technology (BACT) techniques. (Exs. 1, p. 5.1-29; 301, p. 4.1-24.) For instance, A2PP proposes use of two catalyst systems: (1) the selective catalytic reduction system and water injection system to reduce NO_X and (2) the oxidation catalyst system to reduce CO and VOC. (*Id*.) The A2PP Project will also minimize SO_X and particulate emission with the use of inlet air filters and lube oil vent filters and by operating exclusively with pipeline quality natural gas. And, A2PP will use appropriately sized stacks to reduce ground-level concentrations of exhaust constituents. (*Id*.)

Furthermore, A2PP is required to use BACT on the combustion turbines, in accordance with the requirements of the District's New Source Review program. (Ex. 1, Appen. 5.1C, p. 5.1C-1.)

Staff has proposed measures to ensure that A2PP's license is amended as necessary to incorporate future changes to the air quality permits and to ensure ongoing compliance during commissioning and routine operation through quarterly reports. Conditions of Certification **AQ-SC6** and **AQ-SC7** incorporate these requirements.

Finally, the modeling analysis indicates that the maximum 24-hour PM10 impacts occur in the undeveloped area about 0.1 miles southeast of the project site, and impacts would be substantially lower at the closes single-family residence, which is located approximately 0.3 miles to the northeast. (Ex. 301, p. 4.1-11.) Thus, project construction will not expose sensitive receptors to substantial pollution concentrations.

b. Fumigation Impacts

A2PP's fumigation impacts were calculated using the U.S. EPA approved SCREEN3 model for short-term averaging periods (i.e., 24 hours or less. (Ex. 1, p. 5.1-37.) The modeling results show that the short-term project impacts during fumigation would not exceed the impacts for routine operation as shown in **Air Quality Table 7** above. (Exs. 1, p. 5.1-37, Appen. 5.1B, Tables 5.1B-6a and-6b, Table 5.1-24; 301, pp. 41.-24 – 41-25.) Thus, no mitigation is required.

9. Commissioning-Phase Impacts and Mitigation

New electrical generation facilities must go through initial commissioning phases before becoming commercially available to generate electricity. During this period, initial firing causes greater emissions than those that occur during normal operations because of the need to tune the combustor, conduct numerous startups and shutdowns, operate under low loads, and conduct testing before emission control systems are functioning or fine-tuned for optimum performance. (Ex. 301, pp. 4.1-15, 4.1-25.)

The Applicant anticipates approximately 28 days or 288 hours of operation to complete the following commissioning activities for all three CTGs:
Full Speed No Load Tests (FSNL) – a test of the gas turbine ignition system, a test to ensure that the CTG is synchronized with its electric generator, and a test of the CTG's speed control system.

Minimum Load Tests (without SCR Operational) – several days of tuning the CTG combustor to minimize emissions and perform other checks.

Multiple Load Tests (SCR/Oxidation Catalyst Operational at Various Levels) – several days of installing control systems and tuning to achieve NO_X and CO control at design levels. (Ex. 301, p. 4.1-15, 4.1-25.)

Typical operating emission limits with annual or multi-year averaging do not apply during initial commissioning. Instead, commissioning impacts are compared with

standards having hourly or other short-term averaging times. Using the U.S. EPA-approved model to calculate commissioning emission impacts, the Applicant determined that emission rates to VOC, PM10, PM2.5, and SO_X are not expected to be higher than normal operation emissions. **Air Quality Table 11** below shows the highest modeled impacts in comparison with the 1- and 8- hour CO standards and the 1-hour NO_X standard.

AIR QUALITY Table 11
A2PP, Commissioning-Phase Maximum Impacts (µg/m^3)

Pollutant	Averaging Time	Modeled Impact	Background	Total Impact	Limiting Standard	Percent of Standard
CO	1 hour	65.9	7,935	8,001	23,000	35
	8 hour	21.7	4,144	4,166	10,000	42
NO_2 [a]	1 hour [a]	66.6	118.7	185.25	339	55

Source: Ex. 1, Table 5.1-27 (TID2009a and SJVAPCD2010), with independent Staff assessment for NO_2, December 2009.
Note: a. The maximum 1-hour NO_2 concentration is based on AERMOD OLM output.

As shown, the commissioning-phase impacts of CO and NO_2 would be somewhat higher than those resulting during routine operations. Commissioning-phase impacts to particulate matter and ozone concentrations would be addressed with the mitigation identified with the Conditions of Certification applicable to routine operations. (Ex. 301, p. 4.1-25.)

10. Cumulative Impacts

Cumulative impacts may result from the project's incremental effect, together with other closely related past, present and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project. (Pub. Res. Code § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15130, 15355.)

The air quality analysis focuses on criteria air pollutants, which have impacts that are typically cumulative by nature. Although a project by itself would rarely cause a violation of a federal or state criteria pollutant standard, a new source of pollution may contribute to violations of criteria pollutant standards in the context of existing background pollutant sources or foreseeable future projects. Air districts attempt to reduce background criteria pollutant levels by adopting attainment plans, which are multi-faceted programmatic approaches to attainment. Attainment plans typically include new source review requirements that provide offsets and use BACT, combined with more stringent emissions controls on existing sources. (Ex. 301, p. 4.1-29.)

The evidence includes analysis of the project's potential cumulative air quality impacts, including a description of the air quality background. The background includes a discussion of SJVAPCD's projections for criteria pollutants and its

programmatic efforts to abate such pollution, the evidence describes the District's *2004 Extreme Ozone Attainment Demonstration Plan, 2007 Ozone Plan, 2007 PM10 Particulate Maintenance Plan, and 2008 PM2.5 Plan.* (Ex. 301, pp. 4.1-30 – 4.1-31.) Collectively, these plans establish regional goals and illustrate how the District proposes to achieve attainment status.

LORS Compliance. Based on the District's analyses of the project, A2PP is expected to comply with the District's plans through the project's anticipated compliance with the regulatory requirements. Specifically with respect to particulate matter, the District's 2007 *PM10 Maintenance Plan and 2008 PM2.5 Plan* specify how the District intend to further its aggressive efforts to implement PM10 and PM2.5 controls.

According to the evidence, Staff initially expressed concern that the A2PP Project could interfere with the attainment effort of the *2008 PM2.5 Plan* if it relies on SO_X emission reduction credits without an adequate trading ratio for allowing PM2.5 increases. However, SJVAPCD determined that the offset requirements would be satisfied and no net increase of PM10 would occur with the proposed one-to-one ratio for the allowed interpollutant credit trading because there has been an appropriate scientific demonstration that this is an adequate trading ratio.

The evidence indicates that the implementation of interpollutant credit trading and the related ratio under District Rule 2201 is subject to federal oversight and the ration could possibly be heightened (increased) in the future. Although there is no formal federal endorsement of the District's interpollutant trading approach, the attainment plan has been previously adopted by ARB. In reliance on the findings of these authorities, and the District in particular, we can reasonably conclude that the A2PP Project is not likely to conflict with regional particulate matter attainment goals.

Localized Cumulative Impacts. The evidence includes a discussion of the project's "localized cumulative impacts" from direct emissions locally when combined with other local major emission sources. The proposed project and other reasonably foreseeable projects could cause impacts that would be locally combined if present and future projects would introduce stationary sources that are not included in the "background" conditions. Under CEQA, reasonably foreseeable future projects are usually those that are either currently under construction or in the process of being approved by a local air district or municipality.

Projects that have not yet entered the approval process do not ordinarily qualify as "foreseeable" since the detailed information needed to conduct this analysis is not available. Sources that are presently operational are included in the background

concentrations. Background conditions also take into account the effects of non-stationary sources. Projects with stationary sources located up to six miles from the proposed project site usually need to be considered by the analysis.

In consultation with SJVAPCD, the Applicant identified potential new stationary sources within six miles of the A2PP. These sources are comprised of 72 existing facilities and 159 proposed projects. In addition to the existing TID APP facility and the proposed A2PP Project, only five projects would involve emissions increases of more than 10 pounds per day of any contaminant other than VOC. .
The projects evaluted for the cumulative impacts are:

- **TID's APP Facility.** The existing APP, adjacent to the proposed A2PP, would experience a reduction in operation with the addition of A2PP; however, the existing APP stationary sources included in A2PP's analysis of cumulative impacts is based on current operational patterns.

- **Facility #N-1090522 (Stanislaus County Bldg. Maint.).** Proposed a 900 hp Caterpillar Model C27 diesel-fired emergency standby IC engine.

- **Facility #N-1081108 (Conagra Foods).** Proposed a new vegetable branding and roasting operation served by one 0.576 MMBtu/hr natural gas fired ribbon burner (branding) and five 0.576 MMBtu/hr natural gas fired ribbon burners (roasting).

- **Facility #N-1804279 (Ceres Memorial Park).** Proposed a new Hartwick Combustion Technologies, Inc. Model APEX-250 crematory incinerators consisting of a 0.6 MMBtu/hr primary burner and a 1.2 MMBtu/hr secondary burner (afterburner).

- **Facility #N-1801297 (Winco Foods).** 1) Proposed a 480 hp Caterpillar Model C9 Tier 3 certified diesel-fired emergency standby IC engine powering an electric generator. 2) Proposed a 1,372 hp Caterpillar Model C32 Tier 2 certified diesel-fired emergency standby IC engine powering an electric generator, respectively. (Ex. 301, pp. 4.1-31 -4.1-32.)

The maximum modeled cumulative impacts are presented below in **Air Quality Table 11**. The total impact is conservatively estimated by the maximum modeled impact plus existing maximum background pollutant levels.

AIR QUALITY Table 11
A2PP, Ambient Air Quality Impacts from Cumulative Sources (µg/m^3)

Pollutant	Averaging Time	Modeled Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24 hour	8.2	**111.1**	**119.3**	50	**239**
	Annual	1.4	**31.7**	**33.1**	20	**166**
PM2.5	24 hour	8.2	**71**	**79.2**	35	**226**
	Annual	1.4	**16.0**	**17.4**	12	**145**
CO	1 hour	66.1	7,935	8,001.1	23,000	35
	8 hour	144.7	4,144	4,288.7	10,000	43
NO_2 [a]	1 hour [a]	167.0	118.7	285.7	339	84
	1 hour Federal	50.2 [b]	93.8	144.0	188	77
	Annual	0.6	24.7	25.3	57	44
SO_2	1 hour	3.6	47.2	50.8	655	8
	1 hour Federal	3.6	47.2	50.8	196	26
	24 hour	1.5	18.4	19.9	105	19
	Annual	0.5	5.3	5.8	80	7

Source: Response to DR 8 and 9 (CH2M2009f), with independent staff assessment for NO_2, December 2009.
Notes:
a. The maximum 1-hour NO_2 concentration is based on AERMOD OLM output.
b. Non-facility emergency-use-only standby engines are not modeled in the compliance demonstration for 1-hour federal NO_2 standard.

The evidence establishes that compared with the impacts from the proposed A2PP Project alone, maximum cumulative impacts caused by the existing APP would be substantially higher for PM10/PM2.5. The combined PM10/PM2.5 impacts caused by A2PP, the existing APP and other projects would be dominated by A2PP.

Although the proposed A2PP causes higher cumulative impacts than the existing APP for NO_2, the total NO_2 impacts would be dominated by the other unrelated projects. Modeled concentrations of 1-hour NO_2 are highest at the other cumulative sources, especially at internal combustion engines proposed for emergency use at neighboring facilities. In the immediate vicinity (few hundred meters) of these off-site emergency standby engines, maximum 1-hour NO_2 concentrations could potentially exceeding the newly-established federal 1-hour NO_2 standard. However, when viewed over a multi-year period, NO_2 impacts caused by neighboring sources that operate only for testing and emergency purposes would not be likely to cause a new violation. Furthermore, the proposed A2PP, with the existing APP, would not cause or contribute to a violation because maximum 1-hour NO_2 modeled impacts excluding the neighboring off-site

emergency generator engines would be approximately 50 $\mu g/m^3$ and in compliance with new standard.

As also discussed above, particulate matter emissions from A2PP would be cumulatively considerable because they would contribute to existing violations of the PM10 and PM2.5 ambient air quality standards. Secondary impacts would also be cumulatively considerable for PM10, PM2.5, and ozone because emissions of particulate matter precursors (including SO_X) and ozone precursors (NO_X and VOC) would contribute to existing violations of the PM10, PM2.5, and ozone standards. Mitigation to reduce these impacts to insignificant levels to is discussed above.

We find that with implementation of the Conditions of Certification the project will not result in cumulatively considerable impacts to air quality.

11. Compliance with LORs

The project's emissions and air quality impacts must comply with various local, state, and federal LORS. As discussed above, the Applicant, Staff, and the District have evaluated the project's air quality impacts and determined that the project will comply with applicable LORS with implementation of the Conditions of Certification. **Air Quality Table 1** above, the foregoing evaluation and the Conditions of Certification describe how the project will comply with applicable federal, state, and District LORS.

One additional LORS identified in **Air Quality Table 1** but not specifically discussed above, is 40 CFR 52.21, Prevention of Significant Deterioration. The A2PP Project would not be subject to permit requirements under the Prevention of Significant Deterioration (PSD) program because A2PP would not qualify as a new major stationary source of NO_2, CO, or PM10. If, in the future, the project owner changes the project, implementation of Condition of Certification **AQ-SC6** will ensure that the owner promptly notifies the Energy Commission to incorporate any changes in permit conditions.

12. Public and Agency Comments

No public or agency comments were received on air quality.

FINDINGS AND CONCLUSIONS

Based on the record, we find as follows:

1. The A2PP Project is located in the City of Ceres in Stanislaus County, California. It is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

2. SJVAPCD released its Final Determination of Compliance (FDOC) about February 16, 2010, stating that the project will comply with applicable District rules, which incorporate state and federal requirements.

3. The A2PP Project area is designated nonattainment for the state ozone (1-hour) standard, federal and state ozone (8-hour) standards, state PM10 standard, and federal and state PM2.5 standards.

4. The project would not cause new violations of any NO_2, CO, or SO_2 ambient air quality standards. Nor will the project contribute to existing violations for these pollutants.

5. The project NO_X and VOC emission would contribute to existing violations of state and federal ambient air quality standard. Compliance with Condition of Certification **AQ-SC7** will mitigate the ozone impact to less than significant levels.

6. The mitigation measures contained in Conditions **AQ-SC1** through **AQ-SC-5** are designed to reduce the project's construction-related air quality impacts to insignificant levels under CEQA.

7. The SJVAPCD requires the project to mitigate stationary source NO_X, VOC, SO_2, and PM10/PM2.5 emissions by employing Best Available Control Technology (BACT).

8. To reduce NO_X, VOC, and PM10/2.5 emissions to insignificant levels under CEQA, Conditions **AQ-SC6** and **AQ-SC7** require the project to use low emission maintenance vehicles and fugitive dust controls during operation.

9. The record contains an adequate analysis of the project's potential contributions to cumulative air quality impacts.

10. There is no evidence that project-related air emissions will result in significant nuisance odors or any significant air quality impacts on soils, vegetation or sensitive species.

CONCLUSIONS OF LAW

1. Implementation of the mitigation measures described in the record and contained in the following Conditions of Certification are sufficient to ensure that A2PP will conform with all applicable laws, ordinances, regulations, and standards relating to air quality as set forth in the pertinent portions of **Appendix A** of this Decision.

2. Implementation of the mitigation measures described in the record and contained in the Conditions of Certification ensures that the project will not result in significant direct, indirect, or cumulative air quality impacts in conformance with NEPA and CEQA requirements.

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, for approval, an AQCMP that details the steps to be taken and the reporting requirements necessary to ensure compliance with conditions of certification **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 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.

a. All unpaved roads and disturbed areas in the project and linear 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 either reduced or eliminated during periods of precipitation.

b. No vehicle shall exceed 15 miles per hour within the construction site.

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

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

e. Any unpaved exits from the construction site shall include a control device to prevent track-out to paved public roadways, using one or more of the following techniques: a grizzly (rails, pipes, or grates used to dislodge debris from vehicles before they exit the site) that extends from the intersection with the paved road surface for the full width of the unpaved exit surface for a distance of at least 25 feet; or a layer of washed gravel at least one inch or larger in diameter and three inches deep, extending from the intersection with the paved road surface for the full width of the unpaved exit surface for a distance of at least 50 feet; or at least 100 feet of paved surface which extends from the intersection with the paved public road surface for the full width of the unpaved access road; or an alternative trackout control device approved by the District and the CPM.

f. 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.

g. 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 run-off to roadways.

h. 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.

i. At least the first 500 feet of any paved roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or run-off from the construction site is visible on the paved roadways.

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

k. 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 to provide at least two feet of freeboard.

l. 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.

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 with the potential to be transported off the project site, 200 feet beyond the centerline of the construction of linear facilities, or within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not providing effective mitigation. The AQCMM or delegate shall then implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed.

Step 1: Within 15 minutes of making such a determination, the AQCMM or delegate shall direct more intensive application of the existing mitigation methods.

Step 2: If Step 1 specified above fails to result in adequate mitigation within 30 minutes of the original determination, the AQCMM or delegate shall direct implementation of additional methods of dust suppression.

Step 3: If Step 2 specified above fails to result in effective mitigation within one hour of the original determination, the AQCMM or delegate shall direct a temporary shutdown of the activity causing the emissions.

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 shutdown 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 additional mitigation measures will be accomplished within the specified time limits.

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

a. 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.

b. All construction diesel engines with a rating of 50 hp or higher shall meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b)(1), unless certified by the on-site AQCMM that such engine is not available for a particular item of equipment. 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. In the event that a Tier 3 engine is not available for any off-road equipment larger than 50 hp, that equipment shall be equipped with a Tier 2 engine or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NO_X) and diesel particulate matter (DPM) to no more than Tier 2 levels, unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this Condition, the use of such devices is “not practical” for the following, as well as other, reasons:

    1. There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question to Tier 2 equivalent emission levels and either a Tier 1 engine or the highest level of available control is being used; or
    2. The construction equipment is intended to be on site for five days or less.

3. The CPM may grant relief from this requirement if the AQCMM can demonstrate a good faith effort to comply with this requirement and that compliance is not possible.

4. 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.

c. The use of a retrofit control device may be terminated immediately, provided that the CPM is informed within 10 working days of the termination and the AQCMM demonstrates that one of the following conditions exists:

1. The use of the control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure.

2. The control device is causing or is reasonably expected to cause significant engine damage.

3. The control device is causing or is reasonably expected to cause a significant risk to workers or the public.

4. Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination.

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

e. All diesel heavy construction equipment shall not idle for more than five minutes, to the extent practical.

f. 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) 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 the equipment has been properly maintained; 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-SC6 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 either: 1) submittal by 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-SC7 The project owner shall provide emission reductions in the form of offsets or emission reduction credits (ERCs) in the quantities of at least 141,561 lb NOx, 33,993 lb VOC, 65,703 lb PM10, and 38,736 lb SOx emissions. The project owner shall demonstrate that the reductions are provided in the form required by the District.

The project owner shall surrender the ERCs from among those that are listed in the District Final Determination of Compliance Conditions (SJVAPCD 2010) or a modified list, as allowed by this condition. If additional ERCs are submitted, the project owner shall submit an updated table including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions to the listed credits.

The CPM, in consultation with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, and that the requested change(s) will not cause the project to result in a significant environmental impact. The District must also confirm that each requested change is consistent with applicable federal and state laws and regulations.

Verification: The project owner shall submit to the CPM records showing that the project's offset requirements have been met prior to initiating construction. If the CPM approves a substitution or modification to the list of ERCs, the CPM shall file a statement of the approval with the project owner and the Energy Commission docket. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-SC8 The project owner shall submit to the CPM quarterly operation reports that include operational and emissions information as necessary to demonstrate compliance with the Conditions of Certification. The quarterly operation report shall specifically note or highlight incidences of noncompliance.

Verification: The project owner shall submit quarterly operation reports to the CPM and APCO no later than 30 days following the end of each calendar quarter. This information shall be maintained on site for a minimum of five years and shall be provided to the CPM and District personnel upon request.

District Final Determination Of Compliance Conditions (SJVAPCD 2010)

The following Conditions, **AQ-1** to **AQ-64**, apply to each of the three LM6000 PG SPRINT CTGs individually, and Conditions **AQ-65** to **AQ-95** apply to the proposed A2PP facility as a whole. The SJVAPCD released its Final Determination of Compliance dated February 16, 2010, and this Staff Assessment reflects the SJVAPCD conditions.

EQUIPMENT DESCRIPTION, UNITS N-3299-4-0, N-3299-5-0, and N-3299-6-0

54.2 MW nominal (ISO) rating simple-cycle peak-demand power generating system consisting of a 523.2 MMBTU/HR (at nominal ISO MW rating) General Electric, aero derivative, model LM6000 PG Sprint, natural gas-fired combustion turbine generator with a water spray premixed combustion system, an oxidation catalyst and a selective catalytic reduction (SCR) system with ammonia injection.

AQ-1 The permittee shall not begin actual on-site construction of the equipment authorized by this Authority to Construct until the lead agency satisfies the requirements of the California Environmental Quality Act (CEQA). [California Environmental Quality Act]

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

AQ-2 This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]

Verification: No verification necessary.

AQ-3 Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

Verification: The project owner shall submit to both the District and CPM the Title V Operating Permit application prior to operation.

AQ-4 The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ SC8**).

AQ-5 The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date

and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-6 No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

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

AQ-7 The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

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

AQ-8 Particulate matter emissions from the gas turbine system shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with **AQ-46**.

AQ-9 No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann one or 20 percent opacity. [District Rule 4101]

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

AQ-10 APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

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

AQ-11 Commissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the construction contractor to ensure safe and reliable steady state operation of the gas turbine and associated electrical delivery systems. [District Rule 2201]

Verification: No verification necessary.

AQ-12 Commissioning period shall commence when all mechanical, electrical, and control systems are installed and individual system startup has been completed, or when a gas turbine is first fired, whichever occurs first. The commissioning period shall terminate when the plant has completed initial source testing, completed final plant tuning, and is available for commercial operation. [District Rule 2201]

Verification: The project owner shall submit a commissioning plan to the CPM and APCO for approval at least 30 days prior to first firing of the gas turbine describing the procedures to be followed during the commissioning period and the anticipated duration of each commissioning activity.

AQ-13 Emission rates from the gas turbine system during the commissioning period shall not exceed any of the following limits: NO_X (as NO2) - 40.40 lb/hr and 969.6 lb/day; VOC (as CH4) - 8.41 lb/hr and 201.8 lb/day; CO - 40.00 lb/hr and 704.6 lb/day; PM10 - 2.50 lb/hr and 60.0 lb/day; or SOx (as SO2) - 1.56 lb/hr and 37.4 lb/day. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-14 During commissioning period, NO_X and CO emission rate shall be monitored using installed and calibrated Continuous Emission Monitoring Systems (CEMS). [District Rule 2201]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-12**.

AQ-15 The total mass emissions of NO_X, VOC, CO, PM10 and SO_X that are emitted during the commissioning period shall accrue towards the quarterly emission limits. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-16 During commissioning period, the owner or operator shall keep records of the natural gas fuel combusted in the gas turbine system on an hourly and daily basis. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-17 Startup of this gas turbine system shall not exceed one hour per event. [District Rules 2201 and 4703]

Verification: The project owner shall submit to the District and CPM the startup event duration data demonstrating compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-18 Shutdown of this gas turbine system shall not exceed one hour per event. [District Rules 2201 and 4703]

Verification: The project owner shall submit to the District and CPM the shutdown event duration data demonstrating compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-19 During all types of operation (with an exception of ammonia injection tuning prior to the initial source test during the commissioning period), including startup and shutdown periods, ammonia injection into the SCR system shall occur once the minimum temperature at the catalyst face has been reached to ensure NO_X emission reductions can occur with a reasonable level of ammonia slip. The minimum catalyst face temperature shall be determined during the final design phase of this project and shall be submitted to the District at least 30 days prior to commencement of construction. [District Rule 2201]

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

AQ-20 The District shall administratively add the minimum temperature limitation established pursuant to the above Condition in the final Permit to Operate. The District may administratively modify the temperature as necessary following any replacement of the SCR catalyst material. [District Rule 2201]

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

AQ-21 During start-up or shutdown period, the emissions shall not exceed any of the following limits: NO_X (as NO_2) - 25.00 lb/hr; CO - 40.00 lb/hr; VOC (as methane) - 2.00 lb/hr; PM10 - 2.50 lb/hr; SO_X (as SO_2) - 1.56 lb/hr; or NH3 - 7.44 lb/hr. [District Rules 2201 and 4703]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-22 Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29]

Verification: No verification necessary.

AQ-23 Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status ending when the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26]

Verification: No verification necessary.

AQ-24 The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2]

Verification: The project owner shall submit to the District and CPM the startup and shutdown event duration data demonstrating compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-25 Except during startup and shutdown periods, emissions from the gas turbine system shall not exceed any of the following limits: NO_X (as NO_2) - 5.02 lb/hr and 2.5 ppmvd @ 15% O_2; CO - 4.89 lb/hr and 4.0 ppmvd @ 15% O_2; VOC (as methane) - 1.40 lb/hr and 2.0 ppmvd @ 15% O_2; PM10 - 2.50 lb/hr; or SO_X (as SO_2) - 1.56 lb/hr. NO_X (as NO_2) emission limits are based on 1-hour rolling average period. All other emission limits are based on 3-hour rolling average period. [District Rules 2201, 4001 and 4703]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-26 NH3 emissions shall not exceed 10.0 ppmvd @ 15% O_2 over a 24-hour rolling average period. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-27 Each 3-hour rolling average period will be compiled from the three most recent 1- hour periods. Each one hour period shall commence on the hour. Each 1-hour period in a 24- hour rolling average for ammonia slip will commence on the hour. The 24-hour rolling average shall be calculated using the most recent 24 one-hour periods. [District Rule 2201]

Verification: No verification necessary.

AQ-28 Emissions from the gas turbine system, on days when a startup and/or shutdown occurs, shall not exceed the following limits: NO_X (as NO_2) - 160.4 lb/day; CO - 187.6 lb/day; VOC - 34.8 lb/day; PM10 - 60.0 lb/day; SOx (as SO_2) - 37.4 lb/day, or NH_3 - 178.6 lb/day. Daily emissions shall be compiled for a 24-hour period starting and ending at twelve-midnight. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-29 Emissions from the gas turbine system, on days when a startup and/or shutdown does not occur, shall not exceed the following: NO_X (as NO_2)

- 120.5 lb/day; CO - 117.4 lb/day; VOC - 33.6 lb/day; PM10 - 60.0 lb/day; SO_X (as SO_2) - 37.4 lb/day, or NH_3 - 178.6 lb/day. Daily emissions shall be compiled for a 24- hour period starting and ending at twelve-midnight. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-30 Gas turbine system shall be fired on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dscf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]

Verification: The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (**AQ-SC8**).

AQ-31 NO_X (as NO_2) emissions from this gas turbine system shall not exceed any of the following: 1st quarter: 11,635 lb; 2nd quarter: 11,764 lb; 3rd quarter: 11,894 lb; 4th quarter: 11,894 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-32 CO emissions from this gas turbine system shall not exceed any of the following: 1st quarter: 12,728 lb; 2nd quarter: 12,869 lb; 3rd quarter: 13,011 lb; 4th quarter: 13,011 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-33 VOC emissions from this gas turbine system shall not exceed any of the following: 1st quarter: 2,794 lb; 2nd quarter: 2,825 lb; 3rd quarter: 2,856 lb; 4th quarter: 2,856 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-34 NH_3 emissions from the SCR system associated with this gas turbine system shall not exceed any of the following: 1st quarter: 15,181 lb; 2nd quarter: 15,349 lb; 3rd quarter: 15,517 lb; 4th quarter: 15,517 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-35 PM10 emissions from this gas turbine system shall not exceed any of the following: 1st quarter: 5,400 lb; 2nd quarter: 5,461 lb; 3rd quarter: 5,520 lb; 4th quarter: 5,520 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-36 SO_X (as SO_2) emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 3,183 lb; 2nd quarter: 3,219 lb; 3rd quarter: 3,255 lb; 4th quarter: 3,255 lb. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-37 A water injection system, a selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine system. [District Rule 2201]

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

AQ-38 The gas turbine engine and generator lube oil vents shall be equipped with mist eliminators or equivalent technology sufficient to limit the visible emissions from the lube oil vents to not exceed 5 percent opacity, except for a period not exceeding three minutes in any one hour. [District Rule 2201]

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

AQ-39 Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

Verification: The project owner shall submit the proposed source test plan or protocol for the source tests 15 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 30 days prior to the proposed source test date and time.

AQ-40 Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081]

Verification: The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition **AQ-39**.

AQ-41 Source testing to measure startup and shutdown NO_X, CO, and VOC mass emission rates shall be conducted before the end of the commissioning period and at least once every seven years thereafter. CEM relative accuracy for NO_X and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NO_X and CO startup emission limits, then startup and shutdown NO_X and CO testing shall be conducted every 12 months. If an annual startup and shutdown NO_X and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NO_X and CO testing frequency shall return to the once every seven years schedule. [District Rule 1081]

Verification: The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (**AQ-39**). Testing for startup and shutdown emissions shall be conducted upon initial operation and at least once every seven years.

AQ-42 Source testing to determine compliance with the NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O_2) and PM10 emission rate (lb/hr) shall be conducted before the end of commissioning period and at least once every 12 months thereafter. [District Rules 2201 and 4703, 40 CFR 60.4400(a)]

Verification: The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (**AQ-39**). Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months.

AQ-43 The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days after the end of commissioning period and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 2201 and 40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

Verification: The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (**AQ-SC8**).

AQ-44 The following test methods shall be used: NO_X - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O_2 - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative

test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.4400(1)(i)]

Verification: The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with Condition **AQ-39**.

AQ-45 Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)]

Verification: The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (**AQ-SC8**).

AQ-46 The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Verification: The project owner shall submit the report of the source test results to both the District and CPM within 60 days of the last day of tests.

AQ-47 A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 4703]

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

AQ-48 The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS), which continuously measures and records the exhaust gas NO_X, CO and O_2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission to verify the continuous monitoring system is properly installed and operational.

AQ-49 The NO_X and O_2 CEMS shall be installed and certified in accordance with the requirements of 40 CFR Part 75. The CO CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60,

Appendix B Performance Specification 4A (PS 4A), or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the quarterly operation report (**AQ-SC8**).

AQ-50 The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the quarterly operation report (**AQ-SC8**).

AQ-51 The CEMS data shall be reduced to hourly averages as specified in §60.13(h) and in accordance with §60.4350, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350]

Verification: The project owner shall submit to the CPM and APCO CEMS data reduced in compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-52 In accordance with 40 CFR Part 60, Appendix F, 5.1, the CO CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-53 The owner/operator shall perform a RATA for CO as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the quarterly operation report (**AQ-SC8**).

AQ-54 The NO_X and O_2 CEMS shall be audited in accordance with the applicable requirements of 40 CFR Part 75. Linearity reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this Condition as part of the quarterly operation report (**AQ-SC8**).

AQ-55 Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080]

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

AQ-56 The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080]

Verification: The project owner shall provide a Continuous Emission Monitoring System (CEM) protocol for approval by the APCO and CPM at least 60 days prior to installation of the CEM. The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-57 The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(b)]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-58 The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_X, CO, and O_2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring

Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

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

AQ-59 Monitor Downtime is defined as any unit operating hour in which the data for NO_X, or O_2 concentrations is either missing or invalid. [40 CFR 60.4380(b)(2)]

Verification: No verification necessary.

AQ-60 The owner or operator shall maintain records of the following items: 1) hourly and daily emissions, in pounds, for each pollutant listed in this permit on the days startup and or shutdown of the gas turbine system occurs, 2) hourly and daily emissions, in pounds, for each pollutant in this permit on the days startup and or shutdown of the gas turbine system does not occur, 3) quarterly emissions, in pounds, for each pollutant listed in this permit. [District Rule 2201]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-61 The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, total hours of operation, the type and quantity of fuel used, date/time and duration of each start-up and each shutdown event. [District Rule 2201 and 4703, 6.2.6, 6.2.8, 6.2.11]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-62 The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703, 6.2.4]

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

AQ-63 The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Date, time intervals, data and magnitude of excess NO_X emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission

standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

Verification: The project owner shall submit to the District and CPM the report of CEM operations, emission data, and monitor downtime data in the quarterly operation report (**AQ-SC8**) that follows the definitions of this Condition.

AQ-64 The owner or operator shall submit to the District information correlating the NO_X control system operating parameters to the associated measured NO_X output. The information must be sufficient to allow the District to determine compliance with the NO_X emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5]

Verification: The project owner shall submit to the District and CPM the report of CEM operations, emission data, and monitor downtime data in the quarterly operation report (**AQ-SC8**).

AQ-65 Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of NO_X: 1st quarter: 34,905 lb, 2nd quarter: 35,292 lb, 3rd quarter: 35,682 lb, and 4th quarter: 35,682 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-66 NOx ERC S-3113-2 (or a certificate split from this certificate) shall be used to supply the required NO_X offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-67 Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of VOC: 1st quarter: 6,113 lb, 2nd quarter: 6,113 lb, 3rd quarter: 6,114 lb, and 4th quarter: 6,114 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-68 VOC ERC C-1008-1 (or a certificate split from this certificate) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-69 Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of PM10: 1st quarter: 13,506 lb, 2nd quarter: 13,507 lb, 3rd quarter: 13,507 lb, and 4th quarter: 13,507 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-70 SO_X ERC S-3129-5 (or a certificate split from this certificate) shall be used to supply the required PM10 offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]

Verification: The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.

AQ-71 The District has authorized to use SO_X reductions to offset emissions increase in PM10 at SO_X/PM10 interpollutant offset ratio of 1.00. [District Rule 2201]

Verification: No verification necessary.

AQ-72 Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless

specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

Verification: A summary of significant construction activities and monitoring records required shall be included in the construction monthly compliance report (**AQ-SC3**).

AQ-73 An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or five acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

Verification: The final Dust Control Plan shall be included within the Air Quality Construction Mitigation Plan and submitted to the District and CPM not less than 30 days prior to the start of any construction activity, and a summary of significant construction activities and monitoring records required shall be included in the construction monthly compliance report (**AQ-SC3**).

AQ-74 An owner/operator shall prevent or clean up any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rules 8011 and 8041]

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

AQ-75 Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

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

AQ-76 Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

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

AQ-77 Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20 percent opacity and comply with the requirements for a stabilized unpaved road as

defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

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

AQ-78 Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20 percent opacity. [District Rule 8011 and 8071]

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

AQ-79 On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with three axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20 percent opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

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

AQ-80 Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

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

AQ-81 Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (**AQ-SC8**).

AQ-82 The owners and operators of each affected source and each affected unit at the source shall have an Acid Rain permit and operate in compliance with all permit requirements. [40 CFR 72]

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

AQ-83 The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75]

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

AQ-84 The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75]

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

AQ-85 The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73]

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

AQ-86 Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77]

Verification: No verification necessary.

AQ-87 Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72]

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

AQ-88 An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73]

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

AQ-89 An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72]

Verification: No verification necessary.

AQ-90 An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72]

Verification: No verification necessary.

AQ-91 The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77]

Verification: The project owner shall submit to both the District and CPM the proposed offset plan as required by the federal rule.

AQ-92 The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77]

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

AQ-93 The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72]

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

AQ-94 The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75]

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

AQ-95 The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75]

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

C. PUBLIC HEALTH

The public health analysis supplements the **Air Quality** section and considers the potential public health effects that could result from exposure to emissions of toxic air contaminants (or "TACs") during project construction and operation. This topic focuses on whether such emissions represent significant public health impacts or violate standards for public health protection.[1] The evidence presented by the parties was uncontested. (10/1/10 RT 11-12; Exs.1, §§ 5.1, 5.9, Appendices 5.1A – 5.1G; Appendix 5.9A, 2, 4 [Public Health], 8 [Attachment A, § 3.4], 15 [Data Responses 30-33], 21 [Attachment DR 18, § 3.9]; 300[2], § 4.7.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

Project construction and operation will produce routine emissions of toxic air contaminants for which no ambient air quality standards have been established. These substances are categorized as noncriteria pollutants. In the absence of standards, state and federal regulatory agencies have developed health risk assessment procedures to evaluate potential health effects from exposure to these TACs. (Ex. 300, p. 4.7-4.)

The risk assessment consists of the following steps:

- Identify the types and amounts of hazardous substances that the project could emit into the environment;

[1] This Decision describes other potential public health concerns under specific topics. Potential impacts from emissions of criteria pollutants are analyzed in the **Air Quality** section. The accidental release of hazardous materials is addressed in **Hazardous Materials Management**. Electromagnetic fields are covered in **Transmission Line Safety and Nuisance**. Potential impacts to soils and surface water sources are considered in the **Soil and Water Resources** section. Potential exposure to contaminated soils and hazardous wastes are described in **Waste Management**. The **Socioeconomics, Traffic and Transportation,** and **Worker Safety and Fire Prevention** sections include analyses of the project's potential effects upon local infrastructure such as police, medical, and fire services. (Ex. 300, p. 4.7-1.)

[2] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

- Estimate worst-case concentrations of project emissions in the environment using dispersion modeling;
- Estimate amounts of pollutants to which people could be exposed through inhalation, ingestion, and dermal contact; and
- Characterize potential health risks by comparing worst-case exposure to the project with the scientific safety standards based on known health effects. (Ex. 300, p. 4.7-5.)

Typically, the initial health risk analysis is performed at a "screening level," which is designed to estimate potential health risks under the most conservative, worst-case conditions and model those conditions to analyze results.[3] Such conditions include:

- Using the highest levels of pollutants that could be emitted from the power plant;
- Assuming weather conditions that would lead to the maximum ambient concentration of pollutants;
- Using the type of air quality computer model which predicts the greatest plausible impacts;
- Calculating health risks at the location where the pollutant concentrations are estimated to be the highest;
- Assuming that an individual's exposure to cancer-causing agents occurs continuously for 70 years; and
- Using health-based standards designed to protect the most sensitive members of the population (i.e., the young, elderly, and those with respiratory illnesses). (Ex. 300, p. 4.7-3.)

The risk assessment for the Almond 2 Power Plant (A2PP) project addresses three categories of potential health impacts: acute (short-term) effects; chronic

[3] The evidence is based on data from several expert agencies, including the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA), which identifies contaminants that are known to cause cancer or other noncancer toxicological endpoints and calculates the toxicity and cancer potency factors of these contaminants. In addition, the California Air Resources Board and the local air districts conduct ambient air monitoring of toxic air contaminants and the state Department of Public Health conducts epidemiological investigations into the impacts of pollutants on communities. (Exs. 300, p. 4.7-5; 1, § 5.9.3.1.)

(long-term) noncancer effects; and cancer risk (also long-term).[4] Acute health effects result from short-term (one-hour) exposure to relatively high concentrations of pollutants; these effects are temporary. Chronic non-cancer health effects occur as a result of long-term exposure (8 to 70 years) to lower concentrations of pollutants. For carcinogenic substances, the health assessment considers the total risk of developing cancer and assumes that continuous exposure to the cancer-causing substance occurs over a 70-year lifetime. (Exs. 300, pp. 4.7-4 — 4.7-5; 1, § 5.9.3.1.)

The analysis for noncancer chronic health effects compares the maximum project contaminant levels to safe levels called Reference Exposure Levels or RELs. These exposure levels are designed to protect the most sensitive individuals in the population such as infants, the elderly, 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 medical and toxicological literature, and include margins of safety. (Ex. 300, p. 4.7-6.) A "hazard index" of less than 1.0 signifies that the worst-case exposure is less than the safe exposure level, and thus there are not likely to be adverse noncancer health effects. (*Id*. at p. 4.7-7.)

The assessment also considers risk from all cancer-causing chemicals from the project's emissions. The calculated risk is not meant to predict the actual expected incidence of cancer, but is rather a theoretical estimate based on worst-case assumptions. (Ex. 300, p. 4.7-7.) Cancer risk is expressed in chances per million and is a function of the maximum expected pollutant concentration, the probability that a particular pollutant will cause cancer, and the length of the exposure period. The State of California has determined that "the risk level which represents no significant risk shall be one which is calculated to result in one excess case of cancer in an exposed population of 100,000, assuming lifetime exposure." (Cal. Code Regs., tit. 22, § 12703(b).) This risk level is equivalent to an incremental cancer risk of 10 in one million, or $10x10^{-6}$. The conservative nature of the screening assumptions means that actual cancer risks due to project emissions are likely to be considerably lower than those estimated.[5] (*Id*. at pp. 4.7-7 — 4.7-8.)

[4] Human exposure pathways include inhalation, dermal (through the skin) absorption, soil ingestion, consumption of locally grown plant foods, and mother's milk. (Ex. 300, p. 4.7-11.)

[5] SJVAPCD's rules require emitting units to use Toxics Best Available Control Technology (T-BACT) to meet the cancer risk significance level of 10 in one million. (Ex. 1, § 5.9.3.1.1.)

If the screening analysis predicts no significant risks, then no further analysis is required. However, if the predicted risk is significant, then further analysis using more realistic, site-specific assumptions is performed to obtain a more accurate assessment of potential health risks. If the site-specific analysis confirms that the risk exceeds the significance level, then appropriate mitigation measures are necessary to reduce the risk to less than significant. The evidence explains that if a refined analysis identifies a cancer risk that exceeds the significance level after all risk reduction measures have been considered, Commission staff would not recommend approval of the project. (Ex. 300, p. 4.7-8.)

The record shows that the Applicant performed screening level risk assessments and concluded that no adverse health effects are expected from project construction or operation. Staff's testimony concurs with Applicant's conclusions. (Exs 1, § 5.9.3.4.1, Appendices 5.1D, 5.1E; 300, p. 4.7-9 et seq.)

1. Setting and Public Health Concerns

Land uses surrounding the project site include the existing Almond Power Plant (immediately south), various industrial and commercial facilities, agricultural fields (mainly Almond orchards) and several residential uses within a one-mile radius of the site. (Ex. 1, § 5.6.1.1.) The record also shows several sensitive receptors, including childcare centers, schools, and health facilities within a three-mile radius of the site. (*Id*. at Appendix 5.9A and § 5.9, Figures 5.9-1 through 5.9-4B.) The nearest sensitive receptor is a childcare center located approximately 0.75 mile northeast of the site. The nearest residences are located 0.3 mile northeast of the site. (*Id*. at § 5.9.2.)

Applicant provided information from the Stanislaus County Public Health Services Department regarding the current status of respiratory diseases (including asthma), cancer, and childhood mortality rates in the region. (Ex. 1, § 5.9.2.) These studies show that while adult asthma rates are slightly lower than the statewide average (11.9 percent of population verses 12.7 percent), asthma rates in children are higher (20.4 percent verses 16.1 percent). In addition, cancer death rates in Stanislaus County were found to be on the decline, but still higher than the statewide average (190 versus 180 per 100,000 population). (Ex. 300, p. 4.7-4.)

The parties analyzed the project's potential health effects for the most sensitive populations in the context of public health data for the San Joaquin Valley Air Basin, which includes Stanislaus County.[6] (Ex. 1, § 5.9.2, Appen. 5.9A.)

2. Construction Impacts and Mitigation

Construction of the project is expected to take place over a period of 12 months. (Ex. 1, § 5.9.3.2.) The evidence contains an analysis of potential health effects during construction that could result from exposure to toxic substances in disturbed contaminated soils and from inhalation of particulates in fugitive dust and diesel exhaust from heavy equipment. (Ex. 300, p. 4.7-8.)

The Applicant's Phase I and Phase II Environmental Site Assessments (ESAs) did not identify or confirm any Recognized Environmental Conditions (potentially significant toxic soil contamination from previous uses) at the site that would require soil removal and remediation. However, to ensure that potential exposure to soil contamination is reduced to insignificant levels, Conditions of Certification **Waste-1** and **Waste-2** require a registered professional engineer or geologist to be available during excavation and grading to ensure proper handling and disposal of contaminated soil. See the **Waste Management** section of this Decision for further discussion. (Ex. 300, pp. 4.7-8 — 4.7-9.)

Regarding exposure to particulates, the evidence describes the expected daily and annual maximum emissions of noncriteria pollutants from fugitive dust and diesel exhaust, and the modeling protocol used to calculate potential effects. (Ex. 1, § 5.9.3.2, Appen. 5.1E.) The analyses for chronic and carginogenic effects assumed exposure for long-term periods (8 - 70 years and 9 years, respectively) under the OEHHA health risk assessment guidelines. The results showed that the risk at the Point of Maximum Impact (PMI) would be less than significant for chronic health effects but would exceed the significance threshold for cancer.[7] However, because construction emissions will be relatively short-term for a period of 12 months or less, the actual effects will be substantially lower that the modeled estimates and are considered insignificant. (Ex. 300, pp. 4.7-9 — 4.7-10.)

[6] The SJVAPCD regulates toxic air contaminant emissions under its Integrated Air Toxic Program, which integrates state and federal requirements. (Ex. 1, § 5.1.3.6.)

[7] The PMI locations for construction and operation are all within a few hundred feet of the site fenceline, which indicates that potential impacts at the nearest sensitive receptor locations would be substantially lower than results at the PMIs. See, Exhibit 1, Appendix 5.1D, Figure 5.1D-1.

To ensure that exposure to fugitive dust and diesel emissions are reduced to insignificant levels, Conditions of Certification **AQ-SC-2**, **AQ-SC-3**, **AQ-SC-4** and **AQ-SC-5** require the project owner to implement measures to control fugitive dust and diesel exhaust, including watering excavation areas, use of ultra-low sulfur diesel fuel, and installation of oxidation catalysts and soot filters on diesel equipment. See discussion in the **Air Quality** section of this Decision.

3. Operation Impacts and Mitigation

The project's TAC emissions sources include its three new combustion turbine generators, plus one existing turbine generator and one existing firewater pump at the adjacent Almond Plant. Applicant presented evidence that identified the TAC emissions from those sources, described the methodology used in quantifying the emission rates including atmospheric dispersion modeling, and specified the types of health effects that could occur. (Exs. 1, § 5.1.3.6.1 et seq., Tables 5.1-20, 5.1-21, § 5.9.3.4.1, Table 5.9-4; 300, pp. 4.7-10 — 4.7-12.)

Applicant's screening risk assessment was based on the data described in the record and appropriate modeling protocol established by the expert agencies. (Ex. 1, § 5.9.3.4 et seq.) The risk assessment shows a maximum acute Hazard Index (HI) of 0.01 and a maximum chronic HI of 0.01 at the PMI. The total worst-case individual cancer risk was calculated at 0.7 in 1 million at the PMI. Staff reviewed Applicant's risk assessment and confirmed that the acute and chronic calculated risks from project operations fall below the significance level of 1.0, and that the cancer risk from project operations is below the significance level of 10 in one million. Staff's **Public Health Table 3**, below summarizes the risk assessment results, indicating that no short- or long-term adverse health effects are expected. (Exs. 300, pp. 4.7-12 — 4.7-14; 1, § 5.9.3.5, Table 5.9-5.)

PUBLIC HEALTH Table 3
Operation Hazard/Risk at Point of Maximum Impact: Applicant Assessment

Type of Hazard/Risk	Hazard Index/Risk	Significance Level	Significant
Acute Noncancer	0.01	1.0	No
Chronic Noncancer	0.01	1.0	No
Individual Cancer	0.7 in a million	10.0 in a million	No

Source: Exs. 300, p. 4.7.-11; 1, § 5,9,3,5, Table 5.9-5

4. Cumulative Impacts

A project may result in a significant adverse 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 if impacts from the A2PP were combined with those of other local or regional facilities. The evidence shows that cumulative public health impacts are not significant unless the emitting sources are in close proximity to each other. The SJVAPCD reported only two faciltities in close proximity to the A2PP site:

- Existing Almond Power Plant. The existing APP, adjacent to the A2PP site, would reduce operations when A2PP is online but the existing stationary sources were included in the analysis of cumulative impacts based on current operational patterns.
- WinCo Foods**.** This new facility would include a 480 hp Caterpillar Model C9 Tier 3 certified diesel-fired emergency standby IC engine powering an electric generator. and a 1,372 hp Caterpillar Model C32 Tier 2 certified diesel-fired emergency standby IC engine powering an electric generator.

Applicant and Staff each conducted a cumulative impacts assessment of the existing power plant sources plus the new A2PP sources but they did not include the proposed WinCo Foods emergency standby diesel generators because routine emissions from standby generators occur only during testing at infrequent intervals during the year and the emissions for emergency generators under loss of power circumstances are not required to be included in a stationary source health risk assessment under OEHHA rules. (Ex. 300, p. 4.7-15.)

The results of the parties' cumulative health risk assessments for cancer risk and chronic and acute hazard index values were consistent and indicated that the contribution of A2PP is de minimis and would not result in a significant cumulative impact to public health. (Exs. 300, pp. 4.7-15 — 4.7-19, Public Health Tables 7 and 8; 1, § 5.9.4, Table 5.9.6, Appen. 5.9A.)

5. Environmental Justice Concerns

The public health analysis considered the low income/minority populations identified in the record (See, Exs. 1, Appen. 5.10A; 300, § 4.8, Socioeconomics Figure 1) and found no potential significant adverse public health impacts for any

receptors, including environmental justice populations. The Applicant's risk assessments complied with all CARB and OEHHA guidelines that focus on protecting public health for the most sensitive individuals in the population. Using conservative (health-protective) exposure and toxicity assumptions, the assessments demonstrated that potentially exposed individuals - including sensitive receptors such as the elderly, infants, and people with pre-existing medical conditions - will not experience any acute or chronic significant health risk or any significant cancer risk as a result of that exposure. (Ex. 300, p. 4.7-18.)

FINDINGS OF FACT

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

1. Construction and operation of the project will result in the routine release of criteria and noncriteria pollutants that have the potential to adversely impact public health.

2. Emissions of criteria pollutants, as discussed in the **Air Quality** section of this Decision, will be mitigated to levels consistent with applicable state and federal standards.

3. Emissions of noncriteria pollutants or toxic air contaminants are assessed according to procedures developed by state and federal regulatory agencies to evaluate potential health effects to protect the most sensitive individuals in the population.

4. The accepted method used by state and federal regulatory agencies in assessing the significance for both acute and chronic non-carcinogenic public health effects of noncriteria pollutants is known as the hazard index method. A similar method is used for assessing the significance of potential carcinogenic effects based on incremental exposure levels.

5. The evidence contains a screening level health risk assessment of the project's potential health effects due to emissions of toxic air contaminants (TACs).

6. The 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.

7. Exposure to diesel particulate emissions from construction equipment is short-term and will not result in long-term carcinogenic or non-carcinogenic health effects.

8. Exposure to construction-related diesel particulates will be mitigated to the extent feasible by implementing measures to reduce equipment emissions.

9. Exposure to particulates in fugitive dust due to excavation and construction activities will be mitigated to insignificant levels by implementing measures to reduce dust production and dispersal.

10. The health risk assessment for exposure to TAC emissions during project operations confirmed that acute and chronic calculated risks fall below the significance level of 1.0, and that the cancer risk is below the significance level of 10 in one million.

11. Cumulative impacts from noncriteria pollutants were analyzed in accordance with CEQA requirements and are not expected to be significant.

12. Since the project's contributions to health risks are well below the significance level, the project is not expected to contribute significantly to a cumulative health impact.

CONCLUSIONS OF LAW

1. We therefore conclude that emissions of noncriteria pollutants from the construction and operation of the A2PP Power Plant Project do not pose a significant direct, indirect, or cumulative adverse public health risk.

2. The project will comply with the applicable laws, ordinances, regulations, and standards (LORS) specified in the appropriate portion of **Appendix A** of this Decision. No Conditions of Certification are necessary because the Conditions of Certification for **Air Quality** incorporate the applicable public health LORS.

There are no specific Conditions of Certification for this topic.

D. WORKER SAFETY AND FIRE PROTECTION

Industrial workers are exposed to potential safety and health hazards on a daily basis. Federal and state laws and standards related to industrial workers are designed to ensure that these hazards are minimized to insignificant levels.[1] (Ex. 300, p. 4.14-6.) This topic analyzes whether the project's safety and health plans are in accord with applicable LORS and adequate to protect industrial workers from hazardous working conditions. This topic also discusses the availability and adequacy of fire protection and emergency response services, as well as the mitigation measures necessary to ensure adequate response.

The evidence on this topic was uncontested. (10/1/10 RT11-12; Exs. 1, §§ 5.16; 4 [Worker Safety and Health]; 15 [Data Responses 80-84]; 21 [Attachment DR 18, § 3.16]; 40; 300[2], § 4.14.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Worker Safety

Industrial environments are potentially dangerous during construction, operation, and demolition activities. Workers at the Almond 2 Power Plant (A2PP) will be exposed to excessive heat, loud noises, moving equipment, trenches, and confined space entry and egress problems. Potential injuries and death could result from falling, tripping, burns, lacerations, falling equipment or structures, chemical spills, hazardous waste, fires, explosions, electrical sparks, and electrocution. (Exs. 300, pp. 4.14-4 - 4.14-5; 1, § 5.16.2.2, Tables 5.16-1, 5.16-2.)

[1] We take administrative notice that the U.S. Labor Department recently issued a critical report on enforcement of workplace safety in California and ordered the state to fix myriad problems, including poor training of safety inspectors and delays in responding to complaints. See the Federal Annual Monitoring and Evaluation Report for FY 2009 by the U.S. Department of Labor OSHA Region IX at: http://www.osha.gov/dcsp/osp/efame/ca_efame_with_appendices.pdf.

[2] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the Exhibit List as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 302: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

Both federal and state Occupational Safety and Health Administration (OSHA and Cal-OSHA) LORS on **Worker Safety** require the project owner to adopt well-defined policies and procedures, training programs, hazard recognition, and controls to minimize injuries and to protect the health of onsite workers. (Exs. 300, p. 4.14-2, Worker Safety and Fire Protection Table 1; 1, § 5.16.3.)

The evidence provides extensive details on the worker safety and health programs required by applicable law and the project-specific safety measures necessary to protect on-site workers. Specifically, the project owner must develop and implement a "Construction Safety and Health Program" and an "Operations and Maintenance Safety and Health Program," both of which must be approved by BLM's Authorized Officer and the Energy Commission's Compliance Project Manager prior to project construction and operation. A separate "Injury and Illness Prevention Program," a "Personal Protective Equipment Program," an "Emergency Action Plan," a "Fire Prevention Plan," and other general safety procedures are required for both the construction and operation phases of the project. (Exs. 300, p. 4.14-5 et seq.; 1, §§ 5.16.2.3.1, 5.16.2.3.2, 5.16.2.3.3.) Conditions of Certification **WORKER SAFETY-1** and **-2** ensure that these measures will be developed and implemented in compliance with applicable LORS.[3]

To address potential soil contamination that could be encountered during project-related excavation and construction, Conditions **WASTE-1** and **WASTE-2** require a registered professional engineer or geologist to oversee soil excavation and grading to ensure proper handling and disposal of contaminated soil. See the **Waste Management** section of this Decision for a more detailed analysis. (Ex. 300, pp. 4.14-3 - 4.14-4.)

OSHA and Cal-OSHA standards encourage employers to monitor construction worker safety by employing a "competent person" who has experience enforcing workplace safety standards, has the ability to identify hazards relating to specific construction activities, and has authority to take appropriate action. To implement this safe workplace policy during project construction, Condition **WORKER SAFETY-3** requires the project owner to employ a power plant Construction Safety Supervisor to coordinate and implement the Construction Safety and Health Programs, and to investigate any safety-related incidents and emergency responses. (Ex. 300, pp. 4.14-9 - 4.14-10.)

[3] Condition **WORKER SAFETY-2** requires the project owner to revise and update the health and safety operations program for the existing Almond Power Plant to include the A2PP facility consistent with applicable LORS. (Ex. 300, p. 4.14-5.)

To further reduce workplace hazards during project construction, the project owner must also employ a professional Safety Monitor. The Safety Monitor will report to the Chief Building Official (CBO) and the Compliance Project Manager (CPM), track compliance with OSHA/Cal-OSHA regulations, and serve as an on-site OSHA expert. The Safety Monitor is also responsible for auditing safety compliance and ensuring that safety procedures are implemented during construction, commissioning, and the transition to operational status. (Ex. 300, pp. 4.14-10 to 4.14-11.) Implementation of Condition **WORKER SAFETY-4** will ensure that the Safety Monitor performs the duties described in the evidentiary record.[4]

In the event of a medical emergency at the project site, Condition **WORKER SAFETY-5** requires the project owner to maintain an automatic portable defibrillator on-site, to ensure that it is available during construction and operation, and to train appropriate personnel to use it.[5] (Ex. 300, p. 4.14-13.)

2. Fire Protection and Emergency Response

Project construction and operation pose the potential for both small fires and major structural fires. Electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, insulating fluid or flammable liquids, explosions, and over-heated equipment represent serious fire hazards. (Ex. 300, p. 4.14-11.)

The project will rely upon both local fire protection services and on-site fire protection systems, which provide the first line of defense for such occurrences. The Construction Fire Prevention Program required by Condition **WORKER SAFETY-1** must be consistent with applicable LORS and specify measures to minimize the likelihood of fires during construction, including the locations of portable fire extinguishers, safety procedures, hazardous materials clean-up procedures, and worker training. The evidence indicates that pending installation of permanent fire suppression systems for A2PP, hose extensions will be added to the existing Almond Power Plant hydrants in order to reach the A2PP construction site. (Ex. 300, p. 4.14-11.)

[4] We note for the record that Conditions **WORKER SAFETY-3** and **-4** have been standard requirements for all power plants licensed by the Commission since 2005. (Ex. 300, p. 4.14-11.)

[5] Testimony indicates 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 onsite defibrillator. Many modern industrial and commercial enterprises maintain defibrillators for emergency use. We therefore endorse this equipment as an appropriate safety and health precaution. (Ex. 300, p. 4.14-13.)

The Operation Fire Prevention Program required by Condition **WORKER SAFETY-2** ensures that the project will conform with applicable fire safety LORS. Evidence indicates that during operation, the project will meet the fire protection and suppression requirements of the California Fire Code, all applicable NFPA standards (including Standard 850 addressing fire protection at electric generating plants), and all Cal-OSHA requirements. These fire standards require on-site fire suppression components to include both fixed and portable fire extinguishing systems located throughout the site. (Ex. 300, p. 4.14-12.)

Fire water will be supplied by a well located on the existing Almond Power Plant site and stored in an existing fire water storage tank with a dedicated firefighting supply of 250,000 gallons. The fire water feeds an underground fire loop piping system that will be expanded to service to the A2PP, with water pressure maintained by one electric jockey pump and one diesel-driven backup pump. The fire water loop will supply both fire hydrants and the fixed suppression systems and will be designed to provide two hours of protection for a single worst-case fire. Applicant indicated that the dedicated fire water supply could last for three hours of fire protection with one fire hydrant and one transformer deluge system (the largest user) operating at 500 gpm and 750 gpm, respectively (Exs. 300, p. 4.14-12; 1, § 2.1.11, 15.)

A fixed water sprinkler system will be installed in areas of risk, including administrative, control, warehouse, and maintenance buildings and the water treatment building in accordance with NFPA requirements and local fire codes. A carbon dioxide and dry chemical fire protection system will be provided for each of the combustion turbine generators and accessory equipment. The system will include fire detection sensors to trigger alarms and turn off ventilation, close ventilation openings, and automatically actuate the protection system. (Exs. 300, p. 4.14-12; 1, §§ 2.1.11 and 2.2.1.1.2.)

In addition to the fixed fire protection system, the appropriate class of service portable extinguishers will be located throughout the facility at intervals consistent with NFPA and Uniform Fire Code requirements to ensure adequate fire protection. (Exs. 300, p. 4.14-12; 1, § 2.1.11.)

The Ceres Emergency Services – Fire Division (CFD) has jurisdiction to provide fire support services to the site. There are a total of four fire stations in the CFD system. Station #3, located at 420 East Service Road (approximately 1.2 miles away), is the closest to the site with a response time of two to four minutes. The

next closest station is Station #1, located in downtown Ceres about 2.5 miles away, with a response time of four to five minutes. Backup support, if necessary, could be provided by the City of Modesto Fire Department and the Westport Fire Protection Division through mutual aid agreements. (Exs. 300, p. 4.14.3; 1, § 5.16.2.4.)

CFD Station #3 also serves as the first responder to hazardous materials ("hazmat") incidents with backup support provided by other CFD stations and the City of Modesto Fire Department. Both CFD Station #3 and the City of Modesto Fire Department have trained personnel and equipment for an initial hazmat response. In the event of a large spill, the Stanislaus County Environmental Resources - Hazardous Materials Division, Hazardous Materials Response Team, could provide a full hazmat response. Stanislaus County's Hazmat Team is located on Cornucopia Way about 0.5 miles from the project site, with a response time of approximately 10 to 15 minutes. Evidence indicates that these response teams are capable of handling any hazmat incident at the site in a timely manner. (Exs. 300, p. 4.14-3; 1, § 5.5.2.5.)

Access to the project site will be provided via two gated access roads, one equipped with a remote, card-activated gate for primary access and the other equipped with a manual lock for emergency vehicle access. The secondary access will be located about 200 feet east of the primary access gate at the southern fence line. All power plants licensed by the Commission must include a secondary access gate as a fire safety procedure to provide entry to fire emergency vehicles and personnel if the main gate is blocked. (Exs. 15; 300, p. 4.14-12.)

3. Cumulative Impacts

Evidence reveals that the CFD and its mutual aid emergency response teams are adequately equipped to respond to fire, hazmat, rescue, or EMS emergencies in a timely manner at the A2PP site without any impacts on their capabilities to service other emergencies. (Ex. 300, p. 4.14-13.)

FINDINGS OF FACT

Based on the uncontroverted evidence, the Energy Commission makes the following findings:

1. Industrial workers at the project site and along the linear corridors will be exposed to potential safety and health 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 consistent with applicable federal and state LORS for both the construction and operation phases of the project.

3. The project will employ an on-site professional Construction Safety Supervisor and a Construction Safety Monitor to ensure compliance with the Construction Safety and Health Program.

4. The project will maintain a portable automatic external defibrillator on-site and train personnel to use it in the event of a medical emergency.

5. The project will include on-site fire protection and appropriate fire suppression systems consistent with applicable LORS as the first line of defense in the event of a fire.

6. The Ceres Fire Department (CFD) will provide fire protection and emergency response services to the project site.

7. The CFD and its mutual aid responders will provide adequate hazmat response capability.

8. The project will provide two access entry gates to allow emergency vehicle access to the site if one of the gates is blocked.

9. Construction and operation of the A2PP Project will not result in any direct, indirect, or cumulative impacts on fire protection services in the project vicinity.

CONCLUSIONS OF LAW

1. We therefore conclude that with implementation of the Conditions of Certification listed below and the mitigation measures described in the evidentiary record, the A2PP Project will not result in significant health and safety impacts to on-site workers.

2. We further conclude that the mitigated A2PP Project, as described in the evidentiary record, will comply with all applicable laws, ordinances, regulations, and standards listed for Worker Safety and Fire Protection as set forth in the appropriate portion of **Appendix A** of this Decision.

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 Ceres Emergency Services – Fire Division (CFD) for review and comment prior to submittal to the CPM for approval.

Verification: At least 30 days prior to the start of site mobilization, 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 CFD stating the Fire Department's comments on the Construction Fire Prevention Plan and Emergency Action Plan, including any concerns about compliance with LORS or Fire Department protocol.

WORKER SAFETY-2 The project owner shall submit to the CPM a copy of a revised and updated 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 CFD 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 CFD stating the Fire Department's comments on the Operations Fire Prevention Plan and Emergency Action Plan, including any concerns about compliance with LORS or Fire Department protocol.

WORKER SAFETY-3 The project owner shall employ 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:

- record of all employees trained for that month (all records shall be kept on site for the duration of the project);
- summary report of safety management actions and safety-related incidents that occurred during the month;
- report of any continuing or unresolved situations and incidents that may pose danger to life or health; and
- 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: At least 30 days prior to the start of site mobilization, 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 new and functional portable automatic external defibrillator (AED) is located on site and a copy of the training and maintenance program for review and approval. The project owner shall also provide status reports on the continuing functionality of the AED and updates on the training program in each Annual Compliance Report, and shall replace the AED with a new one when it no longer functions.

E. HAZARDOUS MATERIALS MANAGEMENT

This analysis considers whether the construction and operation of the A2PP Project will create significant impacts to public health and safety resulting from the use, handling, storage, or transport of hazardous materials. Several locational factors affect the potential for project-related hazardous materials to cause adverse impacts. These include local meteorological conditions, terrain characteristics, and the proximity of population centers and sensitive receptors. Power plant facilities are also subject to a number of laws, ordinances, regulations, and standards (LORS) related to hazardous materials. **Appendix A** to this Decision identifies the applicable LORS.

The evidence incorporates all of these factors in the analysis of potential impacts, as summarized below.[1] The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §5.5; 4; 8; 15; 21; 32; 33; 34; 300[2], § 4.4.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting.

Land uses in the area surrounding the A2PP site are commercial, residential, and agricultural. Sensitive receptors within a 6-mile radius of the project sire include 189 daycare centers and 37 schools, three nursing homes, 64 medical facilities, and two colleges. (Ex. 1, p. 5.5-1.) Within a 1-mile radius of the project site, there are five daycare centers but no schools, medical facilities, or nursing homes.

The nearest sensitive receptor is a small-capacity, in-home daycare center approximately 0.5 miles north of the site. (Ex. 1, p. 5.5-1.) The nearest schools are Sinclair Elementary School approximately 1.2 miles north of the project site and Central Valley High School approximately 1.5 miles north of the site. (*Id*.) **Hazardous Materials Management Figures 1 and 2** shows the locations of preschools/daycare facilities and schools within a 3-mile radius of the project site.

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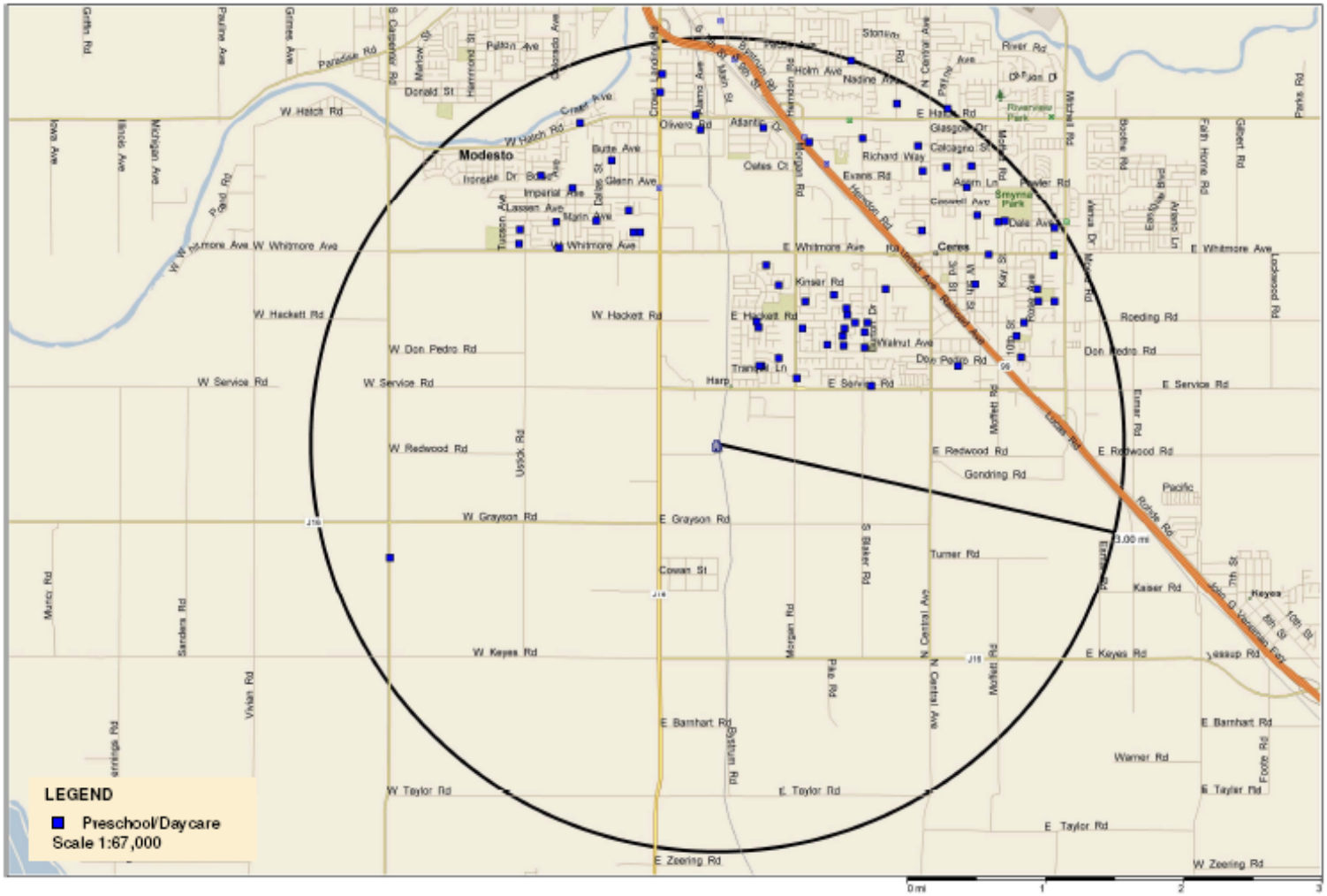
[1] The **Worker Safety** and **Fire Protection** portion of this Decision analyzes the protection of workers from such risks.

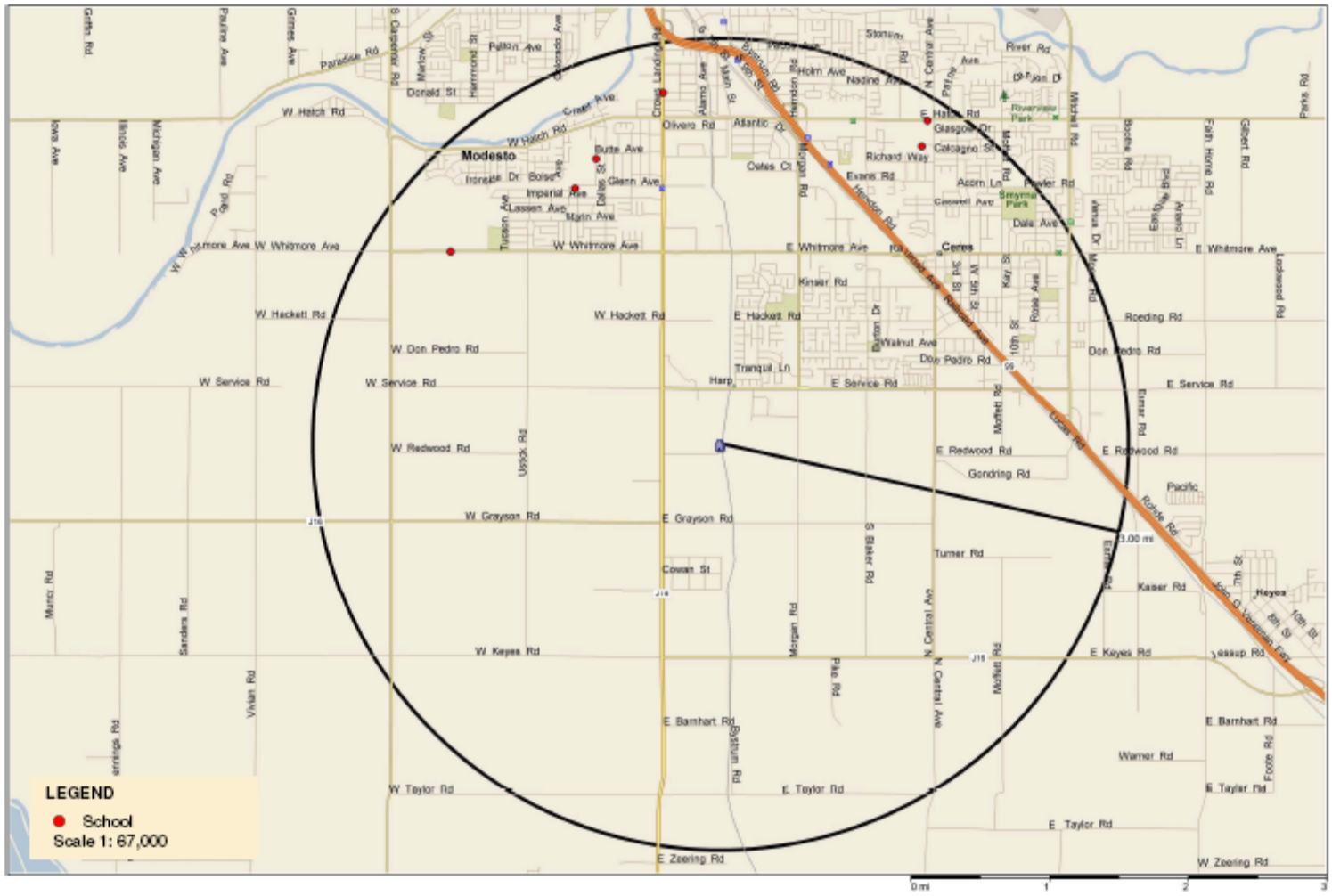
[2] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision

HAZARDOUS MATERIALS – FIGURE 1



Source: Ex. 1, AFC

HAZARDOUS MATERIALS – FIGURE 2



Source: Ex. 1, AFC

2. Use of Hazardous Materials

The evidence establishes that the A2PP Project will use hazardous materials during construction and operation. Hazardous materials used during the construction phase will include gasoline, diesel fuel, motor oil, hydraulic fluid, welding gases, lubricants, solvents, cleaners, paint, and paint thinners. Hazardous materials, such as mineral and lubricating oils, cleaning detergents, welding gases, and other chemicals will be present at the facility during operation. (Exs. 1, p. 5.5-2; 300, p. 4.4-6.)

A list of all hazardous materials proposed for use at the A2PP facility is provided in **Hazardous Materials Management Attachment D** at the end of this section.

The evidence includes an assessment of the risks posed by the use of hazardous materials. This assessment included the following elements in the order presented:

- Review of the types and amounts of chemicals proposed for on-site use, and a determination of the need and appropriateness of their use.
- Removal from further consideration of chemicals that will be used in small amounts, or whose physical state is such that there is virtually no chance that a spill will migrate off the site and impact the public.
- Review and evaluation of measures proposed to prevent spills. These included engineering controls such automatic shut-off valves and different size transfer-hose couplings, as well as administrative controls such as worker training and safety management programs.
- Review and evaluation of measures proposed by TID to respond to accidents. These measures also 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.
- Analysis of the theoretical impacts on the public of a worst-case spill of hazardous materials, even with the mitigation measures proposed. (Ex. 300, pp. 4.4-6.)

a. Small Quantity Hazardous Materials

The evidence shows that none of the small quantity hazardous materials used during construction and operation poses a significant potential for off-site impacts due to the minimal quantities involved, their infrequent use, and onsite containment by way of temporary berms used by contractors. (Ex. 300, p. 4.4-6.) Petroleum hydrocarbon-based motor fuels, mineral oil, lube oil, and diesel fuel are all very low volatility and

represent limited off-site hazards even in larger quantities. Handling of hazardous materials during construction would follow best management practices (BMPs) to minimize environmental effects (Exs. 1, § 5.5.2.3.1; 300, p. 4.4-6 – 4.4-7).

Requirements related to the types and amounts of hazardous materials approved for use in association with the A2PP Project (as identified in **Hazardous Materials Management Attachment D)** are specified in Condition of Certification **HAZ-1**.

b. Large Quantity Hazardous Materials

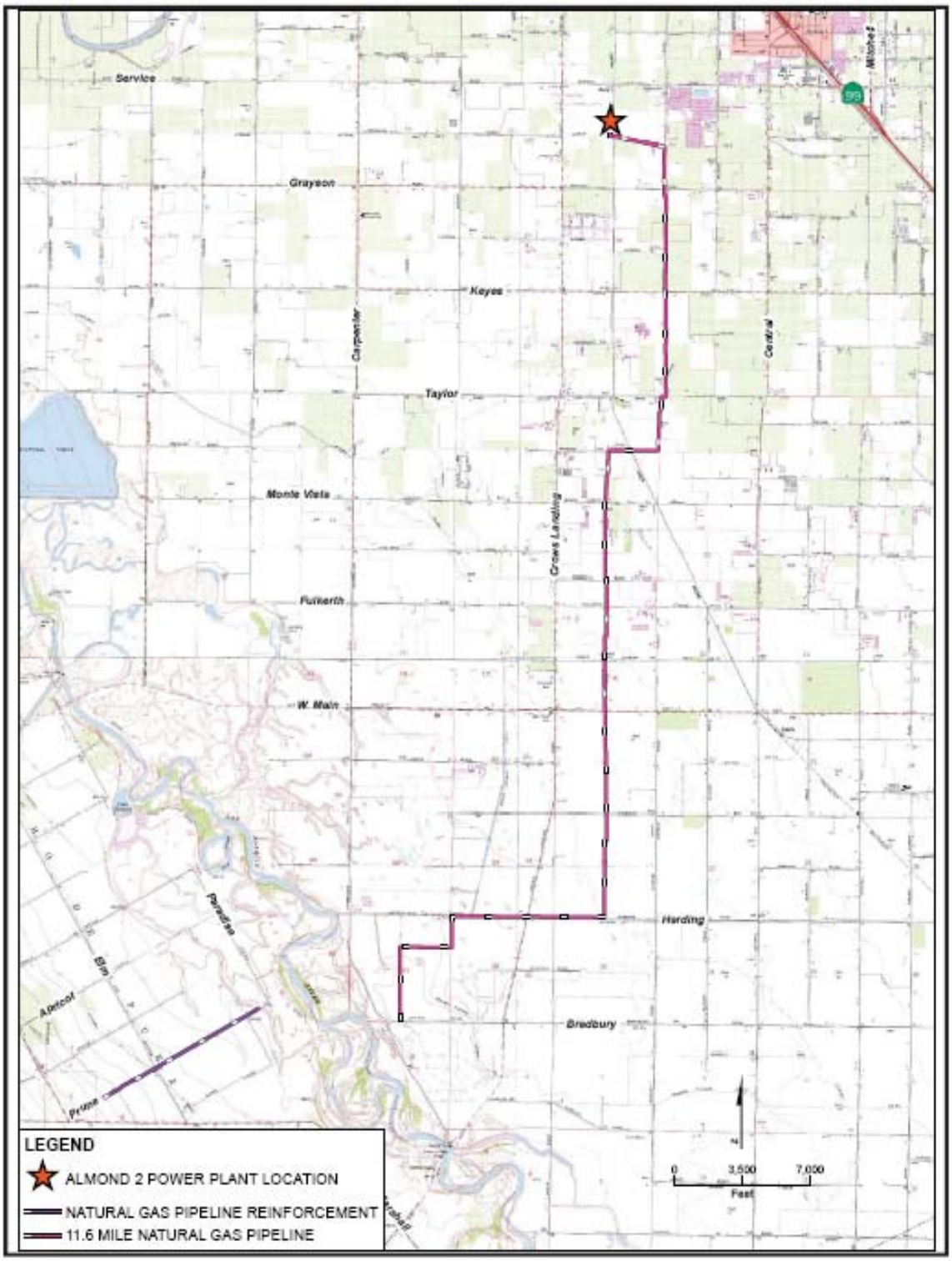
i. Natural Gas.

The project will involve the handling of large amounts of natural gas. Due to its tendency to disperse rapidly, natural gas is less likely to cause explosions than fuel gases such as propane or liquefied petroleum gas. Its use at the site nonetheless poses risk of fire and explosion because of its flammability if release occurs under certain specific conditions. (Ex. 300, p. 4.4-7.)

The evidence shows that the risk of fire or explosion resulting from the project's use of natural gas can be reduced to insignificant levels with compliance with applicable codes, which incorporate safety measures. For instance, the 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, start-up procedures require air purging of the gas turbines prior to start up, thereby precluding the presence of an explosive mixture. The safety management plan proposed by the Applicant will address the handling and use of natural gas and will significantly reduce the potential for equipment failure due to improper maintenance or human error. (Ex. 300, p. 4.4-7.)

Although the project will use significant quantities of gas, the gas will not be stored onsite. (Ex. 300, p. 4.4-7.) Instead, it will be supplied to A2PP from existing and new pipelines constructed and owned by PG&E. The pipeline alignment is approximately 11.6 miles long and will run alongside paved roads and farm roads, and through agricultural fields. (Ex. 300, p. 4.4-7.) PG&E will also reinforce a 1.8-mile long existing pipeline segment along the western side of the San Joaquin River. All pipelines will be installed underground, with trenchless construction under several water crossings. (Ex. 300, p. 4.4-7.) **Hazardous Materials Management Figure 3** depicts the pipeline route.

ALMOND 2 POWER PLANT - HAZARDOUS MATERIALS - FIGURE 3



Source:

We have evaluated the potential offsite impacts related to the installation of the new pipeline. The evidence shows that failures of gas lines typically occur as a result of pipeline corrosion, pipeline construction or material defects, rupture by heavy equipment excavating the area, weather effects, and earthquakes. (Ex. 300, p. 4.4-8.) The evidence also shows that there are several applicable LORS that apply to each of these potential hazard areas to avoid or minimize their occurrence. These LORS are sufficient to reduce the risk of accidental release from the pipeline to insignificant levels.

For instance, several LORS apply to the design of the pipeline. The safety requirements for pipeline construction vary according to the population density and land use, which characterize the surrounding land and are applied based on specified pipeline classifications. (Title 49, Code of Federal Regulations, Part 192).

The safety requirements for pipeline construction vary according to the population density and land use, which characterize the surrounding land. There are four pipeline classes as defined by Title 49, Code of Federal Regulations, Part 192 (49 CFR 192). (Ex. 300, p. 4.4-9.) The natural gas pipeline for the A2PP Project will be designed for Class 1 service because it is a pipeline located within 220 years of ten or fewer buildings intended for human occupancy in any 1-mile segment. The pipeline will meet all standards of the California Public Utilities Commission (CPUC) General Order 112-D and 58-A standards as well as all federal regulations. CPUC General Order 112-E, Section 125.1 requires that at least 30 days prior to the construction of a new pipeline, the owner must file a report with the commission that will include a route map for the pipeline.

The natural gas pipeline will be constructed and operated in accordance with the Federal Department of Transportation (DOT) regulations, Title 49, Code of Federal Regulations (CFR), Parts 190, 191, and 192. According to the evidence, in November 2000, the DOT Office of Pipeline Safety proposed a program requiring the preparation of risk management plans for gas pipelines throughout the United States. These risk management plans must include the use of diagnostic techniques to detect internal and external corrosion or cracks in pipelines and to perform preventive maintenance. The pipeline owner must develop and implement these plans.

In accordance with the LORS, the following safety features will be incorporated into the design and operation of the A2PP-related natural gas pipeline: (1) the working pressure will be less than the design pressure; (2) butt welds will be x-rayed and the pipeline will be tested with water prior to the introduction of natural gas into the line; (3) the pipeline will be surveyed for leakage annually (4) the pipeline will be marked to prevent rupture

by heavy equipment excavating in the area; and (5) valves at the meter will be installed to isolate the line if a leak occurs.

The evidence establishes that the federal and state requirements will be administered by both the federal government and the CPUC based on their respective jurisdictional authority. (Ex. 300, p. 4.4-10.) Thus, we find that compliance with existing LORS would be sufficient to ensure minimal risks of pipeline failure. We also find that the project's compliance with existing regulatory requirements will be sufficient to reduce the risk of accidental release from the pipeline to insignificant levels. (Ex. 300, pp. 4.4-8 – 4.4-10.)

ii. Anhydrous Ammonia.

The evidence establishes that anhydrous ammonia is the only hazardous material that may pose a significant risk of off-site impact. The A2PP Project will use anhydrous ammonia to control the emission of oxides of nitrogen (NO_X) from the combustion of natural gas. The project's use of anhydrous ammonia can result in the release of ammonia vapor in the event of a spill. The accidental release of anhydrous ammonia without proper mitigation can result in significant down-wind concentrations of ammonia gas. (Ex. 300, p. 4.4-10.)

The project will use the existing APP ammonia storage tank, which has a maximum capacity of 12,000 gallons. The tank is filled with 100 percent ammonia in a liquid state under pressure to a maximum of 85 percent of capacity. As a result, the maximum amount of anhydrous ammonia on site would be 10,200 gallons. (Ex. 1, § 5.5.2.3; 300, p. 4.4-10.) According to the evidence, the tank is surrounded by an above-ground secondary containment basin capable of holding the full contents of the tank plus rainfall. (*Id.)*

In evaluating the potential impacts of an accidental release, we note there are benchmark exposure levels ammonia gas occurring offsite:

- The lowest concentration posing a risk of lethality (2,000 parts per million (ppm)
- The concentration immediately dangerous to life and health (300 ppm)
- The emergency response planning guideline level of two to 150 ppm, and
- The level considered by the Commission to be without serious adverse effects on the public for a one time exposure (75 ppm). (Ex. 300, p. 4.4-11.)

The evidence contains explains that Staff used a health-based airborne concentration of 75 ppm to evaluate the significance of impacts associated with potential releases of

ammonia. (According to Staff, this benchmark – as compared to the others listed above – evaluates the acceptable of avoidable exposures to the population instead of merely addressing emergency planning and proper safety practices. Ex. 300, p. 4.4-31.)

Staff used the National Research Council's 30-minute Short Term Public Emergency Limit (STPEL) for ammonia to determine the potential for significant impacts. (Ex. 300, p. 4.4-31.) The limit is designed to apply to unanticipated releases and subsequent exposure. According to the evidence, exposure at this level should not result in serious effects but would result in "strong odor, lacrimation, and irritation of the upper respiratory tract (nose and throat), but no incapacitation or prevention of self-rescue." (*Id*.) However, exposure above the 30 minute STPEL poses significant risk impacts for sensitive members of the public.

The evidence does not indicate that potential exposure associated with a potential release exceeds 75 ppm at any public receptor. Nonetheless, as discussed above we have considered the probability of occurrence of a release, the severity of the consequences, and the nature of the potentially exposed population in determining whether the likelihood, and extent of potential exposure are sufficient to support a finding of potentially significant impact. (*Id*.)

Specifically regarding the potential for exposure, we find that the project's storage and use of ammonia are subject to the requirements of the federal Clean Air act, the California Fire Code, and the California Accidental Release Prevention (CalARP) program. The Fire Code imposes specifies requirements for the control of liquid and gaseous releases of hazardous materials. For example, secondary containment in the form of a bermed containment area under and around the anhydrous ammonia tank and loading area is required. Under Articles 79 and 80 of the Fire Code, local agencies and fire departments that enforce this code can require the preparation of a hazardous Materials Business Plan (HMBP) and Hazardous Materials Inventory Statements. (Ex. 1, pp. 5.5-12, 5.5-30.) The CalARP program is designed to minimize the risk that extremely hazardous substances will cause immediate harm to the public and environment. (Ex. 1, p. 5.5-12.)

The Applicant proposes to adhere to the Risk Management Plan (RMP) currently in force for the APP anhydrous ammonias tank because the A2PP will share the APP's ammonia storage facility. The RMP had been previously approved by the Stanislaus County Environmental Resources Hazardous Materials Division. The Stanislaus County Environmental Resources Hazardous Materials Division was approved by the State as the Certified Unified Program Agency (CUPA) for Stanislaus County. The

CUPA is responsible for reviewing plans including RMPs and HMBPs.[3] (Ex. 300, p. 4.4-4.). They also administer the above and below ground storage tank programs, as well as the hazardous waste generator programs. (Ex. 1, p. 5.5-29.) Through these programs, the Stanislaus County Environmental Resources Hazardous Materials Division ensures that businesses and industry store and use hazardous materials safely and in conformance with various regulatory codes. To enforce these programs, the Stanislaus County Environmental Resources Hazardous Materials Division handles permits and performs inspections at established facilities to verify that hazardous materials are properly stored and handled and that the types and quantities of materials reported are accurate. (*Id*.)

Staff evaluated the Off-site Consequence Analysis of the APP RMP and determined that the analysis was conducted in accordance with U.S. EPA and CalARP guidelines. The analysis supports Staff's conclusion that the predicted off-site airborne ammonia concentrations due to a release would be less than significant.

In addition to complying with applicable LORS, the Applicant proposes that the use, storage, and response of any spill will also be addressed by engineering and administrative controls and on-site spill program. (Ex. 300, p. 4.4-11.) Engineering and administrative controls affect the significance of potential impacts related to the use, handling, storage and transport of hazardous materials. 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, or which can limit the spill to a small amount and/or confine it to a small area. Administrative controls are those rules and procedures that workers at the facility must follow. Both types of controls are designed to help prevent accidents or keep them small if they do occur, and are specified at length in the evidence. (Ex. 300, p. 4.4-5.)

In both cases, the goal is to prevent a spill from moving off-site and causing harm. The evidence identifies the applicable engineering and administrative controls. (Ex. 300, pp. 4.4-11 – 4.4.12) Elements of the A2PP facility controls and the safety management plan are summarized below.

[3] We also note that a Process Safety Management Plan (PSMP) is required under OSHA because the OSHA regulations require PSMP for storage of anhydrous ammonia at quantities above 10,000 pounds (29 CFR Part 199). A PSMP has been prepared for the existing ammonia tank and submitted to Stanislaus County Environmental Resources Hazardous Materials Division. The requirements for a PSMP are similar to those for an RMP, but an offsite consequence analysis is not required for the PSMP. (Ex. 1, pp. 5.5-20 – 5.5-21.) Staff reviewed these plans and site security and deemed them adequate. (Ex. 300, p. 4.4-12.)

Engineering Controls

The engineered safety features proposed by the applicant for use at the A2PP Project include:

- construction of secondary containment areas surrounding each of the hazardous materials storage areas designed to contain accidental releases that might happen during storage or delivery in addition to the water associated with 20 minutes of fire suppression;
- physical separation of stored chemicals in isolated containment areas in order to prevent accidental mixing of incompatible materials, which could result in the evolution and release of toxic gases or fumes;
- installation of an automated sprinkler system and an exhaust system for the indoor hazardous materials storage area;
- use of the existing APP anhydrous ammonia storage facility equipped with a secondary containment structure capable of holding the entire volume of the tank plus precipitation;
- use of ammonia sensors set to alarm at 20ppm at the existing anhydrous ammonia tank and at each ammonia skid at the A2PP CTGs; and
- process protective systems including continuous tank level monitors with automatic alarms, automated leak detectors, temperature and pressure monitors and alarms, and excess flow and emergency block valves.
-

Administrative Controls

A worker health and safety program will be prepared by the Applicant and will include (but not be limited to) the following elements (see the **Worker Safety and Fire Protection** section of this Decision for specific regulatory requirements):

- worker training regarding chemical hazards, health and safety issues, and hazard communication;
- 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.

On-Site Spill Response

In order to address the issue of spill response, the facility 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, on-site spill containment, and prevention equipment and capabilities, as well as other elements. Emergency procedures will be established which include evacuation, spill cleanup, hazard prevention, and emergency response.

The Applicant's proposed onsite-spill response measures will be supplemented by regulatory requirements. For example, because the project will have oil in a quantity greater than 1,320 gallons and given the known nearby waters of the State, the project owner must prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan as required by 40 CFR 112 as well as by California Health and Safety Code sections 25270 through 25270.13.

Furthermore, if a spill occurs then the project owner must ensure the immediate reporting of a spill or release of 42 gallons or more to the California Office of Emergency Services and the Certified Unified Program Authority (CUPA). Furthermore, in the event of a spill, the Ceres Emergency Services – Fire Division (CFD) Station #3 - located about 0.3 miles from the A2PP site – can respond to the site in two to four minutes. For a large spill, the Stanislaus County Environmental Resources - Hazardous Materials Division, Hazardous Materials Response Team, would provide a full response within 10-15 minutes. (Ex. 300, p. 4.4-12 – 4.4-12.)

Based on the foregoing, we conclude that the project's compliance with the regulatory framework, the project's implementation of engineering and administrative controls and on-site spill measures, and the availability and ability of emergency responders to provide adequate response within a reasonable time will greatly reduce the potential for accidents and resulting impacts from the release of anhydrous ammonia. Compliance with the safety and regulatory requires will be ensured with implementation of Conditions of Certification **HAZ-1** through **HAZ-3. HAZ-1** imposes limitations on the use and storage of hazardous materials and their strength and volume. **HAZ-2** requires the project owner to update the existing HMBP, RMP, SPCC Plan, and PSMP. **HAZ-3** requires the project owner to develop and implement a Safety Management Plan for tanker-truck delivery of anhydrous ammonia and other liquid hazardous materials.

3. Transportation of Hazardous Materials

Various containerized and bulk hazardous materials, including anhydrous ammonia, will be trucked to the A2PP site. The evidence indicates that anhydrous ammonia poses the predominant risk associated with hazardous materials transport. (Ex. 300, p. 4.4-13.)

Anhydrous ammonia will be delivered in DOT-certified vehicles with design capacities of 6,500 gallons. (Ex. 300, p. 4.4-14.) The maximum use of ammonia during operation of the project will require about 10 tanker truck deliveries per year in addition to the two deliveries currently required for APP. (Ex. 300, p. 4.41-4.)

The Applicant's proposed transportation routes for hazardous materials delivery would have trucks travel CalTrans approved routes currently in use for APP. (Ex. 300, p. 4.4-13.) Each delivery will travel either 3.5 miles from SR-99 along Crows Landing Road or about 18.8 miles from I-5 along Fink Road and Crows Landing road to the site. This would result in either 42 or 226 miles of delivery truck travel in the project area per year (with a full load) for all two deliveries.

The risk of an accidental release during anhydrous ammonia transport in the project area was assessed based on criteria such as previous accident data, established accident modeling, and existing regulatory requirements regarding transport of hazardous materials (e.g., standards for vehicle safety and driver qualifications/competence). Data obtained from the U.S. DOT shows that the actual risk of a fatality over the past five years from all modes of hazardous material transportation is approximately 0.1 in 1,000,000. The conservative risk assessment performed by Staff shows a risk of 1.8 in 1,000,000 for one trip from SR-99 and 2.0 in 1,000,00 for one trip from I-5. Staff calculated the maximum annual risk, including all 12 deliveries, as 21.7 in 1,000,000 for deliveries from SR-99 and 24.1 in 1,000,000 for deliveries from I-5. (Ex. 300, p. 4.4-15.) Staff's results show that the risk of a transportation accident is less than significant. Moreover, the evidence shows that, with applicable regulatory conformance, the risk of exposure to significant concentrations of anhydrous ammonia during transportation to the A2PP facility is extremely low. (Ex. 300, pp. 4.4-14- 4.4-15.)

Even so, both proposed transportation routes pass within 500 feet of two schools. (Ex. 300, p. 4.4-14.) The evidence establishes that public safety necessitates the use of only one route: SR-99 to Crows Landing Road to A2PP. This route was shown to be the safest and best route among the alternatives considered by Staff in that it is the shortest route from an interstate consists of two or more lanes in each direction and has traffic lights at each intersection. (Ex. 300, p. 4.4-15.) Thus, Condition of Certification

HAZ-5 requires TID to direct all vendors delivering anhydrous ammonia to use only the SR-99 to Crows Landing to A2PP route. This Condition also requires TID to consult with the local school district to ensure that no deliveries will be made during hours when the route is used by school buses.

Regulatory standards and related requirements associated with the transport, delivery, and security of hazardous materials to/within the A2PP site are included in Conditions of Certification **HAZ-3, HAZ-4**, **and HAZ-6**. With implementation of the Conditions of Certification below, we conclude that the transport of hazardous materials to and from the A2PP site will pose not significant impacts or risks. (Ex. 300, pp. 4.4-13 – 4.4-16.)

4. Seismic Risk

The A2PP site is in a seismically active region, and could potentially be subject to earthquakes that could cause the failure of hazardous material storage facilities and electrically controlled valves and pumps. If a failure of all of these preventive control measures were to occur, a vapor cloud of hazardous materials could form and move offsite and affect individual in the surrounding community. (Ex. 300, p. 4.4-16.)

An analysis of potential seismic risks at the A2PP site was conducted based on data from historic earthquake events, the project's proposed facilities, and project-related conformance with applicable regulatory requirements (e.g., seismic parameters of the California Building Code). The evidence indicates that storage facility and/or pipeline failures at the A2PP site from seismic events are not probable, and do not represent a significant risk to the public. Additional discussion of potential seismic concerns and related design features is provided in the **Geological Resources** and **Facility Design** sections of this Decision. (Ex. 300, p. 4.4-16.)

5. Site Security

Because the A2PP Project use and store large quantities of hazardous materials, including anhydrous ammonia, site security is essential notwithstanding the Staff determination that the site is appropriately classified as "low vulnerability". The evidence identifies site security measures for this project commensurate with its level of vulnerability and consistent with measures at all power plants under Energy Commission jurisdiction, to provide a minimum level of security consistent with the noted regulatory guidelines. (Ex. 300, pp. 4.4-16 -4.4-18.) These measures include perimeter fencing that would contain the facility, closed captioned monitoring (CCTV), alarms, security guards, and access controls, as well as establishing protocols for

monitoring and reporting suspicious activities and site evacuation. Conditions of Certification **HAZ-6** and **HAZ-7** set forth the required security measures.

6. Cumulative Impacts

A cumulative effect refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effects of the proposed project. (Pub. Res. Code § 21083, Cal. Code Regs., tit. 14, §§ 15064(h), 15065(c), 15130, and 15355.)

The evidence includes a cumulative impacts analysis. The evidence shows that while cumulative impacts related to hazardous material management at applicable existing and foreseeable facilities (including the A2PP Project) are possible, the probability for cumulative impacts is low due to the numerous safeguards required to both prevent and control the release of hazardous materials at such facilities.

More particularly, the evidence explains that Staff considered facilities that use or store gaseous or liquid hazardous materials, or locations where such facilities might likely be built based on the information provided by the Applicant.

The Applicant identified projects either approved or pending before the City of Ceres or Stanislaus County. The three capital projects before the City within a 1-mile radius of the project site or its transmission routes were identified as:

Crows Landing Flea Market and Ceres Lions Park Wells

- Lagoon Cleaning Project
- Larger Stand-by Power and Blaker Reservoir

Thirty-five additional projects with the City of Ceres (either approved or in the application stage) were also identified. At least 29 projects were identified within Stanislaus County, but none is within the project. (Ex. 1, pp. 5.5-15 -5.5-16.) TID's proposed Hughson-Grayson Substation project was also identified as a pending project.

The evidence shows that a number of facilities in Stanislaus County handle, store, emit, or release ammonia. (Ex. 1, p. 5.5-16; 300, p. 4.4-18.) The nearest facility storing ammonia is the WinCo Central Valley Distribution Center, located immediately north of the proposed A2PP site. This facility uses anhydrous ammonia for refrigeration and stores about 7,200 gallons in a closed loop system. The second closest facility that stores ammonia is the Stanislaus Farm Supply, located north of the A2PP site. This

facility stores up to 26,000 gallons of anhydrous ammonia, 30,000 gallons of aqueous ammonia, and 6,000 pounds of methyl bromide gas. (*Id.*)

In the event that the A2PP Project is certified by the Energy Commission, the RMP for the APP will be revised to reflect the additional use, of anhydrous ammonia by the A2PP. Additionally, the project owner must develop and implement a hazardous materials handling program for the A2PP independent of any other projects considered for potential cumulative impacts. Thus, as discussed above, we find that the project's implementation of the Conditions of Certification, poses a minimal risk of accidental release that could result in off-site impacts.

Moreover, the evidence indicates that it is unlikely that an accidental release that has very low probability of occurrence (about one in one million per year) would independently occur at the A2PP site and another facility at the same time. Therefore, we conclude that the proposed A2PP facility would not contribute to a significant hazardous materials-related cumulative impact.

7. Response to Agency and Public Comments

The City of Ceres expressed concern that the AFC did not adequately identify the locations of all schools both in the project area and along the hazardous materials transportation route. The City recommended consultation with the Ceres Unified School District to ensure that all schools are properly located and considered.

Staff's response explained that Staff visited the area twice and determined that with respect to A2PP's hazardous materials use, storage and transport, the risks of impact to any area schools will be reduced to less than significant levels with implementation of the Applicant' proposed engineering and administrative controls and Staff-proposed Condition of Certification **HAZ-5**, which we have adopted. **HAZ-5** requires the project owner to consult with the local school district and prohibits deliveries of anhydrous ammonia deliveries during hours when the delivery route is used by school buses.

We find that Staff's response, the discussion herein regarding the relationship between hazardous materials delivery and schools, and Conditions of Certification (particularly **HAZ-5**) adequately address the City's concerns.

FINDINGS OF FACT

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

1. The A2PP Project will use hazardous materials during construction and operation, including natural gas and anhydrous ammonia

2. The major public health and safety hazards are associated with the risk of fire or explosion related to natural gas and the release of anhydrous ammonia.

3. The risk of fire or explosion from natural gas will be reduced to insignificant levels through adherence to applicable codes and the implementation of effective safety management practices. Specifically, this will include the use of double block and bleed valves for secure shut off, automated combustion controls, burner management, inspection of welds, and use of corrosion resistant coatings.

4. The risk of off-site anhydrous ammonia migration is minimal, and the risk of on-site leaks will be reduced to insignificant levels with the projects' compliance with applicable regulatory requirements and Conditions of Certification below.

5. Potential leak and fire risks associated with road crossings by natural gas pipes and other project facilities will be reduced to insignificant levels with the project's and PG&E's compliance with applicable regulatory requirements.

6. Anhydrous ammonia poses the predominant risk associated with hazardous materials transport. The risk of an accidental release during transport in the project area will be reduced to insignificant levels by conformance with applicable regulatory requirements, including standards for vehicle safety and driver qualifications/competence.

7. While the A2PP site could potentially be subject to earthquakes that result in the failure of hazardous material storage facilities and/or solar field piping, such occurrences are not probable and do not represent a significant risk to the public.

8. The A2PP Project will involve on-site hazardous material use/storage in sufficient quantities to merit the development of special site security measures to prevent unauthorized access. These measures would ensure that potential security risks related to construction and operation of the A2PP facility would be less than significant.

9. Hazardous materials proposed for use in the construction and operation of the A2PP Project, when considered in conjunction with those used at other existing and potential future facilities in the project vicinity, will not cumulatively result in a significant risk to the public.

10. The A2PP Project will be designed with an operating life of approximately 30 to 40 years. While it is not possible to identify specific circumstances and requirements related to facility closure, this process process would conform with applicable LORS in such a way that public health and safety and the environment are protected from adverse impacts.

11. Implementation of the mitigation measures contained in the following Conditions of Certification will ensure that the A2PP Project will not cause significant impacts to public health and safety as the result of the use, handling, storage, or transport of hazardous materials.

12. With implementation of the Conditions of Certification listed below, the A2PP Project will comply with all applicable LORS related to hazardous materials management.

CONCLUSION OF LAW

1. We therefore conclude that the use of hazardous materials in association with the A2PP Project will not result in any significant direct, indirect, or cumulative adverse public health and safety impacts.

CONDITIONS OF CERTIFICATION

HAZ-1 The project owner shall not use any hazardous materials not listed in **Attachment D**, below, or in greater quantities or strengths than those identified by chemical name in **Attachment D**, 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 revise and update the current Hazardous Materials Business Plan (HMBP), Risk Management Plan (RMP), Spill Prevention, Control, and Countermeasure Plan (SPCC Plan), and Process Safety Management Plan (PSMP) and submit the revised plans to the Stanislaus County Environmental Resources Hazardous Materials Division (SCER-HMD) for review and comment and to the CPM for review and approval.

Verification: At least 60 days prior to the start of commissioning of the A2PP, the project owner shall provide a copy of a final updated HMBP, RMP, SPCC Plan, and the PSMP to the CPM for approval.

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of anhydrous 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 30 days prior to the start of construction of the A2PP, the project owner shall provide a Safety Management Plan as described above to the CPM for review and approval.

HAZ-4 The project owner shall direct all vendors delivering anhydrous ammonia to the site to use only tanker trucks that meet or exceed the specifications of DOT Code MC-331. The project owner shall provide this direction in a letter to the vendor(s) at least 30 days prior to the receipt of anhydrous ammonia on site.

Verification: At least 30 days prior to the start of commissioning of the A2PP, the project owner shall submit to the CPM for review and approval copies of the notification letter to supply vendors indicating the transport vehicle specifications.

HAZ-5 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 SR-99 to Crows Landing Road to the power plant site. The project owner shall obtain approval of the CPM if an alternate route is desired. The project owner shall also consult with officials of the Ceres Unified School District regarding school bus schedules and shall prohibit vendors through contractual language from transporting anhydrous ammonia to the site at times that would coincide with regular school bus traffic along Crows Landing Road.

Verification: At least 30 days prior to the start of commissioning of the A2PP, 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 anhydrous ammonia vendor describing the time of day limitation on deliveries, and

3) written evidence that officials of the Ceres Unified School District have been consulted.

HAZ-6 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 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-7 The project owner shall revise and update the existing site-specific operations security plan and make it available to the CPM for review and approval. The project owner shall continue to implement existing 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 updated Operation Security Plan shall include the following additions to the existing security:

1. The existing man-gates located along the perimeter fence shall either be removed or replaced with a type that affords increased security by allowing immediate egress but which prohibits entry.

2. Written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on site or off site;

3. 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;

4. 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;

5. 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 172.802, and that they have conducted employee background investigations in accordance with 49 CFR Part 1572, subparts A and B;

6. An upgraded CCTV system including cameras able to pan, tilt, and zoom and that have low-light capability, are recordable, and are able to view 100 percent of the perimeter fence, the anhydrous ammonia storage tank, the outside entrance to the control room, and the front gate from a monitor in the power plant control room.

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 applicant.

Verification: At least 30 days prior to the start of commissioning of the A2PP, the project owner shall notify the CPM that a revised and updated 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.

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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.

HAZARDOUS MATERIALS ATTACHMENT D
HAZARDOUS MATERIALS PROPOSED FOR USE AND STORAGE ON-SITE AT THE A2PP

Material	CAS No.	Application	Hazardous Characteristics	Maximum Quantity On Site
Acetylene	47-86-2	Welding gas	Health: asphyxiant gas Physical: flammable	435 cu ft
Argon	7440-37-1	Welding gas	Health: asphyxiant gas Physical: non-flammable	450 cu ft
Argon/CO_2	7440-37-1/ 124-38-9	Welding gas	Health: asphyxiant gas Physical: non-flammable	342 cu ft
Anhydrous Ammonia (100 percent NH3 by weight)	7664-41-7	Control NOx emissions through selective catalytic reduction	Health: Corrosive, irritation to permanent damage from inhalation, ingestion and skin contact Physical: Combustible, but difficult to burn	10,200 gallons
Anti-scalant	Various	Prevent scale in reverse osmosis membranes	Health: may cause slight irritation to the skin and moderate irritation to the eyes Physical: non flammable	250 gallons
Aviation Engine Oil	-----	Lubricant	Health: hazardous via ingestion Physical: combustible	1000 gallons
Carbon Dioxide	124-38-9	Fire suppression	Health: asphyxiant gas Physical: nonflammable	7800 lbs
Citric Acid	77-92-9	Reverse osmosis membrane cleaning	Health: causes irritation to the skin, gastrointestinal tract, and respiratory tract Physical: slightly flammable	350 pounds
Cleaning Chemicals	Various	Cleaning	Health: refer to individual chemical labels Physical: refer to individual chemical labels	Varies (less then 25 gallons liquids or 100 pounds solids for each chemical)
Cleaning Chemicals/ Detergents	None	Periodic cleaning of combustion turbine	Health: refer to individual chemical labels Physical: refer to individual chemical labels	110 gallons
Corrosion Inhibitor (365 Amine)	2008-38-1 (Amine solution)	Corrosion inhibitor	Health: harmful if swallowed; causes severe eye damage Physical: nonflammable	75 gallons
Diesel fuel #2	68476-34-6	Small equipment re-fueling	Health: may be carcinogenic via skin absorption, inhalation of fumes, and ingestion. Inhalation may cause nervous system effects Physical: flammable	250 gallons

Material	CAS No.	Application	Hazardous Characteristics	Maximum Quantity On Site
EPA Protocol Gases	Various	Calibration gases	Health: refer to individual chemical labels Physical: refer to individual chemical labels	14,060 cu ft
Hydraulic Oil	None	High-pressure combustion turbine starting system, turbine control valve actuators	Health: hazardous if ingested Physical: combustible	215 gallons
Laboratory Reagents	Various	Water/wastewater laboratory analysis	Health: refer to individual chemical labels Physical: refer to individual chemical labels	130 pounds
Lead acid batteries	Exempt from list if sealed			
Lubrication Oil	----	Lubrication	Health: hazardous if ingested Physical: flammable	12,775 gallons
Mineral Insulating Oil	8012-95-1	Transformers/switch yard	Health: minor health hazard Physical: can be combustible depending on manufacturer	15,000 gallons (in numerous transformers)
Nalco 3DT-183 Cooling Treatment (30-60% phosphoric acid)	7664-38-2	Corrosion control	Health: corrosive, may cause tissue damage Physical: non-flammable	400 gallons
Oxygen	7782-44-7	Welding gas	Health: therapeutic overdoses can cause convulsions Physical: oxidizing agent; actively supports combustion	562 cubic feet
Oxygen scavenger Nalco Elimin-Ox (Carbohydrizide)	497-18-7	For water conditioning	Health: may cause mild irritation Physical: non-flammable	75 gallons
Paint	Various	Touchup of painted surfaces	Health: refer to individual container labels Physical: refer to individual container labels	Varies (less then 25 gallons liquids or 100 pounds solids for each type)
Propane	74-98-6	Torch gas	Health: asphyxiant gas, causes frostbite to area of contact Physical: flammable	None
Propylene Glycol	57-55-6	Anti-icing system	Health: hazardous if ingested Physical: combustible	2,000 gallons (contained within equipment)

Material	CAS No.	Application	Hazardous Characteristics	Maximum Quantity On Site
Sodium Bisulfite (NaHSO3)	7631-90-5	Reduce oxidizers in reverse osmosis feed to protect the RO membranes	Health: corrosive, irritation to eyes, skin, and lungs; may be harmful if digested Physical: non flammable	200 pounds
Sodium Carbonate (Na2CO3)	497-19-8	Reverse osmosis membrane cleaning	Health: may cause irritation or burns to eyes, skin, and lungs; may be harmful if digested Physical: non flammable	200 pounds
Sodium Hydroxide (NaOH)	1310-73-2	Convert CO_2 to alkalinity for removal by reverse osmosis	Health: causes eye and skin burns, hygroscopic, may cause severe respiratory tract irritation with possible burns may cause severe digestive tract irritation with possible burns Physical: non flammable	400 gallons
Sodium Hypochlorite (aqueous solution)	7681-52-9	Biological control	Health: corrosive to respiratory system if inhaled, to digestive system if ingested, to skin, and to eyes. Physical: nonflammable	800 gal
Sodium Nitrite ($NaNO_2$)	7632-00-0	Closed & chilled water loop corrosion inhibitor	Health: very hazardous in case of eye contact (irritant), of ingestion, of inhalation, hazardous in case of skin contact (irritant), slightly hazardous in case of skin contact, prolonged exposure may result in skin burns and ulcerations, over-exposure by inhalation may cause respiratory irritation, sever over-exposure can result in death, inflammation of the eye is characterized by redness, watering, and itching Physical: non flammable	On site only periodically and during initial start-up
Stabrex ST70 (9& sodium bromide and 6% sodium hypochlorite	7647-15-6 7681-52-9	Biological control	Health: harmful via inhalation, ingestion, and skin contact Physical: non-flammable	100 gallons
Sulfuric acid (93%)	7664-93-9	pH control	Health: causes server burn on contact Physical: non-flammable	1950 gallons

Source: TID2009A, Tables 5.5-1 through 5.5-3.
a. Reportable quantities for a pure chemical, per The Comprehensive Environmental Response, Compensation, And Liability Act.

F. WASTE MANAGEMENT

The Almond 2 Power Plant (A2PP) Project will generate non-hazardous and hazardous wastes during construction and operation. This section reviews the project's waste management plans for reducing the risks and environmental impacts associated with handling, storage, and disposal of project-related non-hazardous and hazardous wastes.

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).[1] State law requires hazardous waste generators to obtain U.S. EPA identification numbers and to 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.)

Non-hazardous 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 Class III disposal facilities. (Cal. Code Regs., tit. 14, § 17300 et seq.)

The evidence on this topic was undisputed. (10/1/10 RT 11-12, Exs. 1 §§ 5.6, 5.14, Appendices 5.14A and 5.14B, 4 [Waste Management]; 8 [p. 61]; 15 [Data Responses 75-79]; 21 [Data Responses, Attachment DR18, § 3.14, Appendixes H and I]; 25; 300[2], §. 4.13.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Existing Site Conditions

The certification process requires a Phase I Environmental Site Assessment (ESA) to identify potential or existing releases of hazardous substances or

[1] 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.

[2] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the Exhibit List as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 302: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

contamination at or adjacent to the project site, or within or adjacent to the project's linear corridors. If any hazardous conditions are identified, a Phase II ESA must be conducted to identify the extent of possible contamination and to discuss appropriate mitigation measures. (Ex. 300, pp. 4.13-5 - 4.13-8.)

The Applicant's Phase I ESA for the project site was conducted by Applicant's consultants in accordance with the American Society for Testing and Materials Standard Practice E 1527-05 for ESAs and submitted on February 9 2009.[3]

The Phase I ESA did not identify any recognized environmental conditions (RECs) at the site[4] but indicated concerns based on the historical use of the site. From 1950 to 2004, the site was part of a larger agricultural area used for farming. Subsequently, the site was used as a borrowing pit for the WinCo Food Distribution Company warehouse. Currently, the property is vacant and consists mainly of fill from the borrowing pit area, which was excavated to 6.5 feet below grade and filled with 30,000 cubic yards of soil from nearby agricultural lands. Therefore, the ESA recommended that the fill material be tested for persistent organochlorine pesticide residues and that domestic well water at the site be tested for nitrates because groundwater north of the site is impacted with nitrates. (Exs. 1, pp. 5.14-1 5.14-2, Appendix 5.14A; 300, pp. 4.13-7 - 4.13-8.)

Based on the Phase I recommendations, Applicant's consultants conducted a Phase II ESA in April 2009 to investigate whether the presence of soil contamination at the site would require removal and remediation. Soil sampling was collected at six locations at various depths throughout the site to the depth of fill material (approximately 6.5 feet below grade). The sampling revealed that organochlorine pesticide levels were below reporting limits and metals were below California Human Health Screening Levels, with the exception of arsenic. However, the presence of arsenic was within expected levels and did not require further evaluation. Applicant did not test for nitrates in the well water at the site because the existing onsite well will not be used for domestic purposes. (Exs. 1 pp. 5.14-1 – 5.14-3, Appendix 5.14B; 300, pp. 4.13-7 - 4.13-8.)

To ensure that onsite workers are protected from exposure to any unrecognized RECs, Conditions of Certification **WASTE-1** and **WASTE-2** require the project owner to employ a registered geologist or engineer with experience in remedial

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[3] The Applicant's consultants also conducted an ESA for the gas pipeline in November 2009 and found no known environmental conditions. (Ex. 300, pp. 4.13-7 - 4.13-8.)

[4] A recognized environmental condition is the presence or likely presence of any hazardous substances or petroleum products where conditions indicate an existing release, past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or in the ground, groundwater, or surface water of the property.

investigation to oversee soil excavation and construction activities. If potentially contaminated soils or underground storage tanks are discovered, the geologist or engineer must consult with appropriate regulatory agencies for remediation or other corrective actions and ensure that any contaminated soils are deposited at a Class I landfill or other designated facility. (Ex. 300, p. 4.13-8.)

2. Construction Impacts and Mitigation

Construction of the project and its associated facilities will generate both non-hazardous and hazardous wastes. With implementation of source reduction and recycling, the amount of waste generated during project construction is expected to be minimal. (Exs. 1, pp. 5.14-3 – 5.14-5; 300, pp. 4.13 8 - 4.13.9.)

Approximately 120 tons of non-hazardous solid wastes will be generated during construction, including scrap wood, concrete, steel/metal, paper, glass, and plastic waste. Recyclable materials will be separated and removed to recycling facilities and non-recyclable materials will be collected and deposited at Class III landfills in accordance with applicable LORS. (Exs. 1, pp. 5.14-3 – 5.14-5, Table 5.14-1; 300, p. 4.13-8.)

Non-hazardous liquid wastes include sanitary wastes and dust suppression, drainage, and equipment washwater. Sanitary wastes will be collected in portable, self-contained toilets and pumped periodically for disposal at an appropriate facility. Potentially contaminated wastewater will be contained at designated collection areas and tested before transport to an appropriate wastewater treatment facility. See the **Soil and Water Resources** section of this Decision for further discussion of wastewater management. (Exs. 1, pp. 5.14-3 – 5.14-5, Table 5.14-1; 300, p. 4.13-9.)

Hazardous wastes generated during construction will include liquid and solid wastes such as empty hazardous material containers, solvents, waste paint, oil absorbents, used oil, oily rags, batteries, and cleaning wastes. Hazardous materials that cannot be recycled or used for energy recovery will be properly manifested, transported to, and deposited at a Class I hazardous waste facility by licensed hazardous waste collection and disposal companies. The disposal methods described in the evidentiary record are consistent with applicable LORS. (Exs. 1, pp. §§ 5.14-3 5.14-1, Table 5.14-1; 300, p. 4.13-9.)

Condition **WASTE-5** requires the project owner to implement an approved Construction Waste Management Plan to ensure compliance with applicable LORS. Condition **WASTE-3** requires the project owner to obtain a hazardous

waste generator identification number from the U.S. Environmental Protection Agency (USEPA) before generating any hazardous wastes during project construction and operation. Condition **WASTE-4** requires the project owner to notify the Energy Commission's Compliance Project Manager (CPM) whenever any waste management related enforcement action is initiated by a local, state, or federal authority concerning the project or its waste disposal contractors. (Ex. 300, pp. 4.13-8 - 4.13-9.)

3. Operation Impacts and Mitigation

During operation, the project will generate hazardous and non-hazardous wastes subject to regulatory review. (Exs. 1, § 5.14.1.2.2, Table 5.14-2; 300, p. 4.13-10.) Applicant's Table 5.14-2, replicated below as **Waste Management Table 1,** summarizes the anticipated operation waste streams, estimated waste quantities, and proposed disposal methods.

Waste Management Table 1

Hazardous and Nonhazardous Wastes Generated During Operations

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Office waste (paper, wood, glass, plastics, traditional "waste")	Office/ operations	Paper, packing material	4-yard dumpster weekly	Nonhazardous municipal waste	Local municipal trash pickup
Scrap Metal	Operations	Metal	1,000 pounds	Nonhazardous municipal waste	Recycle if possible, or dispose of al local landfill
Lubricating oil	Small leaks and spills from the gas turbine lubricating oil system	Hydrocarbons	200 pounds	Hazardous	Cleaned up using sorbent and rags – disposed of by certified oil recycler

Hazardous and Nonhazardous Wastes Generated During Operations

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Lubricating oil filters	Gas turbine lubricating oil system	Paper, metal, and hydrocarbons	100 pounds	Hazardous	Recycled by certified oil recycler
Laboratory analysis waste	Water treatment	Sulfuric acid	100 gallons	Hazardous	Sent to waste water tank
Oily rags	Maintenance, wipe down of equipment, etc.	Hydrocarbons, cloth	50 pounds	Hazardous	Recycled by certified oil recycler
Oil sorbents	Cleanup of small spills	Hydrocarbons	50 pounds	Hazardous	Recycled or disposed of by certified oil recycler
Oxidation catalyst units	SCR system emissions control systems (use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	9,500 pounds	Hazardous	Recycled by SCR manufacturer
SCR catalyst units	SCR system (use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	40,645 pounds	Hazardous	Recycled by SCR manufacturer or disposed of in Class I landfill

Source: Ex. 1, Table 5.14-2

All non-hazardous solid wastes will be recycled to the extent feasible, and non-recyclable wastes will be regularly transported to a local solid waste disposal facility in accordance with applicable LORS. The Applicant estimated that the project would generate 40 tons of non-hazardous waste per year. (Ex. 1, pp. 5.14-5 – 5.14-7.)

Management of non-hazardous liquid wastes is described in the **Soil and Water Resources** section of this Decision. The septic tank and leach field system at the existing Almond Power Plant will handle domestic sewage. Other liquid waste streams from area washdown, equipment leakage, and drainage from equipment areas will be collected in a system of floor drains, hub drains, sumps, and piping and routed to the existing Almont Power Plant's oil/water separator, where water will be sampled and analyzed for contamination. If the water is contaminated, it will be trucked off site to an approved wastewater disposal facility. If not contaminated, the water will be discharged to the City of Ceres Wastewater Treatment Plant using the existing pipeline at the Almond Power Plant. (*Id.*)

As indicated above in **Waste Management Table 1**, hazardous wastes include waste lubricating oil, used oil filters from turbine equipment, spent catalyst, and chemical cleaning wastes. The chemical feed area drains will collect spillage, tank overflows, effluent from maintenance, and liquid from area washdowns.

These hazardous wastes will be stored on-site up to 90 days and subsequently transported by licensed hazardous waste haulers to authorized disposal facilities in accordance with applicable LORS. (Exs. 1, pp. 5.14-5 – 5.14-7; 300, p. 4.13-10.)

To ensure proper handling of operation waste streams, Condition **WASTE-6** requires the project owner to implement an Operation Waste Management Plan to identify all hazardous and non-hazardous wastes and the methods of managing the wastes consistent with regulatory requirements and the evidentiary record. (Ex. 300, p. 4.13-9.)

To ensure proper cleanup and management of contamination caused by unauthorized releases of hazardous wastes, Condition **WASTE-7** requires the project owner to report, clean up, and remediate any hazardous materials spills or releases in accordance with applicable law. The **Hazardous Material Management** section of this Decision describes the requirements for hazardous material management, including spill reporting, containment, spill control, and countermeasures. Condition **WASTE-3** (hazardous waste generator identification number), *supra*, and Condition **WASTE-4** (enforcement action)*, supra*, also apply to waste management during operations

4. Potential Impacts on Waste Disposal Facilities

Although there is no discussion in the record regarding the project's compliance with the 50 percent waste diversion program established by the Integrated Waste Management Compliance Act,[5] the Energy Commission has an obligation to ensure that the large project footprint in Stanislaus County does not result in unnecessary or burdensome waste disposal. Therefore, we have included a requirement in Condition **WASTE-5** for the project owner to provide a reuse/recycling plan for construction and demolition materials that meets or exceeds the 50 percent waste diversion goal established by the Integrated Waste Management Compliance Act. Compliance with Condition **WASTE-5** will ensure that project wastes are managed properly and that the project's potential impacts on local landfills are maintained at insignificant levels.

Construction and operation of the project will respectively generate approximately 600 cubic yards[6] and 200 cubic yards per year of non-hazardous

[5] Public Resources Code Section 40000 et seq.; Title 14, California Code of Regulations, Section 17387 et seq.

[6] Cubic yards calculated using CalRecycle at the California Integrated Waste Management Board construction/demolition and inert debris tools and resources – 400 pounds per cubic yard. (Ex. 300, p. 4.13-11.) See: www.ciwmb.ca.gov/leatraing/Resources/CDI/Tools/Calculations.htm

solid waste. The solid wastes will be stored onsite for less than 30 days, and then recycled or deposited at a Class III landfill. (Ex. 1, p. 5.14-11.)

Under CEQA Guidelines,[7] the project could result in a significant environmental impact if it is (1) located on a site included on a list of hazardous materials sites ("Cortese List"), and/or (2) have solid waste disposal needs beyond the capacity of appropriate landfills to accommodate the project's waste disposal needs. The evidence indicates that the project site is not located on a Cortese-listed property and is not affected by the nearest Cortese-listed property (known as the "Martinez Property") located 4.5 miles away and remediated in 1987. (Ex. 1, p. 5.14-8.)

There are four Class III non-hazardous solid waste disposal facilities located near the project, including the Fink Road Landfill (in Crows Landing), Bonzi Sanitary Landfill (in Modesto), Gilton Resource Recovery Facility and Transfer Station (in Modesto), and Bertolotti Disposal and Transfer Station (in Modesto). (Ex. 1, pp. 5.14-8 – 5.14-10, Table 5.14-3.) The evidence shows that there is sufficient capacity at these facilities to handle the project's construction and operation non-hazardous solid wastes over the life of the project, amounting to less than 1.0 percent of the total landfill capacity. (*Id*.; Ex. 300, p. 4.13-11.)

Hazardous wastes will be transported to one of two available Class I landfills: Clean Harbors Buttonwillow Landfill in Kern County and Chemical Waste Management Kettleman Hills Landfill in Kings County. The Kettleman Hills facility also accepts Class II and III waste. Evidence indicates that the quantity of hazardous wastes deposited by the project will be approximately 0.1 percent of the combined capacity of the two Class I landfills. There is sufficient remaining capacity at these facilities to handle the project's hazardous wastes during its operating lifetime. In addition to the Class I landfills, there are several commercial liquid hazardous waste treatment and recycling facilities in California that can process project-related hazardous wastes. (Exs. 1, pp. 5.14-10 -5.14-11; 300, p. 4.13-11.)

6. Cumulative Impacts and Mitigation

The evidence shows that future development within a one-mile radius of the Almond 2 site could contribute to cumulative effects on waste disposal, including the following:

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[7] Title 14, California Code of Regulations, Section 15002(g), Appendix G.

- Martella Farms' four agricultural storage facilities and canopy structures,
- a commercial project for Stanislaus County Animal Shelter,
- completion of the Crows Landing Flea Market
- Ceres Lions Park wells,
- long range planning for West Ceres Specific Plan, Copper Trail Master Plan and Annexation, and Maple Glen Master Plan and Annexation, and,
- TID Hughson-Grayson 115-kV Transmission Line Substation Project. (Exs. 1, pp. 5.6-58 – 5.6-61, Appendix 5.6A; 300, pp. 4.13-11 - 4.13-12.)

Evidence indicates that the quantities of solid and hazardous wastes generated by Almond 2 will add to the total quantities of waste generated by new local and regional development. However, since the Almond 2 Project's waste stream is relatively low, recycling efforts will be prioritized, and sufficient disposal capacity is available, the resulting contribution to cumulative impacts on disposal facilities will be insignificant for both non-hazardous and hazardous waste disposal. In addition, the future projects in the site vicinity must also comply with waste management LORS to reduce their waste streams. (Exs. 1, § 5.14.3; 300, p. 4.13-12.)

7. Environmental Justice

Staff considered the minority and low-income populations in the project area in its cumulative impacts analysis. Since there are no significant adverse direct or cumulative waste management impacts, there are no environmental justice issues under this topic. (Ex. 300, p. 4.13-12; 1, Appendix 5.10A.)

8. Agency and Public Comment

There were no agency or public comments on waste management.

FINDINGS OF FACT

Based on the uncontroverted evidence, the Commission makes the following findings:

1. Applicant's Phase I and Phase II Environmental Site Assessments (ESAs) for the site and gas pipeline corridor did not identify any recognized environmental conditions (RECs) requiring removal and remediation of soils contaminated with hazardous materials.

2. The project owner will implement appropriate characterization, disposal, and remediation measures to ensure that the potential risk of exposure to unknown contaminated soils at the site or along the gas pipeline corridor is reduced to insignificant levels.

3. The project will generate non-hazardous and hazardous wastes during excavation, construction, and operation.

4. The project will obtain a hazardous waste generator identification number from the United States Environmental Protection Agency.

5. The project will recycle non-hazardous and hazardous wastes to the extent feasible and in compliance with applicable law.

6. Hazardous wastes that cannot be recycled will be transported by registered hazardous waste transporters to appropriate Class I landfills.

7. Solid non-hazardous wastes that cannot be recycled will be deposited at Class II and III landfills in the project vicinity.

8. Liquid wastes will be classified for appropriate disposal and managed in accordance with the Conditions of Certification listed in the **Soil and Water Resources** section of this Decision.

9. Disposal of project wastes will not result in any significant direct, indirect, or cumulative impacts on existing waste disposal facilities.

CONCLUSIONS OF LAW

1. Implementation of the Conditions of Certification, below, and the waste management practices described in the evidentiary record will reduce potential adverse impacts to insignificant levels and ensure that project wastes are handled in an environmentally safe manner.

2. 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), 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:

- A description of all construction waste streams, including projections of frequency, amounts generated and hazard classifications;
- a reuse/recycling plan for construction and demolition materials that meets or exceeds the 50 percent waste diversion goal established by the Integrated Waste Management Compliance Act; and
- Management methods to be used for each waste stream, including temporary onsite 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 at least 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:

A detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications;

Management methods to be used for each waste stream, including temporary onsite 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;

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;

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

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 be 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

In its power plant licensing process, the Energy Commission considers potential impacts on biological resources, including state and federally listed species, species of special concern, wetlands, and other resources of critical biological interest such as unique habitats. The evidence contained in the record regarding potential project impacts to biological resources is undisputed. (10/1/10 RT 11-12; Exs. 1, § 5.2, Appendixes 5.2A, 5.2B, 5.2C, 5.2D, 5.2E; 4 [Biological Resources]; 8 [Pages 12-38, Attachments A and B]; 20 [Data Responses 68-76]; 21 [Attachment DR18, §3.2, Appendixes C, D, E]; 25; 26; 27; 300[1].) It describes the biological resources in the vicinity of the project site and along the related linear facilities. The analyses in the evidentiary exhibits assess the potential for adverse effects from the project and determine whether mitigation steps are necessary to reduce any potentially significant impacts and to ensure compliance with applicable laws, ordinances, rules, and standards (LORS).[2]

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Setting

The Almond 2 Power Plant Project site is located in the northern San Joaquin Valley. Land use in the vicinity of the project is not natural, but rather agricultural and light industrial with the urban areas of Modesto and Stockton to the north of the project site. The San Joaquin River is located approximately 7.5 miles southwest of the site. Any natural waterways in the vicinity of the site generally drain to the San Joaquin River. The proposed A2PP site itself is located on a 4.6-acre site immediately adjacent to the existing 48-MW Almond 1 Power Plant.

[1] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 302: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

[2] The record includes the identification of applicable LORS with which the project must comply. LORS pertaining to biological resources are found in Appendix A of this Decision.

A WinCo distribution center is located to the west, a farm supply company is located to the north, light industrial areas are located to the east, and agricultural fields are located to the south. Additional project-related elements are a proposed 13.4-mile natural gas pipeline (11.6 miles of new pipeline and an 1.8-mile reinforcement of the existing pipeline) connecting the A2PP to the existing PG&E Line 215 to the south of the project site. There are also two new 115-kilovolt (kV) transmission lines, one 0.9 mile long and one 1.2 miles long, and the re-rating[3] of 2.9 miles of an existing 69-kV line.

The power plant site is made up of disturbed land and is essentially devoid of vegetation with the exception of some ruderal plant species. The project site is composed of the following features: a vacant, disturbed 3.2-acre parcel previously used by WinCo as a construction borrow pit that is graded to current site elevation, a portion of the existing 1.4-acre Almond 1 plant currently used as a storm water retention pond, and portions of the existing WinCo distribution center site to be used for transmission lines and project switchyard. The project laydown area is located on a previously disturbed 6.4-acre borrow pit immediately west of the proposed plant site. (Ex. 300, p. 4.2-4.)

Many of the impact assessments in the record incorporated biological considerations specific to the A2PP: 1) that existing habitat in the project area is degraded and of low quality; 2) that the project area is essentially surrounded by agriculture or some level of development and subsequent disturbance; 3) that wildlife would probably avoid the project area during the loudest construction activities; 4) that wildlife would likely habituate to construction noise to some degree or would maintain a distance comfortable to them; 5) that the project site does not provide essential habitat from which individuals would be excluded by project construction; 6) that sensitive wildlife are generally not expected to occur near the project area; 7) that parts of the surrounding area are already relatively noisy and otherwise impacted due to the existing Almond 1 power plant that currently occupies a portion of the site; 8) agricultural activities that currently occur along the gas pipeline alignment, and 9) current traffic volumes in the area of the site. These considerations would not necessarily apply to every species, but they are generally true for the project. (Ex. 300, pp. 4.2-23, 4.2-26.)

[3] The re-rating of a portion of the existing transmission line involves stringing transmission lines between existing towers. The activity may result in temporary disturbance to wildlife species within the corridor from stringing equipment parked between existing towers. No permanent impacts are associated with re-rating the existing line.

Transmission lines for the project will be located in road shoulders and active and fallow agricultural fields and orchards. These areas are not sensitive habitat types; however, they do provide potential nesting and foraging habitat for some special-status wildlife species. The existing transmission line proposed for re-rating is partially in a heavily disturbed railroad right-of-way (ROW), and partially within commercial and residential areas which have been previously developed. The ROW contains little or no potential to support special-status species. However, local bird species would be expected to periodically use the line for perching and foraging. The natural gas pipeline for the project will be located in road shoulders and disturbed agricultural lands. (*Id*.)

2. Potential Impacts

a. Special-Status Species

The evidence in the record includes the identification of 44 Special status species evaluated as potentially occurring in or near the A2PP area.[4]. Of the species examined, most were excluded from further consideration. **Biological Resources Table 1**, which follows, summarizes the reasons for exclusion in the case of each species. (Ex. 300, p. 4.2-6 to 4.2-11.) However, a total of 14 special-status species were identified as potentially being affected by the project. (Ex. 300, pp. 4.2-6 to 4.2-11.) No rare plants were found within any designated construction areas or laydown areas during focused surveys. The wildlife special-status species are summarized in the Staff assessment. (Ex. 300, pp. 4.2-12 to 4.2-16.) Briefly they are:

Fairy Shrimp: Four species of fairy shrimp including Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp are known to occur in the vicinity of the A2PP site. However, the pasture in which this feature is located is also irrigated during the dry season when fairy shrimp cysts would be formed. Therefore, the habitat is considered marginal for fairy shrimp due to the level of disturbance associated with road traffic and agricultural activities and the lack of typical seasonal wetland vegetation.

Giant Garter Snake: No giant garter snakes (GGS) were observed during the biological assessment for the project or during field visits. However, some of the un-lined canals within the project's gas pipeline alignment were determined to provide low to marginal habitat for this species.

[4] See Biological Resources Table 2, Ex. 300, pp. 4.2-6 to 4.2-11.)

Western Pond Turtle: No western pond turtles were found on the project site during the biological assessment. However, some of the unlined canals along the gas pipeline route contain marginal habitat for this species.

Tricolored Blackbird: Some of the canals that are proposed to be crossed by the gas pipeline provide marginal foraging habitat for this species. It is unlikely that breeding colonies would be supported by these canals because of the limited amount of emergent wetland vegetation contained in them.

Western Burrowing Owl: No western burrowing owls (WBOs) were found by the project Applicant during surveys in 2009, and the A2PP site generally does not have suitable habitat for WBOs due to the level of disturbance. However, the proposed transmission re-rated alignment has potential habitat for WBO, as does the gas pipeline alignment.

Swainson's Hawk: Suitable foraging and nesting habitat occurs within the natural gas pipeline alignment. Nesting Swainson's hawks have been observed within 0.4 mile of the proposed pipeline alignment.

Northern Harrier: While no northern harriers were observed during biological surveys of the area, fallow agricultural fields within and directly adjacent to the gas pipeline alignment provide potential nesting and foraging habitat for this species.

White-tailed kite: No white-tailed kites were observed during the biological assessment of the site. However, the agricultural fields adjacent to the gas pipeline alignment provide suitable foraging habitat for this species and there are suitable nesting trees directly adjacent to the pipeline alignment.

Loggerhead shrike: This species was observed within the project site during biological assessments.

American Badger: No American badgers were observed during biological surveys of the study area. However, this species is likely to den in the vicinity of the project site and could potentially den or forage within the gas pipeline alignment, although disturbance associated with agricultural activities likely reduces the potential for this.

San Joaquin Kit Fox: Kit fox often enlarge ground squirrel burrows for use as a den and may use vacant badger dens for shelter. Ground squirrel burrows occur within the proposed project area. However, the evidence contains no record of kit fox sitings in the project area.

Biological Resources Table 1
Special-status Species Potentially Occurring In or Near the A2PP Project Area

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
Plants		
Lesser saltscale (*Atriplex minuscula*)	__/__/1B	None: found in alkaline flats associated with sandy soils. Marginal habitat present within study area. Species surveyed for in 2009 with negative results.
Heartscale (*Atriplex cordulata*)	__/__/1B	None: found in alkaline flats associated with sandy soils. Marginal habitat present within study area. Species surveyed for in 2009 with negative results.
Vernal pool smallscale (*Atriplex persistens*)	__/__/1B	None: found in alkaline flats associated with sandy soils. Marginal habitat present within study area. Species surveyed for in 2009 with negative results.
Alkali milk-vetch (*Astragalus tener* var. *tener*)	__/__/1B	None: found in alkaline flats associated with sandy soils. Marginal habitat present within study area. Species surveyed for in 2009 with negative results.
Succulent owl's clover (*Castilleja campestris* ssp. *succulenta*)	CE/FT/1B	None: found in vernal pools. Suitable habitat not present.
Beaked clarkia (*Clarkia rostrata*)	__/__/1B	None: found in woodland habitats generally at higher elevations than project site. Surveyed for in 2009 with negative results.
Hoover's spurge (*Chamaesyce hooveri*)	__/FT/1B	None: found in vernal pools. Suitable habitat not present.
Colusa grass (*Neostapfia colusana*)	CE/FT/1B	None: found in vernal pools. Suitable habitat not present.
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	CE/FT/1B	None: found in vernal pools. Suitable habitat not present.
Hairy Orcutt grass (*Orcuttia pilosa*)	CE/FE/1B	None: found in vernal pools. Suitable habitat not present.
Hartweg's golden sunburst (*Pseudobahia bahiifolia*)	CE/FE/1B	None: found in grasslands near cismontane woodlands in sandy soils. Suitable habitat not present.

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
Greene's tuctoria (*Tuctoria greenei*)	__/FE/1B	None: found in vernal pools. Suitable habitat not present.
Merced monardella (*Monardella leucocephala*)	__/__/1A	None: found in foothill grasslands with sandy soils. Surveyed in 2009 and 2010 with negative results (TID 2010a). Presumed extinct in California.
Big tarplant (*Blepharizonia*) *plumosa*)	__/__/1B	None: found in valley grasslands. Native habitat essentially absent from project area. Surveyed for in 2009 with negative results.
Delta button celery (*Eryngium racemosum*)	CE/__/1B	None: found in riparian clay flats. Suitable habitat not present.
Hispid bird's beak (*Cordylanthus mollis* ssp. *hispidus*)	__/__/1B	None: found in moist alkaline meadows in valley grasslands. Suitable habitat not present.
Sanford's arrowhead (*Sagittaria sanfordii*)	__/__/1B	None: vegetated canals contain marginal habitat for the species. Species surveyed for in 2009 with negative results.
Invertebrates		
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	__/FE/__	None: two elderberry shrubs were found adjacent to the proposed gas pipeline alignment. The stems on both shrubs are all less than one inch in diameter and therefore do not provide suitable habitat for the species according to USFWS guidelines.
Molestan blister beetle (*Lytta molesta*)	CSC/__/__	None: species is associated with vernal pools of the Central Valley. No vernal pools are present on the site. Areas of ponded water within study area do not contain vernal pool vegetation upon which this species is dependent.
Conservancy fairy shrimp (*Branchinecta conservatio*)	__/FE/__	Low: no vernal pools are present within the project area. There is one cattle wallow adjacent to the preferred pipeline alignment that may provide marginal habitat for fairy shrimp. However, there is anecdotal evidence that this feature does not remain inundated long enough to support this species' lifecycle (CH2MHILL 2010).
Longhorn fairy shrimp (*Branchinecta longiantenna*)	__/FE/__	Low: no vernal pools are present within the project area. There is one cattle wallow adjacent to the preferred pipeline alignment that may provide marginal habitat for fairy shrimp. However, there is anecdotal evidence that this feature does not remain inundated long enough to support this species' lifecycle

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
		(CH2MHILL 2010).
Vernal pool fairy shrimp (*Branchinecta lynchi*)	__/FT/__	Low: no vernal pools are present within the project area. There is one cattle wallow adjacent to the preferred pipeline alignment that may provide marginal habitat for fairy shrimp. However, there is anecdotal evidence that this feature does not remain inundated long enough to support this species' lifecycle (CH2MHILL 2010).
Vernal pool tadpole shrimp (*Lepidurus packardi*)	__/FE/__	Low: no vernal pools are present within the project area. There is one cattle wallow adjacent to the preferred pipeline alignment that may provide marginal habitat for fairy shrimp. However, there is anecdotal evidence that this feature does not remain inundated long enough to support this species' lifecycle (CH2MHILL 2010).
Fish		
Green sturgeon (*Acipenser medirostris*)	CSC/FT/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and the Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and direct impacts to all canals for the gas pipeline will be avoided during construction.
Delta smelt (*Hypomesus transpacificus*)	CT/FT/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and the Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and direct impacts to all canals for the gas pipeline will be avoided during construction.
Central Valley steelhead (*Oncorhynchus mykiss*)	__/FT/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
		Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and direct impacts to canals for the gas pipeline will be avoided during construction.
Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*)	__/FT/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and direct impacts to all canals for the gas pipeline will be avoided during construction.
Sacramento splittail (*Pogonichthys macrolepidotus*)	CSC/__/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and all direct impacts to canals for the gas pipeline will be avoided during construction.
Hardhead (*Mylopharodon conocephalus*)	CSC/__/__	None: the project site and the associated areas for the transmission line and gas pipeline do not contain suitable habitat for this species. The Harding Drain and Prairie Flower Drain near the southern terminus of the gas pipeline have a hydrological connection to the San Joaquin River. However, the Harding Drain and Prairie Flower Drain do not represent suitable habitat for this species and all direct impacts to canals for the gas pipeline will be avoided during construction.

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
Amphibians		
California red-legged frog (*Rana draytonii*)	CSC/FT/__	None: the site and the associated infrastructure do not include permanent water sources or other suitable habitat for this species.
California tiger salamander (*Ambystoma californiense*)	SCE/FT/__	None: the site and the associated infrastructure do not include appropriate breeding habitat (vernal pools) or upland refugia habitats (annual grasslands) suitable for this species. A habitat assessment for this species was performed in 2010. No suitable habitat was found (CH2MHILL 2010).
Reptiles		
Giant garter snake (*Thamnophis gigas*)	ST/FT/__	Moderate: canals within gas pipeline alignment provide low to moderate suitable habitat for the species.
Western pond turtle (*Emys marmorata*)	CSC/__/__	Moderate: canals within gas pipeline alignment provide low to moderate suitable habitat for the species.
Birds		
Tricolored blackbird (*Agelaius tricolor*)	CSC/__/__	Low: some emergent vegetation is present in canals that will be crossed by the gas pipeline. Vegetation will not be impacted.
Burrowing owl (*Athene cunicularia*)	CSC/__/__	High: several ground squirrel burrows are present within or directly adjacent to the pipeline alignment that are suitable for use by this species.
Swainson's hawk (*Buteo swainsoni)*	ST/__/__	Present: species was observed nesting within 0.4 mile of the preferred gas pipeline alignment during biological assessments (CDFG 2010). Areas adjacent to the natural gas pipeline alignment are suitable foraging habitat for this species.
Northern harrier (*Circus cyaneus*)	CSC/__/__	High: agricultural fields adjacent to pipeline alignment provide suitable foraging and nesting habitat.
White-tailed kite (*Elanus leucurus*)	SFP/__/__	High: agricultural fields adjacent to pipeline alignment provide suitable foraging and nesting habitat.
Loggerhead shrike (*Lanius ludovicianus*)	CSC/__/__	Present: agricultural fields adjacent to pipeline alignment provide suitable foraging and nesting habitat.

Common Name (Scientific Name)	Status (State/Federal/CNPS)	Potential for Occurrence
Mammals		
American badger (*Taxidea taxus*)	CSC/__/__	Low: margins of agricultural fields along gas pipeline provide marginal habitat for this species.
San Joaquin kit fox (*Vulpes macrotis mutica*)	ST/FE/__	Low: margins of agricultural fields along gas pipeline alignment provide marginal habitat for this species. One burrow, that has since collapsed, was found in 2009 along the pipeline alignment that is potentially large enough for kit fox although the burrow did not have the characteristic shape of a kit fox burrow (TID 2009a).
Riparian brush rabbit (*Sylvilagus bachmani riparius*)	ST/FE/__	None: the proposed project site and its associated infrastructure do not provide appropriate habitat for this species.

Status Codes:
State
CSC: California Species of Special Concern. Species of concern to CDFG because of declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.
SE: State listed as endangered
ST: State listed as threatened
SCE: State Candidate Endangered
SFP: Fully protected
WL: Watch List: includes species formerly on California Species of Special Concern List (Remsen 1978) but which did not meet the criteria for the current list of special concern bird species (Shuford and Gardali 2008).

Federal
FE: Federally listed endangered: species in danger of extinction throughout a significant portion of its range
FT: Federally listed, threatened: species likely to become endangered within the foreseeable future
BCC: Fish and Wildlife Service: Birds of Conservation Concern: Identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent highest conservation priorities
<http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf>

California Native Plant Society (CNPS 2010)
List 1A: Presumed Extinct in California
List 1B: Rare, threatened, or endangered in California and elsewhere
0.1: Seriously threatened in California (high degree/immediacy of threat)
0.2: Fairly threatened in California (moderate degree/immediacy of threat)
0.3: Not very threatened in California (low degree/immediacy of threats or no current threats known)

Potential to Occur:
Present: Species was observed during focused surveys or during biological assessment of site.
High: Suitable habitat is present within the proposed site: occurrence records exist for species in proximity to the site; species expected to occur on site
Moderate: Low quality suitable habitat is present within or near the proposed site; species was not identified during reconnaissance surveys of the site; species may occur on site
Low: Suitable habitat is not present on site; species not expected to occur on site

Source for Table 2 and notes: Exhibit 300, 4.2-6 to 4.2-11.

b. Wetlands

The Applicant conducted a wetland delineation and determined that no wetlands are present on the A2PP site or the original laydown area. The Army Corps of Engineers (ACOE) and California Department of Fish and Game (CDFG) will make a determination regarding the extent of jurisdictional features within the pipeline alignment. One "cattle wallow" located east of the pipeline alignment may contain marginal habitat for fairy shrimp species. While this feature will not be directly impacted by the pipeline construction, it lies within 250 feet of pipeline construction and therefore may require mitigation according to USFWS guidelines. Any canal crossings for the gas pipeline will be constructed with "bore and jack" or directional drilling techniques to avoid directly impacting these areas. Therefore, direct impacts to wetlands and canals are not expected to occur. However, CDFG has indicated that the project will likely require a streambed alteration agreement for crossings under the Harding Drain and the Prairie Flower Drain which have hydrological connections to the San Joaquin River. (Ex. 300, p. 4.2-16.)

3. Construction Impacts

The power plant site is within the fenced facility for the existing Almond 1 power plant site. The site is generally disturbed and supports only ruderal vegetation which does not provide habitat for sensitive plant or wildlife species. Common wildlife species that are acclimated to human disturbance may utilize some of the perimeter areas of the power plant for roosting or perching. However, no significant impacts to biological resources are expected during construction of the A2PP. The 6.4-acre laydown area is previously disturbed and does not provide habitat for sensitive plant or wildlife species and will not be permanently impacted. The two segments of new transmission lines will be located in disturbed or developed road shoulders or agricultural fields. Corridor 1 of the new transmission line will be 0.9 mile long and will permanently impact 0.0017 acre of land for transmission tower footings. Corridor 2 will be 1.2 miles long and will permanently impact 0.0023 acre of land for transmission tower footings. Any impacts to wildlife in these corridors will be temporary. (Ex. 300, p. 4.2-18.)

The 13.4-mile natural gas pipeline associated with the A2PP (11.6 miles of new pipeline and 1.8 miles of pipeline reinforcement) is proposed to connect the project to the existing PG&E Line 215 pipeline. While no natural or sensitive vegetation communities would be impacted by pipeline construction, agricultural

fields do provide potential habitat for some special-status wildlife species and marginal habitat for special-status plants. While animals could be temporarily impacted during pipeline construction, no impact to special-status plants is likely to occur. (Ex. 300, p. 4.2-19.)

To protect any jurisdictional waters and wetlands during construction, we have adopted Condition of Certification **BIO-14,** which requires the Applicant to include any necessary measures to avoid or minimize impacts to jurisdictional waters and to fully mitigate impacts to jurisdictional features. The final conditions of any required permits from ACOE, CDFG, and/or the Regional Water Quality Control Board for impacts to jurisdictional waters will be included in the final Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). To avoid any significant water quality impacts to the San Joaquin River Basin during jack and bore drilling procedures involved in pipeline construction, we have adopted **BIO-8,** which requires preparation of a frac-out containment plan.

We have adopted other mitigation measures based upon agency guidelines for construction in areas that support habitat for giant garter snake (GGS), western pond turtle, western burrowing owl, Swainson's hawk, and San Joaquin kit fox. The measures include Conditions of Certification **BIO-1** (Designated Biologist Selection), **BIO-2** (Designated Biologist Duties), **BIO-3** (Biological Monitor Selection), **BIO-4** (Designated Biologist and Biological Monitor Authority), **BIO-5** (Worker Environmental Awareness Program), **BIO-6** (Biological Resources Mitigation Implementation and Monitoring Plan), **BIO-7** (Impact Avoidance Measures), **BIO-9** (Avoid Harassment or Harm to San Joaquin Kit Fox), **BIO-10** (Pre-construction Nesting Bird Surveys and Nest Monitoring), and **BIO-11** (Burrowing Owl Impact Avoidance and Minimization Measures) outline impact minimization and avoidance measures to avoid construction impacts.

Northern harriers, loggerhead shrikes, Swainson's hawks, burrowing owls, and other bird species protected by Fish and Game codes and the Migratory Bird Treaty Act could potentially nest or forage within or adjacent to the natural gas pipeline alignment. Construction of the project's natural gas pipeline during the nesting season could disrupt nesting behaviors or otherwise adversely affect reproductive success of species protected by CDFG Fish and Games codes or the Migratory Bird Treaty Act. Conditions of Certification **BIO-5, BIO-6, BIO-7, BIO-10,** and **BIO-11** outline a number of impact avoidance and minimization measures for all of these bird species, including specific measures for burrowing owls and Swainson's hawks based on prescribed agency guidelines. **BIO-10** will

require the project owner to perform pre-construction surveys, which would detect the presence of nesting birds within or adjacent to the pipeline ROW and describe measures for monitoring of active nests up to 0.5 mile from construction areas.

Construction within 200 feet of canals with suitable habitat for GGS and western pond turtle could result in mortality of individuals from being crushed by construction equipment or from water quality degradation during pipeline drilling under the canals. Some of the canals proposed for crossing by the natural gas pipeline have suitable habitat for GGS and western pond turtle. Conditions of Certification **BIO-8**, **BIO-12** (Giant Garter Snake and Western Pond Turtle Pre-construction Clearance Surveys), and **BIO-13** (Giant Garter Snake Avoidance and Minimization Measures) are based on existing agency guidelines for working within potential habitat for these species and are expected to reduce impacts to GGS and western pond turtle to less than significant levels. Condition of Certification **BIO-15** (Fairy Shrimp Surveys or Avoidance and Compensation Measures would reduce any project-related impacts to listed fairy shrimp species to less than significant levels.

a. Construction Noise and Vibration

A2PP would comply with applicable LORS that deal with noise and vibration impacts to humans. (Ex. 300, p. 4.2-23.) Generally, noise and vibration levels that do not cause physical injury or harm to humans would not be expected to cause injury or harm to animals. However, there are other impacts related to noise and vibration that could occur to wildlife. The evidence shows that noise levels over 60 dBA can affect the behavior of certain bird species. The Applicant states that average noise levels from project construction could be as high as 71 dBA at 375 feet from the noise source and as high as 59 dBA at 1,500 feet from the noise source (Ex. 1, Table 5.7-10). The construction-related vibration most likely to be perceived by wildlife off site would be pile driving, should it be employed (Ex. 1, p. 5.7-19).

In order to minimize impacts to nesting birds during construction, we have adopted Condition of Certification **BIO-7** (Impact Avoidance Measures). In addition, the measures contained in **NOISE-3** require a noise control program during project construction. While the latter mitigation measure generally applies to human receptors, the measure will mitigate some construction noise impacts for wildlife as well. With these steps, the evidence establishes that noise and

vibration impacts from normal project construction would be temporary and less than significant. (Ex. 300, p. 4.2-24.)

b. Construction Lighting

Artificial lighting can significantly disturb wildlife. Lighting for project construction would occur as necessary to maintain project schedules or to perform construction activities that are temperature sensitive. To the extent feasible, construction lighting will be directed to the center of the construction site and shielded to prevent fugitive light from escaping the site (Ex. 1, p. 5.13-22). Because of the existing level of disturbance and lighting already associated with the project area, no mitigation measures are proposed for impacts to biological resources related to lighting.

c. Re-Rating Impacts

Re-rating would include one segment of the existing 69-kilovolt (kV) TID sub-transmission line totaling approximately 2.9 miles. Special-status animals, such as burrowing owls and kit foxes, could potentially use areas near transmission line poles that contain suitable burrows and could be subject to mortality from construction equipment parking on burrows. However, potential impacts are similar to those for other construction of frastructure for the A2PP Project. Impact avoidance measures **BIO-5**, **BIO-7**, **BIO-9**, **BIO-10**, and **BIO-11** would be required prior to initiation of re-rating construction activities and will mitigate any potential significant impacts.

4. Operations Impacts.

The evidence establishes that potential direct impacts of A2PP operation would result from operational noise and vibration and from lights at night as well as the risk of collision of bat and bird species into stacks of the A2PP. Such a power plant operates as a steady, continuous, broadband noise source, unlike most intermittent sounds that make up the majority of the noise environment. Thus, the power plant noise contributes to, and becomes part of, the background noise level, or the sound heard when most intermittent noises cease. Because Almond I Power Plant is already operating on the site, the noise from operation of the A2PP would not be expected to significantly differ from the existing background noise of the area. Therefore, no impact to biological resources related to

operational noise or vibration is expected and no specific mitigation measures are proposed for A2PP operational noise.

Avian collisions can occur because human structures that are significantly taller than the natural landscape pose a collision risk for birds in flight. This is especially true on dark nights and in foggy or stormy weather with low cloud ceilings and where the structures are tall, narrow, and difficult to detect, such as communication towers and guy wires. A2PP new stacks would be 80 feet in height. (Ex. 1, Fig. 2.1-2.) These are the tallest features associated with the new project construction. Structures over 200 feet high create the largest hazard for avian collision, so the 80-foot tall stacks of the proposed A2PP are not considered to be a significant collision hazard. The A2PP is also not located near a large wetland or other land use that causes birds to flock in large groups. Therefore, avian collision impacts with the A2PP are not expected to be significant. (Ex. 300, p. 4.2-26.)

The evidence also includes analysis of potential impacts from a stormwater retention basin on site, operational lighting impacts, and the risk of avian electrocutions with project-related power lines. Storm water from the plant site would be directed to an onsite detention basin, which would hold water temporarily for brief periods following rain events. However, the evidence establishes that the basin would be neither an increased attractant nor an increased deterrent to local wildlife. (Ex. 1, p. 4.2-25.) Lighting to be used during project operation may include night lighting for security. However, the project developer proposes to install lighting fixtures that include shields and hoods to minimize fugitive light. For areas where lighting is not required for normal operation, safety, or security, switched lighting circuits would be provided, allowing these areas to remain dark at most times. (Ex. 1, p. 5.13-22.) Avian electrocutions at the A2PP are unlikely because the distance between conductor wires on the 115-kV lines will be a minimum of 5.5 feet. This is reflected in Condition of Certification **BIO-7.**

5. Cumulative Impacts

Cumulative impacts refer to a proposed project's incremental effect viewed over time, together with other closely related past, present, and reasonably foreseeable future projects (Public Resources Code § 21083; California Code of Regulations, Title 14, §§ 15064[h], 15065[c], 15130, and 15355). Cumulative impacts can occur when individually minor but collectively significant projects

take place over time. Direct, indirect, and cumulative impacts to sensitive species and the loss of habitat are significant issues in the San Joaquin Valley. However, the A2PP site and its associated infrastructure are located in areas that have been previously disturbed or developed or are currently being utilized for agriculture or industrial development. Therefore, no loss of sensitive habitats or natural vegetation communities will occur with implementation of the A2PP Project beyond what has already historically occurred. Vegetation within the gas pipeline alignment shall be revegetated once construction is complete (Ex. 1), so no net loss of vegetation will occur with construction of the project.

The evidentiary record includes analysis of numerous potential projects in the area of the A2PP. The City of Ceres has 52 residential projects listed that are either recently completed, in construction, or under consideration by the planning department. The Applicant has identified 34 projects under consideration or underway by the City of Ceres, 36 by the City of Modesto, and 29 by Stanislaus County. Three projects under consideration by the City of Ceres are all within one mile of the proposed A2PP or its associated infrastructure. (Ex. 1, Section 5.6.4.) In addition, the TID has prepared an environmental impact report (EIR) for the TID Hughson-Grayson Substation and associated transmission line. This proposed project is located approximately 0.5 mile south of the proposed A2PP. We have incorporated Conditions of Certification that will reduce the proposed A2PP Project's impacts to biological resources to a less than significant level. Furthermore, with implementation of the Applicant's proposed mitigation measures and compliance with the Commission's Conditions of Certification, the cumulative impacts of the A2PP Project will be less than cumulatively considerable in respect to special status species, sensitive or rare habitats, or other sensitive biological resources.

FINDINGS OF FACT

1. The project site is composed of three parcels of land: (1) a vacant disturbed 3.2-acre parcel previously used as a construction borrow pit that is graded to current site elevation; (2) A portion of the existing 1.4-acre Almond 1 plant currently used as a stormwater retention pond which will be filled to accommodate portions of the A2PP; and (3) portions of the existing WinCo distribution center site to be used for transmission lines and the proposed A2PP switchyard.

2. The A2PP site is essentially devoid of vegetation with the exception of some ruderal plant species

3. The project's new transmission lines will be located in road shoulders and active and fallow agricultural fields and orchards. While not sensitive habitat types, the locations do provide potential nesting and foraging habitat for some special-status wildlife species.

4. The re-rated transmission line is partially located in a previously disturbed railroad right-of-way (ROW). The remainder of the alignment is located in commercial and residential areas that have been previously developed. The line therefore has very limited to no potential to support special-status plant or wildlife species.

5. The proposed gas line alignment will be located in road shoulders and active and fallow agricultural fields and orchards which, though not sensitive habitat types, do provide potential nesting and foraging habitat for some special-status wildlife species.

6. The federal and state-listed San Joaquin kit fox and giant garter snake could potentially occur within the designated impact area.

7. With implementation of the Applicant's proposed mitigation measures and compliance with the Commission's Conditions of Certification, the cumulative impacts of the A2PP Project will be less than cumulatively considerable in respect to special status species, sensitive or rare habitats, or other sensitive biological resources.

8. The A2PP and its associated infrastructure will not have a significant impact on sensitive vegetation communities because none are present within the designated impact area.

9. While the outer edge of the preferred pipeline alignment corridor is approximately 25 feet from one disturbed cattle wallow that ponds water during significant rain events, there is evidence that the pipeline alignment is not inundated for a sufficient time to support a life cycle for fairy shrimp species.

10. The state-listed Swainson's hawk could nest in proximity to the preferred gas pipeline alignment.

11. Pre-construction surveys for the species noted above shall be conducted to determine their presence or absence within designated work areas with the incorporation of the Conditions of Certification.

12. Potential impacts to these species during construction will be fully mitigated to a less than significant level

13. The conditions of any necessary take permits shall be included in the final BRMIMP (see Ex. 300, Table 3).

14. Migratory birds and burrowing mammals have the potential to be directly impacted during construction of the natural gas pipeline and transmission line corridors. However, there will be no permanent loss of suitable habitat for these species from construction of these linear elements. Potential impacts to these species during construction will be fully mitigated to a less than significant level with the incorporation of Staff's Conditions of Certification.

15. Impacts of the A2PP to local wildlife species are expected to be fully mitigated through our Conditions of Certification and Applicant's proposed mitigation measures.

16. Any project-related impacts to jurisdictional waters are expected to be temporary and less than significant since PG&E shall be drilling under any jurisdictional canals, thus avoiding direct impacts to these canals and features will be restored to pre-project conditions.

CONCLUSIONS OF LAW

1. The project will have no significant impact on sensitive vegetation communities.

2. Any project-related impacts to sensitive wildlife species will be mitigated to a less than significant level.

3. The project will comply with all applicable law, ordinance, regulations, and standards listed in **Appendix A** of this Decision and referenced under Biological Resources.

CONDITIONS OF CERTIFICATION

DESIGNATED BIOLOGIST SELECTION

BIO-1 The project owner shall assign a Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) for approval. The Designated Biologist must have the following minimum qualifications: a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; 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; and at least one year of field experience with biological resources found in or near the project area.

Verification: The project owner shall submit the specified information at least 90 days prior to the start of any site mobilization. No site or site-related activities shall commence until an approved Designated Biologist is available to be on site. If a Designated Biologist needs to be replaced, the specified information about the proposed replacement must be submitted to the CPM at least 10 working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM for consideration.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The project owner shall ensure that the Designated Biologist performs the following during any site mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist may be assisted by approved biological monitors, but remains the contact for the project owner, the CPM, CDFG, and USFWS. The Designated Biologist shall:

- advise the project owner's construction/operation managers on the implementation of **Biological Resource** Conditions of Certification;
- consult on the preparation of the Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP), to be submitted by the project owner;
- report sensitive species sightings to CNDDB where appropriate
- be available to supervise, conduct, and coordinate mitigation, monitoring, and other biological resource compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources such as special-status species or their habitats;
- clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and Conditions;
- inspect active construction areas where animals may have become trapped prior to commencement of construction each day;
- inspect for installation of structures that prevent entrapment or allow escape during periods of construction inactivity at the end of each day;
- periodically inspect areas with high vehicle activity (i.e., parking lots) for animals in harm's way;

- notify the project owner and CPM of any noncompliance with any **Biological Resource** Condition of Certification;
- respond directly to inquiries of the CPM regarding biological resource issues;
- maintain written records of the tasks specified above and those included in the biological resources mitigation implementation and monitoring plan (BRMIMP), with summaries of these records submitted in the monthly compliance report and the annual report; and
- train the biological monitors as necessary, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP), and all biological resource-related permits.

Verification: The Designated Biologist shall submit a monthly compliance report to the CPM during project construction that includes copies of all written reports and summaries that document biological resource activities. If actions may affect biological resources during operation, a Designated Biologist shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the annual compliance report unless their duties are ceased as approved by the CPM. The Designated Biologist shall notify the CPM, CDFG, and USFWS of any project-related take of state or federally listed species within 24 hours.

BIOLOGICAL MONITOR SELECTION

BIO-3 The project owner's CPM-approved Designated Biologist shall submit the resume, at least three references, and contact information for the proposed biological monitors to the CPM for approval. The resume shall demonstrate to the satisfaction of the CPM the appropriate education and experience to accomplish the assigned duties. Biological Monitor training by the Designated Biologist shall include familiarity with the Conditions of Certification and the BRMIMP, WEAP, and all permits.

Verification: The project owner shall submit the specified information to the CPM for approval at least 30 days prior to the start of any site mobilization. The Designated Biologist shall submit a written statement to the CPM confirming that individual Biological Monitors have been trained, including the date when training was completed. If additional Biological Monitors are needed during construction, the specified information shall be submitted to the CPM for approval 10 days prior to their first day of monitoring activities.

DESIGNATED BIOLOGIST AND BIOLOGICAL MONITOR AUTHORITY

BIO-4 The project owner's construction/operation managers shall act on the advice of the Designated Biologist and Biological Monitors to ensure conformance with the **Biological Resources** Conditions of Certification.

If required by the Designated Biologist and Biological Monitors, the project owner's construction/operation managers shall halt site mobilization, ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist. The Designated Biologist shall:

- require a halt to all activities in any area when there would be an unauthorized adverse impact to biological resources if the activities continued;
- inform the project owner and the construction/operation managers when to resume activities;
- notify the CPM if there is a halt of any activities, and advise the CPM of any corrective actions that have been taken, or shall be instituted, as a result of the work stoppage; and
- if the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist.

Verification: The project owner shall ensure that the Designated Biologist or Biological Monitor notifies the CPM immediately (and no later than the following morning of the incident, or Monday morning in the case of a weekend) of any noncompliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities. The project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem.

WORKER ENVIRONMENTAL AWARENESS PROGRAM

BIO-5 The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation, and closure are informed about sensitive biological resources potentially associated with the project including fairy shrimp, giant garter snake, western pond turtle, western burrowing owl, Swainson's hawk, San Joaquin kit fox, and American badger. The WEAP must:

- be developed by or in consultation with the Designated Biologist and consist of an onsite or training center presentation in which supporting written material and electronic media are made available to all participants;
- discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
- present the reasons for protecting these resources;
- present the meaning of various temporary and permanent habitat protection measures;

- identify whom to contact if there are further comments and questions about the material discussed in the program;
- include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines; and
- be administered by a competent individual acceptable to the Designated Biologist.

Verification: At least 60 days prior to the start of any site mobilization, the project owner shall provide to the CPM two copies of the proposed WEAP and all supporting written materials and script for electronic media (video or DVD) prepared or reviewed by the Designated Biologist and a resume of the persons administering the program.

The project owner shall provide 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.

At least 10 days prior to site mobilization, the project owner shall submit two copies of the CPM-approved training materials and electronic media to the CPM. The signed training acknowledgement forms from construction shall be kept on file by the project owner for a period of at least six months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-6 The project owner shall submit two copies of the proposed biological resources mitigation implementation and monitoring plan (BRMIMP) to the CPM for review and approval, to the USFWS, and CDFG for review and comment, and shall implement the measures identified in the approved BRMIMP. The BRMIMP shall be prepared in consultation with the Designated Biologist, shall include all measures contained in the BRMIMP for the A2PP Project, and shall identify:

- all Applicant-proposed mitigation, monitoring, and compliance measures included as part of the project description in the AFC, which include all measures required for A2PP construction and operation;
- all **Biological Resources** Conditions of Certification, including any measures or Conditions provided in required permits;
- all **Biological Resources** mitigation, monitoring, and compliance measures required in other state and federal agency terms and conditions, such as those provided in any Streambed Alteration

Agreement Notification, Regional Water Quality Control Board Certification, and Army Corps of Engineers 404 permits;

- all biological resource mitigation, monitoring, and compliance measures required in terms and conditions of federal agencies permitting the project;
- all mitigation, monitoring, and compliance measures required for protection of fairy shrimp, giant garter snakes, San Joaquin kit foxes, burrowing owls, Swainson's hawks and other nesting raptors as discussed in Conditions of Certification below;
- a detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;
- all locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction;
- duration for each type of monitoring and a description of monitoring methodologies and frequency;
- performance standards to be used to help decide if and when proposed mitigation is or is not successful;
- all performance standards and remedial measures to be implemented if performance standards are not met;
- a process for proposing plan modifications to the CPM and appropriate agencies for review and approval;
- a copy of all biological resource-related permits obtained; and
- a description of impact avoidance, minimization, and mitigation measures for noise, fugitive dust, and lighting impacts.

Verification: At least 60 days before any site mobilization, the project owner shall submit a draft BRMIMP to the CPM for review and approval, and provide copies to USFWS and CDFG for review and comment. If there are any permits that have not yet been received when the BRMIMP is first submitted, these permits shall be submitted to the CPM within five days of their receipt. Within 15 days of permit receipt, the project owner shall submit a revised BRMIMP reflecting new permit conditions to the CPM.

The project owner shall notify the CPM no less than five working days before implementing any modifications to the approved BRMIMP. Any changes to the BRMIMP must be approved by the CPM before implementation. The project owner shall provide copies to any modifications to the USFWS and CDFG for review and comment.

Implementation of BRMIMP measures shall be reported in the monthly compliance reports by the Designated Biologist (i.e., survey results, construction activities that were monitored, species observed).

Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction closure report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases, and which mitigation and monitoring items are still outstanding.

IMPACT AVOIDANCE MITIGATION MEASURES

BIO-7 The project design shall incorporate all feasible measures that avoid or minimize impacts to the local biological resources, including the following:

- design, install, and maintain transmission line poles, access roads, and storage and parking areas to avoid identified sensitive resources;
- design, install, and maintain new and re-rated transmission lines and all electrical components in accordance with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006) to reduce the likelihood of electrocutions of large birds;
- eliminate from landscaping plans any List A California exotic pest plants of concern as defined by the California Exotic Pest Plant Council;
- no firearms shall be allowed on the site;
- no dogs or other household pets shall be allowed in work areas; and
- prescribe a road sealant that is nontoxic to wildlife and plants that will limit dust on dirt roads.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures shall be reported in the monthly compliance reports by the Designated Biologist. Within 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 impact avoidance measures were completed.

FRAC-OUT CONTAINMENT PLAN

BIO-8 The project owner shall prepare and implement a frac-out containment plan to ensure that drilling mud or other drilling material do not impact biological resources or impair water quality of canals during gas pipeline

construction. The plan should include measures to protect water quality of the adjacent canal(s) and any vegetation that provides suitable habitat for special-status wildlife species adjacent to the frac-out. The plan should also include appropriate procedures for cleanup and disposal of drilling materials and contain potential mitigation measures for impacts to sensitive plant and wildlife species or their habitat that may occur as the result of a frac-out.

Verification: A draft containment plan must be submitted to the CPM, for review and approval, and to the CDFG for review and comment no less than 60 days before the estimated start of construction of the gas pipeline. A final plan must be completed no less than 30 days before the start of construction of the gas pipeline. The final plan shall be incorporated into the BRMIMP. Notification of any frac-out must be made to the CPM, USFWS, and CDFG within 24 hours of the occurrence.

The project owner shall notify the CPM of the circumstances and location of the frac-out and corrective measures that are being taken.

AVOID HARASSMENT OR HARM TO SAN JOAQUIN KIT FOXES

BIO-9 The project owner shall conduct a pre-construction survey for San Joaquin kit fox for the power plant, laydown area, transmission lines, re-rated transmission lines, and pipeline corridor no less than 14 days and no more than 30 days prior to the initiation of construction on each project component. The surveys shall include a 200-foot buffer for the plant site, the gas pipeline alignment and the transmission line corridors. If a natal or pupping den is found within a designated construction area or within 200 feet of a designated construction area, USFWS and CDFG shall be contacted regarding the location of the den and whether any impacts are anticipated to the den from construction activities. If a take permit was not previously issued for the A2PP Project, the project Applicant shall coordinate with the CDFG and USFWS to determine if a take permit will be required for project construction. A copy of all conditions of the take permit shall be included in the BRMIMP and a revised BRMIMP shall be prepared for the project as required. Potential dens may require a 50-foot exclusion zone and active dens may require a 100-foot exclusion zone. Destruction of any known dens would require a take permit from USFWS and the Energy Commission. Natal dens shall not be collapsed until after the adults and pups have left the den.

The project owner shall manage the construction site and related linear alignments for the transmission lines and gas pipeline in a manner to avoid or minimize impacts to the San Joaquin kit fox by following the USFWS 1999 guidelines entitled *Standardized* Recommendations *for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 1998).

Measures provided by USFWS include but are not limited to the following:

During construction, all pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored at the construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before using or moving the equipment or materials; if a kit fox is discovered, then the materials or equipment shall not be moved until consultation with the USFWS and CDFG; if necessary, and under the direct supervision of the Designated Biologist, the equipment may be moved once to remove it from the path of construction activity until the fox escapes.

Regardless of whether kit fox are observed on the project site, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals by the Designated Biologist.

During construction, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the construction site.

All incidental take minimization measures related to San Joaquin kit fox shall be included in the BRMIMP. During construction, the Designated Biologist shall notify the CPM, USFWS and CDFG within 24 hours of receiving a report of incidental take occurring at the project site. The project proponent and the permitting agencies shall meet within two weeks to discuss adaptive management measures that may be undertaken to reduce or eliminate future incidents of incidental take.

Verification: A written report summarizing the results of the pre-construction survey shall be sent to the CPM, CDFG and USFWS prior to the start of ground disturbance. Implementation of the measures shall be reported in the monthly compliance reports by the Designated Biologist.

Within 30 days after completion of project construction, the project owner shall provide to the CPM and USFWS for review and approval and to CDFG for review and comment, a written construction termination report identifying how all biological resource-related conservation measures were completed.

PRE-CONSTRUCTION NESTING BIRD SURVEYS AND NEST MONITORING

BIO-10 Pre-construction nest surveys shall be conducted if construction activities would occur between February 1 and July 31. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within the 14-day

period immediately preceding initiation of construction of each project component. The other survey should be conducted during the start of the Swainson's hawk breeding season (March 20th to April 20th) prior to construction of each project component to accurately determine the location of Swainson's hawk nests within one half mile of construction areas. 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. The Designated Biologist or Biological Monitor shall perform the surveys in accordance with the following guidelines:

Surveys shall be performed within all potential nesting habitat in the project disturbance area (including the gas pipeline and transmission corridors). A survey buffer of 500 feet shall be included in the survey area. Surveys specifically for nesting Swainson's hawks shall be conducted within one half mile of designated disturbance areas that contain appropriate nesting habitat.

If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG) shall be established and a nest monitoring plan shall be developed for all active nests. Active nests shall be monitored on a weekly basis until such time that the Designated Biologist determines the nestlings have fledged and disbursed or the nest is otherwise no longer active. 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. Consultation with CDFG shall be required for any construction that occurs within one half mile of an active Swainson's hawk nest to ensure that no take of Swainson's hawks occurs during project construction.

Nest locations shall be mapped using a geographic positioning system (GPS) and submitted, along with a summary report describing the survey results, to the CPM. The Designated Biologist shall monitor the nest as prescribed above until he or she determines that nestlings have fledged and dispersed or the nest is otherwise no longer active (abandoned).

Verification: At least 10 days prior to the start of any project-related ground disturbance activities, the project owner shall provide the CPM and CDFG 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.

BURROWING OWL IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-11 The project owner shall manage the pipeline alignment and transmission lines in a manner to avoid or minimize impacts to the burrowing owl following California Burrowing Owl Consortium Mitigation Guidelines (CBOC 1999).

During the nonbreeding season (September 1 through January 31), burrowing owls found during pre-construction surveys (**BIO-10**) to be within 50 meters of designated construction areas shall be evicted by passive relocation as described in the California Department of Fish and Game *Staff Report on Burrowing Owls* (CDFG 1995).

During the breeding season (February 1 through August 31), occupied burrows in designated construction areas or within 75 meters of designated construction areas shall not be disturbed and shall be provided with a 75-meter protective buffer until the Designated Biologist verifies through noninvasive means that either the birds have not begun egg laying or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once fledglings are capable of independent survival, the owls can be evicted as described in the California Department of Fish and Game *Staff Report on Burrowing Owls* (CDFG 1995) and the burrow can be destroyed.

If owl relocation is necessary, the project owner or the Designated Biologist shall coordinate with CDFG on the number of new burrows required (if any), their locations, and how any created burrows and compensation land shall be protected for the life of the project in a burrowing owl mitigation and monitoring plan.

Verification: The project owner shall submit a report to CDFG and the CPM at least 10 days prior to the start of ground disturbance that describes survey methods, results, and conservation or mitigation measures implemented in respect to burrowing owls.

Within 30 days after completion of owl relocation and monitoring and the start of ground disturbance, the project owner shall provide written verification to the CDFG and CPM that burrowing owl mitigation measures have been completed.

GIANT GARTER SNAKE (GGS) AND WESTERN POND TURTLE PRE-CONSTRUCTION CLEARANCE SURVEYS

BIO-12 The project owner shall conduct pre-construction surveys for GGS and western pond turtle (WPT) for all gas pipeline construction areas within 200 feet of an area that provides suitable habitat for GGS or WPT as specified in the GGS habitat assessment prepared by the project owner (CH2MHILL 2009k).

The Designated Biologist or a representative approved by USFWS and the CPM must survey the gas pipeline construction area within potential

GGS and WPT habitat (including both aquatic habitat and upland habitat within 200 feet of suitable aquatic habitat) no more than 24 hours prior to the initiation of construction. Another pre-construction survey must be conducted if construction activity ceases within potential GGS habitat for a period of more than two weeks.

Verification: The project owner shall submit a report to the CPM, USFWS, and CDFG no more than 10 days after completion of GGS and WPT pre-construction surveys that describes survey methods, results, and conservation or mitigation measures taken. A figure shall be prepared for any sightings of GGS or WPT.

GIANT GARTER SNAKE (GGS) IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-13 Construction within 200 feet of canals with suitable GGS habitat must follow USFWS construction guidelines. The project Applicant shall minimize all gas pipeline construction within 200 feet of canals with suitable GGS habitat to the greatest extent possible. All pipeline construction within GGS areas shall incorporate measures as described in the USFWS GGS construction guidelines including but not limited to the following:

Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work may include such activities as replanting species removed from banks during construction or drilling operations.

No fencing or other materials shall be utilized within 200 feet of GGS habitat that could potentially entangle or otherwise harm GGS.

All construction that must occur within 200 feet of canals with potential GGS habitat shall occur within the GGS active period (May 1-October 1). USFWS must approve in writing any construction work within GGS habitat that must be conducted outside of this time window before construction activities commence.

Verification: The project owner shall submit a report to USFWS and the CPM if any GGS are found within work areas no more than 24 hours after the sighting is made. The report shall include monitoring results; a description of resolution of construction/snake conflict, and any additional monitoring that was required. The monthly monitoring report shall include updates on construction work occurring within GGS habitat.

COMPLIANCE WITH CDFG STREAMBED ALTERATION AGREEMENT (SAA) AND ACOE SECTION 404 PERMIT MEASURES

This Condition is subject to change once the Applicant determines the extent of federal and state jurisdictional features present within the project footprint and the extent of project-related impacts to these features. Conditions **BIO-12** and **BIO-13** are contingent on the Applicant acquiring a Section 404 permit and operating under the ACOE's programmatic permit for GGS with projects requiring a 404 permit.

BIO-14 PG&E has prepared a wetland delineation report to be submitted to ACOE to determine if waters of the U.S. are present within the disturbance areas or within the natural gas pipeline ROW. It is currently assumed that an SAA and Section 404 Nationwide Permit shall be required by the project for Harding Drain and Prairie Flower Drain. The following measures shall be implemented:

1. Acquire appropriate 404 permit through the ACOE as necessary.
2. Any conditions of the SAA not currently included in this Condition of Certification **BIO-14** that are required by CDFG shall be included in the final BRMIMP.
3. Right of Access and Review for Compliance Monitoring: The CPM reserves the right to enter the project site or allow CDFG or ACOE to enter the project site at any time to ensure compliance with these conditions. The project owner herein grants to the CPM and to CDFG and/or ACOE employees and/or their representatives the right to enter the project site at any time to ensure compliance with the terms and conditions and/or to determine the impacts of storm events, maintenance activities, or other actions that might affect the jurisdictional waters. The CPM, ACOE, or CDFG may, at their discretion, review relevant documents maintained by the operator, interview the operator's employees and agents, inspect the work site, and take other actions to assess compliance with or effectiveness of mitigation measures.
4. Notification: The project owner shall notify the CPM, ACOE, and CDFG, in writing at least five days prior to initiation of project activities in jurisdictional areas as noted and at least five days prior to completion of construction activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. The notifying report shall be provided to the CPM, ACOE, and CDFG no later than seven days after the change of conditions is identified. As

used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports**.**

a. Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the project area whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

b. Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.

c. Legal Conditions: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

5. Code of Regulations: The project owner shall provide a copy of the Streambed Impact Minimization and Compensation Measures from the Energy Commission Final Decision to all contractors, subcontractors, and project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel or Energy Commission personnel upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:

a. The information provided by the Applicant regarding streambed alteration is incomplete or inaccurate;

b. New information becomes available that was not known to it in preparing the terms and conditions;

c. The project or project activities as described in the Staff Assessment Addendum have changed; or

d. The conditions affecting biological resources changed or the CPM, in consultation with CDFG and ACOE, determines that project activities will result in a substantial adverse effect on the environment.

6. Best Management Practices: The project owner shall also comply with the following Conditions:

a. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.

b. Spoil sites shall not be located within drainages or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage.

c. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering jurisdictional waters. These materials, placed within or where they may enter a jurisdictional drainage by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.

d. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, jurisdictional waters.

e. When construction is completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 200 feet of the high water mark of any drainage.

f. No equipment maintenance shall occur within 200 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.

Verification: The project owner shall obtain all required permits from ACOE, Regional Board, or the Energy Commission in conjunction with CDFG at least 45 days prior to the start of construction. The project owner shall incorporate all required conditions of the SAA and/or 401/404 permit(s), as applicable, into the final BRMIMP at least 30 days prior to the start of site mobilization. A copy of all issued permits shall be sent to the CPM at least 30 days prior to the start of construction activities.

FAIRY SHRIMP SURVEYS OR AVOIDANCE AND COMPENSATORY MITIGATION

This Condition assumes that the ACOE will enter formal consultation regarding potential project-related impacts to federally listed fairy shrimp with USFWS during the process of ACOE's issuance of a Section 404 permit. If the USFWS determines that the cattle wallow is not suitable habitat for fairy shrimp species, then the Conditions of **BIO-15** are not required.

BIO-15 Construction of that portion of the natural gas pipeline adjacent to the cattle wallow shall either avoid the cattle wallow to the satisfaction of the USFWS. Alternatively, the project owner shall conduct focused protocol fairy shrimp surveys (1 dry season and 1 wet season survey) within the cattle wallow. If the Applicant conducts focused surveys, which are negative and are accepted by USFWS, then no further mitigation is necessary. If the Applicant finds evidence of fairy shrimp within suitable habitat or assumes presence of fairy shrimp and the project cannot avoid occupied habitat to the satisfaction of the USFWS, then compensatory mitigation shall be required as specified by USFWS in their biological opinion for the project. Compensatory mitigation will include acquisition and protection in perpetuity of occupied fairy shrimp habitat at an acreage specified by USFWS or purchase of vernal pool credits at an appropriate mitigation bank as required by USFWS in the biological opinion. The final requirements for fairy shrimp mitigation as specified in the biological opinion shall be included in the final BRMIMP.

Verification: If the cattle wallow will be avoided to the satisfaction of USFWS, the project owner shall provide the CPM a description of the avoidance measures to be implemented and verification of their acceptability to USFWS no less than 30 days prior to initiation of construction of the gas pipeline. The avoidance measures shall be included in the final BRMIMP.

If the project owner conducts focused surveys for fairy shrimp, the results of focused surveys shall be submitted to the CPM and USFWS no more than 45 days after completion of the surveys. If the results of the focused surveys are negative, then no further analyses or additional mitigation are necessary. If the project owner finds fairy shrimp during focused surveys, final mitigation proposal as specified in the biological opinion for the project shall be sent to the CPM no more than 30 days prior to the implementation of pipeline construction. The final

requirements for fairy shrimp mitigation as specified in the USFWS biological opinion shall be included in the final BRMIMP.

B. SOIL AND WATER RESOURCES

This section focuses on the soil and water resources associated with the Almond 2 Power Plant (A2PP) 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.

In accordance with the California Environmental Quality Act (CEQA) Guidelines and performance standards, this discussion evaluates each of the following items:

- Whether construction or operation would lead to accelerated wind or water erosion and sedimentation.
- Whether the project would exacerbate flood conditions in the vicinity of the project.
- Whether the project's water use would cause a substantial, or potentially substantial, adverse change in the quantity or quality of groundwater or surface water.[36]
- Whether project construction or operation would lead to degradation of surface or groundwater quality.
- Whether the project would comply with all applicable LORS. (CEQA Guidelines, Appendix G (Tit. 14, Cal Code Regs, §§ 15000 - 15387.)

We also evaluated the project's compliance with the applicable laws, ordinance, regulations, and standards and policies presented in **Appendix A** to this Decision. These LORS reflect a comprehensive regulatory system, with adopted standards and established practices designed to prevent or minimize adverse impacts to soil and water resources.

The evidence establishes that with implementation of the adopted Conditions of Certification, there will be no significant environmental impacts and the project will comply with all applicable LORS.

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §§ 5.11, 5.15, Appendix 5.11A, 3 [§ 5.11], 4 [Soils], 8 [Attachment A, § 3.5, pp. 55-57], 15 [Data

[36] The **Biological Resources** section of this Decision discusses the potential impacts of project construction on jurisdictional waters and includes related Conduits of Certification to ensure that any such impacts are reduces to less than significant levels.

Reponses [34-69], 20 [Data Responses 63-67], 21 [Attachment DR18, §3.11 and Appendix G]; 31 [Data Response 68]; 44; 45; 301, § 4.9.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting

The A2PP Project site is comprised of a 3.2-acre vacant parcel of disturbed industrial land and 1.4 acres of the existing TID 48 MW Almond Power Plant (APP) site, which is immediately south of the A2PP site. The project laydown area comprises approximately 6.4-acres of land directly west of the A2PP site. (Exs. 1, p. 5.6-1; 301, p. 4.5-5.)

The project site and linears will be located on relatively flat, previously developed land. Roughly three fourths of the northern portion of the site was previously used as a borrow area and was excavated to a depth of approximately 6.5 feet below ground surface. In 2008, the borrow area was filled to its current elevation with fill from the construction of a wastewater pond. The site was filled in one-foot lifts and compacted to 95 percent relative compaction. (Ex. 1, pp. 5.4-1, 5.4-2, 5.11-19 – 5.11-20, 5.15-15.)

There are no surface waters located within the boundaries of the A2PP site. The San Joaquin and Tuolumne rivers - two of Stanislaus County's major rivers - are between three and 10 miles away from the project site. (Exs. 1, p. 5.15-1; 301, p. 4.9-4) Both rivers terminate in the San Joaquin River located west of the project site. **Soil and Water Resources Figure 1** below shows the A2PP site in relation to nearby surface waters.

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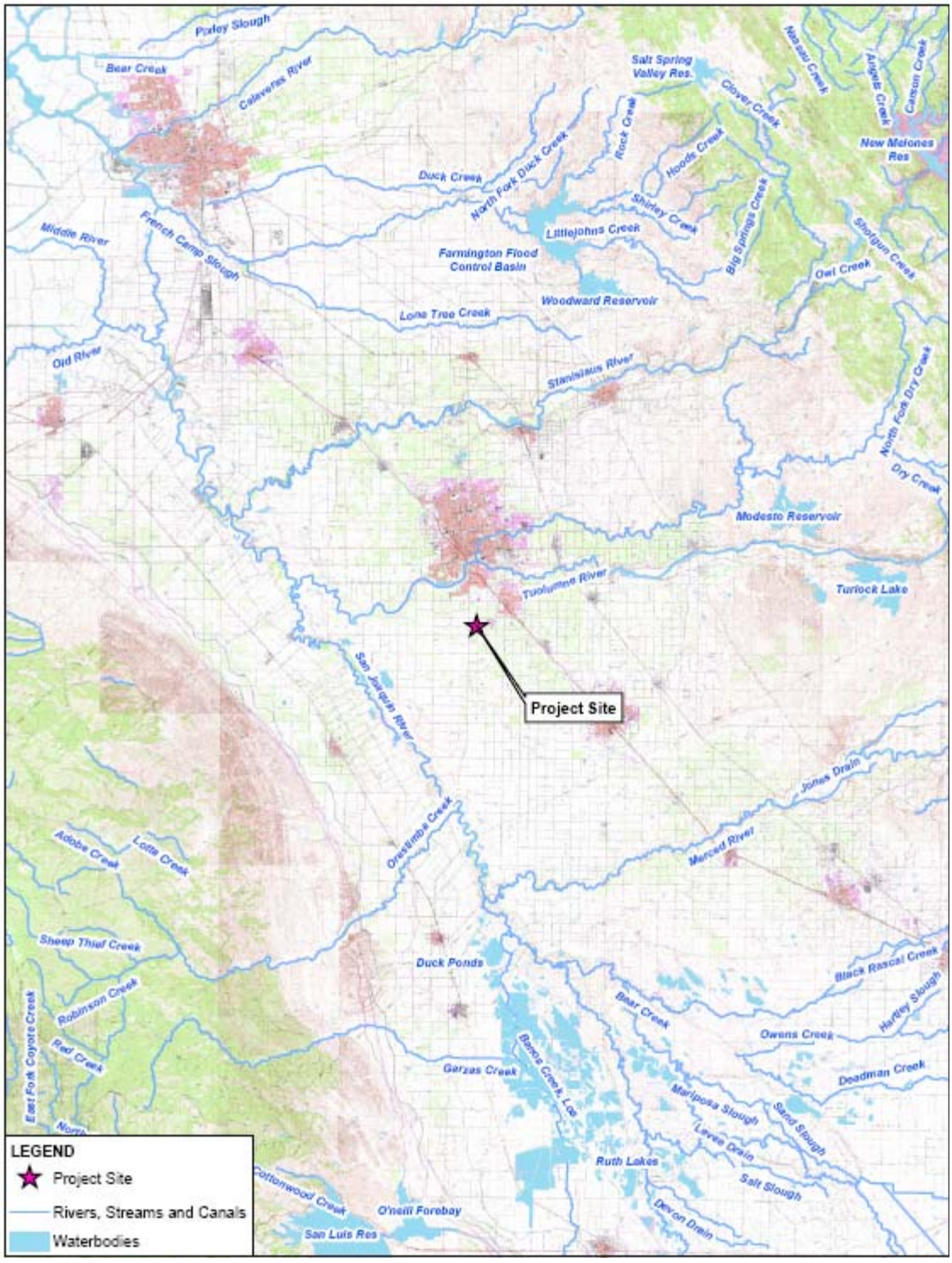
Soil and Water Resources – Figure 1



Source: Ex. 1

A2PP is within the jurisdiction of the Central Valley Regional Water Quality Control Board (Central Valley RWQCB), which sets water quality standards, issues waste discharge requirements, and enforces compliance therewith. RWQCB adopts water quality control plans (also known as Basin Plans) that establish water quality objectives for the reasonable protection of beneficial uses and implementation programs for achieving water quality objectives. (Ex. 1, p. 5.15-2.)

Water quality objectives for the Tuolumne and San Joaquin rivers are contained in the Central Valley RWQCB Basin Plan for the Sacramento River and San Joaquin River basins. (Ex. 1, p. 5.15-2; 301, p. 4.9-4.) The Basin Plan identifies the lower Tuolumne River between Don Pedro Reservoir and the San Joaquin River and a segment of the San Joaquin River between the Merced and Tuolumne rivers as impaired water bodies. This means they have nonattainment status for specified water quality standards and are subject to RWQCB's requirements for meeting total maximum daily loads (TMDLs). (Ex. 1, p. 5.15-2.)

The A2PP site is within the Turlock Subbasin of the San Joaquin Valley Groundwater Basin. (Ex. 1, p. 5.15-5; 301, p. 4.9-4.) The Subbasin is between the Tuolumne and Merced rivers to the north and south, respectively, and is bounded on the west by the San Joaquin River and on the east by crystalline basement rock. (*Id*.) (301, p. 4.9-5.)

Groundwater in the Turlock Subbasin flows primarily to the southwest towards the San Joaquin River. (Ex. 1, p. 5.15-5; 301, p. 4.9-5.) The evidence shows that groundwater levels in the subbasin have steadily declined overtime. Current data establishes that well yields in the Subbasin range from 200 to 4,500 gallons per minute (gpm), with an average yield of 1,000 to 2,000 gpm. Well depths in the Subbasin range from 50 to 350 feet below ground surface (bgs). (Ex. 1, p. 5.15-5.)

Groundwater throughout the Turlock Subbasin is of the sodium-bicarbonate type and has total dissolved solids (TDS) values ranging from 100 to 930 milligrams per liter. (Ex. 301, p. 4.9-5.) Although there are localized areas of hard groundwater, nitrate, chloride, boron, and dibromochloropropane, all groundwaters in the Subbasin are considered suitable for municipal and domestic water supply, agricultural supply, and industrial service and process supply unless classified otherwise by the Central Valley RWQCB. (Ex. 301, p. 4.9-5.) The City of Ceres relies on groundwater as its municipal water supply. (Ex. 301, p. 4.9-6.)

2. Soil and Erosion

The Applicant developed a description of the project area soils using resources that included the Soil Survey of Eastern Stanislaus Area, California (USDA – Natural Resources Conservation Service – [USDA-NRCS]) and Soil and Soil Survey of Stanislaus County, Western Part. The record describes the various categories of project area soils and establishes that the soil mapping units are generally sandy loams or loamy sands formed in alluvial deposits. These soils are deep and well drained, with moderately rapid permeability. (*Id.*) (Ex. 1, pp. 5.11-2 – 5.11-18.)

Given that most of the A2PP site was once used as a borrow area and then backfilled with imported soil, there was likely significant change to the native soil described in the USDA-NRCS soil survey. (Ex. 1, p. 5.11-19.) The Applicant's analysis assumes that the non-native soil material used to fill the borrow area is suitable for engineering purposes and does not contain organic debris or expansive clays. (Ex. 1, p. 5.11-20.)

The evidence shows that the conditions that could lead to excessive soil erosion are not present at the A2PP site. (Exs. 1, p. 5.11-21; 301, p. 4.9-11.) Soil erosion causes the loss of topsoil and can increase the sediment load in surface receiving waters downstream of the A2PP site.

The factors that lead to soil loss include steep slopes, lack of vegetation, and erodible soils with significant proportions of silts and very fine sands. (Ex. 1, p. 5.11-19.) The magnitude, extent, and duration of erosion impacts depend on factors including the proximity of the construction activities to surface water, the soil types affected, and the nature of the construction activities, and time of year of construction activities.

Prolonged periods of precipitation, or high intensity and short duration runoff events coupled with earth disturbance activities can also result in on-site erosion. In addition, high winds during grading and excavation activities can result in wind borne erosion leading to increased particulate emissions that adversely affect air quality. (Ex. 1, p. 5.11-21.)

The evidence establishes that that the conditions that could lead to excessive soil erosion are not present at the A2PP site. The site is relatively flat with an estimated average slope of less than two percent, there are no surface waters on the project site, the affected soils are expected to have moderate wind and water

erosion potential because they are medium to coarse grained, the annual average rainfall in the Modesto area is about 12-inches with most of the precipitation occurring between November and April. (Exs. 1, pp. 5.11-19 - 5.11-21; 301, pp. 4.9-4, 4.9-8 -4.9-9.)

Nonetheless, A2PP construction activities are expected to result in minimal, short-term soil erosion. To reduce these impacts, the Applicant proposes implementation of Best Management Practices (BMPs) as described in its draft Storm Water Pollution Prevention Plan (SWPP) and drainage, erosion, and sediment control plan (DESCP). (Exs. 1, p. 5.11-21, 15, Attachment DR66-1; 31, Attachment DR68.)

The BMPs will incorporate temporary and permanent measures. (Ex. 1, pp. 5.11-27 – 5.11-29.) The temporary measures would be undertaken before construction begins and would be evaluated and maintained throughout the construction period. These construction-related BMPs will include activities such as stabilizing construction entrances, applying water for dust suppression, placement of silt fencing, berms and, hay bales as needed. (Ex. 1, pp. 5.11-21, 5.11-38; 301, p. 4.9-11.)

Regarding soil loss during construction from water erosion, the Applicant used the Revised Universal Soil Loss Equation (RUSLE2) to make estimates. The results of the RUSLE2 analysis indicate that with implementation of the BMPS required by the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity, total project soil loss is estimated to be 1.53 tons. We find that this minimal amount of soil loss will not result in a significant impact to soil resources. (Ex. 1, p. 5.1-21 – 5.11-23.)

The evidence establishes that potential for wind erosion and resulting impacts were also evaluated. The Applicant calculated the total suspended particulates (TSP) that could be emitted due to site grading and wind erosion of exposed soil. The Applicant's analyses were guided by the bay Area Quality Management District and U.S. Environmental Protection Agency emission factors. Without mitigation, the maximum predicted erosion is estimated at 9.60 tons over the construction period. With implementation of the BMPS specified in the SWPPP, the maximum predicted erosion is 3.6 tons. (Ex. 1, p. 5.11-23 – 5.11-24.)

Thus, we find that implementation of the BMPs and Staff-proposed Conditions of Certification **SOIL&WATER -1** and **-2**, the project will avoid significant soil

erosion and subsequent sedimentation during construction and will not contribute significantly to either occurrence. These Conditions ensure that the project owner complies with the requirements of the NPDES permit. They also require the project owner to develop and implement (1) a site-specific DESCP that ensures protection of soil resources of the project site and all linear facilities for both construction and operation of the project and (2) a SWPPP for the construction of the entire A2PP.

Because the evidence also establishes that operation of A2PP may also result in erosion impacts, on-site permanent erosion control measures such as graveling, paving, revegetation, and installation of new drainage systems must be implemented as necessary. (Ex. 1, p. 5.11-29.) We find that implementation of Conditions of Certification **SOIL&WATER -1** and **-2** will reduce operation-related erosion impacts to less than significant levels.

3. Stormwater Runoff and Drainage

Construction activities (grading and excavation in particular) are expected to result in short-term surface water impacts if runoff flow rates and volume discharges from the site increase offsite flooding. This could lead to adverse water quality impacts from the discharge of eroded sediments for the site, hazardous materials, or migration of any existing hazardous materials present in the subsurface soil and groundwater. (Exs. 1, p. 5.15-16; 301, pp. 4.9-10 - 4.9-11.) Compliance with engineering and construction specifications and following City-approved grading and drainage plans effectively mitigate the short-term impacts. Furthermore, drainage impacts will be mitigated to less than significant levels with implementation of the SWPPP, BMPS as required by Conditions of Certification **SOIL&WATER -1 and -2**. Implementation of the SWPPP will prevent off-site migration of sediment and other pollutants, and will reduce the effects of construction site runoff to offsite areas.

A2PP operation has potential to result in stormwater and drainage impacts. When construction concludes, approximately 4.6 acres of impervious surfaces will have been added to the project site. (Ex. 301, p. 4.9-14.) However, this increase in impervious surfaces is not expected to significantly change the amount or timing of runoff from the site because the site will be built on relatively level ground. Moreover, A2PP's proposed use of the existing APP stormwater system will further reduce the potential for offsite stormwater and drainage impacts.

The existing APP system incorporates a series of inlets and drainage pipes that convey runoff to an onsite retention pond. (Ex. 1, p. 5.15-19.) The expansion of this system to accommodate the A2PP will include relocating the retention pond from its current location to the northern portion of the site and sizing the pond at 2.41 acre-feet capacity to accommodate 100-year peak runoff with 2.65 feet of freeboard. (Ex. 1, p. 5.15-15; 301, p. 4.9-14.) Thus, because stormwater would be collected and discharged to the onsite retention pond, the A2PP Project is not expected to result in substantial erosion, siltation, or flooding on or offsite.

Nonetheless, the evidence shows that implementation of mitigation measures is required to reduce any potential impacts to less than significant levels. We find that implementation of Conditions of Certification **SOIL&WATER-1**, **-2**, and **-3** would mitigate these impacts to less than significant levels. The requirements of **SOIL&WATER-1** and**-2** are summarized above. **SOIL&WATER-3** mandates that the project owner ensure that only stormwater is discharged onto the site and further requires the project owner to comply with the requirements of the NPDES and also, develop and implement a SWPPP for project operation.

4. Wastewater Management

Sources of wastewater during A2PP construction would include equipment wash water and hydrostatic test water. Improper handling or containment of construction wastewater could cause a broad dispersion of contaminants to soil or groundwater. Therefore, discharge of any non-hazardous construction-generated wastewater must comply with discharge regulations.

The record explains how the different types of wastewater will be handled. Equipment wash water would be transported to an appropriate treatment facility. Hydrostatic test water would be discharged to land or trucked off-site to an appropriate treatment and disposal facility. Discharge of the hydrostatic test water to land would be done in accordance with SWRCB Water Quality Order No. 2003-003-DWQ. Sanitary wastewater generated during construction would be containerized in portable facilities with the waste removed by a licensed waste hauler. (Ex. 301, p. 4.9-14.) The Applicant's implementation of these measures together with the BMPs and LORS specified in Conditions of Certification **SOIL&WATER-1** and **-2**, will ensure no significant impacts from construction-generated wastewater.

During plant operations, process wastewater would be generated from sources such as the reverse osmosis/demineralizer system and general plant drains that

collect containment area washdowns, sample drains, and drainage from facility equipment drains. Water from these areas will be collected in a system of floor drains, hubs drains, sumps, and piping routed to the existing process wastewater collection system that discharges to the percolation ponds at WWTP. Drains that could potentially contain oil or grease will be first routed through an oil water separator. All other non-reclaimable process wastewater will be discharged to the Ceres WWTP. (Ex. 1, pp. 5.15-13 – 5.15-15.)

The Applicant submits that under a worst-case scenario that assumes a 100 percent capacity factor (8,760 hours per year), the A2PP would discharge up to a maximum of approximately 174,240 gallons per day and approximately 63.5 million gallons per year of process water to the evaporation ponds. (Ex. 1, p. 5.15-14.) However, because A2PP is intended as a peaking facility a more reasonable scenario would assume a 57 percent capacity factor (5,000 hours per year). **Soil and Water Resources Table 1** below shows the expected wastewater flow rates for A2PP under both peak and expected scenarios.

Soil and Water Resources – Table 1

Estimated Peak and Average Discharge from A2PP Operations

Capacity Factor	Peak (Daily[a]/Yearly[b])		Average (Daily/Yearly)	
100 percent (8,760 hours per year)	174,240	63.5	139,680	50.9
57 percent (5,000 hours per year)	116,160	36.2	93,120	29

[a]gallons per day

[b]million gallons per year

Source: CH2M HILL, 2009a

APP is currently the only user of this wastewater, and since the A2PP would be an expansion of that power plant operation, we do not anticipate the increased pumping rate to negatively affect any other water users. (Ex. 301, p. 4.9-17.)

Further, the water services agreement between TID and the City of Ceres specifies the terms of the discharge of process water to the Ceres WWTP percolation ponds. Condition of Certification **SOIL&WATER-5** specifies the maximum allowed discharge as 560,000 gallons per day per the agreements between TID and the City of Ceres, and requires the project owner to prepare monitoring reports disclosing violations of discharge limits or amounts. Thus, wastewater discharge from A2PP is expected to meet all requirements of the agreements and all requirements of the Central Valley RWQCB, including those pertaining to wastewater quality. (Exs. 1, pp. 5.15-3, 5.15-9, Appen. 2A; 301, pp. 4.9-7 – 4.9-8.)

Soil and Water Resources Table 2 below shows expected concentrations of select contaminants in the A2PP discharge stream under peak and average flows.

Soil and Water Resources - Table 2

Parameter	Units	Extraction Well Intake[a]	Wastewater Discharge (Peak Flow)[b]	Wastewater Discharge (Average Flow)[c]
Total Dissolved Solids	mg/L	833	2714.6	2380.4
Total Alkalinity ($CaCO_3$)	mg/L	256	822.1	720.8
Nitrate (NO_3)	mg/L	3.6	11.5	10.1
Sodium	mg/L	162	519.8	455.8

a Ceres WWTP water quality data
b Expected A2PP discharge at 100oF dry bulb temperature
c Expected A2PP discharge at 60oF dry bulb temperature
Source: Ex.301

The evidence establishes that the A2PP Project will comply with existing waste discharge requirements (WDRs) and possible future revisions to the WDRs. More particularly, during the life of the project, the Ceres WWTP may be required to revise the WDRs in response to requirements of the Central Valley RWQCB. Any changed requirements could affect the quality of wastewater that the A2PP can discharge to the Ceres WWTP. At this point, any such changes in the WDRs are too speculative to predict, but in the event of changed WDRs including water quality standards that prohibit the inclusion of A2PP's waste discharge into the Ceres WWTP, the project would require a new process water supply source or pretreatment at the project prior to discharge to the Ceres WWTP. In this event, the Applicant proposes evaluation of alternatives that include use of a zero liquid discharge facilities, discharging wastewater to the City of Turlock WWTP, eliminating the reverse osmosis system and increase of use of demineralizer trailers. Any change in the project's wastewater discharge other than as approved in this Decision must be approved by the Commission pursuant to a request for a project modification. (Exs. 44; 45; 301, p. 4.9-16.)

Wastewater from combustion turbine water washes will be collected in holding tanks or sumps and then will be trucked off-site for disposal at an approved wastewater disposal facility. (Exs. 1, p. 5.15-15; 301, p. 4.9-14.) Sanitary wastes generated during operation of A2PP would be generated by sinks, toilets, and other sanitary facilities. A2PP will use APP's existing septic tank and leach field system, which are shown to have sufficient capacity. Thus, there will be no

sanitary waste output from the A2PP. (Exs. 1, p. 5.15-15; 301, pp. 4.9-16 -4.9-17.)

Based on the foregoing discussion, we find that impacts to surface water will be less than significant with implementation of the Conditions of Certification.

5. Project Water Supply

The project requires water for sanitary and domestic use, construction–related dust control and soil compaction, plant process and cooling, and fire suppression. The project has identified different water supply sources for the different categories of water needs. The impacts associated with the water supply needs and sources are discussed below.

a. Sanitary and Domestic Use

The A2PP Project proposes to use to an existing onsite APP groundwater well for its sanitary service water. (Ex. 301, p. 4.9-7.) APP currently pumps and uses approximately 16,000 gpd from this well for sanitary service water. (Ex. 301, p. 4.9-7.) A2PP is expected to use a minimal amount of this water for eye-wash stations and safety showers. (Ex. 1, p. 5.15-10.) The evidence establishes that this well and two other TID-owned agricultural wells are used to maintain local groundwater levels below the root zone of agricultural crops in the area (about six to 10 feet below ground surface). This groundwater extraction is necessary to lower the local shallow groundwater table and improve percolation at the Ceres Waste Water Treatment Plant (Ceres WWTP). (Ex. 301, p. 4.9-7.)

Drinking water will be provided by an outside drinking water delivery service. (Ex. 1, p. 5.15-10.)

The evidence indicates that the project's proposed water supply for sanitary and domestic use will not result in any groundwater impacts.

b. Construction

During the 12-month construction period, A2PP will require water primarily for dust suppression and soil compaction. According to the Applicant, at the peak of construction activities, the project will require an average of approximately 50 gallons of water per minute and approximately 200 gallons per minute per hour for dust control and soil compaction.

Stated otherwise, the Applicant projects that the average daily water use for construction would be 36,000 gallons per day (gpd) and that maximum daily use would be 144,000 gpd. The Applicant anticipates maximum construction water use to be 52.56 million gallons or 161.3 acre feet. (Ex. 1, p. 5.15-13; 301, p. 4.9-6, pp. 4.9-5 – 4.9-6.)

The construction water supply would come either from APP's onsite fire system or the TID irrigation canal (Lateral #2) south of the A2PP site by way of trucks. Fire water is provided by APP's onsite well. The canal water comes from the TID-owned agricultural wells that are used to maintain local groundwater levels. (Exs. 1, pp. 5.15-10 – 5.15-115.15-13, 5.15-19; 301, pp. 4.9-5, 4.9-7.)

The project's minimal construction water needs, whether met by the fire water or Lateral #2, are not expected to result in significant impacts to the groundwater basin from this temporary increase in well use. Likewise, because A2PP's average daily requirements are about 50 gpm or 0.11 cfs, impacts to surface water from TID Lateral #2 will be negligible. And, even with the addition of A2PP's water needs, TID would be able to meet delivery requirements of other users of the canal.

Maximum flow in the Lateral #2 canal is 110 cfs but normal flow is 60 to 80 cfs during irrigation season. During the rainy season the canal flows at about 5 cfs due to drainage pumps in the vicinity that remove water from the root zones of plants and orchards. The pumped water is drained into the TID irrigation canals. (Exs. 15, p. 79 [Data Response 49]; 301, p. 4.9-13 – 4.9-14.)

Thus, we concur with the Applicant's and Staff's determination that no impacts to groundwater or other users would result from the proposed construction water supply.

c. Operation Process and Cooling Water

The water for plant process and cooling will be supplied by an existing 6" pipeline between APP and Ceres WWTP. (Exs. 1, p. 5.15-9; 301, p. 4.9-6.) This water supply system relies on groundwater pumped from a TID-owned well near the Ceres WWTP percolation-evaporation basins. (Exs. 1; 15 [Date Responses 34-69]; 301, p. 4.9-7.) This well, referred to as the "extraction well," is used pursuant to a written agreement known as the "Second Amendment to the Water Service Agreement" or "Amendment 2," between TID and the City of Ceres. Amendment

2 entitles TID to pump up to 1,135,000 gallons per day of primary-treated (reclaimed) water from the extraction well. (Ex. 301, pp. 4.9-7, 4.9-15.)

The source of the reclaimed wastewater is sanitary wastewater that is infiltrated through the percolation-evaporation basins after receiving primary treatment. (Ex. 301, p. 4.9-7.) As the water percolates into the ground, the soil filters organic material, microorganisms, and nutrients such as nitrogen and phosphorous. (*Id*.)

The project's estimated operation water requirements for both process and cooling water are shown below in **Soil and Water Resources Table 3**. The maximum daily water use for plant processes would be approximately 349 gallons per minute and the average plant process water would be about 293 AFY. The average daily water use would be approximately 319 gallons per minute. (Ex. 1, p. 5.15-10, 15 [Soil and Water Resources].)

Soil and Water Resources – Table 3

Estimated Daily and Annual Water Use for A2PP Operations[a]

Water Use	Average Daily Use[b] (gpm)	Maximum Daily Use[c] (gpm)	Projected Annual Use[d] (acre-feet)
Process and cooling water	319	349	
8,760 hours per year			514
5,000 hours per year			293

gpm = gallons per minute

[a]Water requirements shown are estimated quantities based on the simple-cycle plant operating at full load, with evaporative cooling of the CTG inlet air and the SPRINT system in use.

[b]60°F heat balance case

[c]110°F heat balance case

[d]Annual use is based on 319 gpm for the maximum operating scenario of 8,760 hours of operation per year and 319 gpm for average operation of 5,000 hours per year.

These estimates are consistent with the project's proposed use as a peaking facility expected to operate under a 57 percent capacity factor. Under a worst case scenario of 100 percent capacity factory (operating at 8,760 hours per year), the Applicant projects that A2PP would use an annual average of approximately 514 acre-feet per year of water for plant processes. (Ex. 1, p. 5.15.-10.) Under either scenario, the additional volume of water that would be pumped to satisfy the A2PP Project's needs combined with the APP's existing needs, will be less than the 1,135,000 gallons per day that TID is allowed to pump under its agreement with the City of Ceres. (Ex. 301, p. 4.9-15.)

The Ceres WWTP has committed to providing sufficient year round capacity to meet both APP's and A2PP's process water needs. The Applicant submitted

evidence that the Ceres WWTP has process capacity of 3.1 million gpd of wastewater but generates approximately 2.0 mgd of primary treated effluent. Ceres WWTP discharges approximately 1.0 mgd into the percolation-evaporation ponds while the A2PP maximum demand will be about 0.9 mgd. Staff independently confirmed that the percolation-evaporation ponds have percolation capacity of 3.5 inches per day, which is sufficient to meet TID's project needs. Thus, the evidence indicates that Ceres WWTP is a reliable source of process water for A2PP under existing and reasonably foreseeable future circumstances. (Exs. 15, p. 71, 44. 45; 301, pp. 4.9-15.) The evidence further indicates the A2PP's use of reclaimed water from the Ceres WWTP will not adversely impact Ceres' obligation to provide up to 2.0 mgd to the Turlock WWTP. (*Id*.) The Applicant has not identified a back up water source.

Staff was concerned that this water quality data could change with the additional demands of A2PP and possibly impact local groundwater conditions or that the extraction well could draw from fresh water sources. The Applicant's studies support the conclusion that the primary contributor to the TID extraction well is infiltration from the adjacent percolation-evaporation ponds. Staff evaluated the Applicant's steady-state, 3-dimensional, finite-element groundwater model and concurred with the conclusion that at least 95 percent of the supply from the extraction well originates from the Ceres WWTP percolation-evaporation ponds. (Exs. 15, pp. 74 – 75; 18, [Response to WSQ-4]; 301, p. 4.9-15.)

At Staff's request, the Applicant provided data about possible impacts to wells within a one-half mile influence of the extraction well. The Applicant performed an analysis that concluded that the increase in pumping at the extraction well is expected to increase from the currently estimated zone of influence from 1750 feet to 2865 feet over 10 years. (Ex. 15 [Data Responses 37, 38], pp. 73-74.) The Applicant's review of well data obtained from various sources indicated that there were no wells within the area influenced by the current operation of the extraction well that are not already owned by TID or the City of Ceres. (*Id*. p. 74, 76.) And, although domestic wells located along Grayson and Blaker Roads in the City of Ceres could be influenced by the increased pumping for A2PP, because the wells are in the opposite direction from the Ceres WWTP and approximately a half mile away for the extraction well the evidence indicates that any impacts would be negligible.

The evidence also indicates that the proximity of the percolation ponds minimizes the impact of the additional pumping on local groundwater conditions, including

nearby potable groundwater supplies. (Ex. 15 [Data Responses, 37 - 40], pp. 74-76.)

Regarding project impacts to groundwater quality from the return flow from the A2PP to Ceres WWTP, the evidence relies on test data obtained from the City of Ceres. Inflow to the ponds is expected to occur from three sources: the treated water from the WWTP that is not conveyed to other users, A2PP power plant return flow estimated at 50 percent of the extraction well operating at full capacity, and precipitation. (Ex. 18, p. 11.) Output from the Applicant' modeling shows that when the four wells (the TID agricultural wells and extraction well) in the vicinity of the Ceres WWTP ponds pump at expected rates, groundwater is captured at the wells. Thus, the additional return flow from the A2PP to the ponds is captured.

Thus, the evidence shows that increasing the pumping at the extraction well for the A2PP Project will have minimal effect on the surrounding aquifer and will support capture of the treated water infiltrated at the WWTP ponds. (Ex. 18.) There will be no adverse impacts to groundwater.

To ensure that the source and amount of process and cooling water requirements conform to the Applicant's proposal and the evaluation herein, we require the project owner to comply with Condition of Certification **SOIL&WATER-4**. This Condition mandates that water for project operation processing shall only be reclaimed water from Ceres WWTP and that water use shall not exceed 514 AFY.

6. Water Treatment

The water provided to APP is pumped from an extraction well located beneath the WWTP percolation-evaporation ponds and then sent through APP's reverse osmosis system. A2PP will tie into this system. Water from the reverse osmosis storage tank will be used for evaporative cooling or demineralized. The demineralized water will be stored in two on-site demineralized water storage tanks (each with an approximately 240,000 gallon capacity) for use in the combustion turbine generators. (Ex. 1, p. 5.15-10.)

7. Flooding Potential

The project site is within flooding Zone X, which is defined by the Federal Emergency Management Agency. Zone X is an area outside of the 500- and

100-year floodplains. Flood risk as a result of project construction and operation is less than significant. (Ex. 1, pp. 5.15-9, Figure 5.15-35, 5-19, 5.15-21.)

8. Cumulative Impacts

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 reasonably foreseeable future projects. (Cal. Code Regs., tit. 14, §15130.)

Temporary and permanent disturbances associated with construction of the proposed project would cause accelerated wind- and water-induced erosion. However, the evidence shows that implementation of Conditions of Certification, including the requirements of the SWPPP and the DESCP, will ensure that the project would not contribute significantly to cumulative erosion and sedimentation impacts.

As shown by the evidence, the industrial wastewater and contact stormwater from the A2PP site would be routed to the existing onsite holding tank and hauled offsite for disposal at a licensed facility. All sanitary wastewater would be discharged into the existing APP septic tank/leach field. Therefore, no wastewater-related cumulative impacts are expected. The stormwater discharge would be retained on site and would not exacerbate flooding conditions in the area.

A2PP would use percolated wastewater pumped from an existing extraction well near the Ceres WWTP primary-treated percolation-evaporation basins. APP is currently the only user of this wastewater, and since A2PP would be an expansion of that power plant operation, we do not anticipate the increased pumping rate to negatively affect any other water users.

No significant cumulative impacts are expected to result from the A2PP Project. The A2PP Project would use less than 13.2 million gallons (40.51 AF) of fresh water for construction, assuming average daily use, during the entire 12-month construction period. Though the A2PP would use an evaporative-cooling system, TID would be reclaiming wastewater that has percolated to groundwater near the Ceres WWTP P-E basins. The requirements for fresh water include minimal use of groundwater, for sanitary water purposes, to be pumped via the

existing well at the APP site. The A2PP site would not significantly alter offsite runoff quantity or quality, nor would it significantly impact soil resources as the site was previously disturbed. Soils not covered by the plant buildings, pavement, and ancillary improvements would not be changed over the long-term. Staff believes A2PP would not contribute to a cumulative soil and water resources impact.

9. Compliance with LORS

We evaluated the project elements and concur with the Applicant's and Staff's independent conclusions that the project will comply with the LORS set forth in **Appendix A** that address protection of water resources, storm water management, erosion control, the use of drinking water and freshwater, and wastewater discharge. The State Water Resources Control Board and Regional Water Quality Control Boards regulate discharges of stormwater and wastewater into surface waters under the federal LORS (Clean Water Act/Water Pollution Control Act). (See Porter Cologne Water Quality Control Act, Water Code §§ 13000 et seq.) Because the project will result in the disturbance of more than one acre of soil, a SWPPP is required under SWRCB Water Quality Order No. 99-08-DWQ. Conditions of Certification **SOIL&WATER-1** and **SOIL&WATER-3** ensure that the SWPPP is prepared and implemented and that the requirements of the NPDES permit are complied with.

The project's use of reclaimed water for plant process and cooling complies with the Water Code requirements regarding water conservation, including limiting the use of the potable water for industrial purposes where suitable recycled water is available. (See, Water Code § 461, 13550, 13551, 13751, 13575 et seq.) We also find that the A2PP's use of reclaimed water (albeit pumped as groundwater from an extraction well) for plant process and cooling needs complies with the applicable laws, policies, and requirements for the conservation and beneficial use of water as set forth in the California Constitution, Warren-Alquist Act, § 25008, SWRCB Resolutions 2009-001 and 75-58, 88-63, and the Energy Commission 2003 Integrated Policy Report. (See, Ex. 301, p. 4.9-18 -4.9-19.0.)

We also find that the project will comply with local LORS imposed by the City of Ceres. The Ceres General Plan and Municipal Code establish goals, policies, and requirements for stormwater drainage. The project's proposed drainage plan, including the series of inlets and drainage pipes and the re-sized retention

pond, appear to be in accordance with the local requirements. (See, e.g. Ex. 1, pp. 5.15-16, Figure 5.15-4, 5.15-19, 5.15-24; 3 [Data Response 5.15]; 301, pp. p..4.9-8.)

10. Noteworthy Public Benefits

The A2PP Project's proposed use of reclaimed groundwater near the Ceres WWTP would offer an operational benefit to the wastewater treatment process. The added demand for A2PP groundwater helps draw down the local groundwater table in the vicinity of the Ceres WWTP to drive down mounding that inhibits percolation capacity in the Ceres WWTP percolation –evaporation basins, especially during the winter months. (Ex. 301, p. 4.9-19.)

11. Agency and Public Comments

There were no agency and public comments.

FINDINGS OF FACT

Based upon the evidence of record before us, we find and conclude as follows:

1. Project construction and operation has the potential to induce erosion and sedimentation, adversely affect water supplies, and degrade water quality.

2. The project will not significantly increase or decrease erosion rates with implementation of Conditions of Certification **SOIL&WATER-1** and **-2**.

3. Potential on-site drainage impacts to on-site structures and offsite property will be mitigated to insignificant levels with implementation of Conditions of Certification **SOIL&WATER-1** and **-3**.

4. The proposed use of groundwater will not significantly impact groundwater levels in existing Subbasin wells, the Subbasin balance, or the quality of groundwater in the Subbasin.

5. The Conditions of Certification, below, are adequate to ensure that construction and operation of the A2PP will comply with LORS and will not create significant adverse impacts to the matters addressed in the discipline of **Soils and Water Resources**.

CONCLUSION OF LAW

1. We therefore conclude that the project will conform to all applicable laws, ordinances, regulations, and standards identified in the pertinent portion of **Appendix A** of this Decision.

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 storm water associated with construction activity. The project owner shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the construction of the entire TID Almond 2 Power Plant (A2PP).

Verification: At least 60 days before construction begins, the project owner shall submit a copy of the construction SWPPP to the Stanislaus County Public Works Department, for review, and concurrently to the CPM for approval. At least 30 days before construction begins, the project owner shall submit copies to the Compliance Project Manager (CPM) of all correspondence between the project owner and the Central Valley Regional Water Quality Control Board (RWQCB) regarding the General NPDES permit for the discharge of storm water associated with construction activities. This information shall include copies of the Notice of Intent and the Notice of Termination sent to the State Water Resources Control Board for the project construction.

SOIL&WATER-2: The project owner shall develop a site-specific DESCP that ensures protection of water quality and soil resources of the project site and all linear facilities 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 offsite 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 retention basin. Maintenance activities must include removal of accumulated sediment from the retention basin when an average depth of 0.5 feet of sediment has accumulated in the retention basin. The plan shall be consistent with the grading and drainage plan as required by Condition of Certification **CIVIL-1**. The DESCP shall contain the following elements. All maps shall be presented at a legible scale no less than 1” = 100’.

- ***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 include hydrologic calculations for onsite areas and offsite areas that drain to the site; include maps showing the drainage area boundaries and sizes in acres, topography and typical overland flow directions, and show all existing, interim, and proposed drainage infrastructure and their intended direction of flow. Provide hydraulic calculations to support the selection and sizing of the drainage network, retention facilities and best management practices (BMPs). 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 or to the limits of the offsite drainage basins that drain toward the site.

- ***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, cut/fill depths 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 at the site, 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 would be no clearing and/or grading conducted for each element of the project. Areas of no disturbance shall be properly identified and delineated on the plan maps.

- ***Project Schedule*** – The DESCP shall identify on the topographic site map the location of the site-specific BMPs to

be employed during each phase of construction (initial grading, project element excavation and construction, and final grading/stabilization). Separate BMP 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 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, stamped and sealed by a professional certified engineer or erosion-control specialist.

Verification: No later than 60 days before the start of construction, the project owner shall submit a copy of the DESCP to the CPM for review and approval. 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 stormwater facilities monitoring and maintenance activities. The operational SWPPP may be combined with the DESCP in an effort to simplify the annual compliance reporting and CPM review. A combined DESCP/SWPPP would be verified under **SOIL&WATER-3**.

SOIL&WATER-3: The project owner shall comply with the requirements of the General NPDES permit for discharges of storm water associated with industrial activity. The project owner shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the operation of the site. The project owner shall ensure that only stormwater is discharged onto the site. The project owner shall comply with the requirements of the general NPDES permit for discharges of storm water associated with industrial activity. The project owner shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the operation of the site.

Verification: At least 30 days prior to commercial operation, the project owner shall submit the operational Storm Water Pollution Prevention Plan for the A2PP site to the CPM. Within 10 days of its mailing or receipt, the project owner shall submit to the CPM any correspondence between the project owner and the

Central Valley RWQCB about the general NPDES permit for discharge of storm water 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. A letter from the Central Valley RWQCB indicating that there is no requirement for a general NPDES permit for discharges of stormwater associated with industrial activity would satisfy this Condition.

SOIL&WATER-4: Water used for project operation processing shall exclusively be reclaimed water from the City of Ceres Wastewater Treatment Plant. Pumping or purchasing groundwater for this supply source is prohibited. Water use shall not exceed 514 acre-feet per year. The project owner shall monitor and record the total water used on a monthly basis. For calculating the annual water use, the term "year" will correspond to the date established for the annual compliance report submittal.

Verification: At least 60 days prior to commercial operation of A2PP, the project owner shall submit to the CPM evidence that metering devices are operational on the water supply and distribution systems.

The project owner shall maintain metering devices as part of the water supply and distribution systems to monitor and record, in gallons per day, the total volume(s) of water supplied to A2PP from the City of Ceres. Those metering devices shall be operational for the life of the project.

For the first year of operation, the project owner shall prepare an annual Water Use Summary, which will include the monthly average of daily water usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. For subsequent years, the annual Water Use Summary shall also include the annual water used by the project in prior years. The annual Water Use Summary shall be submitted to the CPM as part of the annual compliance report (ACR).

SOIL&WATER-5: The A2PP process wastewater will discharge to the Ceres WWTP Percolation-Evaporation basins at a maximum discharge of 560,000 gallons per day per the City of Ceres, CA and Turlock Irrigation District Water Services Agreement and its Amendments. During operation, any monitoring reports provided to the City of Ceres shall also be provided to the CPM. The CPM shall be notified of any violations of discharge limits or amounts.

Verification: During A2PP operation, the project owner shall submit to the CPM any wastewater quality monitoring reports required by the City of Ceres, in the annual compliance report. The project owner shall submit any notice of violations from the City of Ceres to the CPM within 10 days of receipt and fully explain the corrective actions taken in the annual compliance report. The project owner shall also promptly provide to the CPM copies of all correspondence

between the Ceres WWTP and TID related to suspensions, nullifications, or amendments to the Water Services Agreement.

C. CULTURAL RESOURCES

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. Cultural resource materials such as artifacts, structures, or land modifications reflect the history of human development. Certain places that are important to Native Americans or local national/ethnic groups are also considered valuable cultural resources. Analysis in this topic area pertains to the structural and cultural evidence of human development in the project vicinity, as well as appropriate mitigation measures should cultural resources be disturbed by project excavation and construction. Potential impacts to these resources from the proposed project may include, but are not limited to, destruction of resources; alteration of a historical feature and diminishment of the significance of a cultural resource caused by construction and operation the facility. These impacts and the thresholds for determining the significance of these impacts are discussed in this section.

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.) An archaeological resource that does not qualify as an historic resource may be considered a "unique" archaeological resource under CEQA. (*See* Pub. Res. Code, § 21083.2.) In addition, structures older than 50 years (or less if the resource is deemed exceptional) can be considered for listing as significant historic structures. The Office of Historic Preservation's Instructions for Recording Historical Resources (1995) endorses recording and evaluating resources over 45 years of age to accommodate a five-year lag in the planning process.

The CEQA Guidelines define historical resources to include:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR,

(2) A resource included in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, or

(3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. [Cal. Code Regs. tit. 14, § 15064.5(a).]

Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the National Register of Historic Places (NRHP) as well as California Registered Historical Landmarks from No. 770 onward. [Pub. Res. Code, § 5024.1(d).]

Under the CEQA Guidelines, a resource is generally considered to be historically significant if it meets the criteria for listing in the CRHR. These criteria are essentially the same as the eligibility criteria for the NRHP. In addition to being at least 50 years old, a resource must meet at least one of the following four criteria: (1) it is associated with events that have made a significant contribution to the broad patterns of our history (Criterion 1); (2) it is associated with the lives of persons significant in our past (Criterion 2); (3) the resource embodies the distinctive characteristics of a type, period, or method of construction, or that it represents the work of a master, or possesses high artistic values (Criterion 3); or, (4) the resource has yielded, or may be likely to yield, information important to history or prehistory (Criterion 4). (Pub. Res. Code § 5024.1.) Historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code Regs., tit. 14, § 4852(c); Pub. Res. Code § 5020.1 (j), 5024.1).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA allows the lead agency to make a determination as to whether the resource is a historical resource.

Cultural resources are typically placed in one of three categories, classified by their origins: prehistoric, ethnographic, and historic. (Ex. 300, pp. 4.3-1 - 4.3-2.) Prehistoric archaeological resources are those resources that resulted from human occupation and use of California prior to prolonged European contact. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American human behavior. Ethnographic resources are those resources that represent the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbued landscape features, cemeteries, shrines, or ethnic neighborhoods and structures. Historic-period resources, both archaeological and architectural, are associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, traveled ways, artifacts, or other evidence of human activity. (Ex. 300, pp. 4.3-1 - 4.3-2.)

Our evaluation also considers the applicable law, ordinances, resolutions, and standards (LORS) as set forth in **Cultural Resources Table 1**.

Cultural Resources – Table 1
Laws, Ordinances, Regulations, and Standards

Applicable Law	Description
State	
Public Resources Code 5097.98(b) and (e)	Requires a landowner on whose property Native American human remains are found to limit further development activity in the immediate vicinity until he/she confers with the Native American Heritage Commission-identified Most Likely Descendents (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reinter the remains elsewhere on the property in a location not subject to further disturbance.
California Health and Safety Code, Section 7050.5	This code makes it a misdemeanor to knowingly mutilate or disinter, wantonly disturb, or willfully disturb or remove human remains found outside a cemetery without the authority of law. If human remains are discovered this code also requires a project owner to halt construction, excavation, or ground disturbance of the site or nearby area reasonably suspected to overlie adjacent remains if human remains are discovered and to contact the county coroner.
Local	
County of Stanislaus General Plan (County of Stanislaus 1994)	Conservation/Open Space Element, Goal Eight: Preserve areas of national, state, regional and local historical importance. Policies: The County will support the preservation of Stanislaus County's cultural legacy of historical and archaeological resources for future generations. "Qualified Historical Buildings" as defined by the State Building Code shall be preserved.
City of Ceres General Plan (City of Ceres 1997)	Recreational and Cultural Resources, Goal 5.B: To preserve and maintain sites, structures, and landscapes that serve as significant, visible reminders of the city's social, architectural, and agricultural history. Policies: • The City shall assist property owners in seeking registration of historic structures and sites as State Historic Landmarks or listing on the National Register of Historic Places. • The City shall encourage the preservation, maintenance, and adaptive reuse of existing historic buildings in the Redevelopment Areas and other areas of the Planning Area in order to prevent demolition and disrepair. • The City shall encourage the preservation of buildings of local historic importance in the Downtown and surrounding areas. • The City shall encourage relocation of reusable historic buildings as a means of historic preservation. • The City shall continue to implement the Historic Building Code for historic properties. Recreational and Cultural Resources, Goal 5.C: To protect Ceres' Native American heritage. Policies: • The City shall refer development proposals that may adversely affect archaeological sites to the California Archaeological Inventory at California State University, Stanislaus. • The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without first consulting the California Archaeological Inventory, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archaeologist. City implementations of this policy shall be guided by Appendix K of the *CEQA Guidelines*.

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §5.3, Appendixes 5.3A, 5.3B, 5.3C, 5.3D, 5.3E, 5.3F; 3 [Section 5.3]; 4 [Cultural Resources]; 8 [pp. 38-47, Attachment A, § 3.3, Attachment C]; 15 [Data Responses 16-24]; 18 [Data Response 19]; 21 [Data Response 18, Attachment DR18, § 3.3, Appendix F]; 25; 28; 29 [pp. 1-7]; 300[1], §4.3.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting

The proposed A2PP Project will be located in the City of Ceres in Stanislaus County, California. The site will occupy 4.6 acres of land adjacent to the existing TID Almond Power Plant (APP). The proposed project includes a new 11.6-mile natural gas line; reinforcement of a 1.8-mile segment of an existing natural gas line; two new 115-kV transmission lines; and the re-rating of an existing 69-kV, 2.9-mile transmission line. (Exs. 1, pp. 2-1, 5.3-2; 300, p. 4.3-4.)

2. Project Area of Analysis

The project area of analysis (or "project area") is the area within and surrounding the A2PP Project site, as well as all associated linear facility corridors. The evidence shows that the area reflects the minimum standards set out in the Energy Commission Power Plant Site Certification Regulations (Cal. Code Regs., tit. 20, § 1701 et seq., Appen. B, subd. (g)(2)) and is large and comprehensive in geographic area to facilitate and encompass considerations of both direct and indirect effects to archaeological, ethnographic, and built-environment resources.

The project area is a composite geographic area that allows for analysis of the following resource types:

- For archaeological resources, the area of analysis is minimally defined as the project site footprint, plus a buffer of 200 feet, and the project linear facilities routes, plus 50 feet to either side of the routes.

[1]During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

- For ethnographic resources, the area of analysis is expanded to take into account traditional use areas and traditional cultural properties that may be far ranging, including views that contribute to the historical significance of the properties. The Native American Heritage Commission (NAHC) assists project cultural resources consultants and Staff in identifying these resources, and consultation with Native Americans and other ethnic or community groups may contribute to defining the area of analysis. For the A2PP, Staff identified no ethnographic resources and so defined no area of analysis for them.
- For built-environment resources, the area of analysis is minimally defined as one parcel deep from the project site footprint in urban areas, but in rural areas is expanded to include a 0.5-mile buffer from the project site, and from any aboveground linear facilities, to encompass resources whose setting could be adversely affected by industrial development. For this project, the area of analysis is established at that minimum.
- For a historic district or a cultural landscape, the area of analysis is based on the unique aspects of of each siting case. The area of analysis for the Turlock Irrigation District Historic District, which is discussed herein as a potentially CRHR-eligible resource, is defined as the historic boundaries of the TID. (Ex. 300, pp. 4.3-13 – 4.3-14.)

3. Environmental Setting

a. Geology and Geomorphology

The surface of the A2PP plant site and vicinity is predominately Holocene in age. The Pleistocene (1.8 million–10,000 years ago), and Holocene (10,000 years ago to the present) geological epochs are the periods during which humans reached and spread over the northern and southern American hemispheres. Landforms from these periods are possible locations for surface or buried archaeological deposits.

The A2PP site and linear facilities are generally located in the Great Valley geomorphic province, which is a structural trough that the Sacramento Valley basin to the northwest and the San Joaquin Valley basin to the southeast.

The project area of analysis is located in the San Joaquin Valley, between the courses of the Tuolumne and Merced Rivers. It is a low-gradient alluvial plain described as vast and featureless. More specifically, the project site occupies an alluvial fan of the Tuolumne River with the near surface sediments deposited by flooding of the San Joaquin and Tuolumne rivers. Moving away from the rivers, the topmost stratigraphic unit in the project area is the Modesto Formation, which

dates from 75,000 to 10,000 years before the present. The Modesto Formation extends to a depth of 10–20 feet below the ground surface. (Exs. 1, pp. 5.4-1–5.4-2, 5.8-2, 5.8-5; 300, pp. 4.3-5 - 4.3-6.)

The project's natural gas pipeline route and pipeline reinforcement segment extend onto the fan-toe facies of the Tuolumne River fan, where the historic San Joaquin River and the toe of the Tuolumne River alluvial fan created a series of floodplain, flood basin, and interdistributary channel habitats. (Ex. 1, p. 5.8-6; 300, p. 4.3-6.)

b. Prehistoric Background

Several chronological sequences have been devised to trace the development of Central Valley Native American cultures and economies over time. These sequences are based on the persistence or replacement of material characteristics such as burial customs and artifact types. (Ex. 300, pp. 4.3-6 – 4.3-7.)

Evidence of human occupation during the Paleo-Indian (11,500 BC – 8550 BC) and Lower Archaic (8550-5550 BC) periods include the occurrence of skillfully made stone spear points. California's late Pleistocene and early Holocene people were primarily hunter-foragers who developed technology and adapted their lifestyles to the seasonal availability of a wide variety of local food sources.

Middle Archaic (5550 – 550 BC) sites indicate that subsistence was based on a variety of food resources that included many kinds of fish, birds, and mammals. Seeds, roots, and acorns were also important dietary elements. (Ex. 300, p. 4.3-8.) Evidence of human activity during the Upper Archaic period (550 BC to AD 1100) includes milling equipment, distinctive flaking patterns on large concave-base projectile points, and shell beads.

The best archaeologically represented period is the Emergent Period (1100 AD – Historic Period). During this period, earlier technologies disappeared and those associated with European contact in the region, including the bow and arrow. (Ex. 300, pp. 4.3-6 – 4.3-9.)

c. Ethnographic Background

The A2PP Project is located in the traditional territory claimed by the Native American group known as the Yalesumne tribe of the Northern Valley Yokuts.

Yokuts is a term applied to a large and diverse group that formerly inhabited the San Joaquin valley and Sierra Nevada foothills of central California. The Northern Valley Yokuts occupied the area between the Stanislaus and Tuolumne Rivers closest to the San Joaquin River and relied heavily on the river for settlement and subsistence. (Ex. 300, p. 4.3-9.)

Before the northern San Joaquin valley was transformed for agricultural use in the nineteenth century, sloughs and marshes dominated the floodplain of the San Joaquin River. The native Delta cultures were destroyed due to several factors including proliferation of Spanish missions, introduction of European diseases, and the impact of American settlers during the Gold Rush. (Ex. 300, p. 4.3-10.)

d. Historic Background

California's Central Valley has been defined by transportation, irrigation, and agriculture. It was during the American Period in particular (1848 to the present) that the region underwent great change. Gold was discovered following the Mexican-American War, triggering the Gold Rush of 1849 and an ensuing population explosion. Following California's statehood in 1850, commerce took hold in the San Joaquin Valley as local jurisdictions provided services to miners. The short-lived cattle boom soon followed.

The Central Pacific Railroad began construction of the first railroad in the valley in 1870. The rail line ran southeast toward Modesto, which was a planned railroad town. A section of the Tidewater Southern Railroad runs adjacent to the A2PP site. Ferries were also a common method of transportation. (Ex. 300, pp. 4.3-11 - 4.3-12.) The Tidewater Southern Railroad was organized in 1910 and started service in 1912. The line's connections in Stockton with several other railroads made carrying freight profitable. The line was ultimately acquired by Union Pacific. A section of the line runs adjacent to the A2PP site.

Regarding water supply and distribution, the evidence shows that Turlock Irrigation District (TID) was one of the first irrigation districts established following the passage of the Wright Bill in 1887. TID began irrigation in 1900 and most of its main canal and the laterals were completed by 1904. The founding of the TID, the creation and use of water conveyance systems in the early 1900s, and the promise of cheap land attracted settlers to the area. This sparked revolution in the area's agricultural practices and led to an increase in population and trade and formed the basis for new industries. (Ex. 300, p. 4.3-12.)

4. Cultural Resources Inventory

The evidence explains that development of a cultural resources inventory entails working through a sequence of investigatory phases that involves: conducting background research to identify known cultural resources; conducting fieldwork to collect requisite primary data on not-yet-identified cultural resources; assessing the results of any geotechnical studies or environmental assessments completed for the proposed project site; and, making recommendations or determinations of historical significance for any identified cultural resources. (Ex. 300, p. 4.3-13.) The Applicant's and Staff's research methods and results for each investigatory phase were detailed in the record. (Exs. 1, pp. 5.3-10 – 5.3-32; 300, pp. 4.3-15 – 4.3-20.) Their collective findings are summarized below.

Records Searches. In summary, the Applicant conducted a records search for the area encompassing a 1.0-mile buffer around the proposed A2PP plant site, laydown areas and parking areas, and a 0.5-mile buffer around the transmission line corridors and originally proposed natural gas pipeline routes.[2] (Ex. 300, p. 4.3-16.) The results of the California Historical Records Information Search (CHRIS) records search were as follows:

- No previously recorded cultural resources were identified within the proposed plant site or in the linear facilities corridors in the initial records search.
- Several TID laterals and drains, structures, and a section of the former Tidewater Southern Railroad (TSRR) were noted on the historic maps.
- Two previously recorded built-environment resources were identified in the literature search for the alignment of the natural gas pipeline
- One prehistoric resource was identified within 0.5 mile of the natural gas pipeline alignment. (Exs. 1, Appen. 5.3B and F, p. 10, 11, 21 [Attachment DR 18]; 300, pp. 4.3-16 -4.3-17.)

The prehistoric resource is a Native American burial site (P-50-000218) that consisted of midden (i.e., a deposit containing the accumulation of refuse and discards resulting from human domestic activities over a long period of time) and approximately six burials. The site was located on what appears to be a former natural levee of the San Joaquin River, approximately 550 feet from the proposed pipeline reinforcement segment. The midden included small amounts

[2] The natural gas pipeline alignment was modified after the Applicant submitted the AFC. The **Project Description** section of this Decision includes a diagram of the pipeline alignment.

of fractured stone, shell, and animal and human bone on the surface of a cultivated field.

The evidence indicates that the raised portion of the midden was destroyed in 1952 by grading activities. Portions of the undisturbed subsurface midden, including burials, was excavated about 1962 by students at what is now San Francisco State University. Remains of two individuals removed from this site are kept by the Santa Rosa Rancheria, which is affiliated with the Tachi Yokuts tribe. As discussed above, the Yokuts have traditional ties to the Central Valley and the project area. (Ex. 300, p. 4.3-16.)

Consultations. Consultations with local agencies and organizations and Native American representatives, yielded little information. In particular, the Native American Heritage Commission Sacred Lands file did not indicate the presence of Native American traditional cultural properties or cultural resources within the project area. (Ex. 330, p. 4.3-17.)

Pedestrian Archaeology Survey. This survey included examining exposed soils when possible. No cultural materials were identified but one cultural resource was recorded. The recorded resource is a four-mile segment of the Tidewater Southern Railroad that runs adjacent to the existing 69-kV transmission line that will be re-rated as part of the A2PP Project. This segment of the TSRR was completed in 1916, but the rail grade, crossings, lines [rails], and ties have been upgraded to accommodate heavier loads. The line is still in use and follows its original alignment. (Exs. 1, Appen. 5.3B, p. 15; 300, p. 4.3-18.)

Geoarchaeological Investigations. These investigations did not involve excavation within the A2PP Project area of analysis. Instead, the Applicant's geoarchaeologist relied on existing information from the TID Walnut Energy Center, located approximately eight miles south of the proposed A2PP site. The evidence shows that the excavations at the Walnut Energy Center provided an opportunity for closer examination of the Late Quaternary stratigraphy of the area and confirmed that the uppermost stratigraphic unit is the Modesto Formation, ranging from 6–10 feet thick. The excavations established that the upper four feet of this unit at the Walnut Energy Center site was generally disturbed due to the agricultural use of the area. They observed that the Riverbank Formation was below the Modesto Formation, dating to approximately 130,000 years ago. (Ex. 300, p. 4.3-18 – 4.3-19.)

As discussed above, the topmost stratigraphic unit in the project area is the Modesto Formation, which dates from 75,000 to 10,000 years before the present. The Modesto Formation extends to a depth of 10–20 feet below the ground surface. Due to the presence of Modesto Formation at the Walnut Energy Center site, sediments in the topmost stratigraphic layer in the area and the lack of recorded post-glacial sedimentation, encountering Holocene-age archaeological material at depth on the Tuolumne River or Merced River alluvial plains during construction is unlikely. (Ex. 18, pp. 4-5; 300, p. 4.3-18).

The Applicant's geoarchaeologist also reviewed the surficial geologic mapping of the pipeline right-of-way on the east and west sides of the San Joaquin River. The analysis established that the surficial geology on the east side of the river is comprised exclusively the Modesto Formation. (Exs. 8, Attachment C; 300, p. 4.3-19.)

Windshield Survey for Built-Environment Resources. The survey identified 63 buildings over 45 years old. Most of these buildings were prefabricated homes, trailers, and significantly altered minimal traditional and ranch-style structures. These types of structures are generally not considered eligible for CRHR listing. Moreover, the evidence presented establishes that these buildings are ineligible under NRHP Criteria A and B and lacked sufficient integrity to be eligible under Criterion C; these criteria are nearly identical to the CRHR Criteria 1-3. Additionally and, need not be recorded on California Department of Parks and Recreation (DPR) 523 forms. (Exs. 1, pp. 5.3-25, 5.3-27- 5.3-31, Appen. 5.3B, p.16; 300, 4.3-19.)

Also identified were segments of seven TID laterals (2, 2½, 3, 4, 4½, 5, and 5½) and two TID drains (Harding, Prairie Flower). The Applicant recorded the laterals and drains as discrete 100-foot segments. The TID was up and running by the 1904–1905 growing season. Problems with the rising water table began in 1907, and the Moore Drain was constructed; additional drains, including the two in the project area, were constructed after 1918. All of the laterals, except Lateral 5, have been improved with concrete lining beginning in the 1920s; Lateral 5 remains unlined. (Exs. 1, Appen. 5.3B; 21; 300, p. 4.3-19.)

Summary of Identified Cultural Resources. As shown below in **Cultural Resources Table 2**, Staff identified 1 prehistoric archaeological site and 14 built-environment resources within the one-mile records search radius. The prehistoric site is the above-described burial site.

Eleven of the 14 built-environment resources are associated with TID; one is a section of the the Tidewater Southern Railroad; and the remaining two are residential structures. (Ex. 300, pp. 4.3-19 -4.3-20.)

CULTURAL RESOURCES Table 2
Known Cultural Resources Located in the Vicinity of the Proposed Project

Resource Type and Designation	Resource Description	Previously Known/New
Prehistoric Resources	Burial Site (P-50-000218)	Previously Known
Built-Environment Resources	Tidewater Southern Railroad (P-50-000083)	Previously Known/Newly Recorded (Segments)
	TID Lower Lateral 2 (P-50-000073)	Previously Known
	TID Lateral 2	Newly recorded
	TID Lateral 2½	Newly recorded
	TID Lateral 3	Newly recorded
	TID Lateral 4	Newly recorded
	TID Lateral 4½	Newly recorded
	TID Lateral 5	Previously Known/Newly Recorded (Segments)
	TID Lateral 5½	Newly recorded
	TID Harding Drain	Newly recorded
	TID Prairie Flower Drain	Newly recorded
	TID Historic District	Newly recorded
	125 Cowan Street	Newly recorded
	5237 Crows Landing Road	Newly recorded

5. CRHR Eligibility Evaluations

The record details the Applicant's and Staff's CRHR-eligibility evaluations of the following resources:

- Burial Site (P-50-000218)
- TID Historic District
- TID Laterals and Drains
- Tidewater Southern Railroad

The evidence establishes that the Tidewater Southern Railroad is not eligible under any of the criteria. (Ex. 1, p. 5.3-21; 300, pp. 4.3-23 – 4.3-24.) The grounds for determining that the other resources as eligible are summarized below.

a. Burial Site (P-50-000218).

This Native American burial site, which consists of midden and contained at least six human burials, is located on what appears to be a former levee of the San Joaquin River. Ethnographers described this area as the preferred location for the village sites of the historic Yokuts; i.e., mounds along the river. The evidence indicates that prehistoric village mound sites along the rivers of the Central Valley are the best sources of data on the lifeways of the prehistoric inhabitants of this region.

CRHR did not exist when the site was initially identified and investigated. However, this site would probably have been eligible for the CRHR, under Criterion 4 ("likely to yield information important in history or prehistory"). Staff determined, and we agree, that the remnants of the site may retain such eligibility. (Ex. 300, p. 4.3-21.)

b. TID Historic District.

TID is one of only three irrigation districts established early in California history (after the 1887 passage of the Wright Act) and still in operation. The Applicant identified the period of significance for the district from 1893 to 1920, beginning with the construction of the La Grange Dam and encompassing the fundamental development of the TID. Contributing elements of the District include:

- La Grange Dam
- Turlock Diversion Canal
- Main Supply Canal
- Ceres Main Canal
- Turlock Main Canal
- Highline Canal
- Laterals, including 1, 2, 2½, 3, 4, 4½, 5, 5½, 6, 7, 8
- Drains, including Moore, Gilstrap, Westport and Harding
- Ditches
- Associated road structures, including bridges and culverts
- Check dams/flow controls
- Diversion features, including regulator gates, valves, checks, drops and chutes
- Tunnels (Exs. 15, pp. 42-43, Attachment DR23-1; 300, p. 4.3-21.)

TID's jurisdictional area encompasses 307 square miles and overlaps both Stanislaus and Merced Counties. The evidence identifies the boundaries of the district as the Merced River to the south, the San Joaquin River to the west, and the Tuolumne River on the north. Per the guidance and evaluation procedures discussed in *Water Conveyance Systems in California* the boundaries of the TID begin with its source at the La Grange Dam to the east, making it the eastern boundary of the district, and proceed in a linear fashion.

The evidence shows that TID retains its integrity of location, design, and association despite modifications made as a consequence of routine maintenance. Although these changes have somewhat affected the district's integrity of feeling, materials, and workmanship, because these activities began in 1917, within the specified period of significance, they are reasonably considered an improvement to the District overall. Thus, we concur with the Applicant's and Staff's determination that the District retains sufficient integrity to convey its significance and is eligible for the CRHR under Criterion 1 for its association with the development of irrigation agriculture in California and the Central Valley. (Ex. 300, pp, 4.3-21 - 4.3-22.)

c. TID Laterals and Drains

The TID laterals in the project area were constructed between 1899 and 1918. For the purposes of the A2PP Project analysis, the Applicant recorded the individual laterals in discrete 100-foot segments, with the exception of Lateral 2 which was recorded as a two-mile segment. The laterals were constructed as open-earth canals and, with the exception of the section of Lateral 5 in the project area, were lined with concrete after 1920. Lateral 5 remains an open earth canal.

The drains in the project area were constructed around 1918. The check dams and flow controls have also been upgraded. (Ex. 1, Appendix 5.3B.)

The evidence supports the Applicant's determination that the individual segments of canal and drains, each being a very small part of a larger system, do not convey a clear association with significant trends in agriculture, are not associated with persons important to the history of the region, state or nation, and are not significant examples of a type, period or method of construction. Nor are the recorded segments an important source of information about canal construction or technology. (Ex. 300, pp. 4.3-22 – 4.3-23.) Thus, the individual lateral segments and drains are not eligible for the CRHR.

However, because the individual segments and drains are collectively contributing resources to the above-described TID Historic District, they are eligible for the CRHR under Criterion 1. (Ex. 300, pp. 4.3-22 – 4.3-23.)

6. Potential Direct and Indirect Impacts

a. Construction

The proposed A2PP construction activities entailing ground disturbance include: site grading; hauling and storage of equipment, materials, and supplies; excavation of pads and foundations for project equipment; and excavation for a storm water retention pond.

More particularly, the topmost 6.5 feet at the plant site is fill, but foundation excavations for the three new, 80-foot-tall cooling towers and associated equipment could extend below that depth. Excavation of the storm water retention pond could also entail depths greater than 6.5 feet. The new transmission lines will require excavations nine feet deep for tangent poles and 25 feet deep for angle poles. The re-rating of the existing 69-kV line would involve pulling new wires between the existing poles. This process can entail ground disturbance around each pole, the creation or enlargement of roads between the poles, and the creation of large areas of ground disturbance at pulling sites. The proposed new natural gas line would require excavating a trench four feet wide and six to eight feet deep. The evidence suggests that removal of the old pipe and its reinforcement with a new pipe would disturb some previously undisturbed sediments on the sides and bottom of the original installation trench. The excavation depths for the various foundations on the proposed plant site are unknown at this time

Built-Environment Resources. A2PP construction could impact the TID Historic District, which has been shown to retain its integrity of location, design, and association, integrity of feeling, materials, and workmanship. The evidence shows that the construction of the A2PP would have no impacts on the District's integrity of location or association.

But, because the A2PP's natural gas line trench intersects several of the TID's laterals and drains, construction of the A2PP could potentially have a direct physical impact on the District's integrity of design, workmanship, and materials. Also, because the A2PP would introduce new, tall elements into the landscape of the historic district, it could potentially have a direct perceptual impact on the

District's integrity of setting and integrity of feeling. The potential for impacts will be obviated by the Applicant's proposed use of trenchless methods to install the pipeline underneath the laterals and drains. As discussed throughout this Decision, the natural gas pipeline will be installed, maintained, and owed by PG&E. The evidence contained in the **Biological Resources** section of this Decision regarding potential frac-out and the necessity of directional drilling techniques such as a jack and bore to avoid or minimize impacts to or near canals supports our conclusion that PG&E will use such drilling techniques.

Also, because the existing APP and its transmission line are existing elements in the TID Historic District's setting and already contribute to the general feeling of the area, the introduction of the A2PP plant and transmission line would not adversely change the TID Historic District's setting or the general feeling of the area. Thus, the A2PP impact to the TID Historic District's integrity of setting and integrity of feeling would not be significant, and no mitigation would be required.

Archaeological Resources. As discussed above, it is possible that subsurface prehistoric and historic-period archaeological deposits could be encountered during construction.

Burial Site. The evidence indicates that that potentially CRHR-eligible buried archaeological deposits similar to those of P-50-000218 could be in the previously undisturbed fluvial sediments around the segment of existing natural gas pipeline on the west side of the San Joaquin River that the project would reinforce. Moreover, there is a moderate-to-high potential for buried archaeological resources in the vicinity of the San Joaquin River.

CEQA advises a lead agency to make provisions for archaeological resources unexpectedly encountered during construction (Pub. Resources Code, § 21083.2; Cal. Code Regs., tit. 14, §§ 15064.5(f) and 15126.4(b)). In this regard, the Applicant proposed a number of measures intended to mitigate potential impacts to unknown buried archaeological resources that might be discovered during the construction. (Ex. 1, pp. 5.3-34–5.3-36.) These measures include:

- retaining a designated Cultural Resource Specialist (CRS) who will be available during the entire construction period to evaluate any unanticipated discoveries;
- designing and implementing a worker education program for all personnel who have the potential to encounter and alter archaeological sites, historical resources, or properties that may be eligible for the CRHR;

- preparing and implementing a construction monitoring and unanticipated cultural resources discovery plan; ensuring that impacts to cultural resources related to the unanticipated discovery of human remains are treated in accordance with state law as detailed in PRC Sections 5097.91 and 5097.98, as amended; and,
- including in its operation and maintenance manual provisions that will be followed when any ground-disturbing work will occur at the power plant or linear facilities.

We find that these measures as expanded upon by Staff's proposed Conditions of Certification A2PP, **CUL-1** through **CUL-10,** will ensure that all impacts to cultural resources are mitigated to below the level of significance. The record establishes that Staff and the Applicant jointly crafted the language of Conditions **CUL-1**, **-2**, **-3**, and **-9**. (Ex. 301.) As discussed above, **CUL-1**, **CUL-2, and CUL-3,** require a post-certification, pre-construction geoarchaeological study to identify the potential presence of buried prehistoric archaeological resources where the existing gas pipeline will be reinforced. **CUL-1** includes provisions for the geoarchaeologist to receive project-generated background data and for the treatment of any buried archaeological deposits, historic or prehistoric, encountered during geoarchaeological data collection.

Additionally, **CUL-6** incorporates the results of the geoarchaeological study into the required research plan in the Cultural Resources Monitoring and Mitigation Plan and requires a mitigation plan for any CRHR-eligible buried archaeological deposit that would capture a representative sample of the information for which any such resource may be significant. **CUL-9** uses the results of the geoarchaeological study to specify the locations and depths for archaeological monitoring intended to identify buried prehistoric archaeological deposits.

The geoarchaeological report produced through the implementation of **CUL-1, CUL-2,** and **CUL-3** would augment the cultural resources inventory, would provide the basis for recommending project design changes to avoid any CRHR-eligible archaeological deposits, and would facilitate the refinement of those monitoring requirements (mitigation measures) that address the possibility of encountering buried prehistoric archaeological resources during project-related excavation. **CUL-4** through **CUL-10** would provide for the identification, evaluation, and mitigation, if required, of any buried archaeological deposits unexpectedly encountered during project-related excavations.

In summary, because the project would have no significant impacts on known CRHR-eligible cultural resources, no mitigation would be required for such resources. Proposed Conditions of Certification **CUL-1** through **CUL-10** would provide for identification of and appropriate treatment for as-yet-unidentified CRHR-eligible archaeological resources encountered during construction.

Implementation of the Conditions of Certification will reduce direct impacts to cultural resources to less than significant levels. No indirect construction-related impacts were identified by the Applicant or Staff. No mitigation is required for indirect impacts.

7. Operation Impacts

There was no evidence presented that the project would result in any operational impacts to cultural resources. No mitigation is required for potential direct or indirect operation impacts.

8. Cumulative Impacts

A cumulative impact refers to a project's incremental effects considered over time and together with those of other nearby, past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the project. (Pub. Res. Code § 21083; Cal. Code Regs., tit. 14, § 15064(h), 15065(a)(3), 15130, and 15355.)

Cumulative impacts to cultural resources in the A2PP Project vicinity could occur if any other existing or proposed projects, in conjunction with the proposed A2PP, had or would have impacts on cultural resources that, considered together, would be significant. (Ex. 300, p. 4.3-30.)

The Applicant identified 34 projects under consideration or underway by the City of Ceres, 36 by the City of Modesto, and 29 by Stanislaus County. (Ex. 1, § 5.6.4.) Three of the projects are public works projects on existing infrastructure and would not be expected to have an impact on cultural resources. Three industrial and three residential projects are planned within a 2.5–3.0 mile radius of the project area. Three long range planning projects are within two miles of the project area.

The evidence indicates that the cumulative impact of these projects would not result in significant unmitigated adverse impacts. Further, proponents of future

projects in the area could mitigate impacts to known, CRHR-eligible resources through avoidance or data recovery and could mitigate impacts to as-yet-undiscovered subsurface archaeological sites to less-than-significant levels by requiring archaeological monitoring protocols for ground disturbance through avoidance or data recovery. These are standard measures used to ensure compliance with Section 15064.5 of the State CEQA Guidelines and related provisions of the Public Resources Code. It is assumed that similar measures would be applied to other projects in the area as appropriate. Impacts to human remains can be mitigated by following the protocols established by state law in Public Resources Code section 5097.98. Thus, the A2PP project and the other identified projects in the vicinity are not expected to result in significant cumulative impacts to cultural resources. (Exs. 1, pp. 5.3-34, 5.6-61; 300, pp. 4.3-30 – 4.3-31.)

Since any impacts from the proposed A2PP Project would be mitigated to a less-than-significant level by the project's compliance with proposed Conditions of Certification **CUL-1** through **CUL-10**, and since similar protocols can be applied to other projects in the area, we do not expect any incremental effects on cultural resources of the proposed A2PP Project to be cumulatively considerable when viewed in conjunction with other projects.

9. Compliance with LORS

Cultural Resources Table 1 above identifies the applicable state and local LORS. The Applicant identified these same LORS and explained how project construction will comply with each of them. (Ex. 1, pp. 5.3-34 - 5.3-40.) We find that with implementation of the mitigation measures set forth in AFC Sections 5.3.5, 5.3.5.9, 5.3.8.2 and the Conditions of Certification, the project will comply with all applicable LORS.

10. Public and Agency Comments

No public or agency comments were received on this topic.

FINDINGS OF FACT

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

1. No previously recorded cultural resources were identified within the proposed plant site or in the linear facilities corridors in the initial records search.

2. The Sacred Lands file did not indicate the presence of Native American traditional cultural properties or cultural resources within the project area.

3. Two built-environment resources were identified in the literature search for the preferred alignment of the natural gas pipeline.

4. One prehistoric resource (P-50-000218) was identified within 0.5 miles of the preferred alignment. The burial site consists of midden and approximately six burials.

5. While the project will not impact the prehistoric resource, the evidence in the record indicates that the archaeological deposits similar to those of the prehistoric site could be in the sediments around the existing and proposed pipeline.

6. The evidence of record indicates that the TID Historic District is the only CRHR-eligible cultural resource within the areas of analysis that could potentially be impacted by the A2PP.

7. The project's features will not impact the integrity of design, workmanship, and materials of the TID Historic District, and impacts to the integrity of setting and feeling will not be significant. Therefore, no mitigation will be required.

8. Conditions of Certification **CUL-1** through **CUL-10** will mitigate potential impacts to buried archaeological resources that could be discovered during the construction of the proposed A2PP. The Conditions also provide for identification of and appropriate treatment for as-yet-unidentified CRHR-eligible archaeological resources encountered during construction.

9. The incremental effects on cultural resources of the A2PP Project will not be cumulatively considerable when viewed in conjunction with other projects.

CONCLUSIONS OF LAW

1. With implementation of the Conditions of Certification below, the A2PP Project will conform to all applicable laws, ordinances, regulations, and standards relating to cultural resources as set forth in the pertinent portion of **Appendix A** of this Decision.
2. Through implementation of the Conditions of Certification below, the project will have no significant environmental impacts.

CONDITIONS OF CERTIFICATION

CUL-1 Prior to the start of ground disturbance (includes "preconstruction site mobilization," "construction ground disturbance," and "construction grading, boring, and trenching," as defined in the General Conditions for this project) for the reinforced segment of the natural gas pipeline on the west side of the San Joaquin River (hereinafter referred to as the "Reinforcement Segment"), the project owner shall obtain the services of a Project Geoarchaeologist (PG).

The resume for the PG shall include information demonstrating to the satisfaction of the CPM that the PG's training and background conform to the U.S. Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology, as published in Title 36, Code of Federal Regulations, part 61, and showing the completion of graduate-level coursework in geoarchaeology or Quaternary science.

The resume of the PG shall include the names and telephone numbers of contacts familiar with the work of the PG, as a professional geoarchaeologist, on referenced projects and demonstrate to the satisfaction of the CPM that the PG has the appropriate training and experience to undertake the required geoarchaeological study.

No ground disturbance related to the Reinforcement Segment shall occur prior to CPM approval of the PG, unless specifically approved by the CPM.

Verification: At least 135 days prior to the start of ground disturbance related to the Reinforcement Segment, the project owner shall provide the resume of the PG to the CPM, for review and approval.

CUL-2 The PG shall conduct geoarchaeological fieldwork research on the Reinforcement Segment construction right-of-way (ROW) and the San Joaquin River fluvial system landforms (floodplain, alluvial

terraces, and various overbank deposits) in the immediate vicinity, using available geoarchaeological technical literature, remote imagery, site records, and observations from a field reconnaissance of the area. Review of the cultural resources data compiled during the AFC review process shall precede the field reconnaissance.

1. The results of the pre- excavation geoarchaeological research and field reconnaissance shall be submitted to the CPM in a Geoarchaeological Pre-Excavation Research Report that shall also include:

    - A large scale (≥1:12,000) map portraying the Reinforcement Segment pipeline trench and surrounding landforms,
    - Descriptions of identified landforms in and immediately around the construction ROW of the Reinforcement Segment,
    - The geomorphic history of the study area,
    - The hypothesized distribution of potentially sensitive subsurface conditions,
    - The age, to the extent feasible, of the landforms on which the Reinforcement Segment would be located,
    - The postulated distribution of Modesto Formation (Pleistocene and possible early Holocene) landforms versus post-Modesto Formation (postglacial or Holocene) landforms,
    - Recommendations for the optimal location of pre-construction geoarchaeological excavations of a portion of the Reinforcement Segment pipeline trench(**CUL-3**)and
    - A research design for these excavations, to follow the guidance below.

The research design shall include, but is not limited to the following elements:

- Geoarchaeological preconstruction excavations shall be located along the pipeline centerline to avoid additional impacts to buried cultural resources beyond that which would occur during construction along the Reinforcement Segment ROW.
- Unless otherwise specified in the approved Geoarchaeological Pre- Excavation Research Report, the excavations shall consist of backhoe trenches.
- The total depth of excavations shall be to the water table, or to the anticipated depth of the proposed pipeline installation,

whichever is encountered first. The number of backhoe trenches appropriate to this study shall in no case exceed four trenches. Excavation methods shall include:

a. the recordation of one measured profile from each backhoe trench to include reasonably detailed written descriptions of each lithostratigraphic and pedostratigraphic unit, a measured profile drawing, and a profile photograph with a metric scale and north arrow;

b. the screening through ¼-inch hardware cloth of a small (three 5- gallon buckets) sample of sediment from the major lithostratigraphic units in each profile or from two arbitrary levels in each profile;

c. collection of radiocarbon or TL (thermoluminescence) samples to date and/or correlate stratigraphic units and time horizons, with processing of these samples at the discretion of the PG, in consultation with the CPM; and

d. implementation of a protocol to immediately inform the project owner of any buried prehistoric archaeological deposits encountered during geoarchaeological data collection and to facilitate informing the CPM.

2. At the conclusion of reconnaissance and initial data review, a meeting or teleconference with the CPM, the PG, and the project owner shall be held to review the results of the Geoarchaeological Pre- Excavation Research Report.

   No ground disturbance related to the Reinforcement Segment shall occur prior to CPM approval of the Geoarchaeological Pre-Excavation Research Report, unless specifically approved by the CPM.

Verification: At least 120 days prior to the start of ground disturbance related to the Reinforcement Segment, the project owner shall provide the AFC, data responses, all confidential cultural resources documents, maps and drawings, and the Staff Assessment to the PG.

At least 90 days prior to the start of ground disturbance related to the Reinforcement Segment, the project owner shall submit the Geoarchaeological Pre-Excavation Research Report and to the CPM for review and approval.

CUL-3 Geoarchaeological preconstruction excavations along the Reinforcement Segment ROW shall occur under the direction of the PG. The PG may elect to obtain specialized technical services

beyond the requisite radiometric dating to assist in data-gathering and data-interpreting activities.

The PG shall provide a Geoarchaeological Excavation Results Report to the project owner and the CPM that describes the results of the geoarchaeological pre-construction excavations and the subsurface geomorphology along the Reinforcement Segment ROW. This report shall include:

a. in graphic and written form, a master column that characterizes the stratigraphy of the subject portion of the Reinforcement Segment ROW, including a geologic interpretation of the approximate age of the stratigraphic subdivisions reflecting shifts in depositional history and time ranges that correspond to the prehistory and history of the region;

b. the results of the study placed in the context of what is known of the area's Quaternary geomorphology and environmental history;

c. descriptions of any encountered archaeological deposits, including an assessment of the lateral and vertical extents of each such deposit, descriptions of the material culture content and the character of the sedimentary matrix for each deposit, and an assessment of the approximate age of each deposit;

d. a preliminary interpretation of the character of the prehistoric or historic land use that each encountered archaeological deposit represents;

e. an interpretation, with reference to the information gathered and developed above, of the likelihood that buried archaeological deposits are present, and, on the basis of the current understanding of the prehistory and history of the geoarchaeological study area region, what site types are most likely to be found;

f. recommendations, on the basis of the conclusions in "e" where and to what depth archaeological monitoring should be done during construction of the Reinforcement Segment;

g. an assessment of the potential necessity and the approximate cost of mitigating project impacts to any CRHR-eligible buried archaeological deposits found during the geoarchaeological study, and recommended options for project re-design to avoid any potential CRHR-eligible deposits found;

h. appendices to the report to include completed DPR 523 forms for any archaeological deposits encountered and recorded.

The project owner shall review the Geoarchaeological Excavation Results Report and evidence consideration of any project design changes recommended by the PG.

No ground disturbance related to the Reinforcement Segment shall occur prior to CPM approval of the Geoarchaeological Excavation Results Report.

Verification: **1.**At least 90 days prior to the start of ground disturbance related to the Reinforcement Segment, the project owner shall notify the CPM by letter or in an e-mail that the PG has initiated the CPM-approved geoarchaeological study.

2. No later than three weeks after the geoarchaeological pre-construction excavations conclude, the project owner, the PG, and the CPM shall meet or teleconference to review the results of pre-excavations and decide on the need for radiocarbon or other dating.

3. At least 20 days prior to the start of ground disturbance related to the Reinforcement Segment, the project owner shall submit the Geoarchaeological Excavation Results Report to the CRS and the CPM for review and approval.

CUL-4 Prior to the start of ground disturbance (includes "preconstruction site mobilization," "ground disturbance," and "construction grading, boring and trenching," as defined in the General Conditions for this project), the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternate CRSs, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities required in accordance with the Conditions of Certification (COCs). 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 CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner. No ground disturbance shall occur prior to CPM approval of the CRS and alternates, unless such activities are specifically approved by the CPM. Approval of a CRS may be denied or revoked for reasons including but not limited to non-compliance on this or other Energy Commission projects. After all ground disturbance is completed and the CRS has fulfilled all responsibilities specified in these **Cultural Resources** Conditions, the project owner may discharge the CRS, if the CPM approves. With the discharge of the CRS, these

Cultural Resources Conditions no longer apply to the activities of this power plant.

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 Title 36, Code of Federal Regulations, part 61 (36 C.F.R., 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;
2. At least three years of archaeological or historical, as appropriate (per nature of predominant cultural resources on the project site), resource mitigation and field experience in California; and
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/alternate CRS has the appropriate training and experience to implement effectively the Conditions.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. a B.S. or B.A. degree in anthropology, archaeology, historical archaeology or a related field and one year experience monitoring in California; or
2. an A.S. or A.A. 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 specialist(s), 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 proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If there is no alternate CRS in place to conduct the duties of the CRS, a previously approved monitor may serve in place of a CRS so that ground disturbance may continue up to a maximum of 3 days without a CRS. If cultural resources are discovered then ground disturbance will remain halted in the immediate vicinity until there is a CRS or alternate CRS to make a recommendation regarding significance.

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.

At least five days prior to additional CRMs beginning on-site duties during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to their qualifications.

At least 10 days prior to any technical specialists beginning tasks, the resume(s) of the 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 onsite work and is prepared to implement the **Cultural Resources** Conditions.

CUL-5 Prior to the start of ground disturbance, the project owner shall provide the CRS with copies of the AFC, data responses, confidential cultural resources reports, all supplements, and the Energy Commission's Staff Assessment (SA) for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas. 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 map 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 such activities are specifically approved by the CPM.

If construction of the project would proceed in phases, maps and drawings not previously provided shall be provided to the CRS and CPM prior to the start of each phase. Written notice identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

Weekly, until ground disturbance is completed, the project construction manager shall provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.

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, confidential cultural resources documents, and the Energy Commission FSA to the CRS 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.

At least 15 days prior to the start of ground disturbance, if there are changes to any construction-related footprint, the project owner shall provide revised maps and drawings for the changes to the CRS and CPM.

At least 15 days prior to the start of each phase of a phased project, the project owner shall submit the appropriate maps and drawings, if not previously provided, to the CRS and CPM.

Weekly during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.

Within five days of changing the scheduling of phases of a phased project, the project owner shall provide written notice of the changes to the CRS and CPM.

CUL-6 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 follow the content and organization of the draft model CRMMP, provided by the CPM, and the authors' name(s) 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 CRM, and the project owner's environmental compliance manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless such activities are specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. The following statement included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions of Certification 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**."

2. A proposed general research design, scoped, to the extent feasible, to the time periods and the archaeological resource types established by the geoarchaeological field study, that includes a discussion of archaeological research questions and testable hypotheses specifically applicable to the area in which the project is located, and a discussion of artifact collection, retention/disposal, and curation policies as related to the research questions formulated in the research design. The research design will specify that the preferred treatment strategy for any buried archaeological deposits is avoidance. A specific mitigation plan shall be prepared for any unavoidable impacts to any CRHR-eligible (as determined by the CPM) resources. A prescriptive treatment plan may be included in the CRMMP for limited data types.

3. Specification of the implementation sequence and the estimated time frames needed to accomplish all construction-related tasks during the ground disturbance and post-ground–disturbance analysis phases of the project.

4. 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.

5. 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.

6. A description of all impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive

resource areas that are to be avoided during ground disturbance and construction, and identification of areas where these measures are to be implemented. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from construction-related effects.

7. A statement that all encountered cultural resources over 50 years old shall be recorded on Department of Parks and Recreation (DPR) 523 forms 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.
8. A statement that the project owner will pay all curation fees for artifacts recovered and for related documentation produced, if any, 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.
9. A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are encountered during ground disturbance and cannot be treated prescriptively.
10. A description of the contents and format of the final Cultural Resources Report (CRR), which shall be prepared according to ARMR guidelines.

Upon approval of the CRS proposed by the project owner, the CPM will provide to the project owner an electronic copy of the draft model CRMMP for the CRS.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall submit the CRMMP to the CPM for review and approval.

At least 30 days prior to the start of ground disturbance, in a letter to the CPM, the project owner shall agree to pay curation fees for any materials generated or collected as a result of the archaeological investigations (survey, testing, data recovery).

CUL-7 The project owner shall submit the final CRR to the CPM for approval. The final CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format. The final CRR shall report on all field activities including dates, times and locations, results, samplings, and analyses. All survey reports, DPR forms, data recovery reports, and any additional research reports

not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as appendices to the final CRR.

If the project owner requests a suspension of ground disturbance and/or 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 within 24 hours of the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until ground disturbance and/or 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 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the final 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 90 days after completion of ground disturbance (including landscaping), if cultural materials requiring curation were generated or collected, the project owner shall provide to the CPM a copy of an agreement with, or other written commitment from, a curation facility that meets the standards stated in the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, to accept cultural materials, if any, from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.

Within 10 days after CPM approval of the CRR, the project owner shall provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of construction-related reports.

CUL-8 Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, along the linear facilities routes, and at laydown areas, roads, and other ancillary areas. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be

resumed when ground disturbance, such as landscaping, resumes. The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. Samples or visuals of artifacts that might be found in the project vicinity;
3. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;
4. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;
5. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;
6. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;
7. An informational brochure that identifies reporting procedures in the event of a discovery;
8. An acknowledgement form signed by each worker indicating that they have received the training; and
9. A sticker that shall be placed on hard hats indicating that environmental training has been completed.
10. No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

Verification:

1. At least 60 days prior to site mobilization the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval.
2. At least 15 days prior to the beginning of ground disturbance, the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.
3. Monthly, until ground disturbance is completed, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers who have completed the training in the

prior month and a running total of all persons who have completed training to date.

CUL-9 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor full time all ground disturbance related to the Reinforcement Segment, according to the recommendations of the Geoarchaeological Excavation Result Report required in **CUL-2** and **CUL-3**, and as approved by the CPM, to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner.

Full-time archaeological monitoring related to the Reinforcement Segment shall be the archaeological monitoring of the earth-removing activities in the areas specified in the previous paragraph, for as long as the activities are ongoing. Full-time archaeological monitoring related to the Reinforcement Segment shall require at least one monitor per excavation area where machines are actively disturbing native soils. If an excavation area is too large for one monitor to effectively observe the native soil disturbance, one or more additional monitors shall be retained to observe the area.

The project owner shall obtain the services of a Native American monitor to monitor ground disturbance in any areas where Native American artifacts are discovered in native soils. Contact lists of interested 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. After finding those efforts to be satisfactory, the CPM may either identify other potential monitors or allow ground disturbance to proceed without a Native American monitor.

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 noncompliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS or alternate CRS shall report daily to the CPM on the status of the project's cultural resources-related activities, unless

reducing or ending daily reporting is requested by the CRS and approved by the CPM.

In the event that the CRS believes 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 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.

Verification: At least 30 days prior to the start of ground disturbance related to the Reinforcement Segment, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log.

Monthly while monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and shall attach any new DPR 523A forms completed for finds treated prescriptively, as specified in the CRMMP.

At least 24 hours prior to implementing a proposed change in monitoring level, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for changing the monitoring level.

Daily and as long as no cultural resources are found related to the Reinforcement Segment, 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 of communication acceptable to the CPM.

At least 24 hours prior to reducing or ending daily reporting, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for reducing or ending daily reporting.

CUL-10 The project owner shall grant authority to halt ground disturbance in the immediate vicinity of a discovery 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 that a cultural resource over 50 years of age is found (or if younger, determined exceptionally significant by the CPM), or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting as provided in these conditions shall continue during the project's ground-disturbing activities elsewhere. The halting or redirection of ground disturbance 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 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 CRHR eligibility, and recommendations for data recovery from any cultural resources discoveries, whether or not a determination of CRHR eligibility has been made.
2. If the discovery would be of interest to Native Americans, the CRS has notified all Native American groups that expressed a desire to be notified in the event of such a discovery.
3. The CRS has completed field notes, measurements, and photography for a DPR 523 "Primary" form. Unless the find can be treated prescriptively, as specified in the CRMMP, the "Description" entry of the DPR 523 "Primary" form shall include a recommendation on the CRHR eligibility of the discovery. The project owner shall submit completed forms to the CPM.
4. 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 ground disturbance in

the immediate vicinity of a cultural resources discovery, the distance to be determined by the CRS in consultation with the CPM, 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.

Within 48 hours of the discovery of a resource of interest to Native Americans, the project owner shall ensure that the CRS notifies all Native American groups that expressed a desire to be notified in the event of such a discovery.

Unless the discovery can be treated prescriptively, as specified in the CRMMP, completed DPR 523 forms for resources newly discovered during ground disturbance 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 the CRS decides is more appropriate for the subject cultural resource.

D. GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

This section of the Decision summarizes the record concerning the project's potential effects relating to geological and paleontological resources. Our evaluation in this subject area is guided by California Environmental Quality Act (CEQA) Guidelines, Appendix G.

The evidence evaluates whether project-related activities could result in exposure to geological hazards, as well as whether the facility can be designed and constructed to avoid any such hazard which could impair its proper functioning. These include faulting and seismicity, liquefaction, dynamic compaction, hydrocompaction, subsidence, expansive soils, landslides, tsunamis, and seiches. Next, the evidence assesses whether the project will impact any geologic or mineralogical resources. Finally, the evidence examines whether fossilized remains or trace remnants of prehistoric plants or animals are likely to be present at the site and, if so, whether the project's potential impacts to these resources are adequately mitigated.

Our evaluation of the project also includes an assessment of the project's compliance with the applicable laws, ordinances, regulations, and standards (LORS). The LORS are identified in **Appendix A** to this Decision.

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §§ 5.4, 5.8; 300[1], §5.2.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Site Description

The project site is located in central Stanislaus County approximately 30 miles east of the boundary between the Coast Ranges and the Great Valley (Central Valley) physiographic provinces. The Great Valley is approximately 400 miles

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as Exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter Exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's Exhibits 300 through 302 in this Decision.

long and 60 miles wide. The northern third of the Valley is known as the Sacramento Valley and the southern two-thirds are known as the San Joaquin Valley. (Ex. 300, p. 5.2-3.)

The Great Valley is characterized by dissected uplands and relatively undeformed low alluvial plains and fans, river flood plains and channels, and lake bottoms. Much of the Valley alluvium is underlain by marine and non-marine sedimentary rocks and crystalline basement that have undergone antilinal and synclinal folding and faulting related to regional tectonism. (*Id*.)

Overall, the project site slopes downward toward the west. The site surface is composed of six or more feet of engineered fill which was imported to replace native soil removed during construction of the adjacent WinCo Distribution Center. (Ex. 300, p. 5.2-4.)

Native soil in the project area consists of an unknown thickness of arkosic alluvial sand with silt and gravel associated with terraces and fan deposits of the Tuolumne River. (Ex. 300, p. 5.2-4.) The geologic units at the site are widespread throughout the northwestern part of the San Joaquin valley and as such, are not unique in terms of recreational, commercial, or scientific value. (Ex. 300, p. 5.2-6.) The project area is not within an area of significant geologic resources according to the Stanislaus County General Plan. (Ex. 300, p. 5.2-6.)

Based on previously conducted geotechnical studies, the ground water level beneath the site is expected to be approximately 20 feet. (*Id*.)

Several active and potentially active faults related to strike-slip faulting and compressional tectonics are within 62 miles of the A2PP site. The various active faults are identified in the record by name, distance from the site, fault type, strike, and class, and maximum earthquake magnitude. (Ex. 300, p. 5.2-5, Table 2.)

Paleontological collection sites, including one that revealed a fragment of mammoth tusk, are in close proximity to A2PP. (Ex. 300, p. 5.2-6.) Disturbed sediments and artificial fill that form the surface at the site are present along the majority of the project's proposed linears and have no potential to yield scientifically important fossils as they would be out of natural context from their environmental deposition. (Ex. 300, pp. 5.2-6 – 5.2-7.)

2. Geologic Hazards

The evidentiary record contains documentation of potential geologic hazards at the proposed A2PP plant site, including site-specific subsurface information. (Exs. 1, §§ 5.4; 300, pp. 5.2-7 – 5.2-10.) The evidence establishes ground shaking, liquefaction, and subsidence due to compressible soils represent the main geologic hazards at the proposed site. These potential hazards could be effectively mitigated through facility design by incorporating recommendations contained in the project geotechnical evaluation. Proposed Conditions of Certification **GEN-1, GEN-5,** and **CIVIL-1** in the **Facility Design** section will also mitigate these impacts to a less than significant level. (Ex. 300, p. 5.2-6.)

a. Faulting and Seismicity

Evidence was also received regarding the risks of active faulting and seismicity in the project area. (Exs. 1, pp. 5.5-8 – 5.5-9; 300, p. 6.2-10, Table 2.) Four Type A, 16 Type B, and three Type C faults and fault zones were identified within 62 miles of the A2PP site[2]. Of these, two are within 15 miles of the site: Great Valley 7 and Great Valley 8 (both Type B). However, although two of the many fault segments analyzed are within 15 miles of the project site, Staff's fault investigation did not reveal the presence of an active fault crossing the boundary of new construction at A2PP or its proposed transmission routes. (Ex. 300, p. 5.2-8.) Further, none of the project linears cross any known fault. (*Id*.)

The estimated bedrock peak horizontal ground acceleration for the power plant is 0.39 times the acceleration of gravity (0.39g). The geotechnical investigation previously performed for the existing APP and evaluated for the A2PP Project, shows that the soils at the A2PP are Soil Class C. (Ex. 300, p. 5.2-8.) **Facility Design** Condition of Certification **GEN-1** addresses the potential for strong ground shaking. Proper design in accordance with this Condition, as well as with requirements presented in the site-specific, design-level geotechnical evaluation, should adequately mitigate seismic hazards to the current standards of practice and ensure that project buildings and structures are designed with adequate strength to resist the effects of Design Earthquake Ground Motion, as defined by the California Building Code. (Ex. 300, p. 5.2-8.)

[2] Type A faults have slip-rates of $\geq$5 mm per year and are capable of producing an earthquake of magnitude 7.0 or greater. Type B faults have slip-rates of 2 to 5 mm per year and are capable of producing an earthquake of magnitude 6.5 to 7.0. (Ex. 300, p. 5.2-7.) The fault type, potential magnitude, and distance from the site are summarized by Staff in Geology and Paleontology Table 2 to the Revised Staff Assessment. (See Ex. 300, p. 5.2-5.).

b. Liquefaction

Liquefaction is a condition in which a saturated cohesionless soil may lose shear strength because of a sudden increase in pore water pressure caused by an earthquake. The geotechnical evaluation for the A2PP Project indicates that the site and linear alignment have some potential for liquefaction during a large earthquake. (Ex. 300, p. 5.2-8.) The surficial fill layer at the site is anticipated to be underlain by unsaturated clean sand which overlies bedded stiff-to-hard clay and silt soils embedded with sand-dominated layers. Standard penetration system testing at the site indicates that the subsurface formation is medium to very dense and as a result, seismic shaking would be unlikely to cause widespread loss of shear strength. But, the present loose sand layers together with a shallow ground water table (the ground water level beneath the site is expected to be about 20 feet), could liquefy is subjected to strong earthquake shaking. (*Id.*)

Measures to mitigate potential catastrophic damage due to liquefaction are presented in the site specific geotechnical evaluation. Liquefaction potential on the proposed A2PP site is also addressed, and mitigated, in the proposed Condition of Certification **GEN-1, GEN-5,** and **CIVIL-1** in the **Facility Design** section of this Decision.

c. Other Geologic Hazards

The evidence also contains analyses of risk to the project from lateral spreading, dynamic compaction, hydrocompaction, subsidence, expansive soils, landslide, flooding tsunamis, and volcanic hazards. As explained by the evidence, none of these geologic phenomena pose a significant risk to the A2PP Project. (Ex. 300, pp. 5.2-8 – 5.2-10.)

For instance, lateral spreading of the ground surface can occur within liquefiable beds during seismic events. Because the project site is relatively flat, the potential for lateral spreading is negligible. The potential for hydrocompaction is also negligible given the density of the site soils, the site's agricultural history, and historic groundwater elevations.

Although the site could be subject to dynamic compaction during a large earthquake, the project owner's preparation of the California Building Code-required project-specific geotechnical report and implementation of **Facility Design** Conditions of Certification **GEN-1, GEN-5** and **CIVIL-1**, will ensure that

dynamic compaction conditions are reduced to a less than significant level. Compliance with the recommendations and above-listed **Facility Design** Conditions of Certification will ensure mitigation for possible subsidence and expansive soils impacts.

3. Geologic, Mineralogic, and Paleontologic Resources

The proposed A2PP site is located within an established Mineral Resource Zone (MRZ) designated as MRZ-3a which generally means that the area may be suitable for future sources of construction aggregate. (Ex. 300, p. 5.2-10.) However, an evaluation of the APP site did not indicate significant potential for aggregate or other economically viable mineral deposits. (Exs. 1, p.5.4-15; 300, pp. 5.2-10.) Given the widespread availability of construction aggregate in Stanislaus County, there is little chance that construction of the project would make important aggregate deposits unavailable for development. No natural gas, petroleum, or geothermal wells are reported within five miles of the project site. (*Id*.)

Staff's evaluation of the site's geologic, mineralogic, and paleontologic resources included an assessment of the Applicant's evaluation. (Ex. 300, p. 5.2-11.) Staff also conducted a search of a database maintained by the University of California Museum of Paleontology. Staff determined that paleontological collection sites have been recorded within close proximity to the project site. And, while the six feet or more of fill alt the site surface is unlikely to yield scientifically significant fossil remains, Pleistocene sediments underlying the fill have produced numerous fossils in the site vicinity. As a result, the potential to encounter paleontological resources during construction of the project is high if site excavations penetrate the full thickness of the fill. (Ex. 300, p. 5.2-11.)

To reduce potential significant impacts to yet unknown subsurface resources during deeper construction-related excavations, we have adopted Conditions of Certification **PAL-1** through **PAL-7**. They collectively require a worker education program in conjunction with the monitoring of earthwork activities by a qualified professional paleontologist (a paleontologic resource specialist or PRS). Earthwork would be halted any time potential fossils are recognized by either the paleontologist or the worker. A PRS would be retained, for the project by the Applicant to produce a monitoring and mitigation plan, conduct the worker training, and provide the monitoring. These Conditions are designed to mitigate paleontological resource impacts to less than significant levels and ensure that

once the facility is constructed, its operation will not have any adverse impact on geologic, mineralogic, or paleontologic resources.

4. Compliance with LORS

Both Staff and the Applicant identified the applicable LORS that guided the Applicant's and Staff's evaluation of geologic and paleontologic resources and that impose requirements for project construction. (Exs. 1, pp 5.4-17 – 5.4-18, pp. 5.8-14 – 5.8-16, **Appendix A** to this Decision.) The former include the Alquist-Priolo Earthquake Faulting Zone Act and the Seismic Hazards Mapping Act. As explained by the evidence, the project is not located within the Alquist-Priolo Earthquake Fault Zone or any known active fault. (See, e.g., Ex. 1, p. 5.4-15.) As required by the Seismic Hazards Mapping Act, the evidence identifies and discusses the project area in the context of their susceptibility to the effects of strong ground shaking such as liquefaction, landslides, tsunamis, and seiches. (See, e.g., Ex. 300, pp. 5.2-7 – 5.2-10.)

Regarding design and construction requirements, both state and local LORS were identified - all of which must be complied with as specified in **Facility Design** Conditions of Certification **GEN-1**, **GEN-5**, and **CIV-1**.

5. Cumulative Impacts

Cumulative impacts correspond to a proposed project's potential incremental effect, together with other closely related past, present, and reasonably foreseeable future projects whose impacts on geologic, mineralogic, and paleontologic resources may compound or increase the incremental effect of the proposed project on such resources.

Potential cumulative effects, as they pertain to geologic hazards, are essentially limited to regional subsidence due to ground water withdrawal. As this project would not involve pumping of large volumes of ground water, it would not contribute to any increase of this potential hazard. (See the **Soil and Water Resources** section of this Decision regarding the project's water supply.) Furthermore, no viable geologic resources have been identified in the vicinity of the project site.

As discussed above, significant paleontological resources have been identified within close proximity to the proposed project site and its linears but the likelihood of encountering paleontologic resources during project construction is low. (Ex. 300, pp. 5.2-11, 5.2-13.) Any potential impacts to paleontological

resources due to construction activities would be mitigated, as required by proposed Conditions of Certification **PAL-1** through **PAL-7**.

Based on the above discussion, we find that the potential for significant adverse cumulative impacts to the proposed project from geologic hazards during and project impacts to geologic, mineralogic, and paleontologic resources is also low. The proposed Conditions of Certification allow the Energy Commission Compliance Project Manager (CPM) and the Applicant to adopt a compliance monitoring scheme ensuring compliance with applicable LORS for geologic hazards and geologic, mineralogic, and paleontologic resources to reduce any potential project-related cumulative impacts to less than significant levels.

6. Agency and Public Comments

There were no comments received from agencies or the public.

FINDINGS OF FACT

Based on the uncontroverted evidence, we make the following findings:

1. The project is located in central Stanislaus County, California, approximately 30 miles east of the boundary between the Coast Ranges and the Great valley physiographic provinces.

2. Intense levels of earthquake-related ground shaking and settlement due to earthquake-related liquifaction are the primary geologic hazards which could affect the A2PP Project.

3. The evidentiary record contains a geotechnical evaluation prepared for the adjacent TID Almond Power Plant and presents standard engineering design recommendations for mitigation of seismic shaking and site soil conditions applicable to the project site. A project-specific report is required by the California Building Code.

4. Potential geologic hazards to the project are effectively mitigated by standard engineering design measures as specified in Conditions **GEN-1, GEN-5,** and **CIVIL-1** of the **Facility Design** section of this Decision.

5. Lateral spreading, dynamic compaction, hydrocompaction, landslides, flooding, tsunamis, and seiches pose low or negligible project risks.

6. The A2PP site is located within an established Mineral Resource Zone (MRZ), but no economically viable mineral deposits are known to be present at the site

7. There is no evidence of existing or potential geological or mineralogical resources at the project site or along the linear alignments.
8. There are no known paleontological resources on the project site.

9. Because the upper six or more feet of the surface of the proposed A2PP site is disturbed, the material within that depth is unlikely to contain significant paleontological resources within their natural context and is assigned a negligible paleontological sensitivity rating.

10. However, Pleistocene sediments that underlie the fill have produced fossils in the site vicinity. There is potential to encounter paleontological resources during construction of the project if excavations penetrate the full thickness of the fill.

11. The project owner will implement several mitigation measures to avoid impacts to any paleontological resources discovered, including worker education, preparing a Paleontological Monitoring and Mitigation Plan, and having a Paleontologic Resource Specialist on-site. These mitigation measures are found in Conditions of Certification **PAL-1** through **PAL-7,** below.

12. The facility could be designed and constructed to minimize the effect of geologic hazards and impacts to potential paleontological resources at the site during project design life.

13. No geologic hazards which would arise due to cumulative effects during operation of the proposed facility were identified.

CONCLUSIONS OF LAW

1. The Conditions listed below ensure that project activities will not cause significant adverse direct, indirect, or cumulative impacts to geological, mineralogical, or paleontological resources.

2. Compliance with the Conditions of Certification specified below and the **Facility Design** Conditions of Certification **GEN-1**, **GEN-5**, and **CIVIL-1** will ensure that the A2PP conforms to all applicable laws, ordinances, regulations, and standards related to geological, mineralogical, and paleontological resources as identified in **Appendix A** of this Decision.

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:

- BS or BA degree in geology or paleontology and one year of experience monitoring in California; or
- AS or AA in geology, paleontology, or biology and two years' experience monitoring in California; or
- enrollment in upper division classes pursuing a degree in the fields of geology or paleontology.

  Monitors with lesser experience levels may be approved by the CPM, on a case-by-case basis, provided the proposed monitor will

be working under the direct supervision of an approved monitor with the required credentials.

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.

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 laydown 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. The site grading plan and profile drawings for the utility lines are appropriate for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and be at a scale between 1 inch = 40 feet and 1 inch = 100 feet. If the footprint of the project or its linear facilities change, the project owner shall provide maps and drawings reflecting those changes to the PRS.

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 implementing 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, including 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, forepersons 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 each worker's hard hat indicating that environmental training has been completed.

Verification: At least 60 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 60 days prior to ground disturbance, the project owner shall submit the script to the CPM for approval if the project owner is planning to use a video for 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) keeps 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 on the morning of the following business day in the case of a weekend or holiday 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 **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
Almond 2 Power Plant (09-AFC-2)

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 (such as 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

The effect of a power plant project on the local area depends upon the nature of the community and the extent of the associated impacts. Technical topics discussed in this portion of the Decision consider issues of local concern including **Land Use, Noise, Socioeconomics, Traffic and Transportation, and Visual Resources.**

A. LAND USE

The land use analysis focuses on two main issues: (1) whether the project is consistent with local land use plans, ordinances, and policies; and (2) whether the project is compatible with existing and planned uses.

In accordance with the CEQA Guidelines, we evaluate whether the project might result in significant impacts by:

- Converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to non-agricultural use;
- Conflicting with existing zoning for agricultural use or a Williamson Act contract;
- Involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses;
- Physically disrupting or dividing an established community;
- Conflicting with any applicable habitat conservation plan or natural community conservation plan;
- Conflicting 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; or
- Creating 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. (Cal. Code Regs., tit. 14, §§ 15000 et seq., Appen. G, §§ II, IX, XVII.)

We also evaluate whether the project complies with the laws, ordinances, regulations, and standards (LORS) identified in **Land Use Table 1** below.

Land Use Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Source	Description of Applicable LORS
State	
Professional Land Surveyors' Act (Business and Professions Code commencing with § 8700)	The California State Legislature adopted The California Professional Land Surveyors' Act (Act) to govern the land surveyor industry. The Act established the California Board for Professional Engineers and Land Surveyors as the governing board for the purposes of the Act. The law authorizes the board to develop and enforce the rules that are required to carry out the provisions of the Act.
Subdivision Map Act (Government Code commencing with § 66410)	The Subdivision Map Act (Map Act) regulates and controls the design and improvement of subdivisions. Any property divided into two or more parcels is subject to the Map Act. The Map Act is administered by the local agency in the county in which the property is located.
California Land Conservation Act of 1965 (Williamson Act) (Gov. Code commencing with § 51200)	The Williamson Act addresses uses that are considered compatible in areas that are identified as agricultural preserves and on contracted lands. Construction and maintenance of various utilities are identified as compatible uses in areas identified as agricultural preserves (Gov. Code § 51238). The A2PP Project would supply electric power, which is considered a compatible use. The Williamson Act establishes principles of compatibility on contracted lands. Approved uses may not compromise long-term productivity or displace or impair current or reasonably foreseeable agricultural operations (Gov. Code § 51238.1).
Local	
City of Ceres General Plan	
Land Use and Community Design Element	The City of Ceres General Plan land use designations for the A2PP site are General Industrial (GI) and Community Facility (CF). The GI designation is applied primarily in the western part of the planning area, allowing for a wide range of industrial and manufacturing uses. The CF designation is applied to the city's major public and private facilities and institutional uses.
Public Facilities and Services Element, Goal 4.L	Goal 4.L: To provide adequate levels of service for utility services provided by private companies and ensure that these are constructed to minimize negative effects on surrounding development.

City of Ceres Service Road Industrial Master Plan (SRIMP)	
Development Plan Approval, Land Use Classifications, and Development Standards	The A2PP site is within an area that is governed by the Service Road Industrial Master Plan (SRIMP). The SRIMP addresses requirements for approval of development plans: *The approval of development plans…is required for specific development projects (Section 18.20.080 of the Ceres Municipal Code). Although the development plans…must be consistent with the approved Master Plan, minor variations from the Master Plan may be approved by the Planning Director or Planning Commission in conjunction with the review and approval of a development plan provided that any such changes are consistent with the intent of the Master Plan's overall land use program.* Land use classifications for the project area are identified in the SRIMP, as follows: 1) Community Facility (C-F), which applies to existing TID Facilities, and 2) General Industrial (M-2), which applies to heavy industrial uses and properties with the Planned Community (P-C) (50) zoning classification in the south portion of the Master Plan area. The P-C (50) Zone applies to land in the SRIMP plan area. Development standards and polices include the following: *Uses and/or development standards not specifically addressed in this Master Plan or a subsequent Development Plan as required by the P-C Zone shall be governed by the corresponding zones contained in the Ceres Municipal Code.* *Developments processed independent of a subdivision proposal that are consistent with the master plan and standards in the corresponding zones contained in the Ceres Municipal Code can be processed with an Architectural Site Plan Approval rather than a Development Plan.*
City of Ceres Code of Ordinances	
Title 18, Chapter 18.20 Planned Community (P-C) Zone	The A2PP site is within the P-C (50) Zone, which is an area where land uses are governed by the SRIMP. The purpose of the P-C Zone is to establish a level of preplanning for the development or redevelopment of land and to encourage innovative design solutions while retaining good land use relationships and compatibility of uses (Title 18, § 18.20.020).
Title 18, Section 18.08.120 Property Development Standards in the Community Facilities (C-F) Zone (G. Building Height)	The C-F Zone corresponds to the Community Facility land use classification in the SRIMP (see above). The C-F Zone is intended to accommodate governmental, public utility, public education facilities, and quasi-public medical, cultural, and service facilities. No main building erected in the C-F Zone shall have a height greater than 35 feet or three stories, whichever is less. No accessory building erected in the C-F Zone shall have a height greater than one story or fifteen feet, whichever is less. Projections above this height may be permitted when approved by the Planning Commission, provided that they may be safely erected and maintained at such height in view of the surrounding conditions and circumstances.
Title 18, Section 18.08.120 Property Development Standards in the C-F Zone (I. Architectural and Site Plan Approval)	Before any building is erected on any lot; a site plan and floor plans of all buildings, elevations of all buildings and a landscape plan shall be submitted to and approved by the Planning Commission pursuant to the provisions of the C-F Zone in Title 18.

Title 18, Section 18.08.080 Conditional Uses in the C-F Zone Title 18, Section 18.50.040 Uses Subject to a Conditional Use Permit (B.8. Public Utility Structures)	The following uses may be permitted in the C-F Zone subject to a conditional use permit as provided for in Chapter 18.50 of Title 18. A. The facilities of all public utilities as defined by the Public Utilities Code of the state; B. The facilities of public utilities incorporated as political entities by the state. Public utility structures may be permitted in any zone except where expressly prohibited, when such uses are deemed by the Planning Commission to be essential or desirable for the public welfare and convenience and in conformity with the General Plan and its goals and objectives.
Title 17, Chapter 17.36 Lot Line Adjustments	A lot line adjustment is any division of land not requiring a map as specified by the Subdivision Map Act, in which no more parcels are created by the division than existed prior to it. The process requires completion of an application and submittal to the City of Ceres for approval.
1994 Stanislaus County General Plan	
Agricultural Element	Goal One of the Agricultural Element is to strengthen the agricultural sector of the county's economy. Objective Number 1.2 addresses supporting the development of agricultural uses while recognizing that a variety of uses, including uses not directly related to agriculture, may be sited on lands that are zoned for agricultural uses.
Stanislaus County Code, Title 21, Zoning	
Section: 21.08.020 General Provisions, Uses (C. Facilities for Public Utilities)	This section of the Stanislaus County Code addresses uses associated with public utilities in areas zoned for agricultural uses: Facilities for public utilities are permitted in the A-2 Zoning District provided that such use is demonstrated in connection with the approval of a use permit. Public utility transmission and distribution lines, both overhead and underground, are permitted in all districts without limitations as to height, but metal transmission towers are subject to all yard requirements as other structures. However, routes of proposed electrical transmission lines (including height, and placement of towers), shall be submitted to the Planning Commission for review and recommendations prior to the acquisition of rights-of-way, when such lines are not within a public street or highway.
Section: 21.20.030 General Agriculture District (A-2), Uses Requiring Use Permit (C. Tier Three)	This section of the Stanislaus County Code addresses permitted uses in the A-2 Zoning District: Public utility development may be allowed (as a Tier 3 use) when the Planning Commission finds that the use as proposed will not 1) be substantially detrimental to or in conflict with the agricultural use of the property or in the vicinity, and 2) be located in one of the County's most productive agricultural areas, as defined by the General Plan and approved by the County. (For areas zoned General Agriculture [A-2], tier 3 includes uses not directly related to agriculture but that may be necessary to serve the A-2 Zoning District or that may be difficult to locate in urban areas.)

City of Modesto Municipal Code, Title 10, Planning and Zoning	
Chapter 2 Zoning Regulations, Article 23 General Provisions, Section 10-2.2304 Utilities and Railroads	The regulations in Article 23 apply in the various zones established by the City of Modesto. With regard to utilities, the following applies: (a) The provisions of this chapter shall not apply to the poles, lines or similar facilities, whether above ground or underground, whose sole purpose is non-wireless transmission of electricity or communications. This exclusion does not apply to the antennas, uni-poles, monopoles, towers, or any similar or related facilities of wireless communication services.

The evidence on this topic was undisputed. (10/1/10 RT 11-12, Exs. 1, §5.6, Appen. 5.6A; 3, § 5.6; 4 [Land Use]; 8, pp. 48-49; 21 [Attachment DR 18, § 3.6, 29, p.9; 35; 36; 300[1], § 4.5.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. The Project Site and Vicinity

The A2PP Project site is comprised of a 3.2-acre vacant parcel of disturbed industrial land and 1.4 acres of the existing TID Almond Power Plant (APP) site, which is located immediately south of the A2PP site. The project laydown area will be located to the west of the project site and is comprised of approximately 6.4-acres of land. Project features include the construction of two new 115-kV transmission lines, the re-rating of an existing 69-kV line, the construction of a natural gas pipeline, reinforcement of an existing gas pipeline, and construction of three 80-foot tall stacks and associated equipment. (Ex. 300, pp. 4.5-7 – 4.5-8.)

Land Use Figure 1 below depicts the locations of the A2PP Project site and laydown area and the APP site.

Approximately three fourths of the northern portion of the site had previously been used as a borrow area. (Exs. 1, p. 5.6-1; 300, p. 4.5-5.) The existing land uses surrounding the project site are primarily industrial, agricultural, and rural

[1] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as Exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter Exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

residential. Agricultural lands near the project site include fields of nuts trees, alfalfa, and grass. There are no agricultural lands within the A2PP site. However, portions of the proposed two transmission lines will be constructed on active agricultural land. The nearest single-family residence is 0.3 miles from the project site. (Exs. 1, p. 5.6-1; 300, p. 4.5-5.)

Based on data obtained from the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation, the transmission poles and lines and natural gas pipeline are either within or near Prime Farmland. Prime Farmland refers to farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has soil quality, growing season, and moisture supply needed to produce sustained yields. (Ex. 300, p. 4.5-8.)

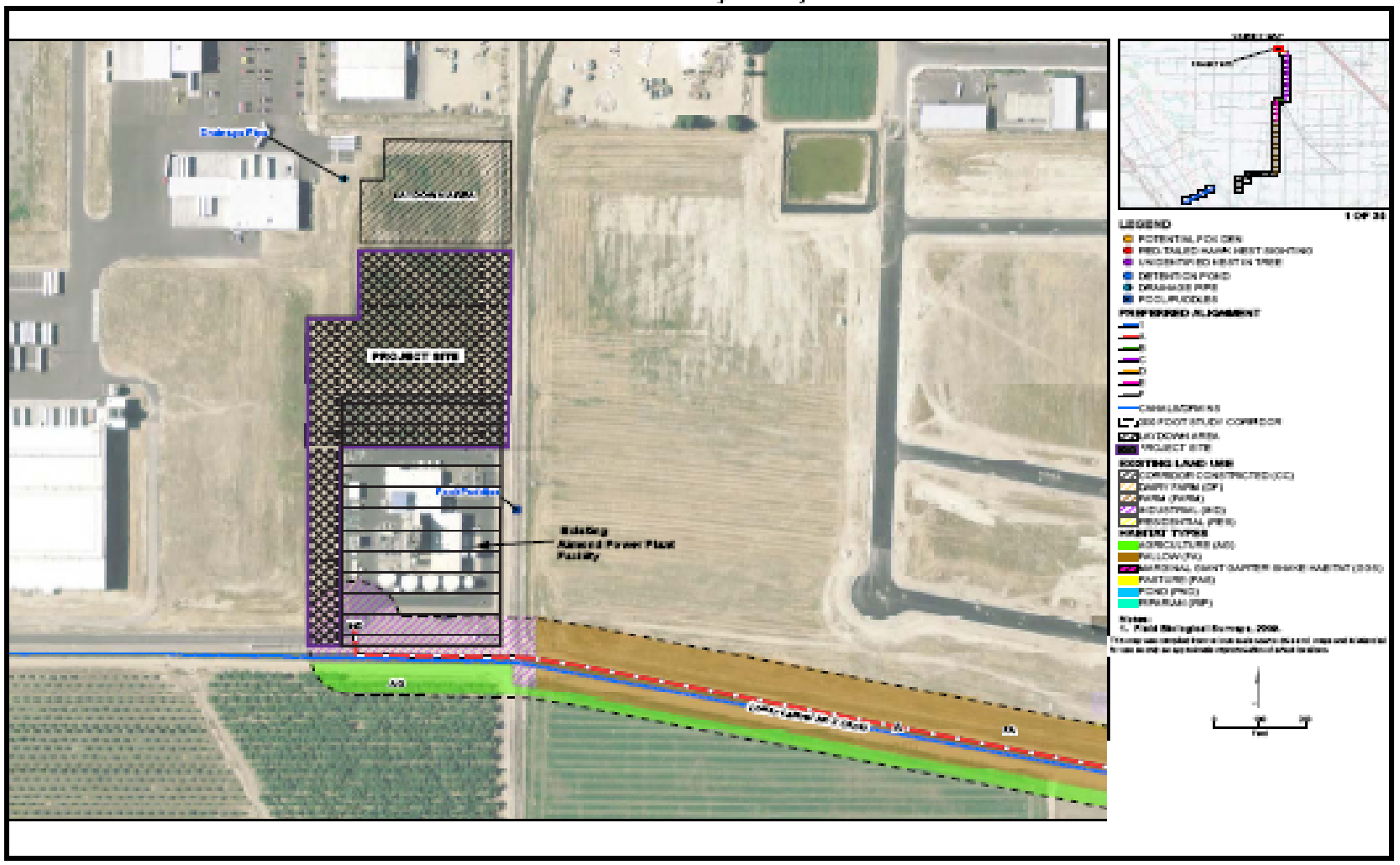
The natural gas pipeline will cross several parcels subject to Williamson Act contracts. (Ex. 300, p. 4.5-8.)

2. Land Use and Zoning Designations.

The A2PP Project, including the plant site, construction laydown and parking areas and linears are all located within Stanislaus County. However, portions of the project will be located solely within the City of Ceres while other portions will be located in the City of Ceres, City of Modesto, and an unincorporated area of Stanislaus County. **Land Use Figure 2** shows the location of the project site and its associated facilities within the various local jurisdictions.

The county's and cities' General Plans and zoning ordinances are the primary laws governing local land use.

LAND USE - FIGURE 1
Almond 2 Power Plant Project - Project Location



The City of Ceres designated land use for the 3.2-acre A2PP Project site and laydown area is General Industrial (GI). A wide range of industrial and manufacturing uses, including power plants are allowed in GI areas. (Ex. 300, p. 4.5-12.) The A2PP site and construction laydown area are specifically governed by the Ceres Service Road Industrial Master Plan (SRIMP), which provides the conceptual framework for development within a specified 320-acre area. Under the SRIMP, the A2PP site has a land use classification of General Industrial (M-2). The portion of the APP facility that includes 1.4 acres to be shared with A2PP is classified as Community Facilities (C-F). (Ex. 300, pp. 4.5-6- 4.5-7, 4.5-12.) Community facilities, wholesale and community commercial, and light and general industrial are allowable uses within the SRIMP plan area. (Exs. 1, pp. 5.6-22 – 5.6-24; 300, p. 4.5-6.)

The 115-kV transmission lines and natural gas line will be constructed in the Stanislaus County planning area in an area designated as Agriculture and within a General Agriculture zone. (Exs. 1, pp 5.6-22 – 5.6-44; 300, p. 4.5-6, **Land Use Figure 2**.)

The re-rated 69-kV sub-transmission transmission line will be constructed in portions of the City of Ceres and the City of Modesto planning areas. Within the City of Ceres, the line would traverse General Industrial, Light Industrial, Community Facilities and Low Residential zones. Within the City of Modesto, this line would traverse land in Industrial and Residential zones. (Exs. 1, pp 5.6-22 – 5.6-44; 300, p. 4.5-5, 4.5-7.)

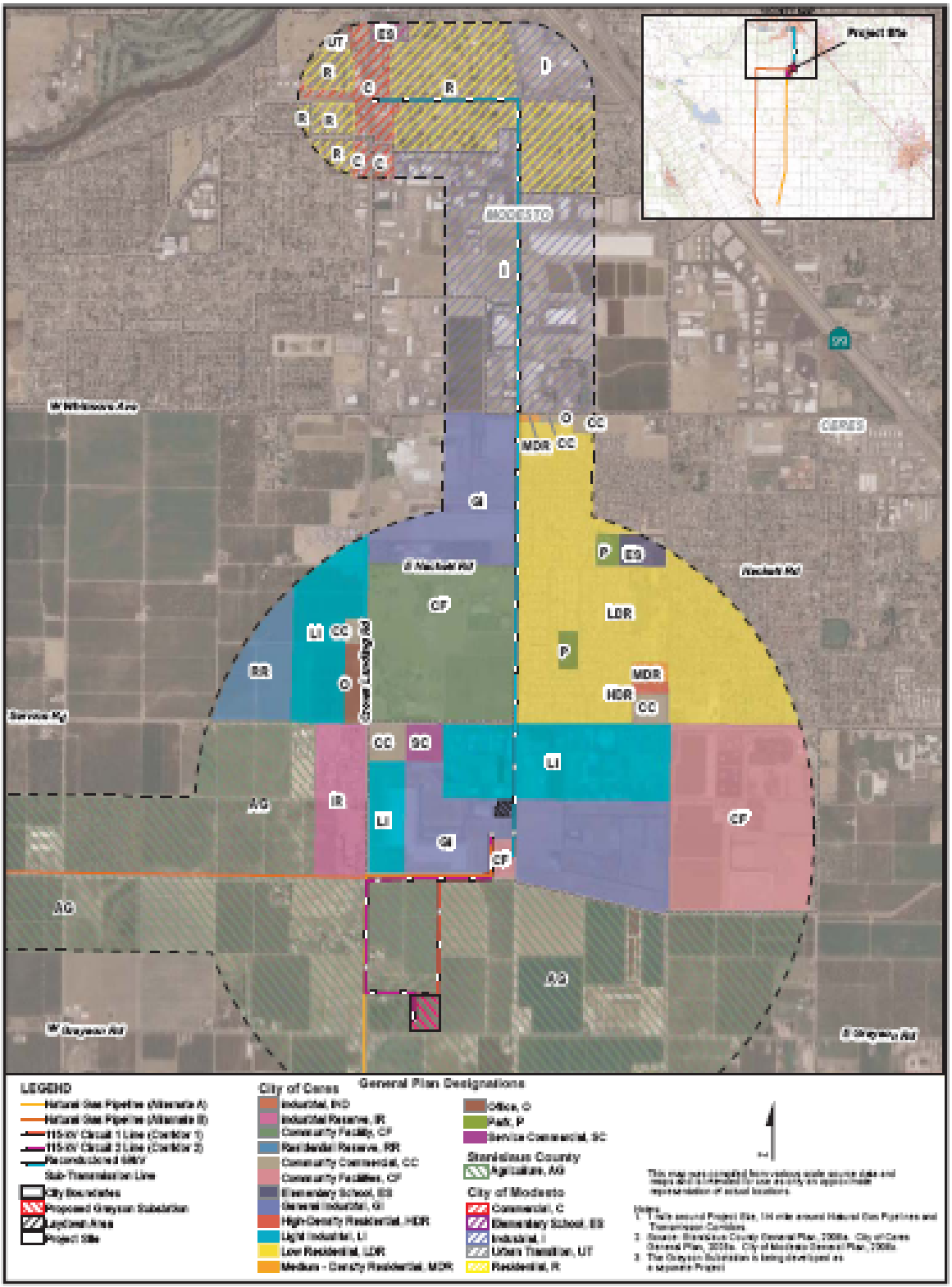
3. Potential Direct and Indirect Impacts

a. Conversion of Farmland

The evidence establishes that installation of the transmission poles and lines and natural gas pipeline is the only project activity that will impact farmland. (Ex. 300, pp. 4.5-10 – 4.5-12.)

Transmission Lines. The transmission lines will be installed in two distinct corridors: Corridor 1 and Corridor 2. Corridor 1 will be installed within an existing TID right-of-way and will cross or be adjacent to land classified by the FMMP as Prime Farmland. Corridor 2 poles and lines will be located within a county road, TID rights-of-way, or along agricultural access roads and will cross land identified as Prime Farmland. (Exs. 1, pp. 5.6-12 – 5.6-21; 300, p. 4.5-10.)

LAND USE - FIGURE 2
Almond 2 Power Plant Project - General Plan Designations



Construction for both corridors could result in minor and temporary disruptions to agricultural uses within areas outside of the rights-of-way and roads. The impact of these disruptions is less than significant.

However, construction of one Corridor 2 pole construction will result in the loss of approximately four square feet of Prime Farmland. CEQA requires us to determine whether this loss is a significant impact. We look to two authorities to guide our evaluation: (1) the CEQA definition of "significant effect on the environment" and (2) the Stanislaus County General Plan since the lines are within the County's planning area. Under CEQA, a "significant effect on the environment" refers to a substantial or potentially substantial adverse change in any of the physical conditions within the affected area. (Cal. Code Regs, tit. 14, § 15382.) Corridor 2 construction will result in the de minimus conversion of Prime Farmland. We find that the impacts of this conversion will not result in a substantial (or potentially substantial) adverse change to agricultural lands in the area. As a result, no mitigation is required under CEQA.

Nor is mitigation required under the Stanislaus County General Plan, which requires compensation (i.e., mitigation) for the conversion of farmland only when the land is converted to residential development. The A2PP Project and Corridor 2 construction in particular will not convert agricultural land to residential uses, and no mitigation is required by the County to compensate for this loss of Prime Farmland. (Exs. 1, pp. 5.6-5 - 5.6-5; 300, p. 4.5-11.)

Natural Gas Pipeline. The natural pipeline will be installed in a 6- to 8- foot deep trench along an 11.6-mile route that will connect to the existing PG&E Line #215. The construction right-of-way within the corridor will be 85 feet wide and the permanent easement will be 50 feet wide. (Ex. 300, p. 4.5-8.) Segments of the pipeline will be located on land primarily classified by the FMMP as Prime Farmland. (*Id*.) As a consequence, construction of the pipeline could result in minor, temporary impacts to agricultural land. (Ex. 300, p. 4.5-11.) However, permanent impacts to agricultural lands will not occur with implementation of Condition of Certification **LAND-2**, which incorporates Applicant-proposed mitigation measures. **LAND-2** requires the project owner to restore to pre-project conditions agricultural lands disturbed during project construction. Restoration includes site grading, preparation, cultivation, and top soil replacement as appropriate.

We find that with implementation of **LAND-2**, construction of the gas pipeline will not result in significant impacts.

b. Land Subject to Williamson Act Contracts

The natural gas pipeline will be located across lands subject to the Williamson Act. The Williamson Act (also known as the California Land Conservation Act of 1965) allows owners of agricultural land to enter into a contract with the county whereby the landowner agrees to restrict use of the land for purposes allowed under the Act in exchange for financial benefits to landowner. The Act allows "compatible uses" on contract property, including construction and maintenance of various utilities. (Gov. Code, § 51238.) Compatible uses, by definition, do not compromise long-term productivity or displace or impair current or reasonably foreseeable agricultural operations. (Gov. Code, § 51238.1)

As discussed above regarding impacts of pipeline construction on Prime Farmland, pipeline installation will not cause long-term impacts or permanently displace or impair agricultural operations. Installation may, however, result in the above-identified temporary – yet mitigable – impacts. More particularly, permanent impacts to agricultural lands will not occur with implementation of Condition of Certification **LAND-2**, which incorporates Applicant-proposed mitigation measures. **LAND-2** requires the project owner to restore to pre-project conditions agricultural lands disturbed during project construction. Restoration includes site grading, preparation, cultivation, and top soil replacement as appropriate. As a result**,** the pipeline construction will have less-than-significant impacts on Williamson Act contracted lands. (Ex. 300, pp. 4.5-11- 4.5-12.)

c. Division of Existing Community.

The evidence establishes that the project represents continued development of a site already committed to industrial use. The A2PP site is located in an established industrial area in the City of Ceres and is adjacent to the existing APP facility. Furthermore, a majority of the project site was once used as a borrow pit. Thus, the addition of the project will not introduce a new industrial use into a non-industrial area or alter existing land use patterns in the area.

And, because the A2PP facility will be located on private property on which public access is disallowed, development the project site will not create new physical barriers. (Ex. 300, p. 4.5-10.) Nor will the installation of the project's linear facilities. The linear facilities will be erected within existing transmission corridors and utility rights-of-way in industrial, agricultural and rural residential areas. The nature of these facilities will not result in the physical division of an established

community or create any physical barriers. There would be no alteration of the existing land uses in these areas. (Exs. 1, p. 5.6-50; 300, p. 4.5-10.)

We therefore find that the addition of the A2PP Project will not physically disrupt or divide an established community.

d. Conflict with Habitat or Natural Community Conservation Plan

There is no evidence that the A2PP Project lands are subject to a Habitat Conservation Plan or natural Community Conservation Plan or within the boundaries of a wildlife preserve or critical habitat area.

4. Consistency with Local Land Use LORS.

As discussed above, portions of the A2PP Project are within an unincorporated area of Stanislaus County and within the cities of Ceres and Modesto. The county's and cities' General Plans and zoning ordinances are the primary laws governing local land use.

In accordance with applicable codes and regulations, we have evaluated the information provided by the Applicant and Staff to determine if elements of the proposed project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, or that would normally have jurisdiction over the project except for the Energy Commission's exclusive authority to license power plants in the state with a generating capacity of 50 MW or greater. (20 Cal. Code Regs. § 1744; Pub. Res. Code §§ 25500–25543.)

The Energy Commission's license takes the place of other state, regional, and local permits (e.g., conditional use permits and variances) and other entitlements that would otherwise be required. The Energy Commission's licensing process includes preparation of findings regarding the conformity of the proposed facility with applicable local, regional, state, and federal standards, ordinances, and laws (Pub. Res. Code § 25523 [d][1]). A determination of noncompliance requires the Energy Commission to consult with the agencies responsible for implementation of identified ordinances or regulations to attempt to correct or eliminate the noncompliant condition.

a. Stanislaus County General Plan

As discussed above, installation of the new 115-kV transmission lines would occur primarily within rights-of-way and along existing agricultural access roads; however, construction of one pole in Corridor 2 would result in the loss of approximately four square feet of Prime Farmland. The Stanislaus County General Plan requires mitigation to compensate for the loss of farmland resulting from residential development in the unincorporated areas of the county.

b. City of Ceres General Plan Designations

As discussed above, most of the A2PP would be sited in an area designated as GI by the City of Ceres General Plan. The GI designation allows for a wide range of industrial and manufacturing uses. The 1.4-acre portion of the existing APP property where some of the A2PP facilities would be sited is designated as CF, which applies to major public and private facilities and institutional uses, including the existing APP. A power plant is an allowable use in areas with GI and CF designations.

The proposed A2PP site has a SRIMP land use classification of General Industrial (M-2), and the portion of the existing APP facility is classified as Community Facilities (C-F). The C-F classification applies to a total of six acres within the SRIMP plan area where TID facilities are currently sited, including the existing APP. The proposed A2PP is appropriately sited in an area designated for general industrial and public utility development.

We therefore conclude that the proposed project does not conflict with the City's General Plan land use designations and applicable land use policies.

c. Ceres Zoning Code

The proposed A2PP Project includes construction of three 80-foot-tall turbine stacks and associated equipment. One of the turbines will be on the APP site. Under the City's zoning code, land uses with a General Plan designation of CF are deemed to be within a C-F zone. The property development standards for the C-F Zone address building height requirements and limit main buildings to a height of 35 feet. The City's approval process allows for construction of structures exceeding the height limit as part of its Architectural and Site Plan Approval (ASPA) process. (Ex. 300, pp. 4.5-13, 4.5-16.) Indeed, the City allows the existing APP facility to include a 92-foot-tall exhaust stack. Thus, we can

reasonably infer that the A2PP Project's three 80-foot-tall turbine stacks would be allowed as structures compatible with the existing uses in the C-F zone. [2]

The re-rated 69-kV sub-transmission transmission line will be constructed in portions of the City of Ceres and the City of Modesto planning areas. Within the City of Ceres, the line would traverse General Industrial, Light Industrial, Community Facilities and Low Residential zones. (Exs. 1, pp 5.6-22 – 5.6-44; 300, p. 4.5-5, 4.5-7.) No zoning inconsistencies will result from re-rating the existing 69-kV sub-transmission line. (Ex. 300, pp. 4.5-12-4.5-14.)

d. Modesto Zoning Code

The re-rated 69-kV sub-transmission transmission line will be constructed in portions of the City of Ceres and the City of Modesto planning areas. Within the City of Modesto, this line would traverse land in Industrial and Residential zones. (Exs. 1, pp 5.6-22 – 5.6-44; 300, p. 4.5-5, 4.5-7.) No zoning inconsistencies will result from re-rating the existing 69-kV sub-transmission line. (Ex. 300, pp. 4.5-4, 4.5-12-4.5-14, 4.5-18.)

e. StanCOG 2011 Regional Transportation Plan

A portion of Corridor 2 will be routed along Crows Landing Road and installed 55 feet from the roadway centerline. In July 2010, the Policy Board of the Stanislaus Council of Governments (StanCOG) adopted the 2011 Regional Transportation Plan (RTP) and associated environmental impact report. The RTP identifies Tier I and Tier II roadway projects, including projects that would entail widening several contiguous segments of Crows Landing Road that cross portions of Modesto, Ceres, and the unincorporated area of Stanislaus County.

A local jurisdiction proposing to widen segments of the roadway would be required to evaluate the environmental effects of the proposed action, including the effects of extending the adjacent rights-of-way and utility easements, in accordance with the requirements of CEQA. Because future projects to widen

[2] Because we find that the project is compatible with local development plans, we do not address the question of whether TID's status as a special district exempts it from the City's zoning codes as has been argued by Staff. (Ex. 300, pp. 4.5-5-4.5-6, 4.5-12–4.5-13.) The California Government Code provides that certain district facilities are exempt from city and county building and zoning ordinances. Exempt facilities include those that are necessary for the production or generation of electrical energy (Gov. Code § 53091, subd. (e)). Because TID operates under the provisions of the California Water Code as a special district, it is argued that TID is exempt from the City of Ceres zoning ordinance, including the property development standards for development in the C-F Zone.

Crows Landing Road would be subject to separate environmental review, no conflict would occur with any land use plan relating to placement of the Corridor 2 transmission line along the roadway.

5. Subdivision Map Act

The State's Subdivision Map Act also applies to the A2PP site and requires the project owner to merge or otherwise combine the parcels over which it has site control, in order for the project to be located on a single legal parcel. (Gov. Code, § 66410 et seq; Ex. 300, pp. 4.5-13.) Staff has determined that the project would be consistent with the applicable LORS upon the project owner providing documentation demonstrating that the A2PP Project will be constructed and operated on a legal parcel of land. We concur and therefore adopt Staff-proposed Condition of Certification **LAND-1**, which requires the Applicant to complete a lot line adjustment and record of survey for filing with the City of Ceres and Stanislaus County. Completing the required actions to move the property boundaries at the plant site would enable construction and operation the A2PP on a legal parcel of land.

6. Land Use Compatibility

We also considered the proposed project's compatibility with other existing land uses in the same setting. Land use compatibility refers to the physical compatibility of planned and existing land uses. As discussed above, the project site is designated for zoning and development purposes and is within an industrial area. The record details the Applicant's efforts to identify schools, churches, child care/day care centers and similar sensitive uses in the vicinity of the A2PP site. (Exs. 1, pp. 5.6-2 – 5.6-12.) Several facilities such as schools, churches, and child care/day care centers are located within one mile of the site. Residences are within 0.3 miles of the proposed project site. (Exs. 1, pp. 5.6-2 – 5.6-12, Figure 5.6-1A; 300, p. 5.6-1.)

However, given the existing and previously permitted uses in the A2PP Project area, such as the existing APP facility and WinCo distribution center, we find that the A2PP plant will not be incompatible with surrounding sensitive uses.

7. Cumulative Impacts

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, § 15065(a)(3).]

As shown by the evidence, the existing land uses similar to, and in the vicinity of, the proposed project site are the APP and WinCo facilities. Information obtained by the Applicant, shows that within the City of Ceres there were approximately 42 projects in various stages of processing when the AFC was filed. (Ex. 1, p. 5.6-49.) Most of the projects are residential but there were also proposals for commercial and industrial projects.

According to the Applicant, there were about 115 projects in the City of Modesto in various stages of review. (Ex. 1, p. 5.6-49, Appen. 5.6A [Tables 5.6A-1 and 5.6A-2].) In Stanislaus County, approximately 936 projects proposed for the unincorporated areas of the County were in various stages of processing at the time the AFC was filed. (Ex. 1, p. 5.6-49, Appendix 5.6A [Table 5.6A-3].)

Impacts involving land use plans or policies and zoning generally will not combine to result in cumulative impacts. The determination of significance for impacts relating to these issues, as considered in Appendix G of the State CEQA Guidelines, is whether a project will conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site-specific and would be addressed on a project-by-project basis. As discussed in this land use analysis, implementing A2PP would not result in significant land use planning impacts, and the project's ultimate consistency with applicable LORS would be ensured through implementation of Conditions of Certification **LAND-1** and **LAND-2**.

The A2PP's impacts relating to land use are site-specific and would not combine with other related projects to compound or increase an environmental effect. The A2PP's contribution to impacts on land use consistency would not result in significant cumulative impacts, and it would not otherwise contribute to impacts on this resource area. (Ex. 300, p. 4.5-18.)

8. Public and Agency Comments

There were no public and agency comments received on the topic of land use.

FINDINGS OF FACT

Based on the evidence, the Commission makes the following findings:

1. The project will convert four square feet Prime Farmland to non-agricultural. The conversion of this de minimum amount of land would not result in significant impacts nor does it necessitate compensation mitigation under the Stanislaus County General Plan.

2. The A2PP Project will not conflict with existing zoning for agricultural use or a Williamson Act contract.

3. There is no evidence that the project will physically divide or disrupt an established community.

4. The A2PP Project is consistent with applicable land use LORS. To mitigate any potential LORS noncompliance regarding the Subdivision Map Act, we require compliance with Condition of Certification **LAND-1.**

5. The A2PP is compatible with surrounding land uses and will not result in any unmitigated public health or environmental impacts to sensitive receptors.

6. With implementation of Conditions of Certification **LAND-1 and LAND-2**, the A2PP Project's contribution to cumulative impacts of existing and proposed projects will not be cumulatively considerable.

CONCLUSIONS OF LAW

1. With implementation of the mitigation measures specified in this Decision, and in the Conditions of Certification, we conclude that construction and operation of the A2PP Project will not result in significant adverse direct, indirect, and cumulative land use impacts.

2. The record contains an adequate analysis of the land use laws, ordinances, regulations, and standards that are relevant to the project and establishes that the project will not create any unmitigated, significantly adverse land use effects as defined under the California Environmental Quality Act.

3. The Conditions of Certification, below, ensures that A2PP Project will be designed, constructed, and operated in conformance with the applicable land use laws, ordinances, regulations, and standards identified in the evidentiary record and listed in the pertinent portion of **Appendix A** of this Decision.

CONDITIONS OF CERTIFICATION

LAND-1 The project owner shall complete a lot line adjustment and record of survey for filing with the City of Ceres and Stanislaus County to ensure construction and operation of the Almond 2 Power Plant on a legal parcel of land. The record of survey shall be filed by a licensed land surveyor or registered civil engineer authorized to practice land surveying. Survey methods, practices, and documentation shall comply with the Subdivision Map Act and the Professional Land Surveyors Act.

Verification: Prior to commercial operation of the Almond 2 Power Plant, the project owner shall provide written documentation to the Compliance Project Manager (CPM) that all necessary actions and approvals relating to the lot line adjustment and record of survey have been completed and finalized. Written documentation submitted to the CPM shall include copies of all approved and recorded documents relating to the lot line adjustment and record of survey.

LAND-2 The project owner shall ensure restoration of certain agricultural lands that are disturbed during project construction. Restoration of agricultural lands disturbed during project construction shall not interfere with maintenance of PG&E's natural gas pipeline within the existing easement. Any lands that are identified by the Farmland Mapping and Monitoring Program as Important Farmland or located within agricultural preserves shall be restored such that no conversion of Important Farmland occurs. Methods to restore affected agricultural lands shall include stock piling of top soil for replacement when project construction is completed. Restoration shall include grading and preparation for cultivation of affected areas and topsoil replacement.

Verification: Before the start of any project construction work on agricultural lands the project owner shall submit written documentation to the Compliance Project Manager (CPM) describing methods that will be used to restore the affected lands. Within 90 days of completion of construction of the Almond 2 Power Plant and related facilities, the project owner shall provide written documentation to the Compliance Project Manager (CPM) demonstrating that all necessary work to restore disturbed agricultural lands has been completed. Written documentation shall include detailed descriptions of restoration methods and corresponding maps for affected areas.

B. TRAFFIC AND TRANSPORTATION

This section addresses the extent to which the project will affect the local area's transportation network. The record contains 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.

Project impacts were evaluated according to Appendix G of the California Environmental Quality Act (CEQA) Guidelines and the National Environmental Policy Act. As more fully discussed below, we find that the project will not:

- Conflict with adopted polices, plans, or programs;
- Cause a substantial increase in traffic when compared with the existing traffic load and capacity of the street system;
- Exceed, either individually or cumulatively, a level of service (LOS) standard established by the county congestion management agency for designated roads or highways;
- Substantially increase hazards due to a design feature or incompatible uses; or
- Result in inadequate parking capacity or a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks or in inadequate emergency access. (CEQA Guidelines, Appendix G.)

As discussed below, we evaluated the project's compliance with the applicable laws, ordinances, regulations, and standards (LORS) set forth below in **Traffic and Transportation Table 1** and find that the project will comply with the applicable LORS.

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, §5.12, 4 [Traffic and Transport], 8, [pp. 57-58, Attachment E], 15, [Data Responses 70-71], 18 [Response to Query 1], 20 [Responses to Request 81-106], 21 [Attachment DR 18, § 3.12], 25, 38]., 300[1], § 4-10.)

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment,

Traffic and Transportation Table 1
Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description
Federal	
Code of Federal Regulations (CFR), Title 14, Transportation; Chapter 1, Part 77	Includes standards for determining obstructions in navigable airspace. Sets forth requirements for notice to the Federal Aviation Administration of certain proposed construction or alteration. Also, provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace.
Code of Federal Regulations (CFR), Title 14, Transportation; Subtitle B, Other Regulations Relating to Transportation	Includes procedures and regulations pertaining to interstate and intrastate transport (includes hazardous materials program procedures) and provides safety measures for motor carriers and motor vehicles that operate on public highways.
State	
California Vehicle Code, Division 2, Chapter. 2.5; Div. 6, Chap. 7; Div. 13, Chap. 5; Div. 14.1, Chap. 1 & 2; Div. 14.8; Div. 15	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	Includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits.
Local	
City of Ceres General Plan; Transportation and Circulation Element, February 24, 1997	Requires level of service (LOS) D for major roadways (arterials, expressways, and roadways) and LOS C for secondary collector or local roadways or better operating conditions for all roadway links and intersections.
Stanislaus County of Governments Regional Transportation Plan, 2007	Establishes regional transportation goals, policies, objectives and actions for various modes of transportation, such as improvements to mobility, improvement of goods movement, and so forth.
County of Stanislaus 1997 General Plan; Circulation Element	County will maintain at least a level of service (LOS) C or better operating conditions for all county roadways and intersections, except in a sphere of influence of a city when the city has adopted a lower level of service.

301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

SUMMARY AND DISCUSSION OF THE EVIDENCE

The Almond Two Power Plant (A2PP) is located on Crows Landing Road, approximately three miles south of State Route (SR) 99, in Ceres, California, County of Stanislaus, on an approximately 4.6-acre parcel, next to the existing TID 48-MW Almond Power Plant (APP). (Ex. 300, p. 4.10-2.)

SR 99 through Crows Landing Road provides access to the project site from the north. . From the south, access is via Keyes Road, which intersects with Crows Landing Road approximately two miles west of SR 99. (Ex. 300, p. 4.10-2.)

The key roadways in the area include:

- SR 99 – A major north-south highway in California's Central Valley that extends through Ceres approximately two miles southwest of the project site.
- SR 132 – A two-lane to four-lane highway, begins at exit 72A of Interstate 580, just west of town of Vernalis and runs due east into Modesto. SR 132 connects to SR 99 approximately five miles north of the project site.
- Crows Landing Road – A two-lane to four-lane roadway running north to south, is located between I-5 and SR 99. The project site is located approximately three miles west of SR 99 via Crows Landing Road.
- Service Road – A 13-mile-long, east-west roadway, begins west of Carpenter Road and ends east of Geer Road. Running through the city of Ceres, the road is used to access the project by northbound traffic traveling on SR 99.
- Whitmore Avenue – A two-lane, east-west undivided roadway through downtown Ceres and unincorporated sections of Stanislaus County, which begins west of Carpenter Road and ends at Montpellier Road. The road is used to access the project site via Central Avenue.
- Hatch Road – A two-to-four-lane, east-west roadway that runs through downtown Ceres and unincorporated parts of Stanislaus County. Located north of the project site, Hatch Road consists of two lanes from Crows Landing Road to SR 99 and four lanes from SR 99 to Mitchell Road.
- Mitchell Road – A two-lane to four-lane, north-south parkway running north-south through Stanislaus County, located between SR 108 and SR 99. A four-lane highway near the project site, Mitchell Road provides access to the project site for traffic coming south from Modesto. Exs. 1, pp. 5.12-1 – 5.12-2, 300, p. 4.10-3 – 4.10-4.)

There are five airports in Stanislaus County, only one of which is within 20,000 feet from the A2PP site: Modesto City - County Airport. A private airstrip for crop

dusters is located more than 20,000 feet from the project site. (Ex. 300, p. 4.10-7.)

Regional transit in the area consists of fixed-route and share-a-ride bus service provided by Ceres Area Transit; Ceres Dial-A-Ride and Stanislaus Regional Transit and school bus service provided by the Ceres Unified School District. According to Ceres Unified School District, at least three school bus stops are located on Crows Landing Road between Service Road and Grayson Road. (Ex. 300, p. 4.10-8.)

The Union Pacific Railroad (UPRR) tracks are located on the eastern boundary of the project site. According to the applicant, the railroad tracks adjacent to the project site are currently used to transport, among other things, food items to and from the industrial park located in the City of Turlock. In addition, rail deliveries also include feedstock for the Foster Farms Plant, which is also located in Turlock. Passenger service is not provided. (Ex. 300, pp. 4.10-8 - 4.10-9.)

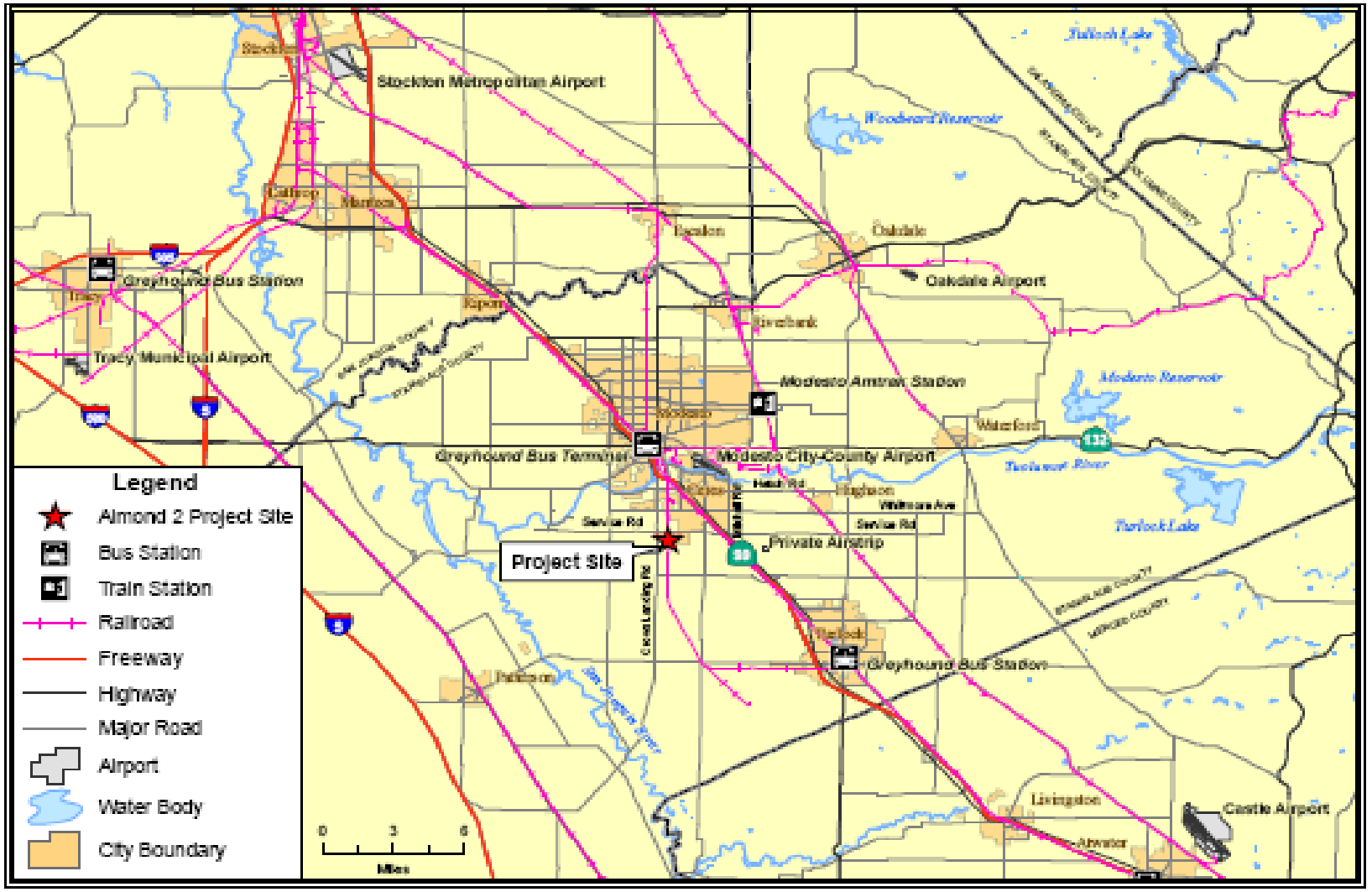
Traffic and Transportation Figure 1 below depicts the regional transportation network in the project vicinity.

1. Existing Levels of Service

The Applicant evaluated traffic impacts using the methodologies and guidance of the 2000 Highway Capacity Manual. (Ex. 1, p. 5.12-2.) The manual describes six levels of service of roadways and intersections. LOS is qualitative measure used to describe operational conditions within a traffic stream and quantify a level of congestion on a particular roadway or intersection considering factors such as speed, travel time, and delay. (Ex. 300, p. 4.10-5.) According to the evidence, a LOS of D is acceptable under the City General Plan for major roadways. (Ex. 300, pp. 4.10-2, 4.10-6.)

Fourteen intersections were analyzed. (Ex. 1, p. 5.12-2 – 5.12-3.) Existing morning peak period (7:00 a.m. to 9:00 a.m.) and evening peak period (4:00 p.m. to 6:00 p.m.) turning point volumes were obtained from the West Ceres Specific Plan Opportunities and Constraints Analysis Report. (Id.) The existing intersection LOS is shown below in **Traffic and Transportation Table 1.** All of the intersections operate under acceptable conditions (LOS D or better) with the exception of the intersections of Crows Landing Road and northbound SR 99 ramps. (Ex. 1, p. 5.12-8.)

TRAFFIC AND TRANSPORTATION - FIGURE 1
Almond 2 Power Plant Project - Regional Transportation Network



Traffic and Transportation Table 4
Existing Intersection Level of Service (LOS) Summary

Intersection	Traffic Control	AM Peak-Hour Delay*	LOS	PM Peak-Hour Delay*	LOS
Crows Landing Road/Service Road	Signal	28	C	27	C
Crows Landing Road/Hackett Road	Signal	25	C	26	C
Crows Landing Road/Whitmore Avenue	Signal	30	C	43	D
Crows Landing Road/Hatch Road	Signal	28	C	33	C
Crows Landing Road/Northbound SR 99 Ramps	Two-Way Stop Control	28 (East-bound)	D	43 (East-bound)	E
Carpenter Road/Service Road	All-Way Stop Control	9	A	9	A
Service Road/Morgan Road	All-Way Stop Control	10	A	11	B
Service Road/Blaker Road	All-Way Stop Control	10	B	16	C
Service Road/Central Avenue	Signal	25	C	25	C
Mitchell Road/Service Road	Signal	26	C	32	C
Carpenter Road/Whitmore Avenue	All-Way Stop Control	10	B	15	C
Whitmore Avenue/Morgan Road	Signal	24	C	29	C
Whitmore Avenue/Blaker Road	Signal	19	B	27	C
Whitmore Avenue/Ustick Road	Signal	11 (North-bound)	B	13 (North-bound)	B

Source: AFC Table 5.12-2, *TIDAlmond II Power Plant*, 2009
*Delay is measured in second/vehicle for the intersection

Existing LOS for the five studied roadway sections are shown below in **Traffic and Transportation Table 2.** All of the roadway segments operate at LOS D or better.

Traffic and Transportation Table 2

Roadway Segment Level of Service (LOS) Existing Conditions

Roadway Segment	Traffic Flow	Divided/ Undivided	Number of Lanes	Year ADT Count	Original AM Peak Hour Volume	AM Peak LOS	Original PM Peak Hour Volume	PM Peak LOS	Acceptable LOS
Crows Landing Road	North of Hatch Road	Undivided	4	2008	1,986	C	2,795	D	D
Crows Landing Road	North of Whitmore Avenue	Undivided	4	2008	1.472	C	1,828	C	D
Crows Landing Road	South of Whitmore Avenue	Undivided	4	2008	1,213	C	1,386	C	D
Whitmore Avenue	East of Crows Landing Road	Undivided	2	2008	656	C	1,041	C	D
Service Road	East of Central Avenue	Undivided	2	2008	460	C	775	C	D

Source: Almond 2 Power Plant (09-AFC-2) E-Mail Queries Set 1

[1]No adjustment needed for 2008 peak volumes or trucks PCE

[2]No adjustment needed for 2008 peak volumes or trucks PCE

Existing LOS for the nine studied freeway segments are shown below in **Traffic and Transportation Table 3.** All segments operate at LOS D or better, except for the segment of SR 99 north of Crows Landing Road.

Traffic and Transportation Table 3

Freeway Segment Level of Service (LOS) Existing Conditions

Roadway Segment	Traffic Flow	Undivided/ Divided	Number of Lanes	Year ADT Count	Original and Adjusted Average Daily Traffic[1]	Daily LOS	Acceptable LOS
State Route 99	North of Crows Landing Road	Undivided	6	2007	118,000	C	D
State Route 99	South of Mitchell Road	Undivided	6	2007	108,000	C	D
State Route 132	East of El Vista Avenue	Undivided	4	2007	24,400	A	D
State Route 132	West of El Vista Avenue	Undivided	4	2007	26,600	A	D

Roadway Segment	Traffic Flow	Undivided/ Divided	Number of Lanes	Year ADT Count	Original and Adjusted Average Daily Traffic[1]	Daily LOS	Acceptable LOS
State Route 132	West of Carpenter Road	Undivided	2	2007	14,400	A	D
Interstate 205	West of Interstate 5	Divided	4	2007	101,000	F	D
Interstate 5	North of Interstate 205	Divided	10	2007	160,000	B	D
State Route 120	West of State Route 99	Divided	4	2007	70,000	B	D
Interstate 580	North of State Route 132	Divided	4	2007	37,000	A	D

Source: Almond 2 Power Plant (09-AFC-2) E-Mail Queries Set 1

[1]No adjustment needed for 2008 peak volumes or trucks PCE

2. Construction Traffic Impacts

a. Project Site

Construction traffic will consist of both delivery/haul trucks and workers, some of whom will carpool. The majority of traffic will result from workers traveling to the site. The Applicant assumes that 20 percent of the workforce will carpool and the average occupancy per vehicle would be two persons.

According to the Applicant, construction will occur eight hours a day between 7:00 a.m. and 3:30 p.m. As a result, inbound worker trips will occur before the morning peak hour for existing traffic. Outbound worker trips will occur before the evening peak hour. (Ex. 1, pp. 5.12-16 – 5.12-17.)

Construction traffic is expected to originate as follows:

- 10 percent of trips will originate from Stockton using southbound SR 99
- 5 percent of trips will originate from Tracy using eastbound I-205, eastbound SR 120, and southbound SR 99
- 5 percent of trips will originate from Tracy using southbound I-580 and eastbound SR 132
- 10 percent of trips will originate from Merced and Turlock using northbound SR 99

- 30 percent of trips will originate from within Modesto and Ceres using southbound SR 99
- 20 percent of trips will originate from within Modesto and Ceres using Mitchell Road, East Hatch Road, and Crows Landing Road
- 20 percent of trips will originate from within Modesto and Ceres using East Whitmore Avenue and Crows Landing Road

Even though construction traffic is not expected to interfere with or contribute to peak morning and evening traffic, the Applicant evaluated possible construction traffic impacts under a worst-possible scenario that assumed the construction traffic during morning and evening peak construction periods. Based on the worst-case scenario, the Applicant estimates that the A2PP project will generate 394 daily passenger car equivalent trips, with 156 trips during the morning and evening peak hours (268 worker trips plus 126 PCE for truck and delivery trips.)[2]

The evidence shows that even with the addition of project traffic, all local roadway segments will operate at LOS C during morning and evening peak traffic, with the exception of one segment. The Crows Landing Road segment north of Hatch Road will operate at LOS D during the evening peak. (Ex. 300, p. 4.1-11, **Traffic and Transportation Table Tables 5 and 6**.) LOS D typically describes the LOS of a busy shopping corridor during the middle of the weekday or a functional urban highway during commuting hours. (Ex. 300, p. 4.10-5, Fn. 2.) LOS D is an acceptable level of service in the region for roadway segments. (Exs. 1, pp. 5.12-7, 300, p. 4.10-6.) Thus, there will be no significant impact to roadways segments from construction traffic. (Exs. 1, p. 5.12-18, 300, pp. 4.10-6, 4.10-11, **Traffic and Transportation Tables 2, 5, and 6**.)

Regarding construction-related freeway traffic, the evidence shows that all study highway corridors will continue to operate at an acceptable LOS with the exception of SR 99 north of Crows Landing Road, which will continue to operate at its existing LOS E. (Ex. 1, pp. 5.12-12, 5.12-18 – 5.12-19, 300, p. 4.10-12, **Traffic and Transportation Tables 3 and 7**.)

The evidence also shows that construction traffic will have no effect on area intersections as none of the morning and evening peak LOS will change. All intersections will operate at LOS for existing conditions. (Exs. 1, p. 5.12-18, 300,

[2] Truck trips were assumed to be distributed evenly throughout the day. Truck trips were converted to passenger-car equivalent units (PCEs) at a ratio of 1.5 passenger cars for each truck. (Ex. 1, p. 5.12-17.)

pp. 4.10-7, 4.10-12, **Traffic and Transportation Tables 4** and **8**.) (Ex. 300, p. 4.10-5, fn. 2.)

To ensure that contrition traffic does not contribute to decreases in LOS, Staff proposed Conditions of Certification **TRANS-2** and **TRANS-3**. **TRANS-2** requires the project owner to prepare a construction traffic control and implementation plan for the project and its facilities, in consultation with the City of Ceres, Caltrans, the California Highway Patrol, and the Stanislaus County Public Works Department. The plan must be submitted to the City of Ceres, Stanislaus County, and Caltrans for review and comment. Under **TRANS-3**, the project owner must prepare a mitigation plan to address and repair any damage that project construction traffic might cause to Crows Landing Road, Service Road, Whitmore Avenue, Hatch Road, and Mitchell Road.[3]

b. Natural Gas Pipeline and Transmission Lines

In addition to construction at the project site, the A2PP project requires construction of the natural gas pipeline and transmission lines. The pipeline will require 20 workers who will meet at the TID and PG&E corporate yards. The workers are expected to travel together in trucks and park adjacent to the corridors. The transmission line work entails constructing two 115-kV transmission line corridors and re-rating an existing 69-kV sub-transmission line. (Ex. 300, p. 4.10-13.)

Construction of these facilities may impact the local area traffic. Flagmen and proper signage are necessary for the facilities work. Implementation of Condition of Certification **TRANS-2** will reduce traffic impacts related to facilities construction as it requires the project owner to prepare and implement a traffic control plan, including traffic control measures, that encompasses the project's facilities. (Ex. 300, p. 4.10-13.)

c. Transport of hazardous Materials

As discussed in the **Hazardous Materials Management** section of this Decision, small quantities of hazardous materials will be delivered to the project site during the construction phase. Hazardous materials will be transported over prearranged routes, SR 99 and Interstate 5. Deliveries will be made to the plant via Crows Landing Road and the APP access road.

[3] The Applicant provided weight and load information that suggests that the local roadways could be damaged even if the Applicant strictly complies with all applicable LORS. (Ex. 1, p. 5.12-12.)

Delivery and disposal of hazardous materials to and from the site as well as handling of the materials on site must be performed according to all applicable state and federal standards as more fully described in the **Hazardous Materials Management** section. (Ex. 300, p. 4.10-15.)

2. Operation Impacts and Mitigation

a. Employee and Truck Traffic.

The existing APP facility employs 12 full-time workers. The A2PP power plant is expected to require four full-time workers. The four workers will generate eight additional trips to and from the project site. Staff assumes those four workers will use the same routes as workers at the APP. Other project-related trips—delivery trucks, visitors, and other business-related trips—are expected to be minimal and to occur during business hours. Based on the evidence, these minor traffic additions to local streets and highways would not significantly affect the LOS of these roads. (Ex. 300, p. 4.10-14).

b. School Bus Routes.

Crows Landing Road will be used by the project workforce and delivery trucks. There are at least three school bus stops on Crows Landing Road between Service Road and Grayson Road. Two stops are within 0.85 miles of the projects site. There is evidence that the Applicant has contacted the Ceres Unified School District to obtain information necessary to determine an adequate traffic control plan for avoiding impacts on school bus service in the area (Ex. 300, p. 4.10-14). However, to ensure that project owner confers with the District and mitigates impacts to the bus routes, Condition of Certification **TRANS-1** requires the project owner work with the District in preparing and implementing a traffic control plan designed to ensure school bus routes are not negatively affected by construction traffic. (Ex. 300, p. 4.10-8, 4.10-14, **Traffic and Transportation – Figure 3**.)

c. Transport of Hazardous Materials and Waste.

The Applicant submits that two to three deliveries of hazardous materials are expected per week during the operation of A2PP. These materials include anhydrous ammonia, cleaning chemicals, lubricating oil and filters, and water-treatment chemicals. (Ex. 1, p. 5.12-20.) Those materials will be transported as hazardous materials or hazardous waste. And their transport will be arranged

with Caltrans and conducted according to relevant transportation regulations. See the **Waste Management**, **Worker Safety and Fire Protection**, and **Hazard Materials** sections of this Decision for additional information.

The transportation and handling of hazardous materials associated with the A2PP project could result in roadway hazards. However, the potential impacts can be mitigated to less than a significant level by complying with existing federal and state standards for transporting hazardous substances. For example, California has developed general requirements for transporting hazardous materials. In general, those requirements may be found in the California Vehicle Code sections 31301 through 32053. There are also federal regulations for transporting hazardous materials. (Ex. 300, p. 4.10-15). The Applicant is expected to comply with the applicable local, state, and federal regulatory framework as set forth above in **Traffic and Transportation Table 1**.

d. Airport Operations.

The closest airport to the project site is the Modesto City-County Airport, which is located approximately 20,000 feet northeast of the site. Approximately 200 general aviation aircraft are based at this airport. SkyWest Airlines operates regularly scheduled flights between Modesto and San Francisco International Airport.

The airport has two runways. Runway 10/28-R, is oriented in a general northwest-southeast direction and is designed for aircraft to land in either direction. Runway 10/28 is designed for aircraft to land at 100 degrees and 280 degrees. Both runways are approximately 97 feet above mean sea level (amsl). A2PP is located approximately 20,000 feet southwest of runway 10/28 at 80 feet above mean sea level. (Ex. 300, p. 4.10-15.)

The evidence establishes that the A2PP site is not located within any airport flight patterns, approach, or transitional surface zones. Nor is it located in congested airspace. (Ex. 300, p. 4.10-16.)

The evidence also shows that the Applicant performed calculations as required by the Federal Aviation Administration (FAA) to determine if the project is exempt from FAA notification requirements. Staff reviewed the requirements for filing a Notice of Proposed Construction with the FAA and concurred with the Applicant's determination that submission of a Form 7460-1 is not necessary because:

- The three 80-foot stacks at an elevation of 81.6 feet do not exceed the FAA's 200-foot requirement.
- The slope ratio as calculated by the FAA Notice of Criteria Tool indicates the Notice Criteria has not been exceeded.
- A2PP does not require construction of a highway, railroad, waterway, and so forth, and neither will it be in an instrument approach area that might exceed FAA requirements or be located on an airport or heliport.

Federal Aviation Regulation Part 77 establishes requirements for determining the effect of proposed structures on air navigation. In general, the FAA must be notified if the height or outward or upward slope of the proposed structure exceeds certain restrictions or the structure proposed is more than 200 feet above ground level at the site, among other criteria. (Ex. 300, p. 4.10-16.)

e. Ground-Level Water Vapor Plumes.

A2PP is designed to be a simple-cycle plant with a selective catalytic reactor (CTG).The CTG is designed to produce hot exhaust that will not condense as a plume. Consequently, ground-level water vapor plumes that could affect roadway traffic will not occur during the operation of A2PP. (Ex. 300, p. 4.10-16.)

f. Emergency Services Vehicle Access.

The Ceres Fire Department, Station Number 3, located at 420 East Service Road, in Ceres, would provide 24-hour fire protection and emergency medical services to the site. The station is approximately 0.3 mile from the project site. Access to the site would be through Crows Landing Road. Response time would be approximately two to three minutes in daylight hours and three to four minutes in nighttime hours. There is no evidence that project traffic will adversely impact emergency vehicle access.

For a more detailed discussion of emergency services concerning adequate ingress/egress serving the facility, see the **Worker Safety and Fire Protection** section of this Decision. (Ex. 300, p. 4.10-16.)

3. Local and Regional Transportation Plans

The Applicant and Staff identified the 2007 Regional Transportation Plant prepared by the Stanislaus County Council of Governments (STANCOG), as a plan that describes planned transportation improvements within the county,

including those within the City of Ceres. (Ex. 1, p. 5.12-14, 300, p. 4.10-2.) There is no evidence that traffic and transportation associated the A2PP project will conflict with this or any other regional plan.

4. Cumulative Impacts

A project may result in a significant adverse cumulative impact where its effects are cumulatively considerable. *Cumulatively considerable* is interpreted to mean that the incremental effects of an individual project are significant when viewed in connection with the effects of (1) past projects; (2) other current projects; and (3) probable future projects (California Code Regulation, Title 14, Section 15130).

A number of projects are proposed for development within two miles of the A2PP site. Those projects could contribute to cumulative effects. These projects include industrial and residential projects. Those projects are in the planning stages at this time and a timeframe for development is not known at this time.

However, one project, the Whitmore Overpass and Utility Relocations, located approximately two miles from the project site, is currently in progress and is expected to be completed in 2011. The existing two-lane overpass will be replaced with a four-lane structure and the road will be widened to four lanes from Mitchell to Blaker. The Whitmore overpass will remain open as a two-lane road throughout construction. However, A2PP traffic and the Whitmore Overpass and Utility Relocations project will not result in a cumulative impact because the Whitmore overpass as well as connecting roads will remain open during construction. (Ex. 300, p. 4.10-17.)

FINDINGS OF FACT

1. During the construction and operation phases, local roadway and highway demand resulting from the daily movement of workers and materials will not increase beyond significance thresholds established by the City of Ceres and Stanislaus County.
2. With the conditions of certificate, the A2PP will comply with all applicable LORS related to traffic and transportation
3. The A2PP will not significantly degrade the level of service on local streets or highways.
4. Modesto City-County Airport is located approximately 20,000 feet northeast of the site. A2PP will consist of three 80-foot stacks at an elevation of 81.6 feet. The heights of these three stacks combined with the

elevation at which they are located do not exceed the FAA's 200-foot requirement. Consequently, the project would not impact aviation safety.

5. Condition of Certification **TRANS-1** would require the applicant to coordinate with the Ceres Unified School District to ensure construction traffic does not interfere with school bus routes.

6. Condition of Certification **TRANS-2** would require a construction traffic control plan to ensure that all construction traffic does not significantly affect traffic on any local roads, intersections, or access to adjoining and neighboring sites.

7. Condition of Certification **TRANS-3** would require a mitigation plan to repair portions of Mitchell Road, East Hatch Road, and Crows Landing Road if they are damaged by project-related traffic.

8. The A2PP as proposed with conditions of certification would not result in significant direct, indirect or cumulative traffic and transportation impacts, and therefore, no environmental justice issues.

CONCLUSIONS OF LAW

1. The Almond 2 Power Plant would be consistent with the Circulation Element in the Stanislaus County General Plan, local circulation plans and policies and all other applicable laws, ordinances, regulations, and standards.

2. The project will not have a significant adverse impact on the local and regional road/highway network.

CONDITIONS OF CERTIFICATION

School Bus Stops

TRANS-1 The Applicant shall in with coordination with the Ceres Unified School District shall prepare and implement a traffic control plan designed to ensure school bus routes are not negatively affected by construction traffic. Mitigation measures may include travel times for workers as well as equipment and materials outside of school bus travel times, as well as a program to train construction workers about bus stop and student safety.

Verification: At least 60 days before the start of site mobilization, the project owner shall submit the traffic control plan to the Ceres Unified School District for review and comment and to the CPM for review and approval. This Traffic Control Plan may be included in the Traffic Control Plan required pursuant to **TRANS-2**.

TRAFFIC CONTROL PLAN

TRANS-2 The project owner shall prepare a construction traffic control and implementation plan for the project and its associated facilities. The project owner shall consult with the City of Ceres, Caltrans, the California Highway Patrol and Stanislaus County Public Works Department (for the gas pipeline), in the preparation of the traffic control and implementation plan.

The traffic control and implementation plan shall include and describe the following minimum requirements:

- Timing of heavy equipment and building materials deliveries and related hauling routes
- Redirecting construction traffic with a flag person;
- Signing, lighting, and traffic control device placement;
- Timing of construction work hours and arrival/departure intervals outside of peak traffic periods
- Ensuring safe access to the main entrance
- Ensuring access for emergency vehicles to the project site
- Closing of travel lanes on a temporary basis
- Ensuring access to adjacent commercial and industrial properties during the construction of all linears
- Devising a construction workforce ride-sharing plan
- Providing a shuttle service from the most distant off-street parking areas

The project owner shall submit the proposed traffic control and implementation plan to the City of Ceres, Stanislaus County and Caltrans for review and comment. The project owner shall provide to the CPM a copy of the transmittal letter submitted to the City of Ceres, and Caltrans requesting their review of the traffic control and implementation plan. The project owner shall provide any comment letters to the CPM for review and approval.

Verification: At least 60 days prior to start of site mobilization, the project owner shall provide to the City of Ceres; Caltrans; and the California Highway Patrol for review and comment and to the CPM for review and approval, a copy of the construction traffic control plan. The plan must document consultation with these agencies. If no comments are received from the City of Ceres, Stanislaus County, Caltrans, or the California Highway Patrol within 30 days of submittal, the project owner may proceed with preparation of the final plan.

ROAD MITIGATION PLAN

TRANS-3 Prior to site mobilization activities, the project owner shall prepare a mitigation plan for Crows Landing Road; Service Road; Whitmore Avenue; Hatch Road; and Mitchell Road. The intent of this plan is to ensure that if these roadways are damaged by project construction, they will be repaired and reconstructed to original or as near original condition as possible. This plan shall include:

- Documentation of the pre-construction condition of Crows Landing Road; Service Road; Whitmore Avenue; Hatch Road, and Mitchell Road. Prior to the start of site mobilization, the project owner shall provide to the CPM photographs or videotape of these roadways.
- Documentation of any portions of Crows Landing Road; Service Road; Whitmore Avenue; Hatch Road; and Mitchell Road that may be inadequate to accommodate oversize or large construction vehicles and identification of necessary remediation measures; and
- Reconstruction of portions of Crows Landing Road; Service Road; Whitmore Avenue; Hatch Road; and Mitchell Road that are damaged by project construction due to oversize or overweight construction vehicles.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit a mitigation plan focused on restoring: Crows Landing Road; Service Road; Whitmore Avenue; Hatch Road; and Mitchell Road to its pre-project condition to Caltrans; County of Stanislaus Public Works Department; and the city of Ceres Public Works Department for review and comment and to the CPM for review and approval.

If a roadway has been damaged as a result of project construction, within 90 days following the completion of construction, the project owner shall provide photo/videotape documentation to the city of Ceres Public Works Department, Caltrans, County of Stanislaus Public Works Department and the CPM that the identified damaged sections of roadways have been restored to their pre-project condition.

C. SOCIOECONOMICS

This topic reviews pertinent demographic information within both a one-mile and six-mile radius of the Project site and evaluates the effects of Project-related population changes on local schools, medical and fire protection services, public utilities and other public services, as well as the fiscal and physical capacities of local government to meet those needs. The public benefits of the project are also reviewed, including both the beneficial impacts on local finances from property and sales taxes as well as the potential adverse impacts upon public services. The evidence for this topic was undisputed. (10/1/10 RT 11-12, Exs., 1, § 5.10, Appendixes 5.1-A, 5.1-B, 3 [§ 5.10], 4 [Socioeconomics], 8 [p. 55], 21 [Attachment DR 18, § 3.10], 25, 300[1], § 4.8.)

In this part of the Decision we determine that the project will not result in a substantial impact under CEQA with respect to population and housing in that the project will not:

- Induce substantial population growth in a new area, either directly or indirectly.
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Nor will the project result in significant impacts to public services or recreations facilities because it will not:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives.
- Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

[1] During the October 1, 2010, evidentiary hearing, all intended exhibits were identified by reference to the hearing exhibit list. Although the exhibit list as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 301: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the exhibit list. We therefore reference Staff's exhibits 300 through 302 in this Decision.

- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

(CEQA Guidelines, Appendix G.)

As a result we find that the A2PP project will comply with all applicable laws, ordinances, regulations, and standards (LORS) (identified below in **Socioeconomics Table 1**) and will not result in any significant environmental impacts.

SOCIOECONOMICS Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

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	Except for a fee, charge, dedication, or other requirement authorized under Section 17620 of the Education Code, state and local public agencies may not impose fees, charges, or other financial requirements to offset the cost for school facilities.

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Setting

The A2PP plant site is located in the City of Ceres, Stanislaus County, California, approximately two miles southwest of the Ceres city center. The proposed 4.6 acre project site will be comprised of 1.4 acres of the existing 48 MW TID Almond Power Plant (APP) site and 3.2 vacant acres of disturbed industrial land. An additional 6.4 acres of nearby land will be used for the construction laydown area.

A WinCo Foods distribution warehouse is located to the west, a farm supply facility is located to the north, and various industrial facilities are located to the east. The project site was previously used by WinCo as a borrow pit during construction of the WinCo distribution warehouse before being filled and graded to the current site elevation.

Land within a 1-mile radius of the proposed project is located within the City of Ceres and Stanislaus County. The lands are primarily agricultural fields and almond orchards (west, south, and east of the project site), single –family residences (northeast of the project site), and a community agricultural center (northwest of the project site). The closest single-family residences are located approximately 0.3 mile northeast of the project site. The City of Ceres Wastewater Treatment Plant is approximately 0.5 mile east of the project site.
Stanislaus County is bordered by Calaveras County to the north, Tuolumne County to the northeast, Mariposa County to the southeast, Merced County to the south, Santa Clara County to the southwest, and San Joaquin/Alameda counties to the northwest. There are nine incorporated cities in Stanislaus County: Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock and Waterford. (Exs. 1, pp. 5.6-1, 5.10-1, 300, pp. 4.8-1 – 4.8-2, 4.8-6 – 4.8-7).

2. Impacts of Construction and Operation Workforce

The 12-month construction phase is the primary focus of this analysis because the potential influx of workers and their dependents into the area could increase demand for community resources.

The average number of construction workers is estimated at 97 per day with workforce requirements peaking at approximately 149 workers in month 6. Project operation and maintenance will require 16 full-time employees. Four of these would be new full-time employees and the other 12 would be current full-time employees of APP. (Exs. 1, pp. 5.10-13 – 5.10-16; 300, p. 4.8-5.)

The evidence indicates that all construction labor and the majority of operations workforce would commute from the surrounding communities of Merced, San Joaquin, and Santa Clara counties. There appears to be a large labor force within two hours commuting time of the project site and it is therefore unlikely that employees will relocate near the project. (Exs. 1, pp. 5.10-13 – 5.10-16; 300, p. 4.8-5.)

We therefore find that the construction and operation workforce will not induce substantial growth or concentration of population and the project will not encourage workers to permanently move into the area. Consequently, the project would have no direct or indirect impact on substantial population growth in the area.

3. Impacts on Housing

The availability of short-term housing for construction workers is documented in the record. (Exs. 1, p. 5.10-16; 300, p. 4.8-6.) In addition to apartments and other rental housing, there are 47 hotels/motels in Stanislaus County that could be used for temporary housing. Recreational vehicle parks are also within the project vicinity. Given the expectation that most workers will commute to the site on a daily basis, there is no evidence that project construction or operation will adversely impact local housing or require new housing construction. Instead, the evidence indicates that rental income will provide an indirect economic benefit to the community. (Ex. 300, pp. 4.8-5 – 4.8-6.)

Housing availability in Stanislaus County and the City of Ceres is documented in the record. As of the date of submission of the AFC, there were approximately 419 available housing units in Ceres and 6,586 in Stanislaus County. (Ex. 300, p. 4.8-6.) Thus, there is sufficient housing availability to accommodate the project's addition of four new full-time operation should they relocate to Ceres. (Id.) As a result, we find that the project would not result displace any anyone or require construction of additional housing.

4. Impacts to Government Facilities

There is no evidence that the Project will adversely impact emergency medical services, police protection, schools, parks, or any other public facilities (i.e., utilities) because the workforce will be commuting rather than moving to the area.

a. Emergency Services

The project is within the jurisdiction of the Ceres Emergency Service-Fire Division (CFD). The CFD has a staff of 30 full-time personnel and provides services from four fire stations. Station #3 is nearest to the project site is Station #3 at approximately 0.3 miles to the east. Station #3 will be the primary responding fire station with an anticipated response time of two to three minutes during the day and two to four minutes at night. (Ex. 300, p. 4.8-7.)

Memorial Medical Center in Modesto is the nearest hospital capable of providing emergency services, including the handling of industrial accidents. This facility is approximately eight miles from the projects site. (Ex. 300, p. 4.8-7.)

The evidence establishes that the emergency medical services provided by CFD and Memorial Medical Center will not require construction of new facilities or

physical alternation of existing facilities. (Ex. 1, p. 5.10-20.) Furthermore, the **Worker Safety and Fire Protection** and **Hazardous Material Handling** sections of this Decision provide further discussion relating to the provision of emergency fire and medical services to the project and how the design of the facility will meet all applicable standards to reduce the risk of accidental hazardous materials release and operate in a matter that complies with applicable safety practices. We find that the project owner's implementation of required safety procedures and employee training will minimize potential unsafe work conditions and the need for outside emergency medical response. (Ex. 300, p. 4.8-7.)

We therefore find that the project will not result in significant impacts to the provision of emergency medical services.

b. Law Enforcement

A2PP is within the jurisdiction of the Ceres Public Safety Department – Police Department (CPD). The CPD operates one station, which is located approximately 2.1 miles from A2PP. (Ex. 300, pp. 4.8-7 - 4.8-8.) CPD's response time would be six to 12 minutes for serious incidents and 26 to 27 minutes for less serious incidents. If necessary, mutual aid would be provided by the Stanislaus County Sheriff.

Traffic-related incidents on state highways and roads are within the jurisdiction of the California Highway Patrol. The CHP office nearest to A2PP is approximately 12.2 miles away. (Ex. 300, p. 4.8-8.)

The evidence indicates that power plants do not attract large numbers of people and therefore require little in the way of law enforcement services. (Ex. 300, p. 4.8-8.) Even though the site will not be publicly accessible, this Decision requires the project owner to implement safety and security measures (see, e.g., **Hazardous Materials Handling** Condition of Certification **HAZ-7**). Thus, we find that construction and operation of the project will not require new or physically altered law enforcement facilities or otherwise result in significant impacts to the provision of law enforcement services.

c. Schools

There are 26 school districts within the Stanislaus County Board of Education, including the Ceres Unified School District (CUSD). A2PP is located within

CUSD's jurisdiction. (Ex. 300, p. 4.9-8.) The record contains a summary of CUSD's historical school enrollment from 2005 through the 2008-09 school year.

As discussed above, construction workers and their families are not expected to relocate to the project vicinity. (Ex. 300, p. 4.8-8.) Only four new full-time employees would be required for plant operation. Even though the Applicant anticipates hiring from within the region and no operation workers are expected to relocate, it is possible that all four new employees may relocate within CUSD. The evidence establishes however, that such relocation would have little or no impacts on the District assuming an average family size of 3.03 persons per household. This would result in the modest addition of approximately four children to local schools. Given this minimal number of students who might potentially relocate within the CUSD, project construction and operation will not have a significant impact on CUSD schools.

d. Recreational Facilities

The Stanislaus County Department Parks and Recreation maintains various community parks, off-road parks, and fishing areas and sponsors special activities. Park amenities include swimming pools, picnic tables, baseball/softball fields, basketball courts, fishing, community centers, playgrounds, walking trails and barbeques. (Ex. 300, p. 4.8-9.)

Given the above-discussed projections for a commuting labor force and possible relocation of four full-time employees, the project will require or contribute to the need for construction of new parks. Nor will it substantially increase the use of existing parks. We therefore find that the addition of A2PP's construction and operation workforce will not have a significant adverse impact on parks and recreation.

e. Utilities

There is no evidence that the project workforce will lead to significant adverse demands on the adequate water, sanitary sewer, electricity, or natural gas supplies. (Ex. 1, p. 5.10-20.)

5. Environmental Justice

Section 65040.12 (c) of the Government Code defines "environmental justice" 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." For each power plant proposal, Staff evaluates the Project's potential impacts on minority and low-income (below poverty level) populations in the Project vicinity. The record contains Staff's demographic screening conducted in accordance with the "Final Guidance for Incorporating Environmental Justice Concerns in U.S. EPA's National Environmental Policy Act (NEPA) Compliance Analysis" (EPA 1998).

Minority populations are identified by the U.S. EPA for environmental justice review when:

- 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.

Minority groups include: American Indian or Alaskan Native; Asian or Pacific Islander; African American not of Hispanic origin; or Hispanic. Low-income populations are identified by the annual statistical poverty thresholds from the Bureau of the Census's Current Population Reports on Income and Poverty. (Ex. 300, p. 4.8-2.)

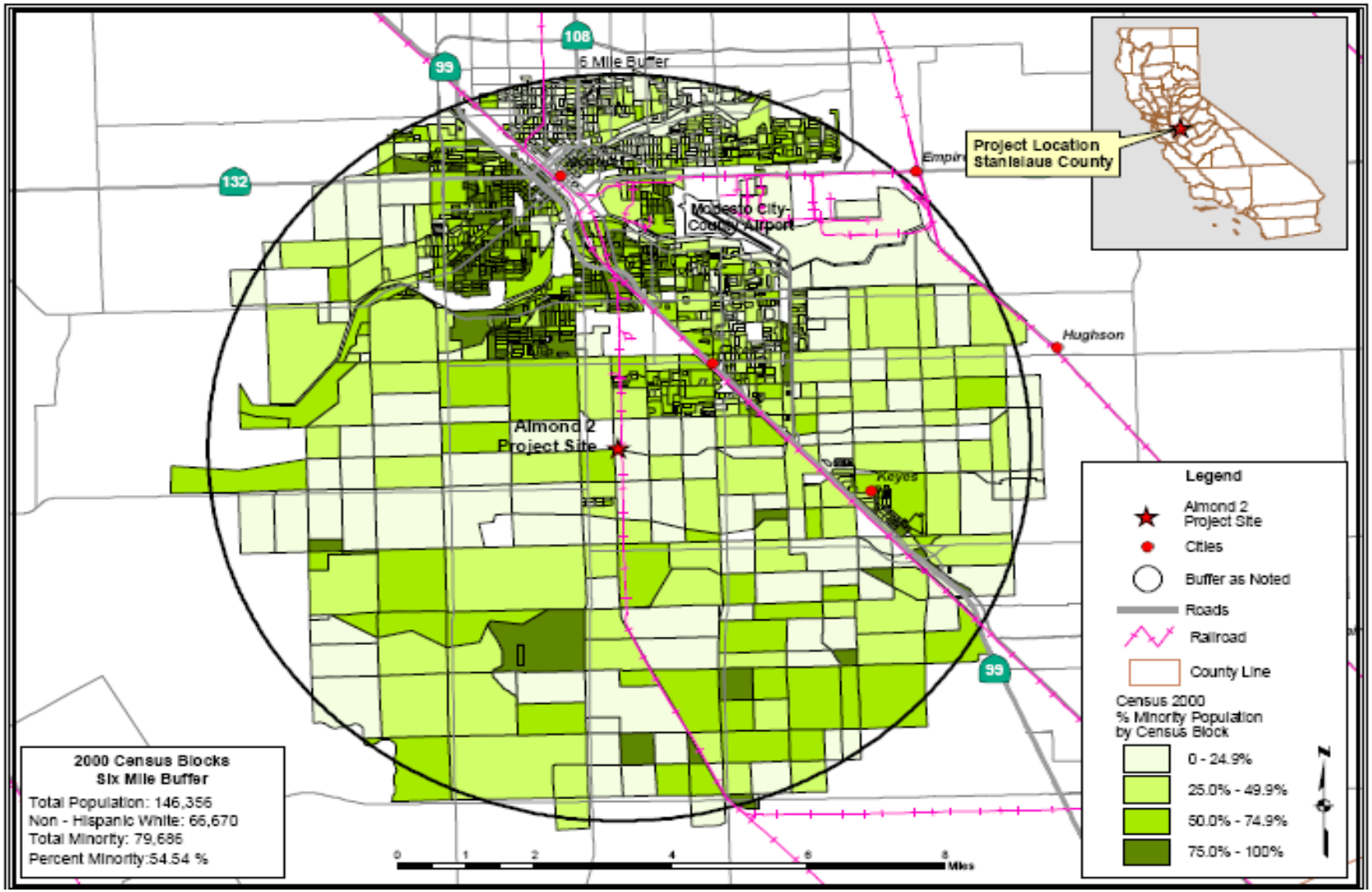
According to Staff, Census 2000 information for the Project vicinity indicates that the minority populations by census block (the smallest geographic unit for which the Census Bureau collects and tabulates data) within a six-mile radius of the project site is 146,356 persons or about 55 percent of the total population. (Ex. 300, p. 4.8-2.) **Socioeconomics Figure1** below shows the location of the minority populations within six-miles of the project site.

Staff also identified the below-poverty-level population based on Year 2000 U.S. Census block group data within a six-mile radius of the project site. Poverty status excludes institutionalized people, people in military quarters, people in college dormitories, and unrelated individuals under 15 years old. The below-poverty-level population within a six-mile radius of the A2PP consists of approximately 22 percent of the total population in that area or approximately 31,078 people. (Ex. 300, p. 4.8-2.)

Based on this information, we find that the minority population exceeds 50 percent in the project vicinity. However, since the record shows that the project's implementation of the Conditions of Certification in this Decision will mitigate all potential health and safety and environmental impacts to levels below significance for any affected population, we conclude that there are no disproportionate impacts on environmental justice populations.

SOCIOECONOMICS - FIGURE 1

Almond 2 Power Plant Project - Census 2000 Minority Population by Census Block - Six Mile Buffer



6. Compliance with LORS

As shown in **Socioeconomics Table 1** above, the only applicable LORS pertain to the possible imposition of school impact fees. The California Government Code asserts that only CUSD has authority to impose school facilities fees. However, because the A2PP project will be located on property owned by the TID (a public entity), the project is exempt from paying school impact fees to CUSD. Moreover, because the project is not expected to induce relocation to the project area and even if it did, the growth associated with the four new full-time employees would result in the enrollment of only four new students to the District, it does not appear that impact fees would be warranted. (Ex. 300, p. 4.8-8 4.8-9.)

7. Cumulative Impacts

A project may result in significant adverse cumulative impacts when its effects are cumulatively considerable; that is, when the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects [*Public Resources Code* Section 21083; *California Code of Regulations*, Title 14, Sections 15064(h); 15065 (c); 15130; and 15355]. Mitigation requires taking feasible measures to avoid or substantially reduce the impacts.

Regarding socioeconomics, cumulative impacts could occur when more than one project in the same area has an overlapping construction schedule, thus creating a demand for workers that cannot be met locally. An increased demand for labor could result in an influx of non-local workers and their dependents, resulting in a strain on housing, schools, parks and recreation, law enforcement, and emergency services.

As shown in **Socioeconomics Table 2** below, the total construction labor force by metropolitan statistical area (MSA) for the region is more than sufficient to accommodate the labor needs for construction of power generation facilities and other large industrial projects.

SOCIOECONOMICS Table 2
Occupational Employment Projections by MSA

Construction and Extraction Occupations for Selected MSAs	Average Annual Employment for 2006	Average Annual Employment for 2016
Stanislaus County MSA	13,300	12,090
Merced County MSA	3,740	3,180
Santa Clara County MSA ‘ (Part of San Jose-Santa Clara-Sunnyvale)	50,960	53,480
Source: EDD 2009 Projections of Employment by Industry and Occupation		

The large size of the available workforce in the region indicates that A2PP construction, in conjunction with construction of other nearby projects, will not adversely impact the availability of workers to complete other projects. Since the A2PP Project will not cause any significant adverse socioeconomic impacts to population, housing, or public services due to the temporary nature of construction, it is unlikely that it would contribute significantly to cumulative socioeconomic impacts. Thus, the project’s impact on socioeconomic factors, when combined with the existing or anticipated impact of other development, is not cumulatively considerable.

8. Public Benefits

Noteworthy public benefits include the direct, indirect, and induced impacts of a proposed power plant. The anticipated economic benefits of A2PP are shown below in **Socioeconomics Table 3** below**.**

Socioeconomics Table 3
A2PP Economic Benefits (2008 dollars)

Fiscal Benefits	
Estimated annual property taxes	Exempt
State and local sales taxes: Construction	$73,750 - $147,500
State and local sales taxes: Operation	$110,625
School Impact Fee	Exempt
Non-Fiscal Benefits	
Total capital costs	$200 million
Construction payroll	$7.56 million
Annual Operations and Maintenance	
Construction materials and supplies	$175 million
Operations and maintenance supplies	$1.8 million
Direct, Indirect, and Induced Benefits	
Estimated Direct	
Construction	97 jobs
Operation	4 full-time positions
Estimated Indirect	
Construction Jobs	33
Construction Income[1]	$556,020[1]
Operation Jobs	26
Operation Income	$1,072,600
Estimated Induced	
Construction Jobs	38
Construction Income[1]	$1,130,290
Operation Jobs	10
Operation Income	$326,600

[1] The numbers shown for construction income (both indirect and induced) are based on local expenditures of $1 million.

Source: TID2009a, 5.10 Socioeconomics.

9. Agency and Public Comments

No comments were received on the topic of Socioeconomics.

FINDINGS AND CONCLUSIONS

Based on the evidence, we make the following findings:

1. The A2PP Project will draw primarily upon the labor force in Merced, San Joaquin, and Santa Clara counties, for both the construction and operation workforce.

2. Construction workers and permanent employees who live within a two-hour commute to the site are not likely to relocate to the project area.

3. The project will not cause a significant influx of construction or operation workers into the project area.

4. The project is not likely to have a significant adverse effect upon local employment, housing, schools, utilities, recreational parks, medical resources, or fire and police protection.

5. The project will provide direct, indirect, and induced economic benefits in Stanislaus County by payment of sales taxes, payroll, and other business expenses.

6. Construction and operation of the project will not result in any direct, indirect, or cumulative adverse socioeconomic impacts.

7. Review of the project is consistent with environmental justice principles.

8. Minority populations exist within a six mile radius of the site.

9. All potential health and safety and environmental impacts from the project will be mitigated to insignificant levels for all affected populations including minority populations.

10. The project will not cause or contribute to disproportionate impacts upon minority populations.

CONCLUSION OF LAW

Project construction and operation will provide economic benefits to the local area and is consistent with principles of environmental justice.

No Conditions of Certification are required.

D. NOISE AND VIBRATION

The construction and operation of any power plant creates noise, or unwanted sound. A combination of different factors such as loudness, time of day, and proximity to sensitive receptors determines whether the source of noise will cause significant adverse impacts. In some cases, vibration may be produced as a result of construction activities, such as blasting or pile driving, which may cause structural damage and annoyance.

This topic evaluates whether noise and vibration produced during project construction or operation will be sufficiently mitigated to comply with applicable law. We consider factors such as the character and loudness of the noise, the times of day or night when it is produced, and the proximity to sensitive receptors to determine whether project noise will result in adverse environmental impacts. We also review whether vibration due to construction or operation will cause adverse impacts to adjacent properties.

Our CEQA evaluation recognizes that a significant effect from noise may exist if a project would result in:

- exposure of persons to, or generation of, noise levels in excess of standards established in the local General Plan or noise ordinance or applicable standards of other agencies;
- exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Section XI of Appendix G of CEQA Guidelines (Cal. Code Regs., tit. 14, App. G)

The discussion below also considers the A2PP Project's compliance with CEQA and the following laws, ordinances, regulations and standards (LORS).

Federal LORS.

The federal LORS are encompassed in the the Occupational Safety and Health Act of 1970 (29 USC § 651 et seq.), which includes regulations designed to protect workers against the effects of occupational noise exposure (29 CFR § 1910.95). These regulations list permissible noise exposure levels as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed,

assuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation. (Ex. 300, p. 4.6-2, Noise Appendix A, Table 4A.)

The Federal Transit Administration (FTA) provides guidance for assessing the impacts of groundborne vibration associated with construction of rail projects. These guidelines assist in assessing groundborne vibration of other types of projects. The FTA-recommended vibration standards are expressed in terms of the "vibration level," which is calculated from the peak particle velocity measured from groundborne vibration. The FTA measure of the threshold of perception is 65 VdB, which correlates to a peak particle velocity of about 0.002 inches per second (in/sec). The FTA measure of the threshold of architectural damage for conventional sensitive structures is 100 VdB, which correlates to a peak particle velocity of about 0.2 in/sec.

There are no federal laws governing off-site (community) noise.

State LORS.

Government Code section 65302(f) encourages local governmental entities to perform noise studies and implement a noise element as part of its General Plan. In addition, the California Office of Planning and Research has published guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure. (See, Ex. 300, p. 4.6-3 [Noise Table 2].)

The California Occupational Safety and Health Administration (Cal/OSHA) has promulgated Occupational Noise Exposure Regulations (Cal. Code Regs., tit. 8, §§ 5095–5099) that set employee noise exposure limits. These standards are equivalent to the federal OSHA standards discussed above.

Local LORS.

Stanislaus County's General Plan Noise Element identifies single-family and multiple-family residential uses in residential zones as noise sensitive land uses (Stanislaus 2006, Chapter 4, section 4.0). The County's General Plan adopted the state land use compatibility guidelines. The General Plan also requires new stationary noise sources to mitigate noise emissions so that noise levels at noise sensitive land uses do not exceed daytime hourly levels of 55 dBA and maximum levels of 75 dba and nighttime hourly levels of 45 dBA and maximum levels of 65 dBA. (Ex. 300, p. 4.6-4.) The County Code prohibits the production of noise that would be a nuisance to a person of ordinary

sensibilities. High-pressure steam blows from stationary internal combustion engines are identified as a public nuisance subject to this noise prohibition. (*Id*.)

The City of Ceres General Plan requires that noise created by new proposed non-transportation sources be mitigated so as not to exceed daytime hourly levels of 55 dBA and maximum levels of 75 dba and nighttime hourly levels of 45 dBA and maximum levels of 65 dBA. The City of Ceres has adopted the state land use compatibility guidelines in its Municipal Code. Additionally, noise regulations applicable to the construction and operation of the project are set forth in the municipal code. The erection (including excavation), demolition, alteration or repair of any building other than between the hours of 7:00 a.m. and 8:00 p.m. would be in violation of the provisions of the code. (*Id*.)

The evidence on this topic was undisputed. (10/1/10 RT 11-12, Exs. 1, § 5.7; 4 [Noise and Vibration]; 8 [Pages 49-54]; 21 [Data Responses, Attachment DR18, § 3.7]; 29 (Pages 7-8]; 37; 300[1], § 4.6.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting

The A2PP Project will be located in the City of Ceres, Stanislaus County, California on approximately 4.6 acres of land adjacent to the existing TID Turlock Almond Power Plant (APP). The land surrounding the project site is zoned for agricultural and residential uses. Traffic on State Route (SR) 99 and local roads is the primary contributor to ambient noise in the project vicinity. The nearest residence is located approximately 0.3 miles northeast of the project site.

[1] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the Exhibit List as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 302: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

2. Project Features

Project construction includes the addition of:

- Two new 115-kV transmission line corridors.
- The re-rating of approximately 2.9 miles of an existing 69-kV sub-transmission line to enhance system reliability.
- A new natural gas supply that will be provided via an approximately 11.6 mile long pipeline.
- Natural gas pipeline reinforcement approximately 1.8 miles long.

3. Assumptions and Baseline Conditions

In evaluating whether the A2PP Project will result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, Staff assumes that potential for a significant noise impact exists where the noise of the project plus the background exceeds the background by 5 dBA or more at the nearest sensitive receptor. Staff further assumes that an increase in a background noise levels up to 5 dBA in a residential setting is insignificant and that an increase of 10 dBA in such a setting is significant. (Ex. 300, p. 4.6-5.) We find these assumptions to be reasonable and appropriate for our evaluation of the project's potential noise impacts.

We also note that the following discussion relies on a baseline derived from the Applicant's ambient noise survey. (Exs. 1, pp. 5.7-4 – 5.7-16; 300, pp. 4.6-6 - 4.6-7.) The survey was conducted January 20 through July 22, 2009, and monitored noise levels at the following locations:

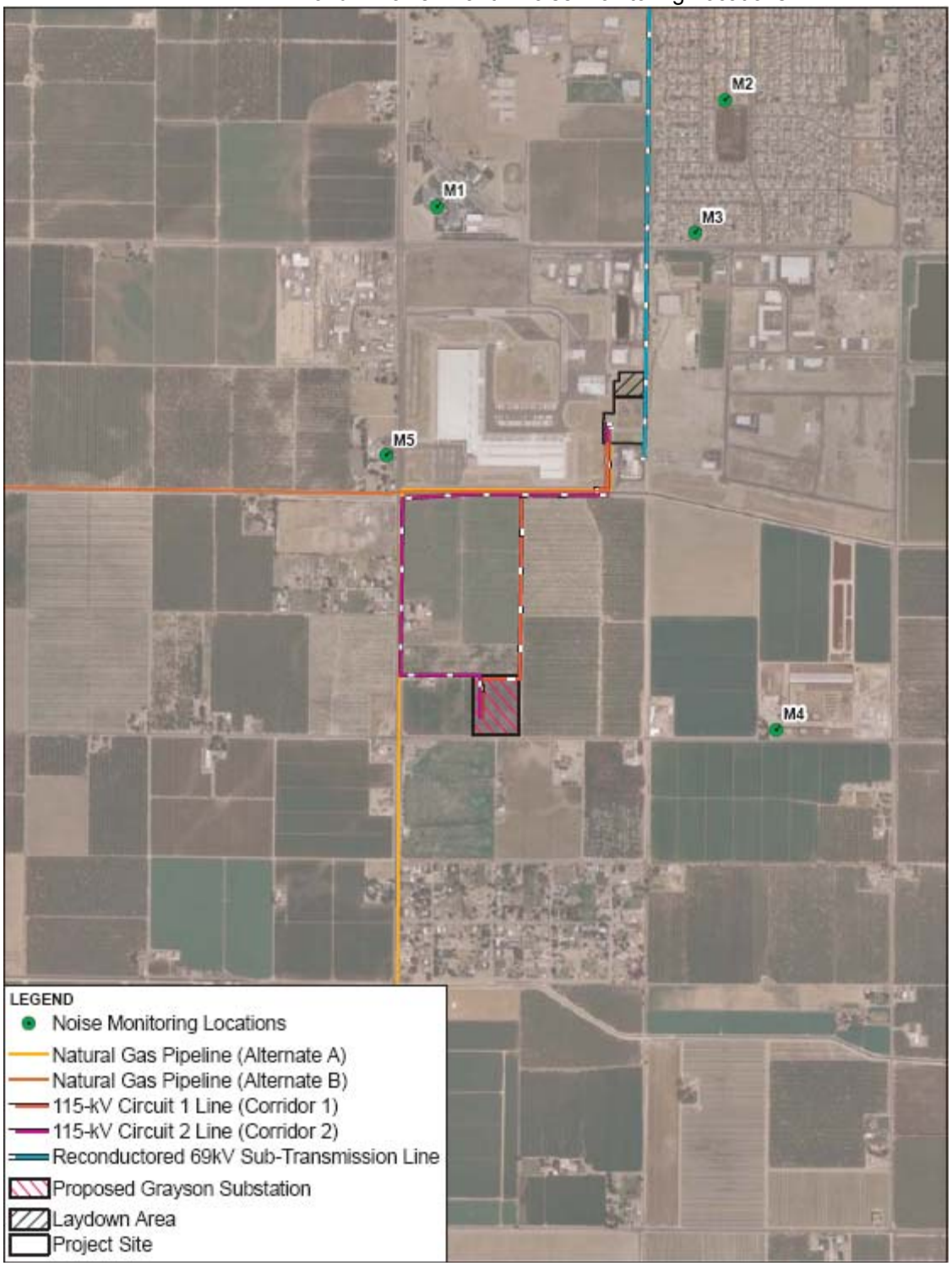
- Location M1: Near a residence located approximately 2700 feet northwest of the project's northern boundary
- Location M2: Near the center of an existing residential development within the City of Ceres, located approximately 3,375 feet northeast of the project's northern boundary
- Location M3: Near the southern edge of a residential development within the City of Ceres, located approximately 1,875 feet to the northeast of the project's northern boundary. This location represents the nearest sensitive receptor, the one most likely to be impacted by project noise
- Location M4: Near a residence located approximately 3,375 feet southeast of the project's southern boundary

Location M5: Near a residence located approximately 2,275 feet west of the project's western boundary.

Noise Figure 1 below shows the noise monitoring locations in relation to the A2PP site.

NOISE – Figure 1

Almond 2 Power Plant - Noise Monitoring Locations



Source: Ex. 1

Noise Table 1 below summarizes the ambient noise measurements associated with the identified locations.

Noise Table 1
Summary of Measured Ambient Noise Levels

Measurement Location	Measured Noise Levels, dBA		
	L_{eq} – Daytime[1]	L_{eq} – Nighttime[2]	L_{90} – Nighttime[3]
M1: Northwest Residence	55	53	43
M2: Northeast Residence	55	46	41
M3: Nearest Receptor	60	55	40
M4: Southeast Residence	59	56	46
M5: West Residence	63	60	43

Sources: Ex. 300, p. 4-6-7, 1, Tables 5.7-3 – 5.7-7

[1] Staff calculations of average of 15 daytime hours
[2] Staff calculations of average of 9 nighttime hours (*Id*.)
[3] Staff calculations of average of 4 consecutive quietest hours of the nighttime (*Id*.)

4. Construction Impacts

The noise generated from A2PP construction will be temporary. The 12-month construction timeframe for the A2PP Project is typical of similar projects in terms of schedule, equipment used, and construction activities. (Exs. 1, p. 5.7-17; 300, p. 4.6-7.)

The Applicant estimated the noise impacts of project construction on the nearest sensitive receptors as shown in **Noise Table 2** below.

Noise Table 2
Predicted Power Plant Construction Noise Impacts

Receptor	Highest Construction Noise Level[1] (dBA L_{eq})	Measured Existing Ambient[2] (dBA L_{eq})	Cumulative (dBA L_{eq})	Change (dBA)
M1: Northwest Residence	54	55 daytime	57 daytime	+2 daytime
		53 nighttime	57 nighttime	+4 nighttime
M2: Northeast Residences	52	55 daytime	57 daytime	+2 daytime
		46 nighttime	53 nighttime	+7 nighttime
M3: Nearest Receptor	57	60 daytime	60 daytime	+0 daytime
		55 nighttime	59 nighttime	+4 nighttime
M4: Southeast Residence	52	59 daytime	60 daytime	+1 daytime
		56 nighttime	57 nighttime	+1 nighttime
M5: West Residence	55	63 daytime	64 daytime	+1 daytime
		60 nighttime	61 nighttime	+1 nighttime

1 Source: TID2009a, AFC Table 5.7-8; and Staff calculations
2 Source: TID2009a, AFC Tables 5.7-3 through 5.7-7; and Staff calculations of average of daytime and nighttime hours

As shown, a maximum construction noise level of 89 dBA L_{eq} is estimated to occur at a distance of 50 feet from the acoustic center of the construction activity (the power block) and to weaken to no more than 57 dBA L_{eq} at the nearest sensitive receptor, which is identified as Location M3. The highest increase in the ambient noise levels at the project's noise-sensitive receptors would be 7 dBA. (Ex. 300, p. 4.6-7.)

While there are no LORS that limit the loudness of the construction noise, we find that a 7dBA increase would be noticeable and potentially significant even though most construction activities will be limited to daytime hours. To ensure that the project construction results in less than significant impacts, we adopt Staff-proposed Conditions of Certification **NOISE -1**, **-2**, and **-6**. **NOISE-6** restricts heavy equipment operation and noisy construction work to the hours of 7:00 a.m. to 8:00 p.m., Sunday through Saturday. In addition, haul trucks and engine-powered equipment must be equipped with adequate mufflers. **NOISE -2** and -**3** establish a notification and complaint process to resolve noise-related complaints.

The evidence also includes an assessment of noise associated with pile driving. The noise from pile driving is expected to reach 104 dBA at a distance of 50 feet. At the nearest sensitive receptor (M3), noise from pile driving could reach 73 dBA, and at location M1 noise levels could increase by 14 dBA. **Noise Table 3** below shows the potential pile driving impacts on the identified sensitive receptor locations.

Noise Table 3
Pile Driving Noise Impacts

Receptor	Pile Driving Noise Level (dBA L_{eq})	Daytime Ambient Noise Level (dBA L_{eq})	Cumulative Level (dBA)	Change (dBA)
M1	69	55	69	+14
M2	67	55	67	+12
M3	73	60	73	+13
M4	67	59	67	+8
M5	71	63	72	+11

Source: TID2009a, AFC Table 5.7-11 and Staff calculations

Pile driving could result in a noticeable and significant impact. With implementation of Condition of Certification **NOISE-6,** any such impacts will be reduced to insignificant levels. (Ex. 300, p. 4.6-9.)

With regard to the project's linear facilities, the evidence establishes that their construction moves at a rapid pace and therefore no particular area is exposed to noise for more than a few days. (Ex. 300, p. 4.6-9.) Implementation of Condition of Certification **NOISE-6** will reduce any potential impacts to less than significant levels.

The evidence indicates that pile driving is the the only construction activity likely to produce vibration perceived off site. Because vibration rapidly attenuates (weakens), we do not anticipate vibration being perceptible at any appreciable distance from the project site. Thus, pile driving will not result in significant vibration impacts. (Ex. 300, p. 4.6-9.)

Finally, to ensure that construction workers are protected from noise hazards in a manner consistent with applicable federal and state LORS, we adopt Staff-proposed Condition of Certification **NOISE-3**. (Ex. 300, pp. 4.6-9 and 4.6-10.)

NOISE-3 requires the project owner to submit to the CPM for review and approval a noise control program and a statement 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 federal and state (OSHA and Cal/OSHA, respectively) standards.

5. Operation Impacts

A power plant operates as a steady, continuous noise source unlike the intermittent sounds that make up most of the noise environment. As such, power plant noise contributes to, and becomes part of, the background noise level. Where power plant noise is audible, it will tend to define the background noise

The primary sources of A2PP operation noise are the combustion turbine generators, SCR units, stacks, compressors and transformers. (Exs. 1, pp. 5.7-20 – 5.7-21; 300, pp. 4.6-10, 4.6-11.)

The Applicant performed noise modeling to determine the project's noise impacts on sensitive receptors. **Noise Table 4** below summarizes the results of this modeling.

Noise Table 4
Predicted Operational Noise Levels and Noise LORS

Receptor	Project Alone Operational Noise Level L_{eq} (dBA)[1]	Stanislaus County General Plan, L_{eq} (dBA)[2]
M1		55 day/ 53 night
M2		55 day/ 46 night
M3		60 day/ 55 night
M4		59 day/ 56 night
M5		63 day/ 60 night

Sources: [1] TID2009a, AFC § 5.7.3.3.3; Staff calculations; CH2MHILL2010d; [2] Noise Table 3 and Noise Table 4, above

The modeling takes into account the Applicant's proposed noise reduction measures as incorporated into the project design. The local planning policy guidelines for Stanislaus County and the City of Ceres require new projects to meet the acceptable exterior noise level standards. The hourly level for daytime noise is 55 dBA and the maximum daytime level is 75 dBA. The hourly nighttime level is 45 dBA and the maximum nighttime level is 65 dBA. Existing ambient conditions at the residential receptors closest to the project site for the A2PP are higher than these noise level standards. The LORS state that in such an instance, the noise level standards must be increased to the ambient levels. The ambient levels are shown **Noise Table 4** above.

As shown, the project's operational noise level at the nearest receptors would be no more than 49 dBA L_{eq}. This is within the state and local LORS noise limits. Therefore, the project's operational noise impacts at the nearest sensitive receptors will comply with both the City of Ceres and Stanislaus County noise LORS. To ensure that the noise limits remain within acceptable limits, we adopt Staff-proposed Condition of Certification **NOISE-4**, which restricts noise at the five closest receptors to specified levels. (Ex. 300, p. 4.6-10.)

Looking solely at CEQA's thresholds of significance, Staff also compared the project noise to nighttime background levels. Staff assumes that the potential for public annoyance from power plant noise is greater at night when residents are attempting to sleep. (Ex. 300, p. 4.6-11.) **Noise Table 5** below shows Staff's predicted operational noise levels.

Noise Table 5
Predicted Operational Noise Levels and CEQA

Receptor	Project Alone Operational Noise Level L_{eq} (dBA) [1]	Measured Existing Ambient, Average Nighttime L_{90} (dBA) [2]	Project Plus Ambient L_{90} (dBA)	Change in Ambient Level
M1	47	43	48	+5
M2	45	41	46	+5
M3	49	40	50	+10
M4	49	46	51	+5
M5	47	43	48	+5

[1] Source: TID2009a, AFC § 5.7.3.3.3; Staff calculations; CH2MHILL2010d
[2] Source: TID2009a, AFC Tables 5.7-3 through 5.7-7; and Staff calculations of average of four quietest consecutive nighttime hours

As shown, combining the ambient noise level with project noise results in increases of 5 dBA on receptor locations M1, M2, M4, and M5. These increases are within the range deemed less than significant (See Assumptions and Baseline Conditions above). Implementation of Condition of Certification **NOISE-4** will ensure that these noise levels

are not exceeded. **NOISE-4** ensures that noise levels due to solely to operation of the project will not exceed 47 dBA at M1 and M5, 45 dBA at M2, and 49 dBA and M4.

The ambient noise level combined with the project noise level at M3 will result in an increase of 10 dBA. An increase between 5 dBA and 10 dBA can be potentially significant, especially when this increase would occur at nighttime when people are trying to sleep. We recognize, however, that the project is intended as a peaking facility and will not operate continuously during nighttime hours. Thus, operational noise between 5 and 10 dBA over ambient levels would be acceptable, given that potential nighttime operation would be sporadic and of short duration as long as the noise level attributed solely to the operation of the project does not exceed 47 dBA at receptor M3. Condition of Certification **NOISE-4** incorporates this requirement. (Ex. 300, p. 4.6-12.)

Another source of disturbance would be strong tonal noises. Applicant plans to address overall noise in project design, and to take appropriate measures, to eliminate tonal noises as possible sources of annoyance. Implementation of Condition of Certification **NOISE-4** will minimize tonal noise impacts to less than significant levels. (Ex. 300, p. 4.6-12.)

Vibration from an operating power plant could be transmitted through the ground and air. The A2PP operating components include a simple cycle power plant consisting of high-speed gas turbines, compressors, and various pumps. The evidence establishes that all of these pieces of equipment must be carefully balanced in order to operate. We therefore find that the ground borne vibration from the A2PP Project will be undetectable by any likely receptor. (Ex. 300, pp. 4.6-12 and 4.6-13.)

Airborne vibration (low frequency noise) can rattle windows and objects on shelves, and can rattle the walls of lightweight structures. The A2PP's chief source of airborne vibration would be the gas turbines' exhaust. In a power plant such as the A2PP, however, the exhaust must pass through the selective catalytic reduction (SCR) modules and the stack silencers before it reaches the atmosphere. The SCRs act as efficient mufflers. The combination of SCR units and stack silencers makes it highly unlikely that the A2PP would cause perceptible airborne vibration effects. (Ex. 300, p. 4.6-13.)

The Applicant acknowledges the need to protect plant operating and maintenance workers from noise hazards and has committed to comply with applicable LORS. To ensure that plant operation and maintenance workers are adequately protected, we adopt Condition of Certification **NOISE-5**. (Exs. 1, §5.7.3.3.1; 300, p. 4.6-13.) **NOISE-5** requires the project owner to conduct an occupational noise survey to identify noise hazards and mitigate the hazards as required by federal and state LORS.

6. Cumulative Impacts

Section 15130 of the CEQA guidelines (Cal. Code Regs., tit. 14) requires a discussion of cumulative environmental impacts. Cumulative impacts are two or more individual impacts that, when considered together, compound or increase the impact.

The Applicant has identified 33 projects in the vicinity of the A2PP; only one of these projects – the City of Ceres project to replace or expand the existing stand-by power unit at Blaker Reservoir - introduces a potential new noise source. However, because this project is more than two miles from the A2PP site, it is too far away to cause cumulative impacts when combined with the A2PP. (Exs. 1, p. 5.7-22; 300, p. 4.6-13.)

7. Project Closure Impacts

Upon closure of the A2PP Project, all operational noise from the project would stop, and no further adverse noise impact from its operation will be possible. The remaining potential temporary noise source will be the dismantling of the structures and equipment and any site restoration work that may be performed. Since this noise would be similar to that caused by the original construction, it can be similarly treated; that is, noisy work could be performed during daytime hours, with machinery and equipment properly equipped with mufflers. Any noise LORS that were in existence at that time would apply. Applicable Conditions of Certification included in the Commission's Decision would also apply unless modified.

With the implementation of the Conditions of Certification described above, we find that noise impacts from operation of the A2PP Project will be less than significant.

8. Agency and Public Comments

There were no comments from agencies or the public on the topic of Noise and Vibration.

FINDINGS OF FACT

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

1. Construction and operation of the A2PP Project will create noise levels above existing ambient levels in the surrounding project area.

2. Construction noise levels will be mitigated to the extent feasible by employing measures such as construction notification, limiting construction to daytime hours in accordance with local noise control laws and ordinances, and a noise complaint process.

3. Measures contained in the Conditions of Certification and compliance with local LORS will assure that noise from construction and operation is mitigated to below the level of significance.

4. Operational noise will increase noise above existing ambient levels in the surrounding project area.

5. Operational noise levels will be mitigated by employing a noise complaint process and noise restrictions near sensitive receptors.

6. The project owner will implement measures to protect workers from injury due to excessive noise levels.

7. The A2PP Project will not create ground or airborne vibrations, which cause significant off-site impacts.

8. Implementation of the Conditions of Certification identified below, ensure that project-related noise emissions will not cause significant adverse impacts to sensitive noise receptors.

CONCLUSION OF LAW

The Commission concludes that implementation of the following Conditions of Certification ensure that the A2PP Project 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 Prior to ground disturbance at the project site and again prior to ground disturbance at the location of the linear facilities, the project owner shall notify all residents within one miles of the site and one mile of the linear facilities, by mail or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project 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: At least 15 days prior to the start of 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 A2PP, 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, or 72 hours if the complaint is made over the weekend;
- 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 the noise levels due to operation of the project alone will not exceed: an hourly average of 47 at location M1, 45 at location M2, 47 at location M3, 49 at location M4, and 47 at location M5 (as shown on **Noise - Figure 1**).

No new pure-tone components shall 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.

A. If the results from the noise survey indicate that the power plant noise at the affected receptor sites exceeds the above values, mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

B. 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 project owner shall conduct a 25-hour noise survey at monitoring location M3, or at a closer location acceptable to the CPM, 30 days of the project first achieving a sustained output of 85 percent or greater of rated capacity. During the period of this survey, the project owner shall also conduct short-term noise measurements between the nighttime hours of 10:00 p.m. and 7:00 a.m. at monitoring locations M1, M2, M4, and M5 or at closer locations acceptable to the CPM. All surveys shall measure one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been caused by the project. During the 25-hour survey, output shall be maintained at a level of 50 percent or greater.

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 shall 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.

A. As indicated above, 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 facility (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.

NOISE-5 Following the project's first achieving a sustained output of 85 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, including pile driving, shall be restricted to the times delineated below:

Any Day: 7:00 a.m. to 8:00 p.m.

Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

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.

EXHIBIT 1 - NOISE COMPLAINT RESOLUTION FORM

Almond 2 Power Plant
(09-AFC-2)

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: _____

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

E. VISUAL RESOURCES

Visual resources are the natural and cultural features of the landscape that contribute to the visual character or quality of the environment. CEQA requires an examination of a project's visual impacts to determine whether the project has the potential to cause substantial degradation to existing views of the site and its surroundings. (Cal. Code Regs., tit. 14 § 15382 and Appendix G, Part I.) More particularly, CEQA requires us to evaluate whether the project would substantially:

- adversely affect a scenic vista;
- damage scenic resources including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

We performed this evaluation and also considered the Almond 2 Power Plant (A2PP) Project's compliance with the applicable laws, ordinances, regulations, and standards (LORS) identified in **Visual Resources Table 1**.

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VISUAL RESOURCES Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Source	Descriptions
Federal	
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (PL 109-59; 2005). Expires 2009	A2PP is not located within or in the vicinity of federally-managed lands or in the vicinity of a recognized National Scenic Byway or All-American Road.
State	
California Streets and Highways Code, Section 260 through 263 – Scenic Highways	Ensures the protection of highway corridors that reflect the state's natural scenic beauty. The state of California has not formally designated as scenic any of the roads or highways within or adjacent to the project area.
Local	
City of Ceres 2015 General Plan Section: Major Corridors Policy 1.J.6 Section: Industrial Development Policy 1.G.4 Policy 1.G.5	A long term vision of Ceres which outlines policies, standards, and programs to guide day to day decisions concerning development through 2015. To enhance the visual quality of its major corridors by requiring new and expanding development to conceal unsightly uses and equipment, (i.e., screening of rooftop equipment and outdoor storage and undergrounding of utilities). City shall seek to minimize the adverse visual impacts of industrial development from State Route 99, primarily through landscaping and fences. City shall encourage industrial developments that include the following features: -Attractive building frontages that are readily visible for the public street (brick, wood façade). -Variation in the roofline (multi-planed, pitched roofs) -Articulation in the walls (insets, projections, canopies, wing walls, trellis) -Large parking areas with tree coverage separated into a series of smaller parking areas with the use of landscaping and the location of buildings. -Outdoor service areas, loading bays and outdoor storage areas that are not readily visible to the public. -Attractive landscaping to enhance the business by softening buildings and parking areas
City of Ceres Municipal Code Land Use and Development Standards: J2: Landscaping G: Building Height Requirements	Provides conceptual framework for the installation of public facilities, provision of public services, and future development. All uses shall provide landscaping that shall be maintained. Height of all main and accessory buildings erected in M-2 zone shall be as approved by Planning Commission.
Stanislaus County 2020 General Plan, Land Use Conservation/Open Space Element: Goal 1	To ensure the continued success of the area's leading agricultural industry. Encourage the protection and preservation of natural and scenic areas throughout the county.

The evidence was undisputed. (10/1/10 RT 11-12, Exs. 1, § 5.13, Appen. 5.13A; 4 [Visual Resources]; 8, [pp. 58-61]; 15 [Response to Query 1]; 19 [Response to Query 3]; 21 [Attachment DR 18, § 3.13]; 25; 300 [1], § 5.13.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Setting

The A2PP is located on Crows Landing Road in the City of Ceres, Stanislaus County California. The site is approximately three miles south of State Route (SR) 99 and comprises approximately 4.6-acres for the plant site and 6.4 acres for construction parking and laydown. (Ex. 300, p. 4.12-2.)

Access to the site from the north is from SR 99 through Crows Landing Road. From the south, access is via Keyes Road, which intersects with Crows Landing Road approximately two miles west of SR 99. (Ex. 300, p. 4.12-2.)

The project site is currently a vacant lot that was previously used by WinCo as a borrow pit. The existing TID APP is adjacent to the A2PP site to the south. Buildings, tanks, and other structures associated with the APP are generally between 30 to 40 feet high but the exhaust stack is 92-feet tall. APP includes exposed pipelines and is surrounded by fencing. (Ex. 1, p. 5.13-2.)

A WinCo distribution warehouse is west of the project site, a farm supply facility is to the north, and various other industrial facilities are to the east. Some agricultural and residential uses are also nearby. The closest residence to the site is 0.30 miles north of the site along East Service Road. This residence marks the edge of a recently developed residential subdivision that extends north and eastward towards central Ceres. A few rural residences are located west of the project site along Crows Landing Road and a small rural neighborhood is located approximately one mile south of the site. A golf course is approximately 0.75 miles southwest of the project site. (Ex. 1, p. 5.13-1.)

[1] During the October 1, 2010, Evidentiary Hearing, all intended exhibits were identified by reference to the hearing Exhibit List. Although the Exhibit List as approved by Staff identified Staff's sole exhibits as exhibits 300 through 302 (300: Revised Staff Assessment, 301: Supplement to Revised Staff Assessment, 302: San Joaquin Valley Air Pollution Control District Final Determination of Compliance), Staff orally misidentified its exhibit numbers as 301-303 when entering its exhibits into the record. The Reporter's Transcript of the hearing makes it clear that the parties and Committee understood that Staff intended to enter exhibits 300 – 302 into the record as identified on the Exhibit List. We therefore reference Staff's exhibits 300 through 302 in this Decision.

Visual Resources Figure 1 shows the shows the project in relation to the access roads and key observation points (KOPs) jointly selected by the Applicant and Staff. KOPs are representative viewpoints from sensitive receptor locations. Residents and recreationalists are typically considered sensitive receptors to changes in landscape. (Ex. 1, p. 5.13-15.)

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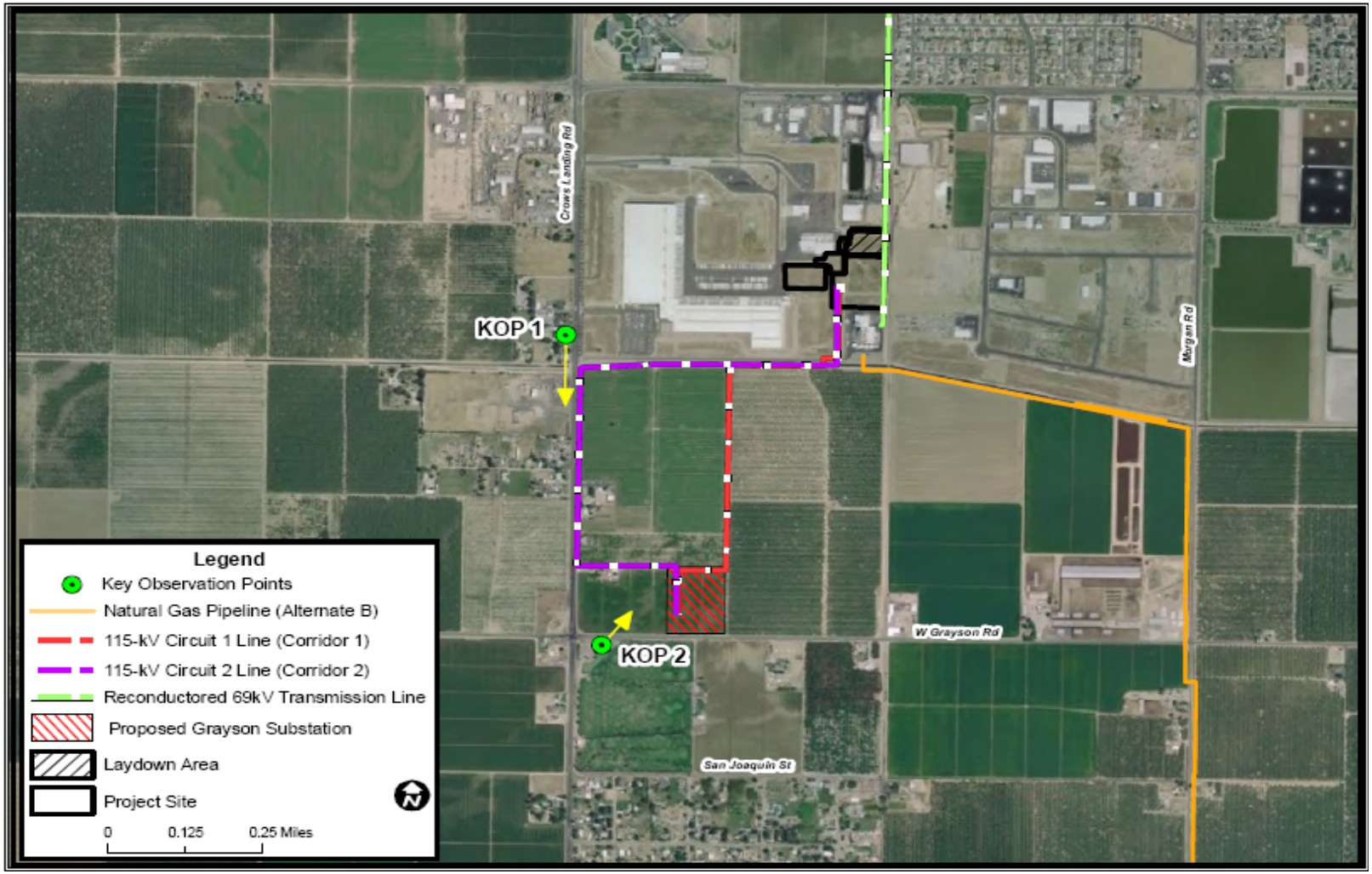
Visual Resources – Figure 1

Almond 2 Power Plant Project – KOP Photo Locations



Source: Ex. 300, NOTE: KOP 2 (the golf course) as identified above is referenced throughout this evaluation as KOP 3.

2. Project Features

The primary project features that will be introduced into the visual landscape include:

- Three 80-foot tall combustion turbine generator stacks
- Three 47-foot tall VBV (variable bypass value) air outlets
- Three 34-foot tall CTG (combustions turbine generator) inlet air housings
- Three 31-foot tall SCRs (selective catalytic reduction)
- Three 15-foot tall combustion turbines
- New building expansion continuing a structure height of 18-feet
- Transmission lines (approximately 70 feet tall) and switchyard facilities. (Ex. 300, p. 4.12-5.)

3. Scenic Vistas

For the purposes of this evaluation, a "scenic vista" is defined as a distant view of high pictorial quality perceived through and along a corridor or opening. According to the evidence, there are no scenic vistas in proximity to the project site or within the area from which the project will be visible. (Exs. 1, p. 5.13-25; 300, p. 4.12-4.) Thus, the addition of the A2PP Project will not result in an impact to scenic vistas.

4. Scenic Resources

For the purposes of this evaluation, "scenic resources: include a unique water feature such as a waterfall; transitional water such as river mouth ecosystems, lagoons, coastal lakes, and brackish wetlands; or, part of a stream, river, or estuary. Neither the Applicant nor Staff identified scenic resources in the project vicinity. The City of Ceres General Plan does not identify any scenic resources in the project area, including the areas where project linears will be located. (Exs. 1, p. 5.13-25; 300, pp. 4.12-4 – 4.12-5.)

5. Project Impacts and Mitigation

a. Construction Impacts

Construction of the power plant would last approximately 12 months and would occur between 7 AM and 3:30 PM on weekdays with weekends and later days as needed.

The construction laydown and parking area will be visible during construction as will be the tall cranes, heavy equipment, building materials, debris, and parked cars in the area. Project construction will also be visible. However, these views will be obstructed by existing industrial structures, sound walls bordering the nearby residences, surrounding agricultural fields, and the APP facilities.

Construction of the project linears – transmission lines and natural gas pipeline – will also be visible offsite. These short-term activities will only create a temporary visual disturbance. No long-term impacts are expected to occur from these activities.

We find that project construction will not result in permanent impacts to visual resources. No mitigation is required. (Ex. 300, pp. 4.12-5 - 4.12-6.)

b. Operation Impacts

As discussed above, the Applicant and Staff selected KOPS, which represent the best viewing conditions from five major areas of viewer sensitivity:

1) KOP 1 - Nearest residential neighborhood north of the project site.
2) KOP 2 – Crows Landing Road, which is the closest main road.
3) KOP 3 – Golf course.
4) KOP 4 – Residential neighborhood south of the project site.
5) KOP 5 – View of transmission line from Crows Landing Road.

The evidence describes the locations and characteristics of the KOPS. (Exs. 1, pp. 5.13-15, 5.13-17 – 5.13-19; 300, 4.12-6 – 4.12-9, Appendix AR-1.)

The Applicant evaluated the project's potential impacts on each of the five KOPS. In contrast, Staff determined that the necessary evaluation need only include

KOP 3 and KOP 5 as they are most representative of public views. According to Staff, the project will be visible to only a few motorists on nearby roadways and obstructed from view by adjacent structures, sound walls bordering the nearby residential development, and agricultural orchards and fields in the project area. (Ex. 300, p. 4.12-6 – 4.12-9.)

Our evaluation, like the Applicant's, considers each KOP but focuses on KOPs 3 and 5.

KOP 3. KOP 3 represents a view looking northeast toward the A2PP site from the parking lot of the St. Stanislaus Golf Course. This golf course is located approximately three-quarters of a mile southwest of the project site. This view from this location as seen in the late fall through early spring months is shown below by **Visual Resources Figure 2**.

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Visual Resources – Figure 2

Almond 2 Power Plant Project – KOP 3 – Existing View – View from St. Stanislaus Golf Course, Late Fall Through Early Spring, Looking Southwest to Almond 2 Power Plant

Source: Ex. 300

From this view, golfers can see the existing APP and the top of the WinCo Foods distribution warehouse. This view is of moderately low visual quality because of the golfers' distance from the plant and the row of trees that provides a visual buffer between the viewer and the plant. With the addition of the A2PP Project, 10 new 115-kV transmission poles and lines and three 80-foot exhaust stacks will be introduced into the viewshed.

Visual Resources Figure 3 below simulates the viewshed with the addition of A2PP. This is the view seen from late fall through early spring.

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Visual Resources – Figure 3

Almond 2 Power Plant Project – KOP 3 – Simulated View – View from St. Stanislaus Golf Course, Late Fall Through Early Spring, Looking Southwest to Almond 2 Power Plant

Source: 300

The plant will be noticeable during the period when agricultural fields are fallow. Otherwise, the view will be blocked by corn stalks, the WinCo warehouse, and the new transmission poles. The evidence shows that the view blockage, view sensitivity, and visual change are expected to be low since the A2PP will blend into the existing industrial view and does not add mass and form to block views. (Exs. 1, 5.13-23; 300, p. 4-12-8.)

Thus, the evidence establishes that the addition of the A2PP Project will have no significant impact on views from KOP 3. (Exs. 1, pp. 5.13-23, 5.13-25; 300, pp. 4.12-7 – 4.12-8.)

KOP 5. KOP 5 represents the view daily commuters and residents will have of the project site as they travel south on Crows Landing Road, directly west of the project site. This view is shown by **Visual Resources Figure 4**.

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Visual Resources – Figure 4

Almond 2 Power Plant Project – KOP 5 – Communication Lines Corridor, Looking South from Crows Landing Road

Source: Ex. 300

The current view is primarily of industrial buildings and transmission poles and lines. The WinCo warehouse distribution facility is a prominent feature.

The existing view at this location is of moderately low quality because of the existing telephone poles and lines, transmission poles and lines, orchards, row crops, and pastures on both sides of Crows Landing Road. The APP is almost imperceptible. Thus, viewer concern and visibility is low.

Visual Resources Figure 5 simulates the view of the project after construction. The addition of the A2PP facility and transmission poles and lines will result in low contrast, low view blockage, and low visual change. The most visible components of the project will be the nine new transmission poles and lines that will be placed on the east side of Crows Landing Road. View blockage and visual change resulting from the nine new poles are both expected to be low.

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Visual Resources – Figure 5

Almond 2 Power Plant Project – KOP 5 – Simulated View – Communications Corridor, Looking South from Crows Landing Road

Source: Ex. 300

Thus, the evidence establishes that the addition of the A2PP Project will have no significant impact on views from KOP 1. (Exs. 1, 5.13-23; 300, p. 4.12-7.)

KOPs 1, 2, and 4. As explained above, Staff determined that the plant will be visible to only a few motorists on nearby roads and obstructed in significant part by existing area features such as structures, sound walls, and orchards. The evidence establishes the view from KOP 1 represents the best view of the project site from the nearest residential neighborhood. However, the project site is not visible from the neighborhood entrance or from the majority of the neighborhood. The evidence shows that the addition of the project features will not significantly change the character or quality of the view. (Ex. 1, pp. 5.13-17 – 5.13-19, 5.13-23, 5.13-25 – 5.13-26.) We do not find this impact to be significant.

KOP 2 represents a view from Crows Landing Road. With the addition of the project, the existing industrial view will appear larger and more dense by filling in the space between the APP and WinCo distribution warehouse. (Ex. 1, pp. 5.13-23, 5.13-26.) The new transmission lines might also be more noticeable. Thus, the visual quality of the view is expected to change from moderately low to low. However, the evidence establishes that the impact of this change is not significant.

KOP 4 represents a view from a residential neighborhood south of the A2PP site. The overall visual quality is low due because the combination of landscape elements (rural and agricultural) is of average to low distinctiveness or memorability. Furthermore, because the houses in the KOP 4 area have an east-west orientation, their view of the project site is at an angle instead of frontal. And, this angled view of the plant will be obstructed by intervening structures and vegetation. The project is not expected to be visible from this KOP. (Ex. 1, pp. 5.13-24, 5.13-25.). As a result, we find that the addition of the project will not result in a significant impact to to the view from KOP 4.

6. Visible Water Vapor Plumes

The A2PP will have visible water vapor plumes produced by the simple-cycle turbines. The evidence indicates that vapor water plumes will occur infrequently, well below 20 percent of daylight hours. We therefore find that the visual impact from these expected plumes will not be significant. (Ex. 300, p. 4.12-9.)

7. Light or Glare

The A2PP will require lighting during facility construction, operation, and for emergencies. Construction activities are expected to occur Monday through Friday between the hours of 7:00 a.m. and 3:30 p.m. Weekend and extended hour work might be required.

The A2PP plant might require operation 24 hours per day 7 days per week (although the project is intended to operate as a peaking facility). It plant will require night lighting for safety and security. The A2PP's lighting needs will necessarily combine with the existing lighting of the APP. (Exs. 1, p. 5.13-22; 300, pp. 4.12-9 – 4.12-10.)

We find that potential offsite impacts of construction and operation lighting can be mitigated to less than significant levels with implementation of Staff-recommended Conditions of Certification **VIS-1** through **VIS-3**. We have adopted these Conditions.

VIS-1 requires the project owner to implement the following measures regarding construction-related night lighting: ensure that lighting is of minimum necessary brightness consistent with requirements for worker safety and site security; shield/hood and direct downward all fixed position lighting to the extent feasible; and, to the extent feasible, keep lighting off when not in use.

VIS-2 requires the project owner to design and install all permanent lighting in a manner that complies with local LORS and does not cause excess reflected glare or illuminate the nighttime sky. The required lighting scheme must minimize illumination of the project and the immediate vicinity plant. Condition of Certification **VIS-3** addresses daytime and nighttime glare by requiring colors of project structures to be consistent with local LORS requirements and treated with a non-reflective finish and that transmission line conductors be nonspecular and nonreflective.

We find that these Conditions incorporate the Applicant's mitigation proposals and with their implementation, potential project visual impacts will be less than significant. (Ex. 300, pp. 4.3-9 -4.3-10.)

8. Cumulative Impacts

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project. [14 Cal. Code of Regs, §15355.] Cumulative impacts occur when more than one project exists or is planned to be completed or constructed in the same area at the same time. That is, any one project may not create a significant visual impact; but the combination of the new project with all existing or planned projects in the area may result in a significant cumulative impact.

A finding of a significant cumulative impact would depend on the degree to which (1) the view shed is altered; (2) view of a scenic resource is impaired; or (3) visual quality is diminished.

The evidence as discussed above establishes that the project will not have a significant impact on any of these elements. Furthermore, no known new industrial uses are planned for the area other than TID's Hughson-Grayson project. As discussed throughout this Decision, the A2PP Project will connect to TID's proposed Grayson Substation. The substation is part of TID's separate and distinct Hughson-Grayson project. Even with the addition of the Hughson-Grayson project in the vicinity, the A2PP Project will not result in significant project-specific adverse visual impacts or contribute to any adverse cumulative visual impacts with implementation of the Conditions of Certification. (Exs. 1, p. 5.13-26, §5.6; 300, p. 4.12-10 -4.12-11.)

9. Compliance with LORS

Visual Resources Table 1 above identifies and summarizes the requirements of the applicable LORS. The evidence establishes that the project will comply with LORS. The one federal LORS – the Safe, Accountable, Flexible, Efficient Transportation Equity Act – does not apply because the A2PP Project is not located within or in the vicinity of federally-managed lands or a recognized National Scenic Byway or All-American Road. Likewise, California Streets and Highways Code sections 260 through 263 do not apply because there are no formally designated roads or highways within the project area. (Ex. 300, p. 4.12-11.)

The City of Ceres General Plan and Municipal Code establish policies and guidelines designed to enhance the visual quality of development requirements.

The project is consistent with these requirements in that the project site is not readily visible from the closest major corridor within the City limits, is not visible from SR 99, will be appropriately landscaped at its entrance, and most project features are not within the public view.

The County of Stanislaus General Plan requirements are also satisfied. The Plan encourages the protection and preservation of natural and scenic areas. However, the areas in the project vicinity are not considered natural or scenic. (Exs. 1, pp. 5.13-27 – 5.13-28; 300, p. 4.12-12.)

We find that the summary of LORS compliance is supported by the evidence submitted on the topic of Visual Resources. (Exs. 1, § 5.13; 300, §4.12.)

10. Public and Agency Comments

There were no public or agency comments on the topic of Visual Resources.

FINDINGS OF FACT

Based on the evidence of record, we find and conclude as follows:

1. The A2PP 174 MW Project, a natural gas-fired, simple-cycle, peaking facility will be located next to the existing 48 MW Almond Power Plant owned and operated by the Turlock Irrigation District, the project proponent.

2. The project assessment evaluated two KOPs and the project's potential to have glare impacts. Based on this assessment we find that views of the project will be less than significant.

3. No scenic vistas exist in the view sheds.

4. No scenic resources were identified in the project area including the location of the linear facilities (transmission line corridors).

5. Visible vapor plumes will occur about 20 percent of daylight hours and were therefore found to not to be significant.

6. Construction of the project (facility and transmission lines) and laydown and parking areas will result in temporary visual disturbance but no long-term visual impacts.

7. The project will have lighting for construction and operation of the facility and has the potential to introduce glare. Conditions of Certification **VIS-1** and **VIS-2** have been adopted to reduce lighting impacts to surrounding uses during construction and operation of the project. Condition of Certification **VIS-3** has been adopted to reduce glare and minimize the visual intrusion of the project.

8. There is no evidence of potential cumulative visual impacts with the addition of the A2PP Project.

9. Implementation of the Conditions of Certification will ensure that the project's visual impacts are less than significant.

10. The A2PP Project will be consistent with all applicable visual laws, ordinances, regulations, and standards relating to visual resources identified in the pertinent portion of **Appendix A** of this Decision.

CONCLUSION OF LAW

1. The following Conditions of Certification have been identified to reduce significant impacts identified in the proposed assessment.

CONDITIONS OF CERTIFICATION

CONSTRUCTION LIGHTING

VIS-1 The project owner shall ensure that lighting for construction of the power plant is used in a manner that minimizes potential night lighting impacts, as follows:

A. All lighting shall be of minimum necessary brightness consistent with worker safety and security

B. All fixed position lighting shall be shielded/hooded, to the extent feasible given safety and security concerns, and directed downward and toward the area to be illuminated to prevent direct illumination of the night sky and direct light trespass (direct light extending outside the boundaries of the power plant site or the site of construction of ancillary facilities, including any security related boundaries)

C. Wherever feasible, safe and not needed for security, lighting shall be kept off when not in use

Verification: Within seven days after the first use of construction lighting, the project owner shall notify and the CPM that the lighting is ready for inspection. If

the CPM requires modifications to the lighting, within 15 days of receiving that notification the project owner shall implement the necessary modifications and notify the CPM that the modifications have been completed.

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 General Conditions section 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 included in the subsequent Monthly Compliance Report following complaint resolution.

PERMANENT EXTERIOR LIGHTING

VIS-2 To the extent feasible, consistent with safety and security considerations, the project owner shall design and install all permanent exterior lighting such that (a) lighting does not cause excess reflected glare; (b) direct lighting does not illuminate the nighttime sky; (c) illumination of the project and its immediate vicinity is minimized; and (d) the plan complies with local policies and ordinances.

The project owner shall submit to the CPM for review and approval and to the City of Ceres Development Services Department for review and comment a lighting mitigation plan that includes the following:

a. Location and direction of light fixtures shall take the lighting mitigation requirements into account

b. Lighting design shall consider setbacks of project features from the site boundary to aid in satisfying the lighting obligation requirements

c. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated.

d. 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.

e. All lighting shall be of minimum necessary brightness consistent with operational safety and security.

f. 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 to the City of Ceres Development Services Department for review and comment a 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

SURFACE TREATMENT OF PROJECT STRUCTURES AND BUILDINGS

VIS-3 The project owner shall treat the surfaces of all project structures and buildings visible to the public such that a) their color(s) minimize(s) visual intrusion and contrast by blending with the landscape; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

The project owner shall submit to the City of Ceres Planning Development Services Department for review and comment and to the CPM for review and approval, a specific surface treatment plan that will satisfy these requirements. The treatment plan shall include:

a. Description of the overall rationale for the proposed surface treatment, including the selection of the proposed colors and finishes

b. List of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the colors 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. One set of 11” x 17” color photo simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture, from Key Observation Points 1 and 2 (locations indicated on Visual Resources Figure 1),

e. Specific schedule for completion of the treatment

f. Procedure to ensure proper treatment maintenance for life of the project

Verification: At least 90 days prior to the start of commercial operation, the project owner shall submit the specific surface treatment plan to the City of Ceres Development Services Department and for review and comment and to the CPM for review and approval. The project owner shall allow the city 30 days to respond to their submittal. The project owner shall provide a copy of city submittal and city comments to the CPM within 60 days of the start of construction. If the CPM notifies the project owner that any revisions of the surface restoration plan are needed, the project owner shall submit to the CPM a plan with the specified revisions within 30 days of receiving that notification.

The project owner shall complete surface restoration within 60 days after the start of commercial operation. The project owner shall notify the CPM within seven days after completion of surface restoration that the restoration is ready for inspection.

Within 90 days after 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 KOP location identified in above.

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; and b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

Appendix A: *Laws, Ordinances, Regulations, and Standards*

Appendix B: *Exhibit List*

Appendix C: *Proof of Service List*

APPENDICES

AIR QUALITY

Applicable LORS	Description
Federal	**U.S. Environmental Protection Agency**
Federal Clean Air Act Amendments of 1990, Title 40 Code of Federal Regulations (CFR) Part 50	National Ambient Air Quality Standards (NAAQS).
Clean Air Act (CAA) § 160-169A and implementing regulations, Title 42 United State Code (USC) §7470-7491 40 CFR 51 & 52 (Prevention of Significant Deterioration Program)	Requires prevention of significant deterioration (PSD) review and facility permitting for construction of new or modified major stationary sources of pollutants that occur at ambient concentrations attaining the NAAQS. A PSD permit would not be required for the proposed A2PP project because it would not exceed 100 tons per year of NO_2, CO, or PM10. The PSD program is within the jurisdiction of the U.S. EPA.
CAA §171-193, 42 USC §7501 et seq. (New Source Review)	Requires new source review (NSR) facility permitting for construction or modification of specified stationary sources. NSR applies to sources of designated nonattainment pollutants. This requirement is addressed through SJVAPCD Rule 2201.
40 CFR 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines, New Source Performance Standard (NSPS). Requires the proposed simple-cycle system to achieve 25 parts per million (ppm) NOx and achieve fuel sulfur standards.
CAA §401 (Title IV), 42 USC §7651(Acid Rain Program)	Requires reductions in NOx and SO_2 emissions, implemented through the Title V program. This program is within the jurisdiction of the SJVAPCD with U.S. EPA oversight [SJVAPCD Rule 2540].
CAA §501 (Title V), 42 USC §7661(Federal Operating Permits Program)	Establishes comprehensive federal operating permit program for major stationary sources. Application required within one year following start of operation. This program is within the jurisdiction of the SJVAPCD with U.S. EPA oversight [SJVAPCD Rule 2520].
State	**California Air Resources Board and Energy Commission**
California Health & Safety Code (H&SC) §41700 (Nuisance Regulation)	Prohibits discharge of such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance.
H&SC §40910-40930	Permitting of source needs to be consistent with approved clean air plan. The SJVAPCD New Source Review program is consistent with regional air quality management plans.
California Public Resources Code §25523(a); 20 CCR §1752, 2300-2309 (CEC & CARB Memorandum of Understanding)	Requires that Energy Commission decision on AFC include requirements to assure protection of environmental quality.
California Code of Regulations for Off-Road Diesel-Fueled Fleets (13 CCR §2449, et seq.)	General Requirements for In-Use Off-Road Diesel-Fueled Fleets – Requires owners and operators of in-use (existing) off-road diesel equipment and vehicles to begin reporting fleet characteristics to CARB in 2009 and meet fleet emissions targets for diesel particulate matter and NOx in 2010.
Airborne Toxic Control Measure for Idling (ATCM, 13 CCR §2485)	ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling – Generally prohibits idling longer than five minutes for diesel-fueled commercial motor vehicles.
Local	**San Joaquin Valley Air Pollution Control District**

Applicable LORS	Description
SJVAPCD Rule 2201 (New and Modified Stationary Sources)	Establishes the pre-construction review requirements for new, modified or relocated emission sources, in conformance with NSR to ensure that these facilities do not interfere with progress in attainment of the ambient air quality standards and that future economic growth in the San Joaquin Valley is not unnecessarily restricted. Establishes the requirement to prepare a Preliminary Determination of Compliance (PDOC) and Final Determination of Compliance (FDOC) during SJVAPCD review of an application for a power plant. This regulation establishes Best Available Control Technology (BACT) and emission offset requirements. The A2PP project net emission increase of NOx would exceed the federal major modification threshold (40 CFR 51.165). The SJVAPCD classifies the project as a Federal Major Modification for NOx, and public notification requirements are triggered (SJVAPCD2010).
SJVAPCD Rule 2520 (Federally Mandated Operating Permits)	Establishes the permit application and compliance requirements for the federal Title V federal permit program. A2PP must submit an application to modify the existing Title V permit.
SJVAPCD Rule 2540 (Acid Rain Program)	Implements the federal Title IV Acid Rain Program, which requires subject facilities to obtain emission allowances for SOx emissions and requires fuel sampling and/or continuous monitoring to determine SOx and NOx emissions.
SJVAPCD Regulation IV (Prohibitions)	Sets forth the restrictions for visible emissions, odor nuisance, various air emissions, and fuel contaminants. Regulation IV incorporates the NSPS provisions of 40 CFR 60, including standards for stationary combustion turbines (Subpart KKKK). These rules limit emissions of NOx, VOC, CO, particulate matter, and sulfur compounds.
SJVAPCD Rule 4703 (Stationary Gas Turbines)	Limits the proposed stationary gas turbine emissions of NOx to 5 ppmv over a 3-hour averaging period and CO to 25 ppmv. Provided certain demonstrations are made, the emission limits do not apply during startup, shutdown, or reduced load periods (defined as “transitional operation periods”).
SJVAPCD Regulation VIII (Fugitive PM10 Prohibition)	Requires control of fugitive PM10 emissions from various sources.

ALTERNATIVES

CEQA

Energy Commission staff is required by agency regulations to examine the "feasibility of available site and facility alternatives to the applicant's proposal which substantially lessen the significant adverse impacts of the proposal on the environment." (Cal. Code Regs., tit. 20, § 1765).

The "Guidelines for Implementation of the California Environmental Quality Act," Title 14, California Code of Regulations, section 15126.6(a), requires 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. (Cal. Code Regs., tit. 14, § 15126.6, subd. (e).) The analysis should identify and compare the impacts of the various alternatives, but analysis of alternatives need not be in as much detail as the analysis of the proposed project.

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 if its effect cannot be reasonably ascertained and if its implementation is remote and speculative. (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(3).) However, if the range of alternatives is defined too narrowly, the analysis may be inadequate. (City of Santee v. County of San Diego (4th District 1989) 214 Cal. App.3d 1438.)

WARREN-ALQUIST ACT

The Warren-Alquist Act provides clarification as to when it may not be reasonable to require an applicant to analyze alternative sites for a project. An alternative site analysis is not required as part of an AFC when a natural gas-fired thermal power plant is (1) proposed for development at an existing industrial site, and (2) "the project has a strong relationship to the existing industrial site and therefore it is reasonable not to analyze alternative sites for the project." (Pub, Res. Code § 25540.6, subd. (b).) Staff believes that the A2PP site –located at an existing industrial site and sharing facilities with the A1PP – satisfies both criteria.

Biological Resources

Applicable LORS	Description
Federal	
Endangered Species Act (Title 16, United States Code, sections 1531 et seq.; Title 50, Code of Federal Regulations, part 17.1 et seq.)	Designates and provides for the protection of threatened and endangered plant and animal species and their critical habitat. The administering agency is USFWS.
Fish and Wildlife Coordination Act (Title 16, United States Code, section 661)	Requires all federal agencies to coordinate with the USFWS in the preservation of fish and wildlife implementing federal actions.
Permit for take under the Bald and Golden Eagle Protection Act, (Title 50, Code of Federal Regulations, section 22.26)	Authorizes limited take of bald eagles and golden eagles under the Bald and Golden Eagle Protection Act, where the taking is associated with, but not the purpose of the activity, and cannot practicably be avoided.
Permit for take under the Bald and Golden Eagle Protection Act, (Title 50, Code of Federal Regulations, section 22.27)	Authorizes intentional take of eagle nests where: necessary to alleviate a safety hazard to people or eagles; necessary to ensure public health and safety; the nest prevents the use of a human-engineered structure; the activity, or mitigation for the activity, will provide a net benefit to eagles; and only allows inactive nests to be taken except in the case of safety emergencies.
Bald and Golden Eagle Protection Act (Title 16, United States Code section 668)	This law provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the take, possession, and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act or regulations issued pursuant thereto and strengthened other enforcement measures. Rewards are provided for information leading to arrest and conviction for violation of the Act.
Migratory Bird Treaty Act (Title 16, United States Code, sections 703–711)	Prohibits the take or possession of any migratory nongame bird (or any part of such migratory nongame bird), including nests with viable eggs. As defined, includes nearly every nongame bird in the state. The administering agency is USFWS.
State	
California Endangered Species Act (Fish and Game Code, sections 2050 et seq.)	Protects California's rare, threatened, and endangered species. The administering agency is CDFG.
California Code of Regulations (Title 14, sections 670.2 and 670.5)	Lists the plants and animals that are classified as rare, threatened, or endangered in California. The administering agency is CDFG.
California Species Preservation Act of 1970 (California Fish and Game Code 900-903)	Requires the protection and enhancement of birds, mammals, fishes, amphibians, and reptiles of California. Administering agency is CDFG.
Fully Protected Species (Fish and Game Code, sections 3511, 4700, 5050, and 5515)	Designates certain bird, mammal, reptile, amphibian, and fish species as fully protected, and prohibits take of such species. The administering agency is CDFG.

Applicable LORS	Description
Native Plant Protection Act (Fish and Game Code, section 1900 et seq.)	Designates rare, threatened, and endangered plants in California and prohibits the taking of listed plants. The administering agency is CDFG.
Nest or Eggs (Fish and Game Code, section 3503)	Prohibits take, possession, or needless destruction of the nest or eggs of any bird. The administering agency is CDFG.
Birds of Prey (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 or to take, possess, or destroy the nests or eggs of any such bird. The administering agency is CDFG.
Migratory Birds (Fish and Game Code, section 3513)	Prohibits take or possession of any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird. The administering agency is CDFG.
Local	
Stanislaus County General Plan	The Stanislaus County General Plan provides goals and objectives including preservation of natural areas in open space and parks, conserve water and protect water quality, provide for long-term protection and use of agricultural lands, provide recreational opportunities for county residents, reserve lands subject to natural disasters as open space in order to protect property and life, and preserve air quality. The plan sets forth policies to meet these goals (Stanislaus County 2010).
City of Ceres General Plan	The City of Ceres general plan provides goals and objectives for management of natural resources including native plant and wildlife species. Preservation of agricultural lands is a primary objective of the plan.

BIOLOGICAL RESOURCES
Permits/Consultations Potentially Required

State LORS		
Permit	**Status**	**Comment**
A 2081 permit for impacts to giant garter snake, Swainson's hawk and San Joaquin kit fox may be required.	Not yet determined if 2081 will be required for these state-listed species.	If 2081 is required, conditions of 2081 permit will be included in the final BRMIMP.
A Streambed Alteration Agreement for canal crossings may be required.	PG&E will submit SAA application to CDFG.	If SAA is required, conditions of SAA will be included in the final BRMIMP for those conditions not currently contained in **BIO-14**.
Federal LORS		
Section 7 Consultation under the federal endangered species act may be required for project-related impacts to giant garter snake, fairy shrimp species, and possibly San Joaquin kit fox.	The project applicant in coordination with PG&E, as the owner and operator of the natural gas pipeline, has informally consulted with USFWS.	It is assumed that the project will require a 404 permit with ACOE (see below). During review of the 404 permit application, it is assumed that ACOE will consult with USFWS regarding potential project-related impacts to the federally listed giant garter snake, fairy shrimp species, and San Joaquin kit fox. Assuming a 404 permit is required and if potential take is determined for any federal listed species, conditions for mitigation of take will be issued in the biological opinion for the project. If a 404 permit is not required by the project and the USFWS finds the possibility of take, then a habitat conservation plan will be required to be prepared through Section 10 of the federal endangered species act for potential take of federally listed species.
Clean Water Act 404 permit through the ACOE.	PG&E recently submitted a wetland delineation to ACOE.	If waters of the U.S. will be impacted by the proposed project, then the appropriate 404 permit will be applied for and issued. Conditions of the 404 permit will be incorporated into the final BRMIMP.

CULTURAL RESOURCES

Applicable LORS	Description
State	
Public Resources Code 5097.98(b) and (e)	Requires a landowner on whose property Native American human remains are found to limit further development activity in the immediate vicinity until he/she confers with the Native American Heritage Commission-identified Most Likely Descendents (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reinter the remains elsewhere on the property in a location not subject to further disturbance.
California Health and Safety Code, Section 7050.5	This code makes it a misdemeanor to knowingly mutilate or disinter, wantonly disturb, or willfully disturb or remove human remains found outside a cemetery without the authority of law. If human remains are discovered ~~T~~this code also requires a project owner to halt construction, excavation, or ground disturbance of the site or nearby area reasonably suspected to overlie adjacent remains if human remains are discovered and to contact the county coroner.
Local	
County of Stanislaus General Plan (County of Stanislaus 1994)	Conservation/Open Space Element, Goal Eight: Preserve areas of national, state, regional and local historical importance. Policies: The County will support the preservation of Stanislaus County's cultural legacy of historical and archaeological resources for future generations. "Qualified Historical Buildings" as defined by the State Building Code shall be preserved.
City of Ceres General Plan (City of Ceres 1997)	Recreational and Cultural Resources, Goal 5.B: To preserve and maintain sites, structures, and landscapes that serve as significant, visible reminders of the city's social, architectural, and agricultural history. Policies: • The City shall assist property owners in seeking registration of historic structures and sites as State Historic Landmarks or listing on the National Register of Historic Places. • The City shall encourage the preservation, maintenance, and adaptive reuse of existing historic buildings in the Redevelopment Areas and other areas of the Planning Area in order to prevent demolition and disrepair. • The City shall encourage the preservation of buildings of local historic importance in the Downtown and surrounding areas. • The City shall encourage relocation of reusable historic buildings as a means of historic preservation. • The City shall continue to implement the Historic Building Code for historic properties. Recreational and Cultural Resources, Goal 5.C: To protect Ceres' Native American heritage. Policies: • The City shall refer development proposals that may adversely affect archaeological sites to the California Archaeological Inventory at California State University, Stanislaus. • The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without first consulting the California Archaeological Inventory, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archaeologist. City implementations of this policy shall be guided by Appendix K of the *CEQA Guidelines*.

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	Stanislaus 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 A2PP project is not located on federal land. There are no federal LORS for geologic hazards and resources for this site.
State	
California Building Code (2007)	The CBC (2007) includes a series of standards that are used in project investigation, design, and construction (including grading and erosion control). The CBC has adopted provisions in the International Building Code (ICC 2006).
Alquist-Priolo Earthquake Fault Zoning Act, Public Resources Code (PRC), sections 2621–2630	The Act 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 project site is not located within a designated Alquist-Priolo Fault Zone.
The Seismic Hazards Mapping Act, PRC sections 2690–2699	Areas are identified that are subject to the effects of strong ground shaking, such as liquefaction, landslides, tsunamis, and seiches.
PRC sections 5097.5 and 30244	The code 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, section 25527	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 (SVP), as indicated below.
California Environmental Quality Act (CEQA), PRC sections 21000 et seq.; CEQA Guidelines, Title 14, sections 15000 et seq., Appendix G	The Act and guidelines mandate 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.
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	
2007 California Building Code	These codes, which are adopted at the county level, address excavation, grading, and earthwork construction, and are not limited to construction relating to earthquake safety and seismic activity hazards.
County of Stanislaus General Plan (2008),	Requires compliance with the safety element of the county general plan with regard to geologic hazards.
City of Ceres (1997)	Requires compliance with the safety element of the county general plan with regard to geologic hazards.

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.
Section 311, CWA (33 USC Section 1251 et seq.) Oil Pollution Prevention (40 CFR 112)	Requires preparation of an Spill Prevention Control and Countermeasures (SPCC) plan if oil is stored in a single AST with capacity greater than 660 gallons or if total petroleum storage at a facility is greater than 1,320 gallons. Administered by the Regional Water Quality Control Board (RWQCB).
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.

Applicable LORS	Description
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.
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."
Hazardous Material Business Plan, Cal HSC Sections 25500 to 25541; 19 CCR Sections 2720 to 2734	Requires the submittal of a chemical inventory and planning and reporting for management of hazardous materials.
Process Safety Management: Title 8 CCR Section 5189	Requires facility owners to develop and implement effective process safety management plans when toxic, reactive, flammable, or explosive chemicals are maintained on site in quantities that exceed regulatory thresholds.
California HSC Sections 25270 through 25270.13	Requires the preparation of a Spill Prevention, Control, and Countermeasures (SPCC) Plan if 10,000 gallons or more of petroleum is stored on-site. The above regulations would also require the immediate reporting of a spill or release of 42 gallons or more to the California Office of Emergency Services and the Certified Unified Program Authority (CUPA).
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	
CUPA Program (Health and Safety Code Section 25180)	To consolidate, coordinate and make consistent the administrative requirements, permitting, inspection activities, enforcement activities and fees for hazardous waste and hazardous materials programs in each jurisdiction.
Environmental Health Emergency Response Program (California Health and Safety Code Sections 25200 et seq. and 101040)	Interagency emergency response team guidelines for incidents involving hazardous material spills or releases, including assessments to evaluate actual or potential environmental contamination an/or exposure, recommendations for short and long-term cleanup, and oversight of the cleanup activities performed by the responsible parties or environmental assessment firms.

LAND USE

Applicable LORS	Description
State	
Professional Land Surveyors' Act (Business and Professions Code commencing with § 8700)	The California State Legislature adopted The California Professional Land Surveyors' Act (Act) to govern the land surveyor industry. The Act established the California Board for Professional Engineers and Land Surveyors as the governing board for the purposes of the Act. The law authorizes the board to develop and enforce the rules that are required to carry out the provisions of the Act.
Subdivision Map Act (Government Code commencing with § 66410)	The Subdivision Map Act (Map Act) regulates and controls the design and improvement of subdivisions. Any property divided into two or more parcels is subject to the Map Act. The Map Act is administered by the local agency in the county in which the property is located.
California Land Conservation Act of 1965 (Williamson Act) (Gov. Code commencing with § 51200)	The Williamson Act addresses uses that are considered compatible in areas that are identified as agricultural preserves and on contracted lands. Construction and maintenance of various utilities are identified as compatible uses in areas identified as agricultural preserves (Gov. Code § 51238). The A2PP project would supply electric power, which is considered a compatible use. The Williamson Act establishes principles of compatibility on contracted lands. Approved uses may not compromise long-term productivity or displace or impair current or reasonably foreseeable agricultural operations (Gov. Code § 51238.1).
Local	
City of Ceres General Plan	
Land Use and Community Design Element	The City of Ceres General Plan land use designations for the A2PP site are General Industrial (GI) and Community Facility (CF). The GI designation is applied primarily in the western part of the planning area, allowing for a wide range of industrial and manufacturing uses. The CF designation is applied to the city's major public and private facilities and institutional uses.
Public Facilities and Services Element, Goal 4.L	Goal 4.L: To provide adequate levels of service for utility services provided by private companies and ensure that these are constructed to minimize negative effects on surrounding development.

Applicable LORS	Description
City of Ceres Service Road Industrial Master Plan (SRIMP)	
Development Plan Approval, Land Use Classifications, and Development Standards	The A2PP site is within an area that is governed by the Service Road Industrial Master Plan (SRIMP). The SRIMP addresses requirements for approval of development plans: *The approval of development plans…is required for specific development projects (Section 18.20.080 of the Ceres Municipal Code). Although the development plans…must be consistent with the approved Master Plan, minor variations from the Master Plan may be approved by the Planning Director or Planning Commission in conjunction with the review and approval of a development plan…provided that any such changes are consistent with the intent of the Master Plan's overall land use program.* Land use classifications for the project area are identified in the SRIMP, as follows: 1) Community Facility (C-F), which applies to existing TID Facilities, and 2) General Industrial (M-2), which applies to heavy industrial uses and properties with the Planned Community (P-C) (50) zoning classification in the south portion of the Master Plan area. The P-C (50) Zone applies to land in the SRIMP plan area. Development standards and polices include the following: *Uses and/or development standards not specifically addressed in this Master Plan or a subsequent Development Plan as required by the P-C Zone shall be governed by the corresponding zones contained in the Ceres Municipal Code.* *Developments processed independent of a subdivision proposal that are consistent with the master plan and standards in the corresponding zones contained in the Ceres Municipal Code can be processed with an Architectural Site Plan Approval rather than a Development Plan.*
City of Ceres Code of Ordinances	
Title 18, Chapter 18.20 Planned Community (P-C) Zone	The A2PP site is within the P-C (50) Zone, which is an area where land uses are governed by the SRIMP. The purpose of the P-C Zone is to establish a level of preplanning for the development or redevelopment of land and to encourage innovative design solutions while retaining good land use relationships and compatibility of uses (Title 18, § 18.20.020).
Title 18, Section 18.08.120 Property Development Standards in the Community Facilities (C-F) Zone (G. Building Height)	The C-F Zone corresponds to the Community Facility land use classification in the SRIMP (see above). The C-F Zone is intended to accommodate governmental, public utility, public education facilities, and quasi-public medical, cultural, and service facilities. No main building erected in the C-F Zone shall have a height greater than thirty five feet or three stories, whichever is less. No accessory building erected in the C-F Zone shall have a height greater than one story or fifteen feet, whichever is less. Projections above this height may be permitted when approved by the Planning Commission, provided that they may be safely erected and maintained at such height in view of the surrounding conditions and circumstances.
Title 18, Section 18.08.120 Property Development Standards in the C-F Zone (I. Architectural and Site Plan Approval)	Before any building is erected on any lot; a site plan and floor plans of all buildings, elevations of all buildings and a landscape plan shall be submitted to and approved by the Planning Commission pursuant to the provisions of the C-F Zone in Title 18.

Applicable LORS	Description
Title 18, Section 18.08.080 Conditional Uses in the C-F Zone Title 18, Section 18.50.040 Uses Subject to a Conditional Use Permit (B.8. Public Utility Structures)	The following uses may be permitted in the C-F Zone subject to a conditional use permit as provided for in Chapter 18.50 of Title 18. A. The facilities of all public utilities as defined by the Public Utilities Code of the state; B. The facilities of public utilities incorporated as political entities by the state. Public utility structures may be permitted in any zone except where expressly prohibited, when such uses are deemed by the Planning Commission to be essential or desirable for the public welfare and convenience and in conformity with the General Plan and its goals and objectives.
Title 17, Chapter 17.36 Lot Line Adjustments	A lot line adjustment is any division of land not requiring a map as specified by the Subdivision Map Act, in which no more parcels are created by the division than existed prior to it. The process requires completion of an application and submittal to the City of Ceres for approval.
1994 Stanislaus County General Plan	
Agricultural Element	Goal One of the Agricultural Element is to strengthen the agricultural sector of the county's economy. Objective Number 1.2 addresses supporting the development of agricultural uses while recognizing that a variety of uses, including uses not directly related to agriculture, may be sited on lands that are zoned for agricultural uses.
Stanislaus County Code, Title 21, Zoning	
Section: 21.08.020 General Provisions, Uses (C. Facilities for Public Utilities)	This section of the Stanislaus County Code addresses uses associated with public utilities in areas zoned for agricultural uses: Facilities for public utilities are permitted in the A-2 Zoning District provided that such use is demonstrated in connection with the approval of a use permit. Public utility transmission and distribution lines, both overhead and underground, are permitted in all districts without limitations as to height, but metal transmission towers are subject to all yard requirements as other structures. However, routes of proposed electrical transmission lines (including height, and placement of towers), shall be submitted to the Planning Commission for review and recommendations prior to the acquisition of rights-of-way, when such lines are not within a public street or highway.
Section: 21.20.030 General Agriculture District (A-2), Uses Requiring Use Permit (C. Tier Three)	This section of the Stanislaus County Code addresses permitted uses in the A-2 Zoning District: Public utility development may be allowed (as a Tier 3 use) when the Planning Commission finds that the use as proposed will not 1) be substantially detrimental to or in conflict with the agricultural use of the property or in the vicinity, and 2) be located in one of the County's most productive agricultural areas, as defined by the General Plan and approved by the County. (For areas zoned General Agriculture [A-2], tier 3 includes uses not directly related to agriculture but that may be necessary to serve the A-2 Zoning District or that may be difficult to locate in urban areas.)

City of Modesto Municipal Code, Title 10, Planning and Zoning	
Chapter 2 Zoning Regulations, Article 23 General Provisions, Section 10-2.2304 Utilities and Railroads	The regulations in Article 23 apply in the various zones established by the City of Modesto. With regard to utilities, the following applies: (a) The provisions of this chapter shall not apply to the poles, lines or similar facilities, whether above ground or underground, whose sole purpose is non-wireless transmission of electricity or communications. This exclusion does not apply to the antennas, uni-poles, monopoles, towers, or any similar or related facilities of wireless communication services.

Land Use

Project Compliance with Adopted Applicable Land Use LORS

Applicable LORS	Consistency Determination	Basis for Consistency
State		
Professional Land Surveyors' Act (Business and Professions Code commencing with § 8700)	Consistent, with implementation of **LAND-1** (see below)	The project applicant will be required to comply with the Professional Land Surveyors' Act for completion of a record of survey and lot line adjustment to ensure construction and operation of the A2PP on a legal parcel of land.
Subdivision Map Act (Government Code commencing with § 66410)	Consistent, with implementation of **LAND-1** (see below)	The project applicant will be required to comply with the Subdivision Map Act for completion of a record of survey and lot line adjustment to ensure construction and operation of the A2PP on a legal parcel of land.
California Land Conservation Act of 1965 (Williamson Act) (Gov. Code commencing with § 51200)	Consistent, with implementation of **LAND-2** (see below)	The natural gas pipeline for the A2PP would cross portions of parcels that are held under Williamson Act contracts. The A2PP project is considered consistent with Williamson Act objectives and principles of compatibility. However, installation of the gas pipeline could cause temporary construction-related impacts to Williamson Act lands. Returning affected Williamson Act contracted lands and agricultural preserves areas to pre-project conditions would ensure that the long-term productivity of these lands is not affected.
Local		
City of Ceres General Plan		
Land Use and Community Design Element	Consistent	The City of Ceres General Plan land use designations for the A2PP site are General Industrial (GI) and Community Facility (CF). Most of the A2PP site is within an area that is designated GI. A portion of the A2PP would be constructed adjacent to the existing APP within an area that is designated CF. The GI designation allows for a wide range of industrial uses, and the CF designation is applied to the city's major public and private facilities and institutional uses, including the APP. The A2PP is considered to be consistent with the City's intent for development projects in each of these designated land use categories. No conflict or inconsistency with the General Plan would occur from implementation of the A2PP project.

Land Use

Project Compliance with Adopted Applicable Land Use LORS

Applicable LORS	Consistency Determination	Basis for Consistency
Public Facilities and Services Element, Goal 4.L	Consistent	The A2PP would provide needed electric generation capacity with improved efficiency and operational flexibility. It would provide additional generation to meet the demands of customers within TID's service territory. Corridor 2 would be equipped with future cross arms to allow for a future 12-kV distribution line, which would minimize negative impacts of retrofitting the poles in the future. Potential impacts relating to implementation of the A2PP are evaluated for the full range of environmental resource sections addressed in this staff assessment. Compliance with Goal 4.L would be achieved with implementation of conditions of certification for the identified impacts.
City of Ceres Service Road Industrial Master Plan (SRIMP)		
Development Plan Approval, Land Use Classifications, and Development Standards	Consistent	Land use classifications specified in the SRIMP for this area are consistent with the corresponding City of Ceres General Plan land designations. In the SRIMP, the Community Facility (C-F) classification corresponds to the CF land use designation in the General Plan, and the General Industrial (M-2) classification corresponds to the GI land use designation. As discussed above, no conflict or inconsistency with the City of Ceres General Plan would occur from implementation of the A2PP project. The A2PP is considered to be consistent with the City's intent for development projects in the City's planning area for the SRIMP.
City of Ceres Code of Ordinances		
Title 18, Chapter 18.20 Planned Community (P-C) Zone	Consistent	As discussed above, the P-C (50) Zone applies to land in the SRIMP plan area. The A2PP is consistent with the City of Ceres General Plan land use designations and the corresponding land use classifications in the SRIMP. Construction and operation of the A2PP is consistent with other uses within the P-C (50) Zone. No conflict or inconsistency with the SRIMP would occur from implementation of the A2PP project.

Land Use

Project Compliance with Adopted Applicable Land Use LORS

Applicable LORS	Consistency Determination	Basis for Consistency
Title 18, Section 18.08.120 Property Development Standards in the Community Facilities (C-F) Zone (G. Building Height)	Consistent	Construction of the A2PP project would include installation of three 80-foot-tall stacks. Based on the existing General Plan land use designations and corresponding zoning at the project site, one of the turbines would be constructed in the C-F Zone where the height of main buildings is limited to 35 feet. The existing APP, which includes a 92-foot-tall exhaust stack, is located adjacent to the A2PP site in the C-F Zone. Construction of the A2PP is considered consistent with the City's intent relating to planned and approved land uses in the C-F Zone. The City of Ceres's approval process to allow construction of structures exceeding the height limit specified for the C-F Zone would typically occur as part of its Architectural and Site Plan Approval (ASPA) process. California law provides that certain district facilities are exempt from city and county building and zoning ordinances. Exempt facilities include those that are necessary for the production or generation of electrical energy (Gov. Code § 53091[e]). Because TID operates under the provisions of the California Water Code as a special district, it is exempt from the City's zoning ordinance, including the property development standards for development in the C-F Zone.
Title 18, Section 18.08.120 Property Development Standards in the C-F Zone (I. Architectural and Site Plan Approval)	Consistent	As discussed above, the existing APP is located adjacent to the A2PP site in the C-F Zone. Construction of the A2PP is considered consistent with the City's intent relating to planned and approved land uses in the C-F Zone. The City of Ceres's approval process to allow construction of structures in the C-F Zone would typically occur as part of its ASPA process. California law provides that certain district facilities are exempt from city and county building and zoning ordinances. Exempt facilities include those that are necessary for the production or generation of electrical energy (Gov. Code § 53091[e]). Because TID operates under the provisions of the California Water Code as a special district, it is exempt from provisions of the City's ASPA process.

Land Use

Project Compliance with Adopted Applicable Land Use LORS

Applicable LORS	Consistency Determination	Basis for Consistency
Title 18, Section 18.08.120 Property Development Standards in the C-F Zone (I. Architectural and Site Plan Approval)	Consistent	As discussed above, the existing APP is located adjacent to the A2PP site in the C-F Zone. Construction of the A2PP is considered consistent with the City's intent relating to planned and approved land uses in the C-F Zone. The City of Ceres's approval process to allow construction of structures in the C-F Zone would typically occur as part of its ASPA process. California law provides that certain district facilities are exempt from city and county building and zoning ordinances. Exempt facilities include those that are necessary for the production or generation of electrical energy (Gov. Code § 53091[e]). Because TID operates under the provisions of the California Water Code as a special district, it is exempt from provisions of the City's ASPA process.
Title 18, Section 18.08.080 Conditional Uses in the C-F Zone Title 18, Section 18.50.040 Uses Subject to a Conditional Use Permit (B.8. Public Utility Structures)	Consistent	Construction of the A2PP is considered consistent with the City's intent relating to planned and approved land uses in the C-F Zone. Public utilities are consistent with the City's purpose and intent for development projects in the C-F Zone (Title 18, § 18.08.020). The Energy Commission has the exclusive authority to license power plants in the state with a generating capacity of 50 MW or greater; therefore, all required local approvals and entitlements for the proposed A2PP, including a conditional use permit, would be covered under the Energy Commission's in-lieu permitting authority.
Title 17, Chapter 17.36 Lot Line Adjustments	Consistent, with implementation of **LAND-1** (see below)	The project applicant will be required to comply with the City's approval process for completion of a record of survey and lot line adjustment to ensure construction and operation of the A2PP on a legal parcel of land.
1994 Stanislaus County General Plan		
Agricultural Element	Consistent	Objective Number 1.2 addresses development in the Stanislaus County A-2 Zoning District. Tier three includes uses that are not directly related to agriculture but may be necessary to serve the A-2 Zoning District or difficult to locate in urban areas. Segments of the 115-kV transmission lines and natural gas line for the A2PP project are located in the County's A-2 Zoning District, in an area that is designated as Agriculture in the County's General Plan. The A2PP is considered to be consistent with the County's intent relating to planned and approved land uses in the A-2 Zoning District. No conflict or inconsistency with the General Plan would occur from implementation of the A2PP project.
Stanislaus County Code, Title 21, Zoning		

Land Use

Project Compliance with Adopted Applicable Land Use LORS

Applicable LORS	Consistency Determination	Basis for Consistency
Section: 21.08.020 General Provisions, Uses (C. Facilities for Public Utilities)	Consistent	Installation of the 115-kV transmission lines and natural gas line for the A2PP project is considered consistent with the County's intent relating to planned and approved land uses in the A-2 Zoning District. Facilities for public utilities are consistent with the City's purpose and intent for development projects in the A-2 Zoning District. The Energy Commission has the exclusive authority to license power plants in the state with a generating capacity of 50 MW or greater; therefore, all required local approvals and entitlements for the proposed A2PP, including approval of a use permit, would be covered under the Energy Commission's in-lieu permitting authority.
Section: 21.20.030 General Agriculture District (A-2), Uses Requiring Use Permit (C. Tier Three)	Consistent	As discussed above, facilities for public utilities are consistent with the City's purpose and intent for development projects in the A-2 Zoning District. The Energy Commission has the exclusive authority to license power plants in the state with a generating capacity of 50 MW or greater; therefore, all required local approvals and entitlements for the proposed A2PP, including approval of a use permit, would be covered under the Energy Commission's in-lieu permitting authority.
City of Modesto Municipal Code, Title 10, Planning and Zoning		
Chapter 2 Zoning Regulations, Article 23 General Provisions, Section 10-2.2304 Utilities and Railroads	Consistent	Segments of the reconductored 69-kV transmission lines would be in an area that is primarily zoned for heavy industrial and low-density residential uses. The transmission lines for the A2PP are considered to be consistent with the County's zoning regulations for uses in these zoning districts.

NOISE AND VIBRATION

Applicable LORS	Description
Federal	
(OSHA): 29 U.S.C. § 651 et seq.	Protects workers from the effects of occupational noise exposure.
State	
(Cal/OSHA): Cal. Code Regs., tit. 8, §§ 5095–5099	Protects workers from the effects of occupational noise exposure.
Local	
Stanislaus County General Plan, Noise Element	Establishes acceptable noise levels.
Stanislaus County Ordinance Code (Title 10, Chapter 10.46)	Prohibits noisy steam blows.
City of Ceres General Plan, Noise Element	Establishes acceptable noise levels.
City of Ceres Municipal Code(Chapter 9.36: “Noise” and Chapter 18.38: “Material Effects”)	Limits construction noise to daytime hours and establishes acceptable noise levels.

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 (Title 42, U.S. Code section 7412)	The National Emissions Standards for Hazardous Air Pollutants (NESHAP) 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 HAPs to apply Maximum Achievable Control Technology.
State	
California Health and Safety Code section 25249.5 et seq. (Proposition 65)	These sections establish thresholds of exposure to carcinogenic substances above which Prop 65 exposure warnings are required.
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 Public Resource Code section 25523(a); Title 20 California Code of Regulations (CCR) section 1752.5, 2300–2309 and Division 2 Chapter 5, Article 1, Appendix B, Part (1); California Clean Air Act, Health and Safety Code section 39650, et seq.	These regulations require a quantitative health risk assessment for new or modified sources, including power plants that emit one or more toxic air contaminants (TACs).

SOIL AND WATER RESOURCES

Applicable LORS	Description
Federal	
Clean Water Act/Water Pollution Control Act. P.L. 92- 500, 1972; amended by Water Quality Act of 1987, P.L. 100-4 (33 USC 466 et seq.); NPDES (CWA, Section 402)	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 storm water discharges during construction and operation of a facility normally addressed through a general National Pollutant Discharge Elimination System (NPDES) permit.
Natural Resources Conservation Service (NRCS), National Engineering Handbook, Sections 2 and 3 (1983)	Sections 2 and 3 of the USDA-NRCS National Engineering Handbook (1983) provide standards for soil conservation and erosion prevention during construction activity.
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 (PCWQCA) (Water Code §13000 et seq.)	PCWQCA 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 (WDR) permit. These regulations require that the RWQCB issue Waste Discharge Requirements specifying conditions regarding the construction, operation, monitoring and closure of waste disposal sites, including injection wells and evaporation ponds for waste disposal. WDRs are updated periodically to reflect changing technology standards and conditions.
SWRCB Res. 2009-0011 (Recycled Water Policy)	This policy supports and promotes the use of recycled water as a means to achieve sustainable local water supplies and reduction of greenhouse gases. This policy encourages the beneficial use of recycled water over disposal of recycled water. This policy states the following recycled water use goals: • "Increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AF/y) by 2020 and by at least two million AF/y by 2030; • Increase the use of stormwater over use in 2007 by at least 500,000 AF/y by 2020 and by at least one million AF/y by 2030; • Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20% by 2020; and Included in these goals is the substitution of as much recycled water for potable water as possible by 2030."
SWRCB Resolution 75-58	The SWRCB has adopted policies that provide guidelines for water quality protection. The principal policy of the SWRCB that specifically addresses the 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 the Board on June 19, 1975 as Resolution 75-58). This policy states that 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. This SWRCB policy requires that power plant cooling water should come from, in order of priority: wastewater being discharged to the ocean, ocean water, brackish water from natural sources or irrigation return flow, inland waste waters of low total dissolved solids, and other inland waters. This policy also includes cooling water discharge prohibitions such as land application.
California Water Code (CWC) Section 461	CWC Section 461 addresses the conservation of all available water resources and requires the maximum reuse of reclaimed water in satisfaction of the requirements for beneficial uses of water.

California Water Code (CWC) Section 13550	CWC Section 13550 requires the use of reclaimed water for industrial purposes subject to reclaimed water being available and meeting certain conditions such as the quality and quantity of the reclaimed water are suitable for the use, the cost is reasonable, and the use is not detrimental to public health.
California Water Code (CWC) Section 13551	CWC Section 13551 limits the use of water with quality suitable for potable domestic use for nonpotable uses if suitable recycled water is available.
California Water Code (CWC) Section 13751	CWC Section 13751 mandates that within 60 days of construction, alteration, abandonment or destruction of a groundwater well a completion report be filed to the appropriate water agency.
Recycling Act of 1991 (Water Code § 13575 et esq.)	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 Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act)	The California Safe Drinking Water Act requires public water systems to obtain a Domestic Water Supply Permit. Public water systems are defined as a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out the year. California Department of Public Health (CDPH) administers the Domestic Water Supply Permit program. The proposed project would likely be considered a non-transient, non-community water system.
Local	
Stanislaus County General Plan; Chapter 7, Agricultural Element	Provides limits for development of agricultural soils.
Stanislaus County Code; Title 13, Streets, Sidewalks, and Public Places	Provides requirements for construction of underground utilities along County roads.
Stanislaus County Code; Title 16, Buildings and Construction	Provides the Building Code for Stanislaus County, including general design standards and an amendment to the California Building Code for grading.
Stanislaus County Code; Title 21, Zoning	Provides information on zoning and outlines the accepted uses for lands under a Williamson Contract.
Stanislaus County Standards and Specifications	Provides the County's minimum requirements for excavation safety, dust controls, earthwork, erosion and pollution prevention, and more.
Stanislaus County Storm Water Management Plan	Regulates Best Management Practices (BMPs) for construction activities.
City of Ceres Municipal Code	Provides requirements for development of land within the City limits and requirements for obtaining permits for water wells. Provides grading requirements and permit information, preliminary soil report requirements, regulates BMPs for construction activities, and gives general design standards.
City of Ceres General Plan; Chapters 4 (Public Utilities and Services) and 6 (Agricultural and Natural Resources)	Policies for water supply and delivery; wastewater collection, treatment, and disposal; stormwater drainage; and water resources.
City of Ceres Improvement Standards	Provides the City's minimum requirements for earthwork and construction activities.

SOCIOECONOMICS

Applicable LORS	Description
Local	
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	Except for a fee, charge, dedication, or other requirement authorized under Section 17620 of the Education Code, state and local public agencies may not impose fees, charges, or other financial requirements to offset the cost for school facilities.

Traffic and Transportation

Applicable LORS	Description
Federal	
Code of Federal Regulations (CFR), Title 14, Transportation; Chapter 1, Part 77 Code of Federal Regulations (CFR), Title 14, Transportation; Subtitle B, Other Regulations Relating to Transportation	Includes standards for determining obstructions in navigable airspace. Sets forth requirements for notice to the Federal Aviation Administration of certain proposed construction or alteration. Also, provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace. Includes procedures and regulations pertaining to interstate and intrastate transport (includes hazardous materials program procedures) and provides safety measures for motor carriers and motor vehicles that operate on public highways.
State	
California Vehicle Code, Division 2, Chapter. 2.5; Div. 6, Chap. 7; Div. 13, Chap. 5; Div. 14.1, Chap. 1 & 2; Div. 14.8; Div. 15 California Streets and Highway Code, Division 1 & 2, Chapter 3 & Chapter 5.5	Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials. Includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits.
Local	
City of Ceres General Plan; Transportation and Circulation Element, February 24, 1997	Requires level of service (LOS) D for major roadways (arterials, expressways, and roadways) and LOS C for secondary collector or local roadways or better operating conditions for all roadway links and intersections.
Stanislaus County of Governments Regional Transportation Plan, 2007	Establishes regional transportation goals, policies, objectives and actions for various modes of transportation, such as improvements to mobility, improvement of goods movement, and so forth.
County of Stanislaus 1997 General Plan; Circulation Element	County will maintain at least a level of service (LOS) C or better operating conditions for all county roadways and intersections, except in a sphere of influence of a city when the city has adopted a lower level of service.

TRAFFIC AND TRANSPORTATION

Applicable LORS	Description
Federal	
Title 14, Code of Federal Regulations (CFR) Chapter 1, Part 77	Includes standards for determining obstructions in navigable airspace. Sets forth requirements for notice to the Federal Aviation Administration of certain proposed construction or alteration. Also, provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace.
	Consistent: The nearest airport facility is the Modesto City-County Airport, located approximately 20,000 feet northeast of the site. The existing flight pattern does not bring aircraft at low altitude over the project site and none of the project's structures would penetrate any navigable airspace.
Title 49, Subtitle B	Includes procedures and regulations pertaining to interstate and intrastate transport (includes hazardous materials program procedures) and provides safety measures for motor carriers and motor vehicles that operate on public highways.
	Consistent: Enforcement is conducted by state and local law enforcement agencies and through state agency licensing and ministerial permitting (e.g., California Department of Motor Vehicles licensing, Caltrans permits), and/or local agency permitting (e.g., Stanislaus County Department of Public Works).
State	
California Vehicle Code, Division 2, Chapter 2.5; Div. 6, Chap. 7; Div. 13, Chap. 5; Div. 14.1, Chap. 1 & 2; Div. 14.8; Div. 15	Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.
	Consistent: Enforcement is provided by state and local law enforcement agencies and through ministerial state agency licensing and permitting and/or local agency permitting.
California Streets and Highway Code, Division 1 & 2, Chapter 3 & Chapter 5.5	Includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits.
	Consistent: Enforcement is provided by state and local law enforcement and through ministerial state agency licensing and permitting and/or local agency permitting.
California Department of Transportation (Caltrans) LOS Policy	Consistent: With the implementation of proposed condition of certification **TRANS-2**, LOS D will be maintained for highways and intersections located within Caltrans jurisdiction.
Local	
City of Ceres Circulation Element	Requires LOS D or better operating conditions for primary collectors, arterials, expressways, freeways, and intersections. LOS C is required for secondary collectors and local streets.
	Consistent: As reflected in Traffic and Transportation Table 2, existing conditions for roadway segments level of service (LOS) operates at or above acceptable levels.

Applicable LORS	Description
County of Stanislaus Circulation Element	Requires LOS C or better operating conditions for city intersections and roadways.
	Consistent: As reflected in Traffic and Transportation Table 8, the LOS along certain identified roadway intersections along the construction designated roadways would remain above the LOS D threshold requirement, The applicant will be required to construction traffic control plan to include methods of reducing construction project impacts on local roadways that exceed LOS on various roadways that are proposed roadways designated for construction routes. Therefore will be in compliance with the county's congestion management plan.

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	
Stanislaus County Code.	Sets noise limits for specific land uses.
Ceres City Municipal Code.	Sets sound level limits at residences and outdoor activity areas.
City of Ceres Noise Element.	Sets noise limits for sensitive land uses.
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.
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	
GO-131-D, CPUC "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	

Applicable LORS	Description
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.

TRANSMISSION SYSTEM ENGINEERING

- California Public Utilities Commission General Order 95, *Rules for Overhead Electric Line Construction*, formulates uniform requirements for construction of overhead transmission lines. Compliance with this order ensures adequate service and safety to persons engaged in the construction, maintenance, and operation or use of overhead electric lines and to the public in general.

- California Public Utilities Commission General Order 128, *Rules for Construction of Underground Electric Supply and Communications Systems*, formulates uniform requirements and minimum standards to be used for underground supply systems to ensure adequate service and safety to persons engaged in the construction, maintenance, and operation or use of underground electric lines and to the public in general.

- The National Electric Safety Code, 1999, provides electrical, mechanical, civil, and structural requirements for overhead electric line construction and operation. The Western Electricity Coordinating Council (WECC) Planning Standards are merged with the North American Electric Reliability Corporation (NERC) Planning Standards and provide the system performance standards used in assessing the reliability of the interconnected system. These standards require the continuity of service to loads as the first priority, and preservation of interconnected operation as a secondary priority. Certain aspects of the NERC/WECC standards are either more stringent or more specific than the NERC standards alone. These standards provide planning for electric systems so as to withstand the more probable forced and maintenance outage system contingencies at projected customer demand and anticipated electricity transfer levels, while continuing to operate reliably within equipment and electric system thermal, voltage, and stability limits. These standards include the reliability criteria for system adequacy and security, system modeling data requirements, system protection and control, and system restoration. Analysis of the WECC system is based to a large degree on section I. A. of the standards, entitled *NERC and WECC Planning Standards with Table I and WECC Disturbance-Performance Table,* and on section I. D., entitled *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 the allowable variations in thermal loading, voltage, and frequency, and loss of load that may occur on systems during various disturbances. Performance levels range from no significant adverse effects inside and outside a system area during a minor disturbance (loss of load or a single transmission element out of service) to a level that seeks to prevent system cascading and the subsequent blackout of islanded areas during a major disturbance (such as loss of multiple 500 kV lines along a common right of way, and/or multiple generators). While controlled loss of generation or load or system separation is permitted in certain circumstances, its uncontrolled loss is not permitted (WECC 2002).

- NERC Reliability Standards for the Bulk Electric Systems of North America provide national policies, standards, principles, and guidelines to assure the adequacy and security of the electric transmission system. The NERC Reliability Standards provide for system performance levels under normal and contingency conditions. While these reliability standards are similar to NERC/WECC standards, certain aspects of the NERC/WECC standards are either more stringent or more specific than the NERC standards with regard to power flow and stability simulations for transmission system contingency performance. The NERC Reliability Standards apply not only to interconnected system operation but also to individual service areas (NERC 2006).

VISUAL RESOURCES

Applicable LORS	Descriptions
Federal	
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (PL 109-59;2005). Expires 2009	A2PP is not located within or in the vicinity of federally-managed lands or in the vicinity of a recognized National Scenic Byway or All-American Road.
State	
California Streets and Highways Code, Section 260 through 263 – Scenic Highways	Ensures the protection of highway corridors that reflect the state's natural scenic beauty. The state of California has not formally designated as scenic any of the roads or highways within or adjacent to the project area.
Local	
City of Ceres 2015 General Plan Section: Major Corridors Policy 1.J.6 Section: Industrial Development Policy 1.G.4 Policy 1.G.5	A long term vision of Ceres which outlines policies, standards, and programs to guide day to day decisions concerning development through 2015. To enhance the visual quality of its major corridors by requiring new and expanding development to conceal unsightly uses and equipment, (i.e., screening of rooftop equipment and outdoor storage and undergrounding of utilities). City shall seek to minimize the adverse visual impacts of industrial development from State Route 99, primarily through landscaping and fences. City shall encourage industrial developments that include the following features: -Attractive building frontages that are readily visible for the public street (brick, wood façade). -Variation in the roofline (multi-planed, pitched roofs) -Articulation in the walls (insets, projections, canopies, wing walls, trellis) -Large parking areas with tree coverage separated into a series of smaller parking areas with the use of landscaping and the location of buildings. -Outdoor service areas, loading bays and outdoor storage areas that are not readily visible to the public. -Attractive landscaping to enhance the business by softening buildings and parking areas

Applicable LORS	Descriptions
City of Ceres Municipal Code	Provides conceptual framework for the installation of public facilities, provision of public services, and future development.
Land Use and Development Standards: J2: Landscaping	All uses shall provide landscaping that shall be maintained.
G: Building Height Requirements	Height of all main and accessory buildings erected in M-2 zone shall be as approved by Planning Commission.
Stanislaus County 2020 General Plan, Land Use	To ensure the continued success of the area's leading agricultural industry.
Conservation/Open Space Element: Goal 1	Encourage the protection and preservation of natural and scenic areas throughout the county.

WASTE MANAGEMENT

Applicable LORS	Description
Federal	
Title 42, United States Code (U.S.C.), §§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 (USEPA) 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 USEPA and its ten regional offices. The Pacific Southwest regional office (Region 9) implements USEPA programs in California, Nevada, Arizona, and Hawaii.
Title 42, U.S.C., §§ 9601, et seq. Comprehensive Environmental Response, Compensation and Liability Act	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 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 USEPA 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). USEPA 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 USEPA.
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 (HSC), 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.
HSC, Chapter 6.11 §§25404 – 25404.9 Unified Hazardous Waste and Hazardous Materials	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

Management Regulatory Program (Unified 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
HSC, Division 20, Chapter 6.5, Article 11.9, §25244.12, et seq. Hazardous Waste Source Reduction and Management Review Act of 1989 (also known as SB 14).	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.
Title 22, CCR, §67100.1 et seq. Hazardous Waste Source Reduction and	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.

Management Review.	
Local	
Stanislaus County Code Title 9 – Health & Safety Code	Stanislaus County Environmental Resources Department administers a comprehensive environmental protection program. Provides guidance for remediation of contaminated sites and for siting and management of facilities that store, collect, treat, dispose or transfer of solid and hazardous waste.

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. Enforced by the Ceres Emergency Services – Fire Division (CFD).
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 (or locally enforced)	
Specific Hazardous Material Handling Requirements	Provide response agencies with necessary information to address emergencies.
Emergency Response Plan	Allows response agency to integrate A2PP emergency response activities into any response actions.
Business Plan	Provides response agency with overview of A2PP purpose and operations.
RMP (Certified Unified Program Agency [CUPA], Administered by the County)	Provides response agency with detailed review of risks and hazards located at the A2PP and mitigation implemented to control risks or hazards. The CUPA for this project is the Stanislaus Environmental Resources Department – Hazardous Materials Division (SERD-HMD).
2007 California Fire Code	Contains general provisions for fire safety, including requirements for proper storage and handling of hazardous materials and listing of the information needed by emergency response personnel. Enforced by the Ceres Emergency Services – Fire Division (CFD).

Docket Number: **09-AFC-2**
Project Name: **Almond 2 Power Plant Project**

FINAL EXHIBIT LIST

Exhibit	Brief Description	Stipulation	Offered	Admitted	Refused	CEC Use Only
Applicant's Exhibits						
1	Almond 2 Power Plant Project Application for Certification (AFC); dated May 8, 2009 and docketed on May 11, 2009. (a) Executive Summary (b) Project Description (c) Transmission System Engineering (d) Natural Gas Supply (e) Air Quality (f) Biological Resources (g) Cultural Resources (h) Geologic Hazards and Resources (i) Hazardous Materials Handling (j) Land Use (k) Noise and Vibration (l) Paleontological Resources (m) Public Health (n) Socioeconomics (o) Soils (p) Traffic and Transportation (q) Visual Resources (r) Waste Management (s) Water Resources (t) Worker Health and Safety (u) Alternatives			X		

	(v) Transmission Line Safety and Nuisance (w) Power Plant Reliability (x) Power Plant Efficiency (y)Facility Design					
2	Almond 2 Power Plant Project AFC Air Quality Modeling & Screening Health Risk Assessment Files; dated May 8, 2009 and docketed on May 11, 2009. (a) Air Quality Public Health			**X**		
3	Supplement A – Data Adequacy Responses; dated and docketed on June 9, 2009. (a) Transmission System Engineering (b) Cultural Resources (c) Land Use (d) Socioeconomics (e) Soils (f)Water Resources			**X**		
4	Applicant's Declarations and Testimony; docketed on September 30, 2010. (a) Project Description (b) Air Quality (c) Alternatives (d) Biological Resources (e) Cultural Resources (f) Transmission System Engineering (g) Geologic Hazards and Resources (h) Hazardous Materials Handling (i) Land Use (j) Noise and Vibration (k) Paleontological Resources (l) Public Health (m)Socioeconomics (n) Soils (o) Traffic and Transportation (p) Visual Resources			**X**		

	(q) Waste Management (r) Water Resources (s) Worker Health and Safety (t) Transmission Line Safety and Nuisance (u) Power Plant Efficiency (v) Power Plant Reliability (w) Facility Design					
5	The Applicant's Proposed Schedule; dated and docketed on July 23, 2009. Project Description			**X**		
6	Informational Hearing Powerpoint Presentation; dated and docketed on July 31, 2009. (a) Project Description			**X**		
7	ROC TID & CURE Meet & Confer on Friday November 13th; dated and docketed on July 31, 2009. (a) Project Description			**X**		
8	Comments on the CEC Staff Assessment; dated and docketed on June 7, 2010. (a) Executive Summary (b) Project Description (c) Air Quality (d) Biological Resources (e) Cultural Resources (f) Hazardous Materials Handling (g) Land Use (h) Noise and Vibration (i) Public Health (j) Socioeconomics (k) Soils (l) Water Resources (m) Traffic and Transportation (n) Transmission System Engineering (o) Visual Resources (p) Waste Management (q) Geologic Hazards and Resources			**X**		

	(r)Paleontological Resources (s) Power Plant Reliability (t) Facility Design (u) Power Plant Efficiency					
9	Air Dispersion Modeling Protocol for TID's Proposed New A2PP in Ceres; dated December 24, 2008. (a) Air Quality			**X**		
10	Notice of Complete Application; dated May 21, 2009 and docketed on June 4, 2009. (a) Air Quality			**X**		
11	Notice of Potential Federal PSD Applicability; dated May 21, 2009 and docketed on June 4, 2009. (a) Air Quality			**X**		
12	Letter to US EPA Regarding Nonapplicability of PSD; dated June 2, 2009 and docketed on June 26, 2009. (a) Air Quality			**X**		
13	Acid Rain Permit Application for the Almond Power Plan Units 2, 3, & 4 per 40 CFR 72.30 & 72.31; dated June 16, 2009 and docketed on September 21, 2009. (a) Air Quality			**X**		
14	Data Response Set 1A, Air Modeling Files; dated and docketed on September 14, 2009. (a) Air Quality			**X**		
15	Data Response Set 1A, Response to CEC Staff Requests 1-84 & Staff Query 1; dated and docketed on September 14, 2009. (a) Responses 1-15; Attachments DR1-1, DR2-1, DR7-1, DR8-1, DR9-1, DR12-1, DR15-1; Air Quality (b) Responses 16-24; Attachments DR21-1, DR22-1, DR23-1; Cultural Resources (c) Responses 25-29; Attachments DR26-1, DR29-1; Hazardous Materials Handling (d) Responses 30-33; Public Health (e) Responses 34-69; Attachments DR50-1, DR61-1, DR61-2, DR65-1, DR66-1; Soils and Water			**X**		

	Resources (f) Responses 70-71; Traffic and Transportation (g) Responses 72-74; Transmission System Engineering (h) Responses 75-79; Waste Management (i) Responses 80-84; Worker Health and Safety (j) Staff Query 1; Visual Resources					
16	TID Certification of Compliance for Exiting Facilities; dated September 15, 2009 and docketed on September 21, 2009. (a) Air Quality			**X**		
17	E-mail RE Draft PDOC; dated September 17, 2009 and docketed on September 21, 2009. (a) Air Quality			**X**		
18	Data Response Set 1B, Response to CEC staff Data Request 19 and Workshop Queries 1 through 6; dated and docketed on October 12, 2009. (a) Response 19; Cultural Resources (b) Response to Query 1; Traffic and Transportation (c) Responses to Queries 2-3, Attachment WSQ3-1; Air Quality (d) Responses to Queries 4-6, Attachment WSQ4-1; Water Resources			**X**		
19	Staff Query Set - 2 Responses to CEC Staff Queries 2 & 3; dated and docketed on October 22, 2009. (a) Response to Query 2; Air Quality (b) Response to Query 3, Attachment SQ3-1; Visual Resources			**X**		
20	CURE Data Responses Set 1A; dated and docketed on November 20, 2009. (a) Responses 1-4; Air Quality (b) Responses 5-62, Attachments CURE-46, CURE-56; Electric Transmission (c) Responses 63-67; Soils and Water Resources (d) Responses 68-76; Biological Resources (e) Responses 77-80; Electric Transmission			**X**		

	(f) Responses 81-106, Attachments CURE-83 and CURE-87; Traffic and Transportation					
21	Data Response Set 1D, Responses to CEC Staff Data Requests 18, & 77-79; dated and docketed on November 25, 2009. (a) Response 18; Cultural Resources (b) Response s 77-79; Waste Management (c) Attachment DR 18; Air Quality, Biological Resources, Cultural Resources, Geologic Hazards and Resources, Hazardous Materials Handling, Land Use, Noise and Vibration, Paleontological Resources, Public Health, Socioeconomics, Soils, Traffic and Transportation, Visual Resources, Waste Management, Water Resources, Worker Health and Safety			**X**		
22	Notice of Preliminary Determination of Compliance (PDOC); dated December 2, 2009 and docketed on December 8, 2009. (a) Air Quality			**X**		
23	Applicant's Comments on Preliminary Determination of Compliance; dated December 29, 2009 and docketed on December 30, 2009. (a) Air Quality			**X**		
24	Final Determination of Compliance; dated February 16, 2010 and docketed on February 22, 2010. (a) Air Quality			**X**		
25	Data Adequacy Discussions; dated May 27, 2009 and docketed on June 4, 2009. (a) Transmission System Engineering (b) Biological Resources (c) Cultural Resources (d) Socioeconomics (e) Traffic and Transportation (f) Visual Resources (g) Waste Management			**X**		

26	Applicant's Delineation of Wetlands & Waters of the U.S. for Line 7216-03 Project Draft Report; dated and docketed on April 23, 2010. (a) Biological Resources			**X**		
27	Technical Memorandum- Description of Suspected Special-Status Species Habitat Along PG&E Line; dated and docketed July 2, 2010. (a) Biological Resources			**X**		
28	Supplement B – Data Adequacy Responses DA5.3-5 (Cultural Resources); dated and docketed on June 23, 2009. (a) Cultural Resources			**X**		
29	Applicant's Revised Conditions of Certification; dated and docketed on August 6, 2010. (a) Cultural Resources (b) Noise and Vibration (c) Land Use			**X**		
30	E-mail Regarding Revised Study Plan Outline & Map; dated and docketed on September 21, 2009. (a) Transmission System Engineering			**X**		
31	Data Response Set 1C - Responses to CEC Staff Data Requests 61B, 68, & 72; dated and docketed on October 30, 2009. (a) Responses 61B and 68, Attachments DR61-3 and DR68-1; Soils and Water Resources (b) Response 72, Attachment DR72-1; Transmission System Engineering			**X**		
32	Stanislaus County Comment Letter Regarding Department of Public Works; dated August 11, 2009 and docketed on August 24, 2009. (a) Hazardous Materials Handling			**X**		
33	ROC TID / A. Greenberg, Site Visit Response; dated November 12, 2009 and docketed on November 16, 2009. (a) Hazardous Materials Handling (b)			**X**		

34	ROC - A. Greenberg / S. Strachan Regarding Pipeline Info; dated and docketed December 3, 2009. (a) Hazardous Materials Handling			**X**		
35	Letter to the CEC Discussing Irrigation District Legal Authorities Regarding Land Use; dated and docketed January 13, 2010. (a) Land Use (b)			**X**		
36	Applicant's Staff Query Set 3, Responses to CEC Staff Query 4; dated and docketed on April 13, 2010. (a) Land Use			**X**		
37	A2 ROC Noise; dated and docketed on July 26, 2010. (a) Noise and Vibration			**X**		
38	Applicant's Email Queries Set 1, Responses to CEC Staff Email Query 1; dated July 13, 2009 and docketed on July 21, 2009. (a) Traffic and Transportation			**X**		
39	CH2M HILL ROC, CH2M HILL Conversation with SWRCB Regarding Recycled Water Treatment Permit; dated April 15, 2010 and docketed April 16, 2010. (a) Water Resources			**X**		
40	Stanislaus County Comment Letter Regarding Fire Prevention Bureau; dated June 17, 2009 and docketed on August 24, 2009. (a) Worker Health and Safety			**X**		
41	Avenal Energy Power Plant PMPD; dated and docketed on November 10, 2009. (a) Air Quality			**X**		
42	Hughson Grayson Project Revised Draft EIR (July 23, 2010) (a) Project Description (b) Transmission System Engineering (c) Transmission Line Safety and Nuisance			**X**		
43	Hughson Grayson Project Revised Draft EIR (November 5, 2009) (a) Project Description			**X**		

	(b) Transmission System Engineering (c) Transmission Line Safety and Nuisance					
44	September 27, 2010, letter regarding Almond 2 Power Plant Project Water Supply and Discharge Hypotheticals – City of Ceres and Central Valley Regional Water Quality Control Board (a) Water Supply			**X**		
45	Record of Conversation between Vijay Kumar and the Central Valley Water Quality Control Board filed on September 27, 2010 (a) Water Supply			**X**		
46	September 29, 2010 letter regarding Almond 2 Power Plant Project: Hughson Grayson 115-kv Transmission Line and Substation Project (a) Transmission System Engineering (b) Project Description			**X**		
Staff's Exhibits						
300	Revised Staff Assessment for the Almond 2 Power Plant Project, July 30, 2010.			**X**		
301	Supplement to the Revised Staff Assessment for the Almond 2 Power Plant Project, September 27, 2010 [NOTE: THE FOLLOWING DOCUMENTS REPLACE AND SUPERSEDE THEIR COUNTERPARTS AS INITIALLY PRESENTED IN EXHIBIT 300] (a) Conditions of Certification – **CUL-1**, **CUL-2**, **CUL-3**, **CUL-9** (b) Conditions of Certification – **NOISE-4** (c) Conditions of Certification – **LAND-2** (d) Conditions of Certification – **HAZ-2** (e) Conditions of Certification – **SOIL&WATER-2**, (f) Air Quality (g) Soil & Water Resources			**X**		

	(h) Declaration of Felicia Miller (i) Declaration of James Brewster Birdsall (j) Declaration of Tao Jing (k) Declaration of David Bise (l) Declaration of Kathleen Forrest (m) Declaration of Michael d. McGuirt (n) Declaration of Alvin J. Greenberg (o) Declaration of Rick Tyler (p) Declaration of Jeanine Hinde (q) Declaration of Erin Bright (r) Declaration of Kristin Ford (s) Declaration of Vince Geronimo (t)Declaration of Rachel Cancienne (u) Declaration of Obed Odoemelam (v) Declaration of Marie McLean (w)Declaration of Ellen Townsend-Hough (x) Declaration of Dal Hunter (y) Declaration of Shahab Khoshmashrab (z) Declaration of Shahab Khoshmashrab (aa) Declaration of Laiping Ng (bb) Declaration of Mark Hesters (cc) Declaration of Suzanne L. Phinney (dd) Declaration of Chris Davis					
302	Final Determination of Compliance, San Joaquin Valley Air Pollution Control District, February 22, 2010.			**X**		

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 TID ALMOND 2 *POWER PLANT PROJECT*

Docket No. 09-AFC-2

PROOF OF SERVICE
(Revised 7/30/10)

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*indicates change

DECLARATION OF SERVICE

I, Katherine Nicholls, declare that on November 5, 2010, I served and filed copies of a CD and electronic mail of the PRESIDING MEMBER'S PROPOSED DECISION for the ALMOND 2 PROJECT. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/almond].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

__x__ sent electronically to all email addresses on the Proof of Service list;

_____ by personal delivery;

__x__ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

__x__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Original Signed By:

Katherine Nicholls