

**CALIFORNIA  
ENERGY  
COMMISSION**

# **HENRIETTA PEAKER PLANT**

**Amendment No.1 (01-AFC-18C)  
Kings County**



**DOCKET  
01-AFC-18C**

DATE MAR 24 2010

RECD. APR 15 2010

**FINAL COMMISSION  
DECISION**

**MARCH 24, 2010  
(01-AFC-18C)  
CEC-800-2010-014**



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## CALIFORNIA ENERGY COMMISSION

1516 9th Street  
Sacramento, CA 95814

[www.energy.ca.gov/sitingcases/henrietta\\_ammendment/](http://www.energy.ca.gov/sitingcases/henrietta_ammendment/)



KAREN DOUGLAS  
*Chairman*

**CALIFORNIA ENERGY COMMISSION**1516 NINTH STREET  
SACRAMENTO, CA 95814-5512

**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

**In the Matter of:**

<b>Petition to Amend the Commission</b>	)	<b>Docket No. 01-AFC-18C</b>
<b>Decision Approving the Application for</b>	)	
<b>Certification for the Henrietta Peaker</b>	)	
<b>Project</b>	)	
	)	
<b>GWF Energy, LLC</b>	)	<b>Order No. 10-0324-3</b>
	)	<b>ORDER APPROVING</b> a Petition to Convert
	)	the Henrietta Park Peaker Project to the GWF
	)	Henrietta Combined-Cycle Power Plant

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GWF Energy, LLC, the owner/operator of the Henrietta Peaker Project (HPP), has requested to modify the Commission Decision approving construction and operation of the HPP to allow conversion of the facility to the GWF Henrietta Combined-Cycle Power Plant. GWF requests authorization to add two once-through steam generators, a 25 MW steam turbine-generator, and an air-cooled condenser to convert the 95 MW peaker project to a 120 MW combined-cycle power plant. The modifications would allow the facility to generate an additional 25 MW of power with no additional fuel use, while providing flexibility to operate the facility in either simple-cycle or combined-cycle mode.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, section 1769(a) of the California Code of Regulations. Staff recommends approval of GWF Energy, LLC's petition to modify the HPP Project and amend related Conditions of Certification.

**ENERGY COMMISSION FINDINGS**

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Energy Commission public review process has been certified as a CEQA-equivalent, and therefore satisfies CEQA requirements. The Energy Commission finds that:

- The petition meets all the filing criteria of section 1769(a) concerning post-certification project modifications.

- The modification will not change the findings in the Energy Commission's Final Decision pursuant to section 1755.
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;
- The Change will be beneficial to the public because it will significantly increase the efficiency of the project, allowing an increase of 25 MW in generating capacity without an increase in fuel use or air emissions. The project will also have the flexibility to operate in simple-cycle mode, allowing rapid startup to quickly respond to system needs, as well as in the more efficient combined-cycle mode.
- The modification was requested based on a substantial change in circumstance since the original HPP was approved. Demand for electric generation services, including ancillary services, has increased substantially since the original project was approved. Conversion to combined-cycle operations will allow GWF to better respond to the market demand for various generating services in coming years.

#### **CONCLUSION AND ORDER**

The Energy Commission hereby adopts the staff's recommendation and approves GWF Energy, LLC's Petition to Amend. The Commission's Final Decision is hereby amended to allow construction and operation of the GWF Henrietta Combined-Cycle Power Plant. Commission staff will henceforth provide adequate monitoring of all conditions and measures set forth in the final decision required to mitigate potential impacts and to assure that the facility has been constructed and is operated in compliance with the conditions of certification as set forth in the Commission's Final Decision.

#### **IT IS SO ORDERED.**

Date: March 24, 2010

STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

  
KAREN DOUGLAS  
Chairman

# INTRODUCTION

## A. SUMMARY OF THE PROPOSED DECISION

This Decision contains the Commission's determinations regarding the Petition for Amendment of the March 5, 2002, Commission Decision (2002 Decision) approving the Application for Certification for the Henrietta Peaker Project (HPP) and includes the findings and conclusions required by law.<sup>1</sup> The amendment, filed on October 14, 2008, seeks to convert the HPP into the Henrietta Combined-Cycle Power Plant by adding Once-Through Steam Generators (OTSG), a 25 MW steam turbine and an air-cooled condenser to the project. We **approve** the amendment, for the reasons and subject to the Conditions of Certification set forth in the remainder of this Decision.

The Petition was filed by GWF Energy, LLC (Applicant or Project Owner), the original licensee. This Decision is based exclusively on the evidentiary record established for this proceeding.<sup>2</sup> We have independently evaluated this evidence, presented the Commission's reasons supporting its Decision, and provided references to portions of the record, which support the Commission's findings and conclusions. The Conditions of Certification, which follow each topic section, will ensure that the Henrietta Combined-Cycle Power Plant is designed, constructed, and operated in the manner necessary to protect public health and safety, provide needed electrical generation, and preserve environmental quality.

GWF Energy originally proposed to build a 95 megawatt (MW) natural gas-fired, single-cycle electric generating facility located about 1 mile south of the main entrance to the Lemoore Naval Air Station near the City of Lemoore in rural Kings County, California.

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<sup>1</sup> The requirements for an amendment of an Energy Commission Decision are set forth in the Commission's regulations, Title 20, California Code of Regulations, section 1769. They are summarized in subsection B, below.

<sup>2</sup> We also take administrative notice of the March 5, 2002, Commission Decision and the evidence admitted in that proceeding.

That proposal was approved by the Energy Commission on March 5, 2002, and commercial operations of the HPP started on July 1, 2002.

The changes to the original project proposed by the amendment are described in detail in the **PROJECT DESCRIPTION** section of this Decision.

During the original decision process and again in the amendment review process, Energy Commission staff (Staff) and the Applicant carried out extensive coordination with numerous local, state, and federal agencies. These included the San Joaquin Valley Air Pollution Control District (SJVAPCD or District), Kings County, and other regulatory agencies with an interest in this project. Through these efforts, the various parties and agencies have reached mutual agreement on almost all aspects of the proposed project and upon the necessary Conditions of Certification. As is discussed below, the evidence shows that the modified project will not create or contribute to any significant impacts to the environment nor to public health and safety, and that the project will comply with all related requirements.

The remaining sections of this Decision describe the changes to the originally approved project, the environmental effects of the amended project, and conformance of the amended project with applicable laws, ordinances, regulations and standards (LORS).

## **B. AMENDMENT PROCESS**

The HPP and its related facilities fall within Energy Commission licensing jurisdiction. (Pub. Resources Code, §§ 25500 et seq.). During its licensing proceedings, the Commission acts as lead state agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, §§ 25519(c), 21000 et seq.), and the Commission's siting process and associated documents are functionally equivalent to the preparation of the traditional Environmental Impact Report. (Pub. Resources Code, § 21080.5.) A license issued by the Commission is in lieu of other state and local permits.

The Commission's certification process provides a thorough and timely review and analysis of all aspects of this proposed project. During the process, we conduct a

comprehensive examination of a project's potential economic, public health and safety, reliability, engineering, and environmental ramifications.

Significantly, the Commission's process allows for and encourages public participation so that members of the public may become involved either informally, or on a more formal level as an Intervenor with the same legal rights and duties as the project developers. Public participation is encouraged at every stage of the process.

After a license is approved, it may be amended on the petition of the Applicant. (Title 20, California Code of Regulations, § 1769. Depending on the complexity and expected level of public interest, an amendment may be analyzed by Staff and referred directly to the Energy Commission for decision, as was done for this proceeding. Alternatively, the amendment may be referred to a committee of two Commissioners who take evidence and submit a proposed decision to the Energy Commission. In either event, the Commission must make the following findings before approving an amendment:

- That the amended project will not have significant,<sup>3</sup> unmitigated, environmental effects or that specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the proceeding and that the benefits of the project outweigh the unavoidable significant environmental effects of the project;
- That the amended project will remain in compliance with all applicable laws, ordinances, regulations and standards or that the facility is required for the public convenience and necessity and that there are not more prudent and feasible means of achieving the public convenience and necessity;
- That the change in the project will be beneficial to the public, Applicant, or Intervenor; and
- That there has been a substantial change in circumstances since the original approval justifying the change or that the change is based on information which

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<sup>3</sup> The Commission's regulations use the term "significant adverse environmental effect." See, e.g., 20 Cal. Code of Regs., §1755. "Adverse" is redundant, however, in that by definition in the CEQA Guidelines (14 Cal. Code of Regs., § 15382) an effect must be "adverse" in order to be "significant;" positive or beneficial effects can not be significant. Therefore, when we use the terms "significant effect" or "significant impact" in this Decision, the reader may assume that those effects and impacts are adverse.

was not known and could not have been known with the exercise of reasonable diligence prior to the original approval.<sup>4</sup>

### **C. PROCEDURAL HISTORY**

On October 14, 2008, the Applicant filed the Amendment Petition No. 1 (Ex. 1), the subject of this amendment proceeding and Decision. The matter was taken up by the Energy Commission's Siting Committee, consisting of Commissioners Karen Douglas and Jeffrey D. Byron. Staff originally proposed a schedule in which Staff would file its Staff Assessment (SA) on April 1, 2009. However, delays in obtaining some of the information necessary to prepare the SA resulted in the publication of the SA on November 4, 2009.

Public and agency comments on the SA were accepted during a 30-day comment period ending on December 4, 2009. The only comments on the SA received during or since that time were from the applicant, GWF Energy. No comments were received from the general public, any agency, or other party.

#### Response to Comments

The applicant's comments on the SA were minor in nature, and required no new analysis or new conditions of compliance. Staff issued an errata of the SA on December 23, 2009, correcting several typographical errors in the original document.

#### Note Regarding Format of this Decision

The remainder of this Decision is organized by topic in the areas of engineering, public health and safety, and environmental effects. The discussions focus on whether the amended project would cause any significant environmental impacts, appropriate mitigation for any such impacts, and whether the amended project will continue to comply with all applicable LORS. Where there are no changes to the findings and conclusions in the 2002 Decision, we will not repeat its analysis beyond a brief explanation of our reasons for making that determination. For the convenience of the

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<sup>4</sup> Title 20, California Code of Regulations, subsections 1769(a)(3), 1755(d).



parties and public, we will, however, reprint all of the conditions of certification for the project, whether or not they are changed from those adopted in 2002.

## I. PROJECT DESCRIPTION

### A. Location

The key feature of the proposed amendment is the conversion of the facility from simple-cycle operations to combined-cycle operations. The power plant's fenced area will expand by 2.86 acres to 9.86 acres to accommodate the proposed new storm water retention basin. See **Figure 2 - PROJECT DESCRIPTION** for an aerial view of the project site.

### B. Power Plant

The amended project will continue to include two aero-derivative General Electric LM6000 combustion turbine-generator (CTGs) sets operating in simple-cycle mode equipped with dry, low oxides of nitrogen (NO<sub>x</sub>) combustors and steam injection capability. The modified project will include two Once-Through Steam Generators (OTSGs), a single 25 MW condensing steam turbine-generator (STG), an air-cooled condenser, and support equipment. OTSGs recover waste heat in the CTG exhaust to create steam for the CTG, but they differ from the more common Heat Recovery Steam Generators (HRSGs) in that OTSGs can be operated "dry," without water in the boiler region, to allow operations in either combined-cycle or simple-cycle mode. GWF also intends to demolish and remove the two existing oxidation catalyst and selective catalytic reduction (SCR) systems, including the existing catalyst housing and 85-foot stacks, and add a new oxidation catalyst system within each OTSG. The new system would control carbon monoxide (CO) emissions to outlet concentration of less than 3 parts per million volume dry (ppmvd) at 15 percent oxygen (O<sub>2</sub>) and volatile organic compounds (VOC) emissions to outlet concentration of less than 2 ppmvd at 15 percent O<sub>2</sub> during simple-cycle and combined-cycle operation. The new SCR system within each OTSG would reuse the existing aqueous ammonia storage system to control oxides of nitrogen (NO<sub>x</sub>) emissions to less than 2 ppmvd at 15 percent O<sub>2</sub> during combined-cycle operation. See **Figure 1 - Project Description** for the facility and equipment configuration of the amended project.

### **C. Natural Gas Facilities and Transmission Line**

No changes are proposed to the HPP's existing natural gas pipeline route nor transmission line route. Because of the increased efficiency allowed by conversion to combined-cycle operations, the modified project will use the same amount of natural gas as that for the original HPP while producing an additional 25 MW of power. Natural gas would continue to be delivered via an existing gas line from Southern California Gas Company's (SoCal Gas) Transmission Line T-8812 located to the south of the project. The use of the existing PG&E substation and transmission corridor remains unchanged.

### **D. Water Supply and Waste Water Treatment**

To avoid the need for extensive new water use at the converted plant, GWF proposes to install a 74-foot tall, 120-foot long, 84-foot wide air-cooled condenser to convert steam exiting the steam turbine back into liquid to be pumped back into the OTSGs. The combined-cycle plant would also utilize a wet-surface air cooler (WSAC) for lube-oil cooling, which uses a spray of water onto the surface of the heat exchanger when air temperatures are above 88 degrees. GWF proposes to increase present water use at the plant by approximately 5 percent in order to supply makeup water for the OTSGs and WSAC. The project's water supply will continue to be provided from its entitlements to State Water Project and Central Valley Project water delivered through the Westlands Water District canal system.

Waste streams from the modified project include wastewater and oil wastes from the oil-water separators used to collect plant equipment drains, and wastewater from WSAC blow-downs, and from washwater drain holding tanks. Oil waste streams from the oil-water separator and turbine wash-water will be collected in separate holding tanks and periodically transported off site for recycle or disposal. Wastewater from process streams at GWF Henrietta will be routed to the mechanical vapor recompression unit to concentrate dissolved solids. Clarified water will be returned to the site's raw water storage tank for reuse in plant processes. Concentrated slurry will be stored in a wastewater storage tank and hauled off-site for disposal at a licensed facility. Sanitary wastewater from sinks, toilets, and other sanitary systems will continue to be collected

and discharged to an existing 1,500 gallon onsite septic tank and discharged to a 1,000 square foot leach field.

## **E. Site Layout**

Numerous minor adjustments to the equipment and site layout are proposed in the amendment petition. Construction of new components will largely occur within the boundaries of the present storm water retention basin, while a new, larger retention basin is constructed on the eastern edge of the project boundary, expanding the disturbed area of the project from 7 acres to 9.86 acres. Equipment additions or modifications from the approved project are:

- Addition of two new OTSGs, each receiving the exhaust from one of the existing combustion turbine generators (CTGs). The OTSGs will be vertical flow boilers with rectangular stacks that will be 91 feet, 6 inches tall by 13 feet wide by 8.9 feet long.
- Addition of a new 25 MW (net) condensing steam turbine generator (STG) with an associated lube oil cooler.
- Addition of a new 74-foot tall by 120-foot long by 84-foot wide air cooled condenser (ACC) for system heat rejection.
- Addition of a 305 gallon per minute (gpm) wet-surface air cooler (WSAC) to reject heat from a fin-fan heat exchanger in the auxiliary cooling water system that provides water for the STG lube oil cooler, STG generator cooler, STG hydraulic control system, boiler feed pump lube oil, and seal water coolers.
- On-site modifications to the water piping, fire protection, and the storm water drainage collection systems.
- Addition of a new 42 MMBtu/hr auxiliary boiler to provide steam turbine seals and air cooled condenser evacuation during OTSG start-up.

- Addition of a new water treatment skid for boiler makeup water.
- Modification of the wastewater treatment system to optimize water supply requirements and minimize off-site wastewater disposal.
- Increase in water consumption of approximately 8 acre-feet per year (AFY) for OTSG feedwater makeup and the lube oil cooler makeup, but no change to the water supply or service connection.
- Addition of a generator step-up transformer and circuit breaker into the existing on-site 115 kilovolt (kV) switchyard to transmit the STG power output to the PG&E grid.

#### **F. Construction and Operation**

The Applicant proposes beginning construction of the project in the first quarter of 2011, and to complete construction in approximately 15 months. Commercial operation is expected to begin by the spring of 2012. The construction work force is expected to peak at 154 workers. Once the new facilities are on line, the operational staff is expected to increase by about 14 employees. The capital cost of the project is expected to be approximately \$80 million.

#### **G. Facility Closure**

The planned life of the HPP facility is 30 years or longer. Whenever the facility is closed, either temporally or permanently, the closure procedures will follow the described plan provided in this Decision and any additional LORS in effect at that time.

#### **H. Findings Specific to an Amendment**

As we note in subsection B of the **Introduction**, above, in addition to the findings necessary to approve an initial power plant license, two additional findings are required in order to approve an amendment to a license. They are 1) that the change in the

project will be beneficial to the public, Applicant, or intervenors and 2) that there has been a substantial change in circumstances since the original approval justifying the change or that the change is based on information which was not known and could not have been known with the exercise of reasonable diligence prior to the original approval.

## **1. Benefits**

Throughout this Decision, we describe various benefits that will accrue from the construction and operation of the HPP as proposed in the amendment. They include additional generation capacity to serve the residents and businesses in the Central and Southern California areas, employment opportunities for construction workers and plant operators, and property tax revenues for Kings County and various local districts and agencies. For the Applicant, this amendment presents an opportunity to increase the amount of electric power and energy it can sell under contract, without increasing fuel use or emissions from the project.

## **2. Changed Information or Circumstances**

The Applicant, in the Amendment Petition, explains the change in information and circumstances as follows:

“These changes are needed to allow GWF to respond to market demand for additional efficient power generation beyond the term of GWF’s existing DWR contract. GWF will expand electrical power generation by converting the existing HPP power generation to a more efficient operating design. The additional power will support California’s growing energy demands, especially during peak summer conditions, which will have a beneficial impact on the public pursuant to Title 20, CCR, Sections 1769 [a][1][G]. A major advantage of the proposed conversion is the enhancement in electric generation efficiency created by the conversion, an approximate 24% increase in fuel efficiency, and a substantial reduction in emissions per MW-hr generated.”

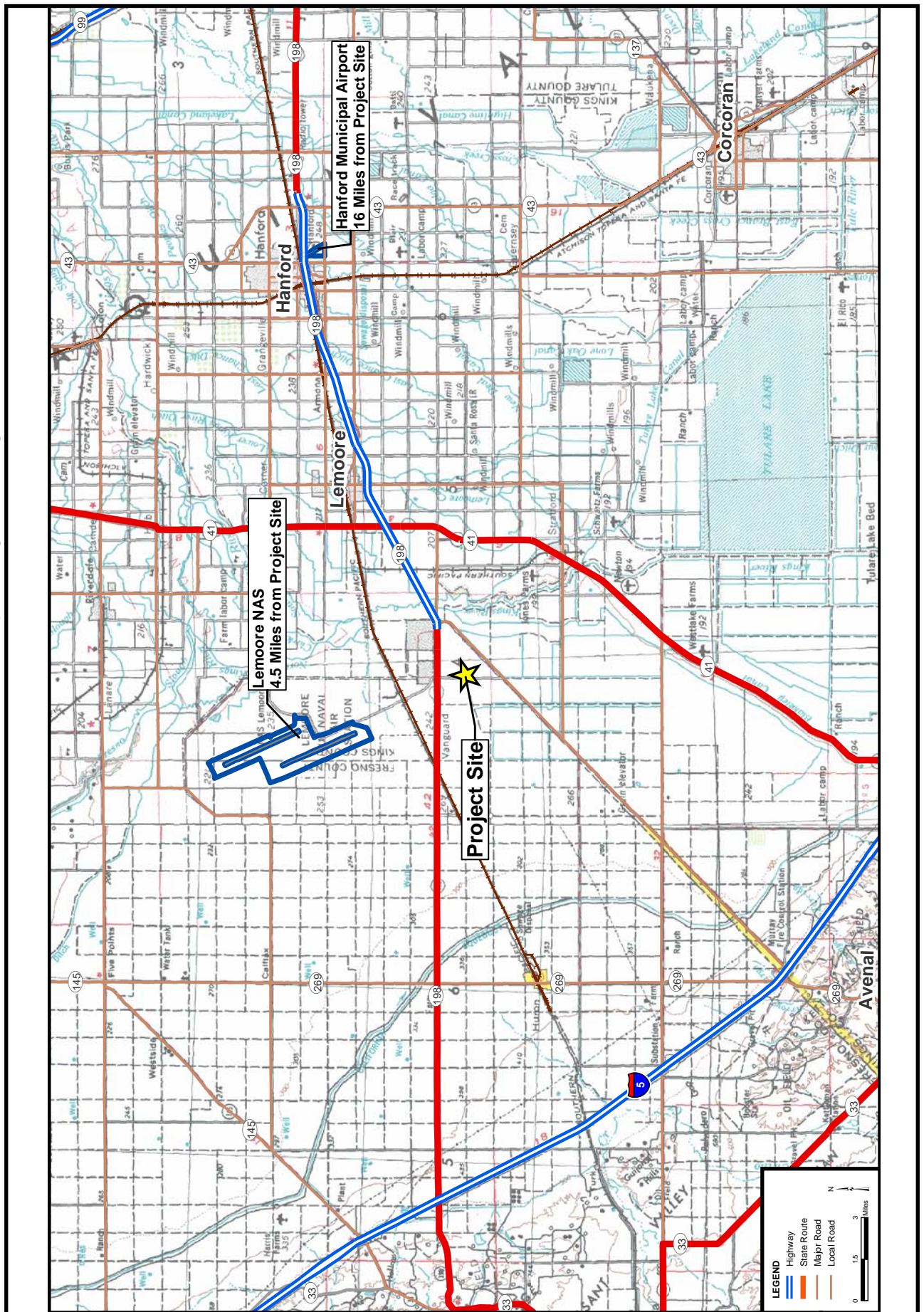
## **FINDINGS AND CONCLUSIONS**

Based upon the evidence, the Commission finds as follows:

1. The change in the project will be beneficial to the public, Applicant, and intervenor by providing additional local generating capacity, construction and operations employment, and tax revenues, with no increase in fuel use or environmental impacts compared to the approved project; and
2. There has been a substantial change in circumstances since the original approval justifying the change in that the demand for electrical power and energy has increased substantially in the region of the project, and the applicant can increase power production without any increase in fuel use or environmental impact.

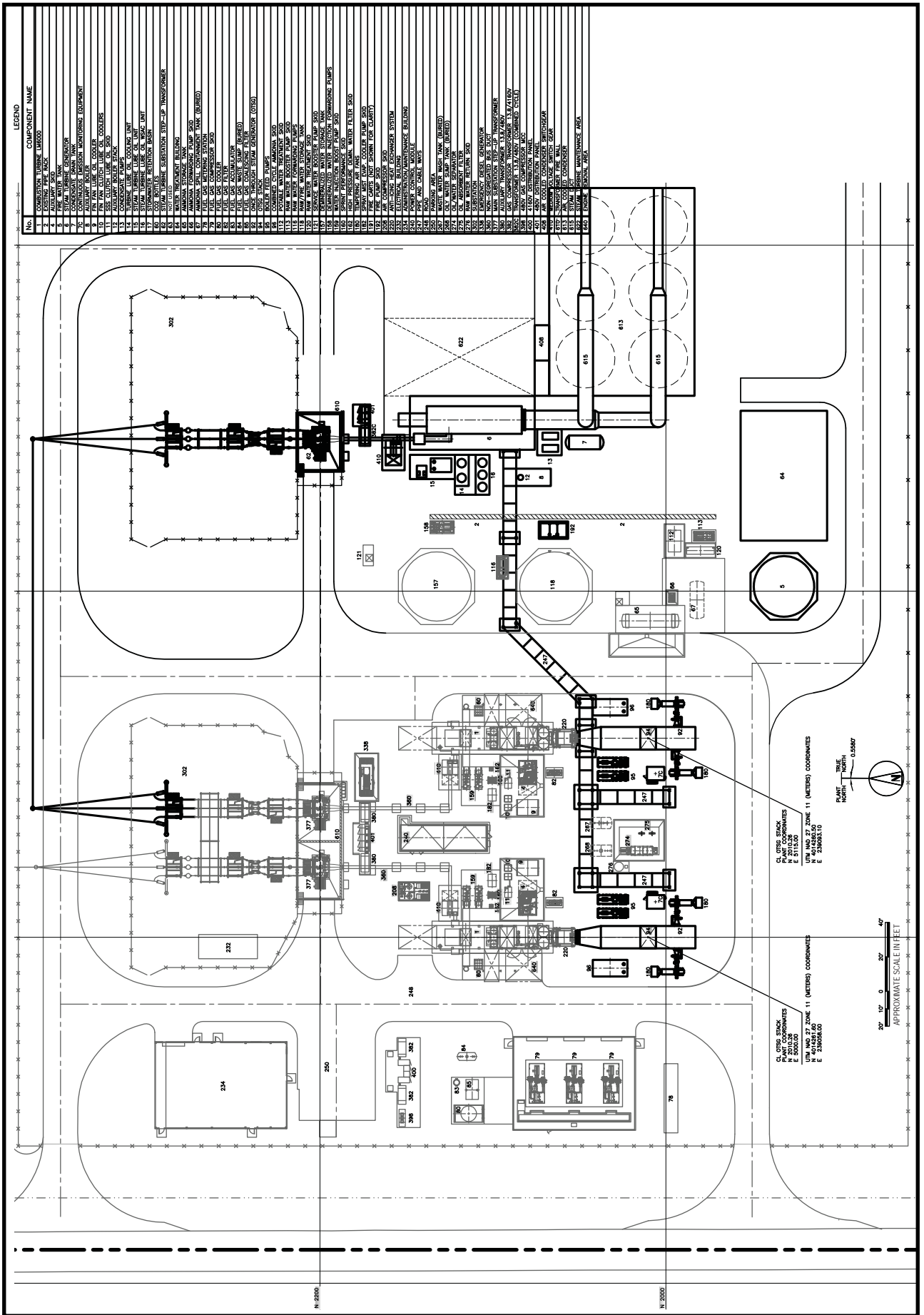


**PROJECT DESCRIPTION - FIGURE 1**  
 GWF Henrietta Amendment Project - Regional Setting





PROJECT DESCRIPTION - FIGURE 2  
GWF Henrietta Amendment Project - General Arrangement



## **II. PROJECT ALTERNATIVES**

### **COMMISSION DISCUSSION**

Because the project is an amendment to an existing license, and because the new project modifications would increase generating capacity without increasing fuel use or environmental impact, this topic was not addressed in the Staff Assessment of the Amendment Petition.

Because no significant environmental effects of the HPP were found in the 2002 Decision approving the project, the applicant did not need to, nor did it attempt to weigh the relative merits of alternative sites against the proposed project location. A similar situation exists here in that we have found no significant effects from the amended project and need not compare the new location to alternative sites or technologies.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. If all Conditions of Certification contained in this Decision are implemented, construction and operation of the Henrietta Combined-Cycle Power Plant will not create any significant direct, indirect, or cumulative environmental impacts.
2. The 2002 Decision and the evidentiary record contain an adequate review of alternative technologies, fuels, the no-project alternative and alternative site locations.
3. No feasible technology alternatives such as geothermal, solar, or wind resources are located near the project or are capable of meeting project objectives.
4. The use of alternative generating technologies would not prove efficient, cost-effective or mitigate any significant environmental impacts to levels of insignificance.
5. No significant environmental impacts would be avoided under the no-project alternative.

### **III. COMPLIANCE AND CLOSURE<sup>5</sup>**

The project General Conditions Including Compliance Monitoring and Closure Plan (Compliance Plan) have been established as required by Public Resources Code section 25532. The plan provides a means for assuring that the facility is constructed, operated, and closed in conjunction with air and water quality, public health and safety, environmental, and other applicable regulations, guidelines, and conditions adopted or established by the Energy Commission and specified in the written decision on the Application for Certification or otherwise required by law.

The project's General Compliance Conditions of Certification, including Compliance Monitoring and Closure Plan (Compliance Plan) have been established as required by Public Resources Code section 25532. The plan provides a means for assuring that the facility is constructed, operated and closed in compliance with public health and safety, environmental and other applicable regulations, guidelines, and conditions adopted or established by the California Energy Commission and specified in the written decision on the Application for Certification or otherwise required by law.

The Compliance Plan is composed of elements that:

- 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;
- state procedures for settling disputes and making post-certification changes;
- state the requirements for periodic compliance reports and other administrative procedures that are necessary to verify the compliance status for all Energy Commission approved conditions of certification;
- establish requirements for facility closure plans; and

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<sup>5</sup> Unlike other topics in the Decision, this section replaces, rather than supplements, its counterpart in the 2002 Decision. Since the adoption of the 2002 Decision, Staff's format for its compliance monitoring and closure conditions has changed. Formerly it consisted of a long narrative without specifically numbered conditions. Now, while there are numbered conditions, the format remains largely a narrative. In essence, however, the General Conditions of Compliance listed below are substantively identical to the General Conditions of Exemption referenced in the 2002 Decision.

- specify conditions of certification for each technical area containing the measures required to mitigate any and all potential adverse project impacts associated with construction, operation and closure below a level of significance. Each specific condition of certification also includes a verification provision that describes the method of assuring that the condition has been satisfied.

## **DEFINITIONS**

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

### **Pre-Construction Site Mobilization**

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

### **Construction**

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 "Construction" 1, 2, 3, or 4 above.

### **Start of Commercial Operation**

For compliance monitoring purposes, "commercial operation" begins after the completion of start-up and commissioning, 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.

### **A. 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
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 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):

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

## **B. 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:

**Compliance Project Manager**  
**(0X-AFC-XC)**  
**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; and
7. the compliance status of each condition, e.g., “not started,” “in progress” or “completed” (include the date).
8. if the condition was amended, the date of the amendment.

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

## **MONTHLY COMPLIANCE REPORT (COMPLIANCE-6)**

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

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

1. A summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;
2. Documents required by specific conditions to be submitted along with the Monthly Compliance Report. Each of these items must be identified in the transmittal letter, as well as the conditions they satisfy and submitted as attachments to the Monthly Compliance Report;
3. An initial, and thereafter updated, compliance matrix showing the status of all conditions of certification;
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 addressed later in this section]; and
10. A listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved matters, and the status of any unresolved matters.

## **CONFIDENTIAL INFORMATION (COMPLIANCE-8)**

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

## **ANNUAL ENERGY FACILITY COMPLIANCE FEE (COMPLIANCE-9)**

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annual compliance fee, which is adjusted annually. Current Compliance fee information is available on the Energy Commission's website [http://www.energy.ca.gov/siting/filing\\_fees.html](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 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 9<sup>th</sup> St., Sacramento, CA 95814.

## **REPORTING OF COMPLAINTS, NOTICES, AND CITATIONS (COMPLIANCE-10)**

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

[http://www.energy.ca.gov/sitingcases/power\\_plants\\_contacts.html](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 commencement of closure activities. The project owner shall file 120 copies (or other number of copies agreed upon by the CPM) of a proposed facility closure plan with the Energy Commission.

The plan shall:

1. identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site;
2. identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;

3. identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and
4. address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

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

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

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

#### **UNPLANNED TEMPORARY CLOSURE/ON-SITE CONTINGENCY PLAN (COMPLIANCE-12)**

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

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

The project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over

the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM.

The on-site contingency plan shall provide for taking immediate steps to secure the facility from trespassing or encroachment. In addition, for closures of more than 90 days, unless other arrangements are agreed to by the CPM, the plan shall provide for removal of hazardous materials and hazardous wastes, draining of all chemicals from storage tanks and other equipment, and the safe shutdown of all equipment. (Also see specific conditions of certification for the technical areas of Hazardous Materials Management and Waste Management.)

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

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

If the CPM determines that an unplanned temporary closure is likely to be permanent, or for 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.” 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 you with a sample petition to use as a template.

## **CHANGE OF OWNERSHIP**

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

### **C. 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). Once staff files an intention to approve the proposed project modifications, any person may file an objection to staff's determination within 14 days of service on the grounds that the modification does not meet the criteria of section 1769 (a)(2). If a person objects to staff's determination, the petition must be processed as a formal amendment to the decision and must be approved by the full commission at a noticed business meeting or hearing.

### **D. 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.

### **E. 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.

### **F. 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.

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

#### **Request for Informal Meeting**

In the event that either the party requesting an investigation or the Energy Commission staff is not satisfied with the project owner's report, investigation of the event, or corrective measures proposed or undertaken, either party may submit a written request to the CPM for a meeting with the project owner. Such request shall be made within 14 days of the project owner's filing of its written report. Upon receipt of such a request, the CPM shall:

1. immediately schedule a meeting with the requesting party and the project owner, to be held at a mutually convenient time and place;



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

### **Formal Dispute Resolution Procedure-Complaints and Investigations**

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

# KEY EVENTS LIST

PROJECT: \_\_\_\_\_

DOCKET #: \_\_\_\_\_

COMPLIANCE PROJECT MANAGER: \_\_\_\_\_

EVENT DESCRIPTION	DATE
Certification Date	
Obtain Site Control	
Online Date	
<b>POWER PLANT SITE ACTIVITIES</b>	
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	
<b>TRANSMISSION LINE ACTIVITIES</b>	
Start T/L Construction	
Synchronization with Grid and Interconnection	
Complete T/L Construction	
<b>FUEL SUPPLY LINE ACTIVITIES</b>	
Start Gas Pipeline Construction and Interconnection	
Complete Gas Pipeline Construction	
<b>WATER SUPPLY LINE ACTIVITIES</b>	
Start Water Supply Line Construction	
Complete Water Supply Line Construction	

<b>CONDITION NUMBER</b>	<b>SUBJECT</b>	<b>DESCRIPTION</b>
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: <ul style="list-style-type: none"> <li>• property owners living within one mile of the project have been notified of a telephone number to contact for questions, complaints or concerns,</li> <li>• a pre-construction matrix has been submitted identifying only those conditions that must be fulfilled before the start of construction,</li> <li>• all pre-construction conditions have been complied with,</li> <li>• the CPM has issued a letter to the project owner authorizing construction.</li> </ul>
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.

<b>CONDITION NUMBER</b>	<b>SUBJECT</b>	<b>DESCRIPTION</b>
COMPLIANCE-8	Confidential Information	Any information the project owner deems confidential shall be submitted to the Energy Commission's Dockets Unit with a request for confidentiality.
COMPLIANCE-9	Annual fees	Payment of Annual Energy Facility Compliance Fee
COMPLIANCE-10	Reporting of Complaints, Notices and Citations	Within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.
COMPLIANCE-11	Planned Facility Closure	The project owner shall submit a closure plan to the CPM at least 12 months prior to commencement of a planned closure.
COMPLIANCE-12	Unplanned Temporary Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COMPLIANCE-13	Unplanned Permanent Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned permanent closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COMPLIANCE-14	Post-certification changes to the Decision	The project owner must petition the Energy Commission to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.

**ATTACHMENT A  
COMPLAINT REPORT/RESOLUTION FORM**

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: \_\_\_\_\_

(ATTACH ADDITIONAL PAGES AND ALL SUPPORTING DOCUMENTATION, AS REQUIRED)

## **IV. ENGINEERING ASSESSMENT**

### **A. FACILITY DESIGN**

The written testimony of Staff's witness, Steve Baker, states that the proposed project changes will not change the analysis in the 2002 Decision, with two minor exceptions: that several new components are being added to the project, and that the applicable California Building Code was updated in 2007 (Staff Assessment Ex. 100, pp. 5.1.1 – 5.1.4.) Staff updated the conditions of compliance associated with Facility Design to reflect these changes.

### **FINDINGS AND CONCLUSIONS**

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable engineering LORS.
3. The Facility Design aspects of the amended project do not create significant direct or cumulative environmental effects.

We therefore conclude that with the implementation of the Conditions of Certification listed below, the HPP project is likely to be designed and constructed in conformity with applicable laws pertinent to its civil, structural, mechanical, and electrical engineering aspects.

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

In the event that the initial engineering designs are submitted to the CBO when a successor to the 2007 CBC is in effect, the 2007 CBC provisions identified herein shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction, or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

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 after receipt of the Certificate of Occupancy, the project owner shall submit to the California Energy Commission 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].

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

**Verification:** At least 60 days (or 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 and to the CPM the schedule, the Master Drawing List, and the Master Specifications List of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design

documents for the major structures and equipment listed in **FACILITY AND DESIGN Table 1** below. Major structures and equipment shall be added to or deleted from the Table only with CPM approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

**Facility Design Table 1  
Major Structures and Equipment List**

<b>Equipment/System</b>	<b>Quantity (Plant)</b>
Combustion Turbine Generator Foundation and Connections	2
<u>Steam Turbine Generator Foundation and Connections</u>	<u>1</u>
<del>SCR Unit</del> <u>Once-Through Steam Generator Structure, Foundation and Connections</u>	2
Transformer Foundation and Connections	<del>23</del>
CT Inlet Air Filter/Duct Structure, Foundation and Connection	2
Exhaust Stack Structure, Foundation and Connections	2
Fuel Gas Filter Foundation and Connections	2
Fuel Gas Compressor Skid 1A, 1B, 1C Foundation and Connections	1
Fuel Gas Cooler Foundation and Connections	1
Fuel Gas Waste Sump/Blower Foundation and Connections	1
Gas Turbine Enclosure Structure, Foundation and Connections	2
<u>Steam Turbine Enclosure Structure, Foundation and Connections</u>	<u>1</u>
<u>Steam Turbine Lube Oil Cooler Skid Foundation and Connections</u>	<u>1</u>
<u>Air Cooled Condenser Structure, Foundation and Connections</u>	<u>1</u>
<u>Auxiliary Boiler</u>	<u>1</u>
<u>Auxiliary Boiler Foundation and Connections</u>	<u>1</u>
Ammonia Storage Tank & Pump Foundation and Connections	1
Auxiliary Skid Foundation and Connections	2
Air Compressor Skid Foundation and Connections	1
Oil/Water Separator Foundation and Connections	1
Waste Water Wash Tank Foundation and Connections	1
Fuel Gas Metering Station Structure, Foundation and Connections	1
Administration Building Structure, Foundation and Connections	1
Continuous Emission Monitoring Equipment Foundation and Connections	2
Ammonia Injection Skid Foundation and Connections	2
Raw Water Forwarding Pumps Foundation and Connection	1
Raw Water Storage Tank Foundation and Connections	1
<u>Water Treatment Building</u>	<u>1</u>
<u>Water Treatment Building Foundation and Connections</u>	<u>1</u>



<b>Equipment/System</b>	<b>Quantity (Plant)</b>
Water Treatment Module Foundation and Connections	<del>4</del> 2
Waste Water Storage Tank Foundation and Connections	1
Waste Water Process Equipment Foundation and Connections	1
Demineralized Water Storage Tank Foundation and Connections	1
Demineralized Water Injection Forwarding Pumps Foundation and Connections	1
Water Injection Boost Pump Skid 2A, 2B Foundation and Connections	2
Sprint Performance Skid Foundation and Connections	2
High Pressure Demineralized Water Filter Skid Foundation and Connections	2
Inlet Air Fogger Foundation and Connections	2
Closed Loop Cooler Foundation and Connections	2
Anti-Icing Heat Exchanger System Foundation and Connections	2
Maintenance Building Structure, Foundation and Connections	1
Power Control Module Structure, Foundation and Connections	1
Emergency Diesel Generator Foundation and Connections	1
Lighting Panel with Transformer Foundation and Connections	1
Auxiliary Transformer Foundation and Connections	2
Gas Compressor Transformer Foundation and Connections	2
480 V Distribution Switchboard Foundation and Connections	1
Gas Compressor 480 V MCC Foundation and Connections	1
4160 Distribution Panel Foundation and Connections	1
Medium Voltage Switch Gear Foundation and Connections	2
Transformer Fire Wall Structure, Foundation and Connections	1 Lot
Potable Water Systems	1 Lot
Drainage Systems (including sanitary drain and waste)	1 Lot
High Pressure and Large Diameter Piping	1 Lot
HVAC and Refrigeration Systems	1 Lot
Temperature Control and Ventilation Systems (including water and sewer connections)	1 Lot
Building Energy Conservation Systems	1 Lot
Switchyard, Buses and Towers	1 Lot
Electrical Duct Banks	1 Lot

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

**Verification:** The project owner shall make the required payments to the CBO in accordance with the agreement between the project owner and the CBO. The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next Monthly Compliance Report indicating that the applicable fees have been paid.

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

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

**Protocol:** The RE shall:

1. Monitor construction progress of work requiring CBO design review and inspection to ensure compliance with LORS;
2. Ensure that construction of all the facilities subject to CBO design review and inspection conforms in every material respect to the applicable LORS, these Conditions of Certification, approved plans, and specifications;
3. Prepare documents to initiate changes in the approved drawings and specifications when directed by the project owner or as required by conditions on the project;

4. Be responsible for providing the project inspectors and testing agency(ies) with complete and up-to-date set(s) of stamped drawings, plans, specifications and any other required documents;
5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and
6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests as not conforming to the approved plans and specifications.

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

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

**Verification:** At least 30 days (or 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 name, qualifications and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.

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

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

stations, and substations) are handled in Conditions of Certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

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

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

If any one of the designated responsible engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned responsible engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

Protocol:     A: The civil engineer shall:

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

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

1. Review all the engineering geology reports, and prepare final soils grading report;

2. Prepare the soils engineering reports required by the 1998 CBC, Appendix Chapter 33, Section 3309.5 – Soils Engineering Report, and Section 3309.6 – Engineering Geology Report;
3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 1998 CBC, Appendix Chapter 33, section 3317, Grading Inspections;
1. Recommend field changes to the civil engineer and RE;
2. Review the geotechnical report, field exploration report, laboratory tests, and engineering analyses detailing the nature and extent of the site soils that may be susceptible to liquefaction, rapid settlement or collapse when saturated under load; and
6. Prepare reports on foundation investigation to comply with the 1998 CBC, Chapter 18 section 1804, Foundation Investigations.

This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations [1998 CBC, section 104.2.4, Stop orders].

Protocol: C: The design engineer shall:

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

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

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

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

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

Protocol: The special inspector shall:

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

the inspector's knowledge, in conformance with the approved plans and specifications and the applicable provisions of the applicable edition of the CBC.

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

**Verification:** At least 15 days 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 the corrective action required [1998 CBC, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The discrepancy documentation shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this Condition of Certification and, if appropriate, the applicable sections of the CBC and/or other LORS.

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

**GEN-8:** The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall request the CBO to inspect the completed structure and review the submitted documents. When the work and the "as-built" and "as graded" plans conform to the approved final plans, the project owner shall notify the CPM regarding the CBO's final approval. The marked up "as-built" drawings for the construction of

structural and architectural work shall be submitted to the CBO. Changes approved by the CBO shall be identified on the “as-built” drawings [1998 CBC, Section 108, Inspections]. The project owner shall retain one set of approved engineering plans, specifications and calculations at the project site or at another accessible location during the operating life of the project [1998 CBC, Section 106.4.2, Retention of Plans].

**Verification:** Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM in the next Monthly Compliance Report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans. After storing final approved engineering plans, specifications and calculations as described above, the project owner shall submit to the CPM a letter stating that the above documents have been stored and indicate the storage location of such documents.

**CIVIL-1:** Prior to the start of site grading, the project owner shall submit to the CBO for review and approval the following:

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

**Verification:** At least 15 days prior to the start of site grading (or a lesser number of days mutually agreed to by the project owner and the CBO), 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 geotechnical engineer or civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications and calculations to the CBO based on these new conditions. The project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected area [1998 CBC, Section 104.2.4, Stop orders].



**Verification:** The project owner shall notify the CPM, within 5 days, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within five days of the CBO's approval to resume earthwork and construction in the affected areas, the project owner shall provide to the CPM a copy of the CBO's approval.

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

If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO, and the CPM [1998 CBC, Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The project owner shall prepare a written report detailing all discrepancies and non-compliance items, and the proposed corrective action, and send copies to the CBO and the CPM.

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

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

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

**STRUC-1:** Prior to the start of any increment of construction of any major structure or component listed in **Table 1** of Condition of Certification **GEN-2**, above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project

structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **Table 1**, above):

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

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

Protocol: The project owner shall:

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

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

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

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

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

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

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 to the CBO, with a copy of the transmittal letter to the CPM [1998 CBC, Chapter 17, Section 1701.3,

Duties and Responsibilities of the Special Inspector]. The NCR shall reference the Condition(s) of Certification and the applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM.

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

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

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

**STRUC-4:** Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in Chapter 3, Table 3-E of the 1998 CBC shall, at a minimum, be designed to comply with Occupancy Category 2 of the 1998 CBC.

**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 installation of the tanks or vessels containing the above specified quantities of toxic or hazardous materials, the project owner shall submit to the CBO for design review and approval final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification.

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

**MECH-1:** Prior to the start of any increment of major piping or plumbing construction, 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 Table 1, Condition of Certification GEN 2, above. Physical layout drawings and drawings not related to code compliance and life safety

need not be submitted. The submittal shall also include the applicable QA/QC procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of said construction [1998 CBC, Section 106.3.2, Submittal Documents, Section 108.3, Inspection Requests, Section 108.4, Approval Required; 1998 California Plumbing Code, Section 103.5.4, Inspection Request, Section 301.1.1, Approval].

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

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

- ANSI B31.2 (Fuel Gas Piping Code);

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

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

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

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

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

- Specific City/County code.

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

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

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

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

**Protocol:** 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 a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of on-site fabrication or installation of any pressure vessel, the project owner shall submit to the CBO for design review and approval, the above listed documents, including a copy of the signed and stamped engineer's certification, with a copy of the transmittal letter to the CPM.

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

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

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

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

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

Final plant design plans to include:

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

Final plant calculations to establish:

1. short-circuit ratings of plant equipment;
2. ampacity of feeder cables;
3. voltage drop in feeder cables;

4. system grounding requirements;
5. coordination study calculations for fuses, circuit breakers and protective relay settings for the 13.8 kV, 4.16 kV and 480 V systems;
6. system grounding requirements; and
7. lighting energy calculations.

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

receipt or delay of major electrical equipment;

testing or energization of major electrical equipment; and

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 a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for design review and approval the above listed documents. The project owner shall include in this submittal a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.



## **B. POWER PLANT EFFICIENCY**

Staff's witness, Erin Bright, in her written analysis (Ex. 100, pp. 5.3-1 – 5.3-2), testified that the proposed changes to the HPP would increase fuel efficiency of the HPP by approximately 24 percent, and would otherwise not change any of the findings or conclusions in the 2002 Decision.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, the Energy Commission makes the following finding:

1. The Efficiency aspects of the amended project do not create significant direct or cumulative environmental effects.
2. We therefore conclude that the Henrietta Combined-Cycle Power Plant will not cause any significant effects on energy supplies or energy resources.
3. No Conditions of Certification were adopted in the 2002 Decision and none are adopted in this Decision concerning the topic of Power Plant Efficiency.

### **C. POWER PLANT RELIABILITY**

Staff's witness, Erin Bright, in her written analysis (Ex. 100, pp. 5.4-1 – 5.4-2), testified that the proposed changes to the HPP would not change any of the findings or conclusions in the 2002 Decision.

### **FINDINGS AND CONCLUSIONS**

Based on the evidence, the Energy Commission makes the following finding:

1. The Reliability aspects of the amended project do not create significant direct or cumulative environmental effects.
2. The Energy Commission, therefore, concludes that the project will not have an significant effect on system reliability.
3. No Conditions of Certification were adopted in the 2002 Decision and none are adopted in this Decision concerning the topic of Power Plant Reliability.

## **D. TRANSMISSION SYSTEM ENGINEERING**

The written testimony of Sudath Arachchige and Mark Hesters reviewed the proposed changes to the transmission system associated with the conversion of the plant from simple-cycle to combined-cycle operations, which would result in a net increase of 25 MW in generating capacity to the PG&E grid. They reviewed the results of a System Impact Study conducted by Navigant Consulting, Inc., at GWF's request. Those studies identified the impacts on other parts of the interconnected transmission network and the likely network upgrades necessary to properly handle the increase in generation from the HPP. Staff concluded that operation of the Henrietta Combined-Cycle Power Plant would not create system overloads under normal, single contingency, or double contingency conditions, would not cause voltage instability during transient events, nor increase the fault duties of nearby substations or busses. Therefore, no transmission system upgrades, reratings or special protection schemes are needed to prevent system overloads caused by operation of the Henrietta Combined-Cycle Power Plant. A detailed facility study is required as a Condition of Compliance to ensure all potential overload conditions are identified and mitigated prior to commencing project operations (Ex. 100, pp. 5.5-1 – 5.5-8).

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find and conclude as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable engineering LORS.
3. The Transmission System Engineering aspects of the amended project do not create significant direct or cumulative environmental effects.

Staff recommended changes to several existing Conditions of Compliance applicable to Transmission System Engineering to reflect changes in LORS or standard nomenclature applicable to Transmission System Engineering. Conditions of Certification **TSE-4** and **TSE-7** are unchanged. Staff proposed to delete Condition of Certification **TSE-8**, and instead move the provisions regarding synchronization of the project to Condition of Certification **TSE-6**. We find these changes appropriate.

We therefore conclude that with the implementation of the various mitigation measures specified in this Decision, the proposed transmission interconnect for the project will not contribute to significant direct, indirect, or cumulative environmental impacts. The Conditions of Certification below ensure that the transmission related aspects of the HPP will be designed, constructed, and operated in conformance with the applicable LORS.

## **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 prior to the start of construction (or a lesser number of days mutually agreed to by the project owner and the CBO), the project owner shall submit the schedule, a Master Drawing List, and a Master Specifications List to the CBO and to 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: Major Equipment List** 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) a civil engineer; B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; or D) a mechanical engineer. (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 the civil, mechanical, electrical, or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California-registered electrical engineer. The civil, geotechnical or civil, and design engineer assigned in conformance with Facility Design condition **GEN-5**, may be responsible for design and review of the TSE facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform 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 prior to the start of rough grading (or a lesser number of days mutually agreed to by the project owner and the CBO), the project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within five days of the approval.

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

**TSE-3** If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action (California Building Code, 1998, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance). The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and shall reference this condition of certification.

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

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

Receipt or delay of major electrical equipment;

Testing or energization of major electrical equipment; and

The number of electrical drawings approved, submitted for approval, and still to be submitted.

**Verification:** At least 30 days prior to the start of each increment of construction (or a lesser number of days mutually agreed to by the project owner and the CBO), 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, and send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

**TSE-5** The project owner shall ensure that the design, construction, and operation of the proposed transmission facilities will conform to all applicable LORS, 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.

1. The power plant outlet line shall meet or exceed the electrical, mechanical, civil, and structural requirements of CPUC General Order 95 and General Order 98 or National Electric Safety Code (NESC), Title 8 of the California Code and Regulations (Title 8), Articles 35, 36, and 37 of the “High Voltage Electric Safety Orders”, California ISO standards, National Electric Code (NEC), and related industry standards.
2. Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.
3. 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.
4. Termination facilities shall comply with applicable PG&E interconnection standards.
5. The project conductors shall be sized to accommodate the full output from the project.
6. The project owner shall provide to the CPM:
  - a. The final Detailed Facility Study (DFS) including a description of facility upgrades, operational mitigation measures, and/or Special Protection System (SPS) sequencing and timing if applicable; and,
  - b. A copy of the executed LGIA signed by the California ISO and the project owner.

**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 to the CBO for approval:

1. Design drawings, specifications, and calculations conforming with CPUC General Order 95 and General Order 98 or NESC; Title 8, California Code of Regulations, Articles 35, 36, and 37 of the “High Voltage Electric Safety Orders”; NEC; applicable interconnection standards, 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,”<sup>6</sup> and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or NESC; Title 8, California Code of Regulations, Articles 35, 36 and 37 of the “High Voltage Electric Safety Orders”; NEC; applicable interconnection standards, and related industry standards.
3. Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements **TSE-5** 1) through 5) above.
4. The final Detailed Facility Study, including a description of facility upgrades, operational mitigation measures, and/or SPS sequencing and timing if applicable, shall be provided concurrently to the CPM.

**TSE-6** The project owner shall provide the following Notice to the California Independent System Operator (California ISO) prior to synchronizing the facility with the California transmission system:

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

1. At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the California ISO Outage Coordination Department.

**Verification:** The project owner shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one week prior to initial synchronization with the grid. A report of the conversation with the California ISO

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<sup>6</sup> Worst-case conditions for the foundations would include for instance, a dead-end or angle pole.



shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.

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

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

- a. “As built” engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC; Title 8, California Code of Regulations, Articles 35, 36 and 37 of the “High Voltage Electric Safety Orders”; applicable interconnection standards; NEC; and related industry standards, and these conditions shall be provided concurrently.
- b. An “as built” engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. “As built” drawings of the electrical, mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the “Compliance Monitoring Plan.”
- c. A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.

**TSE-8 Deleted**

## **E. TRANSMISSION LINE SAFETY AND NUISANCE**

The testimony of Staff's witness, Obed Odoemelam, Ph.D., states that the proposed changes to the HPP will comply with all applicable LORS, and all potential environmental impacts caused by construction of the new transmission facilities will be reduced to less than significant levels by compliance with regulatory and industry standards as required in the existing Condition **TSE-1**. The findings and conclusions in the 2002 Decision regarding Transmission Line Safety and Nuisance (TLSN) remain unchanged by the amendments to the project. (Ex. 100, pp. 4.10-1 – 4.10-2.)

Transmission system modifications associated with the requested HPP modifications are limited to installation of a new step-up transformer for the new 25 MW STG. As noted above in the Transmission System Engineering (TSE) section, Staff has proposed revisions to the previously adopted TSE-related Conditions of Certification to update references to the applicable standards.

## **FINDINGS AND CONCLUSIONS**

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

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable engineering LORS. The transmission line will be designed in accordance with the electric and magnetic field reducing guidelines applicable to PG&E's transmission service area. The site and the route of the project's transmission line are in a rural area with relatively few residences within one-mile radius of the project's property lines. The estimated EMF exposures from the transmission line are significantly below field levels established by states with regulatory limits for such fields.

3. The Transmission Line Safety and Nuisance aspects of the amended project do not create significant direct or cumulative environmental effects.

The Energy Commission, therefore, concludes that with implementation of the revised TSE-related Conditions of Certification, the project will conform with all applicable laws, ordinances, regulations, and standards relating to transmission line safety and nuisance and will not cause any significant environmental effects relating to transmission line safety.

## **V. PUBLIC HEALTH AND SAFETY ASSESSMENT**

### **A. AIR QUALITY**

Staff witness William Walters testified that his analysis determined whether the amended projects' air emissions will either cause a violation or add to an existing violation of a Federal or State air quality standard. Those standards are health based, and "are set at levels to adequately protect the health of all members of the public, including those most sensitive to adverse air quality, such as the aged, people with existing illnesses, and infants and children, while providing a margin of safety." (Ex. 100, p. 4.1-4.)

In addition to review by the Staff, the project was reviewed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or District), which has issued its Final Determination of Compliance (FDOC) for the project. The District found the project to be in compliance with all District rules and regulations. The bulk of the conditions of certification recommended by Staff are those recommended by the District in the FDOC.

The Applicant proposes the following project changes relevant to air quality:

1. Demolition and removal of the two existing oxidation catalyst and selective catalytic reduction (SCR) systems, including the existing catalyst housing and 85-foot stacks
2. Addition of a new oxidation catalyst system within each OTSG to control carbon monoxide (CO) emissions to outlet concentration of less than 3 parts per million volume dry (ppmvd) at 15 percent oxygen (O<sub>2</sub>) and volatile organic compounds (VOC) emissions to outlet concentration of less than 2 ppmvd at 15 percent O<sub>2</sub> during simple-cycle and combined-cycle operation

3. Addition of a new SCR system within each OTSG, reusing the existing aqueous ammonia storage system, to control oxides of nitrogen (NOx) emissions to less than 2 ppmvd at 15 percent O2 during combined-cycle operation
4. A 460 hp Cummins model CFP15E-F10 Tier III certified diesel-fired emergency internal combustion engine is proposed to power a new firewater pump for the site

1. Construction Impacts

Staff reviewed the impacts from construction activities for the amended project and finds them to be no different than those analyzed in the 2002 Decision. It recommends, however, that the construction conditions in the 2002 Decision be updated to its current standard conditions, which reflect, among other things, current state and federal standards for construction engines, because of the project's potentially significant contribution to ongoing violations of state and federal air quality standards. We have done so in Conditions **AQ-SC1** through **AQ-SC6**, below. With those mitigation measures in place, the impacts from construction emissions will be less than significant. (Ex. 100, p. 4.1-38.)

2. Operation Impacts

Because the Henrietta Combined-Cycle Power Plant would utilize the same CTG's currently used for the HPP with new, updated selected catalytic reduction (SCR) and oxidation catalyst equipment, the project will have reduced emissions compared to the presently permitted HPP. All criteria pollutants emissions would be decreased compared to the present HPP. Therefore, additional offset mitigation would not be required as a result of operation of the amended GWF Henrietta Combined-Cycle Power Plant.

The project would continue to contribute to existing violations of the state 24-hour and annual PM10 standards, the state annual PM2.5 standard, and the state 1-

hour and the federal 8-hour ozone standards. However, the project owner has already surrendered more than sufficient Emission Reduction Credits to offset the project's potentially significant contribution to the cumulative air quality impacts creating ongoing violations of state and federal air quality standards. Therefore, the amended project's contribution to ongoing cumulative impacts would be less than significant (Ex. 100, p. 4.1-28 – 4.1-29.)

### 3. Greenhouse Gases

The generation of electricity using fossil fuels such as natural gas can produce air emissions known as greenhouse gases (GHGs) in addition to the criteria air pollutants. GHGs are known to contribute to the warming of the earth's atmosphere. These include primarily carbon dioxide, nitrous oxide (N<sub>2</sub>O, not NO or NO<sub>2</sub>, which are commonly known as NO<sub>x</sub> or oxides of nitrogen), and methane (unburned natural gas). Also included are sulfur hexafluoride (SF<sub>6</sub>) from transformers, and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration chillers.

The California Global Warming Solutions Act of 2006 (AB32) requires the California Air Resources Board (ARB) to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990 to be achieved by 2020. Gubernatorial executive Order S-03-05 (June 1, 2005) requires a further reduction to a level 80 percent below 1990 GHG emissions by the year 2050. 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 prioritization of generation resources to achieve significant reductions in the electricity sector by 2050. Even more dramatic reductions in the electricity sector will likely be required to meet California's 2050 greenhouse gas reduction goal. Facilities under the Energy

Commission's jurisdiction, such as the Henrietta Combined-Cycle Power Plant, must be consistent with these policies.

The Electricity Greenhouse Gas Emission Standards Act (SB1368 ) was also enacted in 2006, requiring base load generation resources or contracts be subject to a GHG or Environmental Performance Standard. At its January 25, 2007 meeting, the California Public Utilities Commission adopted an Emissions Performance Standard for the state's Investor Owned Utilities of 1,100 pounds (or 0.5 metric tons) CO<sub>2</sub> per megawatt-hour. The Emissions Performance Standard applies to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of five years or more, including contracts with power plants located outside of California. A similar performance standard is undergoing rulemaking by the Energy Commission for the Publicly Owned Utilities, and it should be adopted by September 2007.

Because the amended project would increase generating capacity by 25 MW (net) with the same fuel use, the project's GHG emissions per MWh would be lower than the existing HPP that the project would replace. Because of the project's modern design, its GHG emissions per MWh are expected to be lower than those of other power plants and peaking projects that the project would displace and, thus, would contribute to continued improvement of the California and overall Western Electricity Coordinating Council system's GHG emissions and GHG emission rate average.

The project would lead to a net reduction in GHG emissions across the electricity system that provides energy and capacity to California. Thus, staff believes that the project would result in a cumulative overall reduction in GHG emissions from the state's power plants, would not worsen current conditions, and would thus not result in impacts that are cumulatively significant. GWF Henrietta would also provide other potential GHG benefits by filling nearly all of the expected future

roles for gas-fired generation, in a high-renewables, low-GHG system. (Ex. 100, pp. 4.1-87 through 4.1-105)

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The air quality aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

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

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

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



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

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

1. All unpaved roads and disturbed areas in the project and laydown construction sites shall be watered as frequently as necessary to comply with the dust mitigation objectives of AQ-SC4. The frequency of watering may be reduced or eliminated during periods of precipitation.
2. No vehicle shall exceed 10 miles per hour on unpaved areas within the project and laydown construction sites.
3. The construction site entrances shall be posted with visible speed limit signs.
4. All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned and free of dirt prior to entering paved roadways.
5. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.
6. All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.
7. All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.
8. Construction areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.
9. All paved roads within the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.

10. At least the first 500 feet of any public roadway exiting the construction site shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways.
11. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds.
12. All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions shall be provided with a cover or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least two feet of freeboard.
13. Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.
14. Disturbed areas shall be re-vegetated as soon as practical.

The fugitive dust requirements listed in this condition may be replaced with as stringent or more stringent methods as required by SJVAPCD Regulation VIII.

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

**AQ-SC4** Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported (1) off the project site or (2) 200 feet beyond the centerline of the construction of linear facilities, or (3) within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

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

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

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

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

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

1. All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.
2. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.
3. For off-road construction diesel equipment that has a rating of 100 hp to 750 hp a good faith effort shall be made to find and use equipment that meets the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines as specified in Title 13, California Code of Regulations section 2423(b)(1). This good faith effort shall be documented with signed written correspondence by the appropriate construction contractors along with documented

correspondence with at least two construction equipment rental firms.

4. All construction diesel engines that have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in Title 13, California Code of Regulations section 2423(b)(1). The following exceptions for specific construction equipment items may be made on a case-by-case basis.
  - (A) Tier 1 equipment will be allowed on a case-by-case basis only when the project owner has documented that no Tier 2 equipment is available for a particular equipment type that must be used to complete the project's construction. This shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.
  - (B) The construction equipment item is intended to be on site for five days or less.
  - (C) Equipment owned by specialty subcontractors may be granted an exemption, for single equipment items on a case-by-case basis, if it can be demonstrated that extreme financial hardship would occur if the specialty subcontractor had to rent replacement equipment, or if it can be demonstrated that a specialized equipment item is not available by rental.
5. All heavy earthmoving equipment and heavy duty construction-related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
6. All diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.
7. Construction equipment will employ electric motors when feasible.

**Verification:** The project owner shall include in the MCR (1) a summary of all actions taken to maintain compliance with this condition, (2) copies of all diesel fuel purchase records, (3) a list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained, and (4) any other documentation deemed necessary by the CPM and AQCM to verify compliance with this condition. Such information may be provided via electronic format at the project owner's discretion.

**AQ-SC6** The wet surface air cooler shall have a mist eliminator with a manufacturer guaranteed mist reduction rate of 0.005 percent or less of the water recirculation rate.

The wet surface air cooler spray water shall be tested for total dissolved solids and that data shall be used to determine and report the particulate matter emissions from the wet surface air cooler. The wet surface air cooler spray water shall be tested at least once annually during the anticipated summer operation peak period (July through September).

The wet surface air coolers annual particulate (PM10/PM2.5) emissions shall be limited to 8 lbs/year. The project owner shall estimate annual particulate emissions from the wet surface air cooler using the water quality testing data and estimated spray water use. Compliance with the wet surface air cooler PM10 emission limit shall be demonstrated as follows:

$$\text{PM10} = \text{cooling water recirculation} * \text{total dissolved solids concentration in the blowdown water} * \text{design drift rate.}$$

**Verification:** The project owner shall provide the CPM a copy of the manufacturer guarantee for the mist eliminator 30 days prior to installation of the wet surface air cooler. The project owner shall provide the water quality test results and the wet surface air cooler particulate (PM10/PM2.5) emissions estimates to the CPM as part of the fourth quarter's Quarterly Operational Report (AQ-7).

## **DISTRICT FINAL DETERMINATION OF COMPLIANCE CONDITIONS (SJVAPCD 2009b)**

**AQ-1** This Determination of Compliance 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 Rule 2201]

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

**AQ-2** Prior to operating with modifications authorized by this Determination of Compliance, 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 the CPM copies of the Title V operating permit application within five working days of its submittal by the project owner to the District.

**AQ-3** To the extent this Determination of Compliance serves as an Authority to Construct, said Authority to Construct shall not become effective until the California Energy Commission approves the Application for Certification. [California Environmental Quality Act and District Rule 2201, Section 5.8.8]

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

**AQ-4** The project owner shall not begin actual onsite construction of the equipment authorized by this Determination of Compliance until the lead agency satisfies the requirements of the California Environmental Quality Act (CEQA). [California Environmental Quality Act]

**Verification:** The project owner/operator shall keep proof of the project's District air permit and CEC certification including copies of all permit conditions and Conditions of Certification onsite starting at the commencement of construction through the final decommissioning of the project. The project owner shall make the District's permit conditions and Conditions of Certification available at the project site to representatives of the District, ARB, EPA and the Energy Commission for inspection.

**Equipment Description, UNIT C-3929-1-5 and UNIT C-3929-2-5:**

Modification of 46.9 MW nominally rated simple-cycle peak-demand power generating systems #1 and #2, each consisting of a General Electric Model LM 6000 PC Sprint natural gas fired combustion turbine generator with water spray premixed combustion system, served by a selective catalytic reduction (SCR) system and an oxidation catalyst: Correct nominal rating of power generating system to 47.5 MW and convert the existing power generating system to a simple cycle or combined cycle configuration by (1) Removing the existing oxidation catalyst, selective catalytic reduction system and 85' exhaust stack; (2) installing a new once through heat recovery steam generator; (3) installing a new oxidation catalyst, selective catalytic reduction system and 91.5' tall exhaust stack; and (4) installing a 25 MW nominally rated condensing steam turbine generator and its associated lube oil cooler (shared between C-3929-1 and C-3929-2)

**The following Conditions of Certification apply per turbine unit unless otherwise identified.**

**AQ-5** The owner/operator of GWF Henrietta shall minimize the emissions from the gas turbine to the maximum extent possible during the commissioning period. Conditions **AQ-6** through **AQ-16** shall apply only during the commissioning period as defined below. Unless

otherwise indicated, Conditions **AQ-17** through **AQ-85** shall apply after the commissioning period has ended. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM the monthly commissioning status report by the 10<sup>th</sup> of each month and the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-6** Commissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the GWF Henrietta construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems. [District Rule 2201]

**Verification:** The monthly commissioning status report shall be submitted to the CPM by the 10<sup>th</sup> of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-7** 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 performance testing and is available for commercial operation. [District Rule 2201]

**Verification:** The monthly commissioning status report shall be submitted to the CPM by the 10<sup>th</sup> of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-8** At the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201]

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

**AQ-9** At the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system and the oxidation catalyst shall be installed, adjusted, and operated to minimize emissions from this unit. [District Rule 2201]

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

**AQ-10** Coincident with the end of commission period and the steady-state operation of the SCR system and the oxidation catalyst, NO<sub>x</sub> and CO emissions from this unit shall comply with the limits specified in condition **AQ-26** or **AQ-30**. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM the source test data and CTG CEMs operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-11** The project owner shall submit a plan to the District at least four weeks prior to the first firing of this unit, describing the procedures to be followed during the commissioning period. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the combustors, the installation and operation of the SCR systems and the oxidation catalyst, the installation, calibration, and testing of the NO<sub>x</sub> and CO continuous emissions monitors, and any activities requiring the firing of this unit without abatement by the SCR system or oxidation catalyst. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM for review and the District for approval the commissioning plan at least four weeks prior to the first firing of turbines. The project owner shall notify the CPM and District no later than 30 days prior to the proposed start date of commissioning and expected duration.

**AQ-12** Emission rates from this CTG, during the commissioning period, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 52.0 lb/hr; CO – 40.5 lb/hr; VOC (as methane) – 1.20 lb/hr; PM<sub>10</sub> – 2.20 lb/hr; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.33 lb/hr. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM the source test data and CTG CEMs operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).



**AQ-13** During the initial commissioning activities, the project owner shall demonstrate compliance with the NO<sub>x</sub> emission limit specified in **AQ-12** through the use of a properly operated and maintained continuous emissions monitor located within the inlet section of the steam generator unit. Upon completion of the initial commission activities and with the installation of the SCR system and oxidation catalyst, the project owner shall demonstrate compliance with the NO<sub>x</sub> and CO emission limits specified in **AQ-12** through the use of a properly operated and maintained continuous emission monitors and recorders as specified in **AQ-53** and **AQ-55**. The monitored parameters for this unit shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). [District Rule 2201]

**Verification:** The project owner shall provide the source test data and CPM CEMs data demonstrating compliance with this condition as part of the monthly commissioning status report.

**AQ-14** During the initial commissioning activities, the inlet NO<sub>x</sub> continuous emission monitor specified in this permit shall be installed, calibrated, and operational prior to the first re-firing of this unit. Upon completion of the initial commission activities and the installation of the SCR system and oxidation catalyst, the exhaust stack NO<sub>x</sub> and CO continuous emissions monitor specified within this permit shall be installed, calibrated, and operational prior to the first re-firing of this unit. After first re-firing, the detection range of the each continuous emission monitor shall be adjusted as necessary to accurately measure the resulting range of NO<sub>x</sub> and/or CO emission concentrations. [District Rule 2201]

**Verification:** The project owner shall provide a protocol for the installation, calibration, and testing for the SCR system continuous monitors at least 60 days prior to SCR system use. The project owner shall submit to the CPM and District the SCR system operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-15** The total number of firing hours of this unit without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 430 hours during the commissioning period. Such operation of this unit without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities, the project owner shall provide written notice to the District and the unused balance of the 430 firing hours without abatement shall expire. [District Rule 2201]

**Verification:** A log of the dates, times, and cumulative unit operating hours when fuel is being combusted during the commissioning period shall be maintained by the project owner. The project owner shall submit, commencing one month from the time of gas turbine first fire, a monthly commissioning status report throughout the duration of the commissioning phase that demonstrates compliance with the requirements listed in this condition. The monthly commissioning status report shall be submitted to the CPM by the 10<sup>th</sup> of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-16** The total mass emissions of NO<sub>x</sub>, CO, VOC, PM10, and SO<sub>x</sub> that are emitted during the commissioning period shall accrue towards the consecutive twelve month emission limits specified in **AQ-39**. [District Rule 2201]

**Verification:** The monthly commissioning status report shall be submitted to the CPM by the 10<sup>th</sup> of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project owner shall submit the total mass emissions of NO<sub>x</sub>, CO, VOC, PM10, and SO<sub>x</sub> in the 12<sup>th</sup> month commissioning status report in compliance with this condition.

**AQ-17** A SCR system and oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The project owner shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201]

**Verification:** The project owner/operator shall provide copies of drawings of the catalyst systems chosen and design details to the CPM and the District at least thirty (30) days prior to the commencement of construction of the SCR system.

**AQ-18** Project owner shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201]

**Verification:** The project owner/operator shall provide copies of drawings of the continuous emission monitor system design, installation, and operations details to the CPM and the District at least 30 days prior to the commencement of construction of the CEM system.

**AQ-19** When operating in simple-cycle mode and when operating in combined-cycle mode, the project owner shall submit to the District information correlating the NO<sub>x</sub> control system operating parameters to the associated measured NO<sub>x</sub> output. The information must be sufficient to allow the District to determine compliance with the NO<sub>x</sub> emission limits of this permit when no continuous emission monitoring data for NO<sub>x</sub> is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]

**Verification:** The project owner/operator shall provide the District with documentation correlating NO<sub>x</sub> control system operating parameters to the associated measured NO<sub>x</sub> output. Information must be sufficient to allow NO<sub>x</sub> emissions to be calculated during times when the CEMS is not functioning properly.

**AQ-20** All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

**Verification:** Upon request, the project owner/operator shall make all maintenance records and report available at the project site to representatives of the District, ARB, EPA and the Energy Commission for inspection.

**AQ-21** No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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

**AQ-22** 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 1 or 20 percent opacity. [District Rule 4101]

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

**AQ-23** Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-24** Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5 percent or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]

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

**AQ-25** This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-26** When operating in simple-cycle mode, the steady state emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 4.24 lb/hr and 2.5 ppmvd @ 15 percent O<sub>2</sub>; CO – 3.10 lb/hr and 3.0 ppmvd @ 15 percent O<sub>2</sub>; VOC (as methane) – 1.20 lb/hr and 2.0 ppmvd @ 15 percent O<sub>2</sub>; PM<sub>10</sub> – 2.20 lb/hr; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.33 lb/hr. NO<sub>x</sub> (as NO<sub>2</sub>) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201, 4001 and 4703 and 40 CFR 60.4320(a) & (b)]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-27** When operating in simple-cycle mode, during start-up, CTG exhaust emission rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 7.70 lb/event; CO – 7.70 lb/event; VOC (as methane) – 0.70 lb/event; PM<sub>10</sub> – 0.13 lb/event; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.055 lb/event. [District Rules 2201 and 4703]

The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-28** When operating in simple-cycle mode, during shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 7.70 lb/event; CO – 7.70 lb/event; VOC (as methane) – 0.70 lb/event; PM<sub>10</sub> – 0.20 lb/event; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.055 lb/event. [District Rules 2201 and 4703]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-29** When operating in simple-cycle mode, the ammonia (NH<sub>3</sub>) emissions shall not exceed either of the following limits: 6.20 lb/hr or 10 ppmvd @ 15 percent O<sub>2</sub> over a 24 hour rolling average. [District Rules 2201 and 4102]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-30** When operating in combined-cycle mode, the steady state emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 3.40 lb/hr and 2.0 ppmvd @ 15 percent O<sub>2</sub>; CO – 3.10 lb/hr and 3.0 ppmvd @ 15 percent O<sub>2</sub>; VOC (as methane) – 1.20 lb/hr and 2.0 ppmvd @ 15 percent O<sub>2</sub>; PM<sub>10</sub> – 2.20 lb/hr; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.33 lb/hr. NO<sub>x</sub> (as NO<sub>2</sub>) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]

**Verification:** The project owner shall submit to the CPM the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-31** When operating in combined-cycle mode, during start-up, CTG exhaust emission rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 6.10 lb/event; CO – 3.00 lb/event; VOC (as methane) – 0.50 lb/event; PM<sub>10</sub> – 2.20 lb/event; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.33 lb/event. [District Rules 2201 and 4703]

The project owner shall submit to the CPM the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-32** When operating in combined-cycle mode, during shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 2.08 lb/event; CO – 1.00 lb/event; VOC (as methane) – 0.20 lb/event; PM<sub>10</sub> – 0.73 lb/event; or SO<sub>x</sub> (as SO<sub>2</sub>) – 0.11 lb/event. [District Rules 2201 and 4703]

**Verification:** The project owner shall submit to the CPM the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-33** When operating in combined-cycle mode, the ammonia (NH<sub>3</sub>) emissions shall not exceed either of the following limits: 3.10 lb/hr or 5 ppmvd @ 15 percent O<sub>2</sub> over a 24 hour rolling average. [District Rules 2201 and 4102]

**Verification:** The project owner shall provide the estimated daily ammonia concentration and daily ammonia emissions based on the procedures given in this condition and provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**), where the source test data is due in the quarter after the source test report is completed.

**AQ-34** A simple-cycle startup period shall be defined as the period of time during which a unit is brought from a shutdown status until the unit meets the steady state simple-cycle lb/hr and ppmvd emission limits specified within this permit. A combined-cycle startup period shall be defined as the period of time beginning with the gas turbine operating in simple-cycle mode and the initial start sequence of the once through heat recovery steam generator until the unit meets the steady state combined-cycle lb/hr and ppmvd emission limits specified within this permit. A combined-cycle shutdown shall be defined as the period of time during which the initial shutdown sequence is given for the once through heat recovery steam generator until the unit meets the steady state simple-cycle lb/hr and ppmvd emission limits specified within this permit. A simple-cycle shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-35** The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

**Verification:** The project owner shall submit to the CPM and District the CTG startup and shutdown operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (**AQ-68**).

**AQ-36** The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

**Verification:** The project owner shall submit to the CPM and District the CTG startup and shutdown operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (**AQ-68**).

**AQ-37** During all types of operation, including startup and shutdown periods, ammonia injection in to the SCR system shall occur once the minimum temperature at the catalyst face has been reached to ensure NOx 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 submit to the CPM and District the CTG startup and shutdown operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (**AQ-68**).

**AQ-38** Maximum daily emissions from the CTG shall not exceed any of the following limits: NO<sub>x</sub>(as NO<sub>2</sub>) – 129.7 lb/day; CO – 103.1 lb/day; VOC – 30.8 lb/day; PM<sub>10</sub> – 52.1 lb/day; or SO<sub>x</sub> (as SO<sub>2</sub>) – 7.9 lb/day. [District Rule 2201]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-39** Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>) – 35,998 lb/year; CO – 20,705 lb/year; VOC – 4,683 lb/year; PM<sub>10</sub> – 18,660 lb/year; or SO<sub>x</sub> (as SO<sub>2</sub>) – 2,819 lb/year. Compliance with the annual NO<sub>x</sub> and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM<sub>10</sub> and SO<sub>x</sub> emission limits shall be demonstrated using the most recent source test results. [District Rule 2201]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-40** Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-41** Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM the source test data and CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-42** Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15 percent O<sub>2</sub>) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO<sub>x</sub> concentration ppmvd @ 15 percent O<sub>2</sub> across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15 percent O<sub>2</sub>. If this option is chosen, the project owner shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the project owner may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the project owner shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-43** When operating in simple-cycle mode and when operating in combined-cycle mode, source testing to measure startup and shutdown NO<sub>x</sub>, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-3929-1 or C-3929-2) within 60 days after the end of the commissioning period. [District Rules 1081 and 2201]

The results and field data collected during source tests shall be submitted to the CPM and the District within 60 days of testing. Testing shall be conducted within 60 days after the end of the commissioning period on one of the gas turbines.

**AQ-44** Source testing to measure start up and shutdown NO<sub>x</sub>, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-3929-1 or C-3929-2) at least once every seven years. CEM relative accuracy 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<sub>x</sub> and CO startup or shutdown emission limits, then source testing to measure startup and shutdown NO<sub>x</sub> and CO mass emission rates shall



be conducted at least once every 12 months. If an annual startup and shutdown NO<sub>x</sub> and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NO<sub>x</sub> and CO testing frequency shall return to the once every seven years schedule. [District Rules 1081 and 2201]

**Verification:** Testing shall be conducted within 60 days of initial operation of one CTG and at least once every 7 years in compliance.

**AQ-45** When operating in simple-cycle mode, initial source testing to determine compliance with the steady state NO<sub>x</sub>, CO, VOC and NH<sub>3</sub> emission rates (lb/hr and ppmvd @ 15 percent O<sub>2</sub>) and PM<sub>10</sub> emission rate (lb/hr) shall be conducted within 60 days after the end of the commissioning period. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-46** When operating in combined-cycle mode, initial source testing to determine compliance with the steady state NO<sub>x</sub>, CO, VOC and NH<sub>3</sub> emission rates (lb/hr and ppmvd @ 15 percent O<sub>2</sub>) and PM<sub>10</sub> emission rate (lb/hr) shall be conducted within 60 days after the end of the commissioning period. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-47** Source testing to determine compliance with the steady state NO<sub>x</sub>, CO, VOC and NH<sub>3</sub> emission rates (lb/hr and ppmvd @ 15 percent O<sub>2</sub>) and PM<sub>10</sub> emission rate (lb/hr) shall be conducted at least once every 12 months. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

**Verification:** The project owner will submit source test reports to the CPM for review and the District for approval within 60 days of the completion of those tests.

**AQ-48** Testing to demonstrate compliance with the fuel sulfur content limit of 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas shall be conducted weekly. Once eight consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to once every calendar quarter. If a quarterly test shows a violation of the sulfur content limit, then the weekly testing shall resume and continue until eight consecutive tests show compliance. Once

compliance is shown on eight consecutive weekly tests, then testing may return to quarterly. [District Rule 2201 and 40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

**Verification:** The project owner shall submit the quarterly fuel sulfur content values in the Quarterly Operation Reports (**AQ-68**) and shall document all emissions standard violation in each Quarterly Operation Report. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-49** The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E, 20 or ARB Method 100 (ppm basis), or EPA Method 19 (lb/MMBtu basis); CO - EPA Method 10, 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 and 202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, 20 or ARB Method 100. NO<sub>x</sub> testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). 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 and 40 CFR 60.4400(1)(i) and 40 CFR 60.4400(a)(2), (3), and (b)]

**Verification:** The project owner/operator shall provide records of compliance as part of Condition **AQ-52**.

**AQ-50** 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 project owner shall submit the quarterly fuel sulfur content values in the Quarterly Operation Reports (**AQ-68**) and make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-51** 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<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the ARB regulation titled CARB Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

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

**AQ-52** Source testing shall be District witnessed, or authorized and samples shall be collected by a CaliforniaARBcertified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]

**Verification:** The project owner/operator shall notify the CPM and the District thirty (30) days prior to any compliance source test. The project owner/operator shall provide a source test plan to the CPM and District for the CPM and District approval fifteen (15) days prior to testing. The results and field data collected by the source tests shall be submitted to the CPM and District within 60 days of testing.

**AQ-53** The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

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

**AQ-54** The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rules 2201]

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

**AQ-55** 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<sub>x</sub>, CO and O<sub>2</sub> 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 and 4703 and 40 CFR 60.4335(b)(1)]

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

**AQ-56** The owner/operator shall develop and keep on site a quality assurance plan for the NO<sub>x</sub> CEMS. [40 CFR 60.4345(e)]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-57** The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-58** The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2,3 and 4 (PS 2, 3 and 4), or 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

**Verification:** The project owner shall provide a protocol for the installation, calibration, the testing for the CEMS at least 60 days prior to the operation of CEMS. CEMS data summaries shall be submitted to the CPM as part of the Quarterly Operation Report (**AQ-68**).

**AQ-59** Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-60** The owner/operator shall perform a relative accuracy test audit (RATA) for the NO<sub>x</sub>, CO and O<sub>2</sub> CEMS as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR 75, Appendix B, at least once every four calendar quarters. The project owner 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. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. [District Rule 1080 and 40 CFR 60.4345(a)]

**Verification:** The project owner/operator shall provide records of compliance as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-61** Results of the CEM system shall be averaged over a one hour period for NO<sub>x</sub> emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-62** When operating in simple-cycle mode, excess NO<sub>x</sub> emissions shall be defined as any operating hour in which the 1-hour rolling average NO<sub>x</sub> concentration exceeds an applicable emissions limit. When operating in combined-cycle mode, excess NO<sub>x</sub> emission shall be defined as any 30 day operating period in which the 30 day rolling average NO<sub>x</sub> concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO<sub>x</sub> or O<sub>2</sub> (or both). [40CFR 60.4350(g), 40 CFR 60.4350(h) and 40 CFR 60.4380(b)(1)]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-63** For the purpose of determining excess NO<sub>x</sub> emission, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NO<sub>x</sub> emission rate in units of ppm, using the appropriate equation from Method 19 of 40 CFR 60, Appendix A. For any hour in which the hourly O<sub>2</sub> concentration exceeds 19.0 percent O<sub>2</sub>, a diluents cap value of 19.0 percent O<sub>2</sub> may be used in the emission calculations. [40CFR 60.4350(b) and 60.4350(f)]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-64** Excess SO<sub>x</sub> emissions is each unit operating hour including in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SO<sub>x</sub> begins when a sample is not taken by its due date. A period of monitor downtime for SO<sub>x</sub> also begins on the date and hour of a

required sample, if invalid results are obtained. A period of SO<sub>x</sub> monitoring downtime ends on the date and hour of the next valid sample. [40CFR 60.4350(a) and (c)]

**Verification:** CEMS data summaries in compliance with this condition shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-65** The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]

**Verification:** The project owner shall make the records required under this condition available for inspection by representatives of the District, ARB and the Energy Commission.

**AQ-66** Upon notice by the District that the facility's CEM system 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 CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]

**Verification:** The project owner shall provide the non-pollled CEM data using a District approved alternative method and shall make that data available for inspection by representatives of the ARB and the Energy Commission.

**AQ-67** The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

**Verification:** The project owner shall make the records required under this condition available for inspection by representatives of the District, ARB and the Energy Commission.

**AQ-68** The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO<sub>x</sub> 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 (monitor downtime), 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/operator shall compile the required data and submit the quarterly reports to the CPM and the APCO within thirty (30) days of the end of the quarter.

**AQ-69** 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/operator shall make the site available for inspection by representatives of the District, California ARB and the Energy Commission.

**AQ-70** Project owner 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, 6.1]

**Verification:** The project owner/operator shall comply with the notification requirements of the District and submit written copies of these notification reports to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-71** 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, 7.0]

**Verification:** The project owner/operator shall comply with the notification requirements of the District and submit written copies of these notification reports to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-72** The project owner shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)]

**Verification:** The project owner/operator shall compile required data and submit the information to the CPM in quarterly report (AQ-68) submitted no later than 30 days after the end of each calendar quarter.

**AQ-73** The project owner shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NO<sub>x</sub> and CO mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period), and VOC, PM10 and SO<sub>x</sub> mass emission rates (lb/twelve month rolling period). [District Rules 2201 and 4703]

**Verification:** The project owner/operator shall comply with the notification requirements of the District and submit written copies of these notification reports to the CPM as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-74** All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703]

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

**AQ-75** The project owner shall comply with the following Acid Rain regulation requirements:

- a. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72]
- b. 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]
- c. 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]



- d. 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]
- e. 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]
- f. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72 and 40 CFR 75]
- g. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72]
- h. 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]
- i. 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]
- j. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72]
- k. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72]
- l. 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]

- m. 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]
- n. 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]
- o. 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. (i) 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]
- p. 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 submit to the CPM and District the CTG annual operating data and NOx emissions limitation information demonstrating compliance with all applicable provisions of 40 CFR 72 as part of the Quarterly Operation Reports (**AQ-68**). The project owner shall maintain the documents in accordance with 40 CFR 72.24 on site and made available to district personnel upon request. The project owner/operator shall submit to the CPM copies of the Title IV permit and proof that necessary emission allowances have been acquired at least 15 days prior to the initial firing of the turbine(s). The project owner shall

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

**AQ-76** 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:** The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Commission to determine if adequate measures to control fugitive dust emissions are in place.

**AQ-77** 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 5 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 project owner shall provide a Dust Control Plan to the APCO and CPM at least 60 days prior to the start of any construction activity required in this condition.

**AQ-78** An owner/operator shall prevent or cleanup 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

**Verification:** The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Commission to determine if adequate measures to control fugitive dust emissions are in place.

**AQ-79** 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/operator shall make the site available for inspection by representatives of the District, ARB and the Commission to determine if adequate measures to control fugitive dust emissions are in place.

**AQ-80** Any paved road or unpaved roads 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/operator shall make the site available for inspection by representatives of the District, ARB and the Commission.

**AQ-81** 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 Rules 8011 and 8071]

**Verification:** The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Commission to determine if adequate measures to control fugitive dust emissions are in place.

**AQ-82** 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 Rules 8011 and 8071]

**Verification:** The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Commission to determine if adequate measures to control fugitive dust emissions are in place.

**AQ-83** On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, project owner 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 Rules 8011 and 8071]

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

**AQ-84** Whenever any portion of the site becomes inactive, Project owner 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/operator shall make the site available for inspection by representatives of the District, ARB and the Commission.

**AQ-85** 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:** The project owner shall make the records required under this condition available for inspection by representatives of the District, ARB and the Energy Commission.

**Equipment Description, UNIT C-3929-4-3:**

Modification of 471 hp Caterpillar model #3456 DI TA AA diesel-fired emergency standby IC engine powering an electrical generator: reduce the annual hours of operation for maintenance and testing purposes from 200 hours/year to 50 hours/year

**AQ-86** 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 of records by representatives of the District, ARB, and the Commission.

**AQ-87** 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 1 or 20 percent opacity. [District Rule 4101]

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

**AQ-88** Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

**Verification:** The project owner/operator shall compile required data and submit the information to the CPM in quarterly report submitted no later than 60 days after the end of each calendar year.

**AQ-89** Emissions from this IC engine shall not exceed any of the following limits: 4.69 g-NO<sub>x</sub>/bhp-hr, 0.12 g-CO/bhp-hr, or 0.04 g-VOC/bhp-hr. [District Rules 2201 and 13 CCR 2423 and 17 CCR 93115]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-90** Emissions from this IC engine shall not exceed 0.029 g-PM<sub>10</sub>/bhp-hr based on U.S.EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-91** Only ARB certified diesel fuel containing not more than 0.0015 percent sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

**Verification:** The project owner/operator shall make records available for inspection by representatives of the District, ARB and the Energy Commission upon request.

**AQ-92** This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission. The project owner shall submit elapsed time in hours in the quarterly report of Condition **AQ-68**,

**AQ-93** This engine shall be equipped with either a positive crankcase ventilation (PCV) system which recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90 percent control efficiency. [District Rule 2201]

**Verification:** The project owner /operator shall make the site available for inspection by representative of the District, ARB and the Energy Emission.

**AQ-94** The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

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

**AQ-95** This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per year. [District Rule 4702 and 17 CCR 93115]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-96** During periods of operation for maintenance, testing, and required regulatory purposes, the project owner shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]

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

**AQ-97** An emergency situation is an unscheduled electrical power outage by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the project owner. [District Rule 4702]

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

**AQ-98** This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]

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

**AQ-99** The project owner shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation

for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

**Verification:** The project owner/operator shall make records available for inspection by representatives of the District, ARB and the Energy Commission upon request.

**AQ-100** All records shall be maintained and retained on-site for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

**Verification:** The project owner shall maintain all the records on site and made available to district personnel upon request. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**Equipment Description, UNIT C-3929-5-0:**

42.0 MMBtu/hr Rentech Model RTD-2-60, or equivalent, natural gas-fired boiler with a COEN model C-RMB, or equivalent, ultra low-NOx burner, and a fuel gas recirculation system.

**AQ-101** 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 of records by representatives of the District, ARB, and the Commission.

**AQ-102** 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 1 or 20 percent opacity. [District Rule 4101]

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

**AQ-103** Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

**Verification:** The project owner/operator shall compile required data and submit the information to the CPM in quarterly report submitted no later than 60 days after the end of each calendar year.

**AQ-104** The project owner shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and



performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 4201]

**Verification:** The project owner shall submit to the CPM copies of the written District approval within five working days of its submittal by the project owner to the District.

**AQ-105** The project owner's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201]

**Verification:** The project owner shall submit to the CPM copies of the written District approval within five working days of its submittal by the project owner to the District.

**AQ-106** Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

**Verification:** The project owner shall provide written approval of alternate equipment as required by **AQ-104**.

**AQ-107** No emission factor and no emission shall be greater for the alternative equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]

**Verification:** The project owner shall provide written approval of alternate equipment as required by **AQ-104**.

**AQ-108** All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emission of air contaminants into the atmosphere. [District Rule 2201]

**Verification:** Upon request, the project owner/operator shall make all maintenance records and report available at the project site to representatives of the District, ARB, EPA and the Energy Commission for inspection.

**AQ-109** The flue gas recirculation (FGR) system shall be properly operated and shall be maintained per the manufacturer's recommendations. [District Rule 2201]

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

**AQ-110** A non resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 40 CFR 60.48(c)(g)]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission. The project owner shall submit fuel use records in the Quarterly Operation Reports (**AQ-68**).

**AQ-111** The boiler shall operate a maximum of 4,000 hours per calendar year. [District Rule 2201]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission. The project owner shall submit operating hour data in the Quarterly Operation Reports (**AQ-68**).

**AQ-112** This unit shall exclusively burn only PUC-regulated natural gas with a sulfur content no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201]

**Verification:** The project owner shall submit fuel sulfur content data as required under **AQ-48**.

**AQ-113** Emissions from the exhaust of this boiler shall not exceed any of the following limits: 6 ppmvd NO<sub>x</sub> @ 3 percent O<sub>2</sub> or 0.0073 lb-NO<sub>x</sub>/MMBtu; 50 ppmvd CO @ 3 percent O<sub>2</sub> or 0.037 lb-CO/MMBtu; 0.005 lb-VOC/MMBtu; 0.0076 lb-PM<sub>10</sub>/MMBtu; or 0.0007 lb-SO<sub>x</sub>/MMBtu. [District Rules 2201, 4305, 4306, 4320 and 4351]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-114** All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 2201, 4305, 4306, 4320 and 4351]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-115** Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-116** Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-117** 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/operator shall notify the CPM and the District thirty (30) days prior to any compliance source test. The project owner/operator shall provide a source test plan to the CPM and District for the CPM and District approval fifteen (15) days prior to testing.

**AQ-118** The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

**Verification:** The project owner/operator shall provide a source test plan to the CPM and District for the CPM and District approval fifteen (15) days prior to testing.

**AQ-119** For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two or three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-120** NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-121** CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-122** Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

**Verification:** The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

**AQ-123** Testing to demonstrate compliance with the fuel sulfur content limit shall be conducted weekly. Once eight consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to once every calendar quarter. If a quarterly test shows a violation of the sulfur content limit then the weekly testing shall resume and continue until eight consecutive tests show compliance. Once compliance is shown on eight consecutive weekly tests then testing may return to quarterly. [District Rules 2201 and 4320]

**Verification:** The project owner shall submit fuel sulfur content data as required under **AQ-48**.

**AQ-124** Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D8410, D6228, D6667 or Gas Processors Association Standard 2377. [District Rule 2201]

**Verification:** The project owner shall submit fuel sulfur content data as required under **AQ-48**.

**AQ-125** The exhaust stack shall either be equipped with a continuous emissions monitor (CEM) for NOx, CO, and O<sub>2</sub> or the committee shall implement one of the alternative monitoring schemes (A, B, C, D, E, F, or G) listed in District Rule 4320, Section 5.7.1 (dated 10/16/08). The project owner shall submit, in writing, the chosen method of monitoring

(either CEMS or chosen alternate monitoring scheme) at least 30 days prior to initial operation of this boiler. [District Rules 2201, 4305, 4306 and 4320]

**Verification:** The project owner shall provide in writing to the District and CPM the chosen monitoring scheme for the boiler at least 30 days prior to initial operation. The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Energy Commission.

**AQ-126** The project owner shall maintain daily records of the type, higher heating value (hhv) and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48(c)(g)]

**Verification:** The project owner shall submit fuel use records in the Quarterly Operation Reports (**AQ-68**). The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Energy Commission.

**AQ-127** The project owner shall keep a record of the cumulative annual quantity of hours operated for this unit. The record shall be updated at least monthly. [District Rule 2201]

**Verification:** The project owner shall submit operating hour data in the Quarterly Operation Reports (**AQ-68**). The project owner/operator shall make the site available for inspection by representatives of the District, ARB and the Energy Commission.

**AQ-128** All records shall be maintained and retained on-site for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

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

**Equipment Description, UNIT C-3929-6-0:**

460 bhp Cummins Model CFP15E-F10 Tier 3 certified diesel-fired emergency internal combustion (IC) engine powering a firewater pump.

**AQ-129** 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 of records by representatives of the District, ARB, and the Energy Commission.

**AQ-130** 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 1 or 20 percent opacity. [District Rule 4101]

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

**AQ-131** Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

**Verification:** The project owner/operator shall compile required data and submit the information to the CPM in quarterly report submitted no later than 60 days after the end of each calendar year.

**AQ-132** Emissions from this IC engine shall not exceed any of the following limits: 2.66 g-NO<sub>x</sub>/bhp-hr, 0.671 g-CO/bhp-hr, or 0.086 g-VOC/bhp-hr. [District Rules 2201 and 13 CCR 2423 and 17 CCR 93115]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-133** Emissions from this IC engine shall not exceed 0.078 g-PM<sub>10</sub>/bhp-hr based on U.S.EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115]

**Verification:** The project owner/operator shall provide records of compliance for the above condition as part of the Quarterly Operation Reports (**AQ-68**).

**AQ-134** Only CARB certified diesel fuel containing not more than 0.0015 percent sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

**Verification:** The project owner shall submit the quarterly fuel sulfur content values in the in the Quarterly Operation Reports (**AQ-68**) and shall document all emissions standard violation in each Quarterly Operation Report. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

**AQ-135** This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rules 2201, 4305, 4306 and 4320]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission. The project owner shall submit elapsed time in hours in the Quarterly Operation Reports (**AQ-68**).

**AQ-136** This engine shall be equipped with either a positive crankcase ventilation (PCV) system which recirculates crankcase emissions into the air intake system for combustion, or a crankcase emission control device of at least 90 percent control efficiency. [District Rules 2201]

**Verification:** The project owner /operator shall make the site available for inspection by representative of the District, ARB and the Energy Emission.

**AQ-137** The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

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

**AQ-138** This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [40 CFR 60.4211(a)]

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

**AQ-139** During periods of operation for maintenance, testing, and required regulatory purposes, the project owner shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [40 CFR 60.4211(a)]

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

**AQ-140** This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 – “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems”, 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]

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

**AQ-141** An emergency situation is an unscheduled event caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the project owner. [District Rule 4702]

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

**AQ-142** The project owner shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purposed of the operation (for example: load testing, weekly testing, emergency fire fighting use, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

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

**AQ-143** All records shall be maintained and retained on-site for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

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



## ACRONYMS

AADT	Annual Average Daily Trips
AAQS	Ambient Air Quality Standard
ACC	Air Cooled Condenser
AERMOD	ARMS/EPA Regulatory Model
AER	Actual Emission Reduction
AFC	Application for Certification
APCD	Air Pollution Control District (SJVAPCD)
APCO	Air Pollution Control Officer
AQCMM	Air Quality Construction Mitigation Manager
AQCMP	Air Quality Construction Mitigation Plan
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ATC	Authority to Construct
BACM	Best Available Control Measures
BACT	Best Available Control Technology
bhp	brake horsepower
Btu	British thermal unit
CCR	California Code of Regulation
CEC	California Energy Commission (or Energy Commission)
CEMS	Continuous Emission Monitoring System
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
COC	Conditions of Certification
CPM	(CEC) Compliance Project Manager
CTG	Combustion Turbine Generator
dscf	Dry Standard Cubic Feet
EIR	Environmental Impact Report
EMFAC	Emission Factors
ERC	Emission Reduction Credit
FDOC	Final Determination Of Compliance
GE	General Electric
GPM	Gallon per minute
gr	Grains (1 gr $\cong$ 0.0648 grams, 7000 gr = 1 pound)
GWF Henrietta	GWF Henrietta Combined-cycle Power Plant
HAP	Hazardous Air Pollutants

HEPP	Hanford Energy Peaker Plant
HPP	Henrietta Peaker Project
H <sub>2</sub> S	Hydrogen Sulfide
hp	Horsepower
HSC	Health and Safety Code
ICE	Internal Combustion Engine
ISC	Industrial Source Complex
ISCST3	Industrial Source Complex Short Term, version 3
kW	Kilowatts (1,000 watts)
lbs	Pounds
LORS	Laws, Ordinances, Regulations and Standards
MCR	Monthly Compliance Report
µg	Microgram
µg/m <sup>3</sup>	Microgram per cubic meter
mg/m <sup>3</sup>	Milligrams per cubic meter
MMBtu	Million British Thermal units
MW	Megawatts (1,000,000 Watts)
NAAQS	National Ambient Air Quality Standard
NH <sub>3</sub>	Ammonia
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>3</sub>	Nitrates
NO <sub>x</sub>	Oxides of Nitrogen or Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O <sub>2</sub>	Oxygen
O <sub>3</sub>	Ozone
OLM	Ozone Limiting Method
OTSG	Once Through Steam Generator
PDOC	Preliminary Determination Of Compliance
PM	Particulate Matter
PM10	Particulate Matter less than 10 microns in diameter
PM2.5	Particulate Matter less than 2.5 microns in diameter
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
ppmvd	Parts Per Million by Volume, Dry
PSA	Preliminary Staff Assessment (this document)
PSD	Prevention of Significant Deterioration
PTO	Permit to Operate

ROG	Reactive Organic Gas
RPDOC	Revised Preliminary Determination of Compliance
scf	Standard Cubic Feet
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>3</sub>	Sulfate
SO <sub>x</sub>	Oxides of Sulfur
SPPE	Small Power Plant Exemption
STG	Steam Turbine Generator
TDS	Total Dissolved Solid
TFV	Thresholds Friction Velocity
TPA	Transportation Planning Agencies
tpy	Tons per year
U.S.EPA	United States Environmental Protection Agency
VDE	Visible Dust Emission
VOC	Volatile Organic Compounds
WSAC	Wet Surface Air Cooler

## **B. PUBLIC HEALTH**

Staff's witness, Dr. Alvin J. Greenberg, testified that staff reviewed the health risk assessment prepared by the Applicant in its Petition to Amend, and conducted an independent screening assessment. It found that the predicted cancer risk and chronic and acute health impacts were below the levels considered to be significant. According to staff's independent analysis, the maximum cancer risk would be approximately 6.4 in 1 million during construction, and approximately 2.9 in 1 million during operation. (Ex. 100, pp. 4.6-3 – 4.6-6.) Compared with a lifetime cancer risk for the average person of 250,000 in one million (2002 Decision, p. 122) this is not a significant increase in cancer risk.

Concerning potential cumulative impacts, no other emissions sources are located within 1 mile of the HPP that fits the criteria for potential cumulative impacts. Because of the project's relatively small health risk, and the lack of other emissions sources in the project area, Staff concluded "that the proposed GWF Henrietta project would not contribute to cumulative impacts in the area of public health." (Ex. 100, p. 4.6-8.)

## **FINDINGS AND CONCLUSIONS**

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Public Health aspects of the proposed project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

The 2002 Decision did not impose any conditions under this topic, and staff determined that with the continued compliance with all applicable LORS, no new conditions are needed in the area of public health.

## **C. HAZARDOUS MATERIALS MANAGEMENT**

Staff determined that, with the continued compliance with the conditions of compliance in the present HPP license, the changes to the HPP proposed in the applicant's Petition to Amend have no potential to create significant impacts in the area of Hazardous Materials Management. No new analysis was needed because staff's previous analysis and conditions of certification is still valid for the amended project, and no new LORS addressing Hazardous Materials Management were implemented since the 2002 Decision.

## **FINDINGS AND CONCLUSIONS**

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The existing Conditions of Certification HAZ-1 through HAZ-5 below will ensure that the Henrietta Combined-Cycle Power Plant is designed, constructed and operated both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Hazardous Materials Management aspects of the proposed project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

**HAZ-1:** All aqueous ammonia deliveries to the facility shall be in tanker trucks that meet or exceed the U.S. Department of Transportation requirements for hazardous materials as established in the Code of Federal Regulations No. 49 Parts 171-180.

**Verification:** The project owner shall include in its Monthly Compliance Reports, copies of all regulatory permits/licenses acquired by the project owner and/or subcontractors concerning the transport of aqueous ammonia and other hazardous materials.

## **GAS PIPELINE STANDARDS**

**HAZ-2:** The natural gas pipeline shall be designed to meet California Public Utilities Commission General Order 112-D & E and 58A standards, or any successor standards. The pipeline will be designed to withstand seismic stresses. The project owner shall incorporate the following safety features into the design and operation of the pipeline: (1) butt welds shall be x-rayed; (2) the pipeline shall be pressure tested prior to the introduction of natural gas; (3) the pipeline shall be surveyed for leakage annually; (4) the pipeline route shall be marked to prevent rupture by heavy equipment excavating in the area; (5) valves shall be installed to locate leaks; and (6) appropriate corrosion measures shall be used.

**Verification:** Prior to the introduction of natural gas into the pipeline, the project owner shall submit the design and operational specifications of the pipeline to the CPM for review and approval.

## **HAZARDOUS MATERIALS INVENTORY**

**HAZ-3:** The project owner shall obtain the advance approval of the CPM if the facility intends to store, handle or use a material in quantities that exceed those specified in Title 19 of the California Code of Regulations, section 2770.5.

**Verification:** The project owner shall provide to the CPM, in the Annual Compliance Report, a list of those materials designated as regulated substances as set forth in Title 19 of the California Code of Regulations. The list shall also include the maximum quantities of these substances at the facility. Copies of the list, from the Annual Report, should also be provided to the Kings County Environmental Health Department (KCEHD) and the Kings County Fire Department (KCFD).

## **HAZARDOUS MATERIALS BUSINESS PLAN**

**HAZ-4:** The project owner shall develop and provide a Hazardous Materials Business Plan.

**Verification:** At least 45 days prior to the initial startup of the HPP facility, the owner shall undertake a hazardous materials floor plan exercise with the KCEHD and KCFD and provide a copy of the Plan, commented on by the KCEHD, to the CPM and KCFD.

## **RISK MANAGEMENT PLAN**

**HAZ-5:** The project owner shall develop and provide a CalARP Risk Management Plan (RMP). The RMP shall include discussions on the potential for double-walling all ammonia related piping, potential for underground placement of the ammonia storage tank, adequate secondary containment for the ammonia unloading area, and procedures for the safe delivery of ammonia, as a minimum. The secondary containment shall be designed to hold 110 percent of the tanker truck.

**Verification:** At least 45 days prior to the initial startup of the HPP facility, the project owner shall furnish a final copy of the RMP to the CPM. An initial draft shall be provided to the CPM and KCEHD for review and comments. The final RMP shall be approved by the CPM.



#### **D. WORKER SAFETY/FIRE PROTECTION**

Similar to Hazardous Materials Management above, Staff determined that the amended project will have no effect on the potential to create significant impacts in the areas of worker safety and fire protection, and will continue to comply with all LORS applicable to these areas.

#### **FINDINGS AND CONCLUSIONS**

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The existing Condition of Certification below will ensure that the amended project is designed, constructed and operated both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Worker Safety and Fire Protection aspects of the proposed project do not create significant direct or cumulative environmental effects.

#### **CONDITIONS OF CERTIFICATION**

**WORKER SAFETY-1:** The project owner shall submit to the CPM a copy of the Project Construction Injury and Illness Prevention Program, containing the following:

- A Construction Safety Program;
- A Construction Personal Protective Equipment Program;
- A Construction Exposure Monitoring Program;
- A Construction Emergency Action Plan; and
- A Construction Fire Protection and Prevention Plan.

The Safety Program, the Personal Protective Equipment Program, and the Exposure Monitoring Program shall be submitted to the CPM for review and comment concerning compliance of the program with all applicable Safety Orders. The Construction Fire Protection and Prevention Plan and Emergency Action Plan shall be submitted to the

Kings County Fire Department for review and comment prior to submittal to the CPM.

**Verification:** At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review and approval a copy of the Project Construction Injury and Illness Prevention Program. The Construction Fire Protection and Prevention Plan Emergency Action Plan shall be submitted to the Kings County Fire Department for review and comment prior to submittal to the CPM.

## **OPERATION SAFETY & HEALTH PROGRAM**

**WORKER SAFETY-2:** The project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety and Health Program containing the following:

- an Operation Injury and Illness Prevention Plan;
- an Emergency Action Plan;
- Hazardous Materials Management Program;
- Operations and Maintenance Safety Program; and;
- Personal Protective Equipment Program (8 CCR §§ 3401-3411).

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the Cal/OSHA Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Operation Fire Protection Plan and the Emergency Action Plan shall also be submitted to the Kings County Fire Department for review and comment.

**Verification:** At least 60 days prior to the start of operation, the project owner shall submit to the CPM a copy of the final version of the Project Operations and Maintenance Safety & Health Program. The Kings County Fire Department shall be provided a copy of the plan for review and comment. The program shall incorporate comments from Cal/OSHA, Consultation Service and the KCFD based on their reviews of the respective program components.

## **WORKER NOISE CONTROL PROGRAM**

**WORKER SAFETY-3:** Prior to the start of project-related ground disturbing activities, the project owner shall submit to the CPM for review and approval, a noise control program. 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 project-related ground disturbing activities, the project owner shall submit to the CPM the above referenced program. The project owner shall make the program available to OSHA upon request.

## **WORKER NOISE SURVEY**

**WORKER SAFETY-4:** The project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility. The survey shall be conducted within thirty (30) days after the facility is in full operation, and shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, sections 5095-5099 (Article 105) and Title 29, Code of Federal Regulations, section 1910.95. The survey results shall be used to determine the magnitude of employee noise exposure. The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures 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.

**WORKER SAFETY-5:** The project owner shall prepare and submit to the CPM an Operations Fire Prevention Plan describing the onsite fire protection systems that will be provided in this project. Specifically, information must be included on employee alarm/communication system, portable fire extinguisher placement and operation, fixed fire fighting equipment placement and operation, fire control methods and techniques, hazardous materials and flammable and combustible liquid storage methods, methods for servicing and refueling vehicles and fire prevention training programs and requirements. Additionally, information shall be provided regarding the source of on-site firewater, including storage if applicable and fire department hook-ups.

**Verification:** At least 60 days prior to the start of operation, the project owner shall submit to the CPM a copy of the final version of the Operations Fire Prevention Plan for review and approval. The KCFD shall also be provided a copy of the Plan for review and comment.

## **VI. ENVIRONMENTAL ASSESSMENT**

### **A. BIOLOGICAL RESOURCES**

Staff witness Brian McCullough testified that the amended project would comply with all LORS and its only potential impact to biological resources would be related to the effect on kit fox habitat caused by the expansion of the project by 2.86 acres to accommodate the new storm water retention basin. Staff recommended a new Condition of Certification, **BIO-8**, to ensure the potential impact to the kit fox habitat is reduced to less than significant. With continued implementation of the existing Conditions of Certification **BIO-1** through **BIO-7**, and the addition of new Condition **BIO-8**, Staff testified that the amended project “would not have a significant effect on sensitive species or their habitat near the project.” (Ex. 100, p. 4.2-6.)

### **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Biological Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

### **CONDITIONS OF CERTIFICATION**

#### **DESIGNATED BIOLOGIST**

**BIO-1:** Site mobilization and/or ancillary facilities preparation (described as any ground disturbing activity other than allowed geotechnical work) shall not begin until an Energy Commission Compliance Project

Manager (CPM) approved Designated Biologist is available to be on-site.

The Designated Biologist must meet the following minimum qualifications:

1. a Bachelor's Degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;
3. at least one year of field experience with biological resources found in or near the project area; and
4. an ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resources tasks that must be addressed during project construction and operation.

If the CPM determines the proposed Designated Biologist to be unacceptable, the project owner shall submit another individual's name and qualifications for consideration. If the approved Designated Biologist needs to be replaced, the project owner shall obtain approval of a new Designated Biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No habitat disturbance will be allowed in any designated sensitive areas until the CPM approves a new Designated Biologist and the new Designated Biologist is on-site.

**Verification:** At least 30 days prior to the start of site mobilization activities, or an alternative timeframe agreed upon with the CPM, the project owner shall submit to the CPM for approval the name, qualifications, address, and telephone number of the individual selected by the project owner as the Designated Biologist. If a Designated Biologist is replaced, the information on the proposed replacement as specified in the Condition must be submitted in writing at least ten working days prior to the termination or release of the preceding Designated Biologist.

## DESIGNATED BIOLOGIST DUTIES

**BIO-2:** The CPM approved Designated Biologist shall perform the following during project site mobilization construction and operation:

1. Advise the project owner's Construction Manager, supervising construction and operations
2. Supervise or conduct mitigation, monitoring, and other biological resources compliance efforts
3. Notify the project owner and the CPM of any non-compliance with any biological resources

**Verification:** During project site mobilization and construction, the Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

## DESIGNATED BIOLOGIST AUTHORITY

**BIO-3:** The project owner's Construction Manager shall act on the advice of the Designated Biologist to ensure conformance with the Biological Resources Conditions of Certification.

**Protocol:** The project owner's Construction Manager shall halt, if necessary, all construction activities in areas specifically identified by the Designated Biologist as sensitive to assure that potential significant biological resource impacts are avoided.

The Designated Biologist shall:

1. Inform the project owner and the Construction Manager when to resume construction, and
2. Advise the Energy Commission CPM if any corrective actions are needed or have to be instituted.

**Verification:** Within 24 hours of a Designated Biologist notification of non-compliance with a Biological Resources Condition of Certification or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within 5 working days after receipt of notice that corrective action is completed, or

the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

## **WORKER ENVIRONMENTAL AWARENESS PROGRAM**

**BIO-4:** The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or related facilities (including the access road, laydown area, transmission lines, water and gas lines) during project mobilization construction and operation, are informed about sensitive biological resources associated with the project.

The Worker Environmental Awareness Program must:

1. be developed by the Designated Biologist and consist of an on-site or training center presentation in which supporting written material is made available to all participants;
2. discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
3. present the reasons for protecting these resources;
4. present the meaning of various temporary and permanent habitat protection measures; and
5. identify whom to contact if there are further comments and questions about the material discussed in the program.
6. The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

Each participant in the on-site Worker Environmental Awareness Program shall sign a statement declaring that the individual understands and shall abide by the guidelines set forth in the program materials. The person administering the program shall also sign each statement. New workers shall receive environmental awareness training on or before their first day of work.

**Verification:** At least 30 days prior to the start of site mobilization, or an alternative timeframe agreed upon with the CPM, the project owner shall provide two (2) copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the Designated Biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the



number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. The signed statements for the construction phase shall be kept on file by the project owner and made available for examination by the CPM for a period of at least 6 months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for 6 months, following the termination of an individual's employment.

## **COMPENSATORY HABITAT**

**BIO-5:** Prior to the start of any site mobilization activities, the project owner shall acquire 10 credits from the Kern Water Bank Habitat Conservation Plan (KWBHCP) to satisfy the requirements for Federal and State Incidental Take Permits (issued by the US Fish & Wildlife Service and California Department of Fish & Game, respectively).

**Verification:** At least 20 days prior to the start of site mobilization activities, the project owner shall submit to the CPM documentation (letter, receipt, and a copy of the check) that it has secured 10 acres of mitigation credits through the KWBHCP. Verification of the purchase of 10 compensatory credits from the KWBHCP will satisfy the need for acquiring a Federal or California-State Incidental Take Permit. A summary of the KWBHCP's terms and conditions will be incorporated into the BRMIMP.

## **BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN**

**BIO-6:** The project owner shall submit to the CPM for review and approval a copy of the final Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and shall implement the measures identified in the plan. Any changes to the adopted BRMIMP must be made in consultation with Energy Commission staff, CDFG and the USFWS.

The final BRMIMP shall identify:

1. All biological resources mitigation, monitoring, and compliance measures recommended by the Applicant referred to, as well as those contained in, Condition of Certification BIO-7 (and other mitigation requirements);
2. All permits the Applicant expects to obtain;
3. The responsibilities of the parties involved;

4. The proposed lines of communication;
5. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation and closure;
6. All required mitigation measures for each sensitive biological resource;
7. The required habitat compensation strategy, including provisions for acquisition, enhancement, and management for any temporary and permanent loss of sensitive biological resources;
8. All measures that will be taken to avoid or mitigate temporary disturbances from construction activities;
9. All locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;
10. Aerial photographs of all areas to be disturbed during project construction activities - one set prior to site disturbance and one set subsequent to completion of mitigation measures. Include planned timing of aerial photography and a description of why times were chosen;
11. The duration for each type of monitoring and a description of monitoring methodologies and frequency;
12. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
13. All performance standards and remedial measures to be implemented if performance standards are not met;
14. Biological resources related facility closure measures; and
15. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

**Verification:** At least 30 days prior to start of any project site mobilization activities, or an alternative timeframe agreed upon by the CPM, the project owner shall provide the CPM with two (2) copies of the draft final version of the BRMIMP for this project, and the CPM will determine the plan's acceptability within 45 days of receipt. The project owner shall notify the CPM no less than five working days before implementing any modifications to the BRMIMP to obtain CPM approval.

Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which mitigation and monitoring plan items are still outstanding.

## **SPECIFIC MITIGATION MEASURES**

**BIO-7:** The project owner shall implement the mitigation measures identified below and incorporate them into the final BRMIMP (BIO-6).

Protocol: The project owner shall:

1. site transmission line poles, access roads, pulling sites, and storage and parking areas to avoid sensitive resources whenever possible;
2. design and construct transmission lines and poles to reduce the likelihood of electrocutions of large birds;
3. implement a Worker Environmental Awareness Program;
4. clearly mark construction area boundaries with stakes, flagging, and/or rope or cord to minimize inadvertent degradation or loss of adjacent habitat during facility construction/modernization. All equipment storage will be restricted to designated construction zones or areas that are currently not considered sensitive species habitat;
5. provide a Designated Biologist to monitor all activities that may result in incidental take of listed species or their habitat. Specifically, the designated monitor shall be present during all activities that occur outside the fenced power plant site;
6. fence and provide wildlife escape ramps for construction areas that contain steep-walled holes or trenches. Fence shall be constructed of hardware cloth or similar materials that are approved by USFWS and CDFG;
7. fence the power plant site and keep all gates closed at night to avoid kit fox movement into the site;
8. inspect the natural gas line trenches each morning for entrapped animals prior to further pipeline construction. Daily construction will

be allowed to begin only after trapped animals are able to escape voluntarily;

9. during the natural gas pipeline construction period, inspect all pipes, culverts, or similar structures with a diameter of 4-inches or greater for sensitive species (such as kit fox) prior to pipe burial. Pipes to be left in trenches overnight shall be capped;
10. provide a post-construction compliance report, within 45 calendar days of completion of the project, to the CPM;
11. make certain that all food-related trash is disposed of in closed containers and removed at least once a week. Feeding of wildlife shall be prohibited;
12. report all inadvertent deaths of sensitive species to the appropriate project representative. Injured animals shall be reported to the USFWS and CDFG, and the project owner shall follow instructions that are provided by USFWS and CDFG; and
13. in the event that sensitive species are observed within the active construction area, the designated biologist shall immediately cease all construction near the sighting location and inform the CPM and the appropriate resource agencies (USFWS and CDFG).

**Verification:** All mitigation measures and their implementation methods shall be included in the BRMIMP (**BIO-6**). Two (2) copies of the CPM approved BRMIMP must be provided to the CPM 5 days prior to site mobilization.

## **COMPENSATORY HABITAT FOR GWF HENRIETTA EXPANSION**

**BIO-8** Prior to the start of any site mobilization activities, the project owner shall acquire at least 4.6 acres of conservation credits from the Kern Water Bank in accordance with the Kern Water Bank Habitat Conservation Plan (KWBHCP).

**Verification:** At least 30 days prior to the start of site mobilization activities, the project owner shall submit to the CPM documentation (letter, receipt, and a copy of the check) that it has secured at least 4.6 acres of mitigation credits through the KWBHCP. Within 30 days following start of site mobilization, the project owner shall submit to the CPM a revised BRMIMP that includes a summary of the KWBHCP's terms and conditions.

**Verification:    B. SOIL AND WATER RESOURCES**

Staff's testimony of Mark Lindley concludes that the proposed amendment will continue to comply with all applicable LORS and will not cause any significant environmental effects. (Ex. 100, pp. 4.8-1 – 4.8-32.) The amended project includes use of an air-cooled condenser as the means of condensing the steam exhausting the steam turbine-generator, thus saving a considerable amount of water compared to power plants that use traditional wet cooling towers.

The amended project would also include use of a wet-surface air cooler and other technologies that would require an additional 8 acre-feet per year of fresh water above presently permitted volumes in order to run at full power operations throughout the year. This increased amount is the equivalent of the use of 20 average households per year.<sup>7</sup> Though this is a relatively small amount of water, it is still subject to the Commission's fresh water policy, which disallows increased fresh water use unless doing so would be economically infeasible or environmentally undesirable, as well as subject to other requirements of the State Water Resources Control Board and under the state's Water Code. We agree with staff's conclusion that no economically feasible alternative is available to the project owner to supply the additional 8 acre-feet per year, and that the project as amended would comply with all LORS related to fresh water supplies. We also agree with staff's conclusion that approval of the amended project will not result in significant individual or cumulative impacts to water resources.

The applicant has prepared a draft Drainage, Erosion, and Sediment Control Plan (DESCP) that included a list of erosion and sediment control Best Management Practices (BMPs) that would be implemented before, during, and post-construction. Staff believes that proper application of these BMPs will be

sufficient to avoid significant impacts related to erosion and sediment control, and proposed two new Conditions of Compliance requiring an approved final DESCP and a Storm Water Pollution Prevention Permit prior to commencing operations of the amended facility. (Ex. 100, p. 4.8-15 – 4-8.16.) A Storm Water Pollution Prevention Plan (SWPPP) incorporating the provisions of Kings County’s National Pollution Discharge Elimination System (NPDES) permit will reduce all potential impacts from stormwater runoff during the plant’s operation to less than significant levels. (Ex. 100, p. 4.8-16 – 4.8-17.)

Staff recommends various revisions to the Conditions of Certification to conform to the changes in the project’s physical layout, and to more closely reflect the project’s future water use and storm water drainage. To correct inconsistencies between Staff’s recommended Conditions of Compliance in the 2001 Final Staff Assessment and the 2002 Decision, Staff has proposed deleting Conditions of Compliance **Water Quality-1, 2, 4, 5, 6, and 7**, and **Water Res-1 and 2** from the 2002 Decision and replacing them with Staff’s recommended Conditions of Certification **Soil & Water 1-8**<sup>8</sup> below. (Ex. 100, p. 4.8-26 – 4.8-31).

## FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the amended project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.

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<sup>7</sup> According to the American Water Works Association, the average American household uses 127,400 gallons per year.

<sup>8</sup> Staff’s proposed Condition of Certification **Soil & Water-9** has been re-numbered as **Soil & Water-8**.

3. The Soil and Water Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

## CONDITIONS OF CERTIFICATION

**SOIL & WATER-1** Prior to site mobilization, the project owner shall obtain CPM approval for a site-specific DESCP that ensures protection of water quality and soil resources on the project site and along 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. The plan should include a vault based BMP targeting hydrocarbons and metals for the GWF Henrietta stormdrains prior to discharge into the retention basin. 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.

***Vicinity Map*** – A map shall be provided showing 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 all existing, interim, and proposed drainage infrastructure and their intended direction of flow. The DESCP shall 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.

***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 engineer or erosion-control specialist.

**Verification:** No later than 90 days prior to start of site mobilization, the project owner shall submit a copy of the DESCP to Kings County and the CPM for review and comment. A copy shall be submitted to the CPM no later than 60 days prior to the start of site mobilization for review and approval. The CPM shall consider comments received from Kings County. During construction, the project owner shall provide an analysis in the monthly compliance report on the effectiveness of the drainage-, erosion- and sediment-control measures and the results of monitoring and maintenance activities. Once operational, the project



owner shall provide in the annual compliance report information on the results of stormwater BMP monitoring and maintenance activities.

**SOIL & WATER-2** The project owner shall obtain a General NPDES permit for discharge of stormwater associated with construction activity from the CVRWQCB, and obtain CPM approval of the related Stormwater Pollution Prevention Plan (SWPPP) for construction activity. The SWPPP shall include final construction drainage design, and specify BMP's for all on and off-site GWF Henrietta project facilities and shall comply with and incorporate Kings County Public Works Agency regulations, including those regulations and guidelines pertinent to areas with shallow groundwater. This includes final site drainage plans and locations of BMPs. The project owner shall submit site drainage plans detailing collection of storm water from roadways, parking areas and all other areas subject to vehicular use. The project owner shall treat collected storm water from these areas to remove contaminants prior to use or discharge. Storm water from these areas must be treated for petroleum by-products and both suspended and dissolved solids.

**Verification:** At least 60 days prior to the start of any site mobilization activities, the SWPPP for Construction Activity shall be submitted to the CPM for approval. Prior to the start of site mobilization, the project owner shall receive and provide proof to the CPM of having received an NPDES permit for construction activities. The SWPPP must comply with and incorporate Kings County Public Works Agency Grading Permit requirements. A letter from the Kings County Building Department addressing compliance with their grading permit requirements must be submitted with the SWPPP. A narrative and construction drawings detailing collection and process stream for storm water from contact areas of the site which are subject to vehicular use shall be submitted to the CPM. Approval of the final SWPPP by the CPM must be received prior to initiation of any site mobilization activities.

**SOIL & WATER-3** The project owner shall install metering devices and record on a monthly basis the amount of water used by the project. The annual summary shall include the monthly range and monthly average of daily usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. The annual summary shall also include the yearly range and yearly average water use by the project. This information shall be supplied to the CPM.

**Verification:** The project owner shall submit, as part of its annual compliance report, a water use summary to the CPM on an annual basis for the life of the project.

**SOIL & WATER-4** Due to the shallow groundwater underlying the site, the project owner shall submit construction drawings demonstrating

compliance with current county regulations for the on-site sewage disposal system, including a vertical cross-section showing proximity to groundwater as delineated in the geotechnical report performed by Kleinfelder, Inc., and dated November 1, 2001. The project owner shall verify the required septic tank and leach field capacity based on any anticipated increases in operational staff related to GWF Henrietta. A letter from the Kings County Building Department addressing compliance, with county requirements must be submitted with the drawings.

**Verification:** No later than 30 days prior to site mobilization, the project owner shall provide evidence of compliance with Kings County Sewage Disposal Regulations to the CPM for approval.

**SOIL & WATER-5** The project owner shall not discharge any waste water off-site, except as delivered to licensed waste disposal contractors as described in Section 2.2.9.1 of the HPP Application for Certification. The project owner shall supply the CPM with copies of the contract between the project owner and the waste disposal contractor, as well as copies of the contractor's permits and certifications relative to the hauling and disposal of the process wastes and contact storm water wastes. Notification of any changes in waste disposal contractor or subcontractors shall be made to the CPM within 30 days of the change.

**Verification:** The project owner shall maintain records of wastewater hauled off-site, including hauler's Chain of Custody or other signed and dated receipts. Copies of these records shall be submitted to the CPM as part of the project owner's annual compliance report. Before operation of the power plant, the CPM will be supplied with copies of the waste disposal contract and the contractor's certifications and permits. The CPM shall be notified of any change in the contract, contractors or sub-contractors within 30 days of the change.

**SOIL & WATER-6** The project owner shall implement a biannual stormwater monitoring program to assess the quality of storm water discharges to the evaporation/percolation basin during two storm events as required by the Central Valley Regional Water Quality Control Board. The monitoring program shall include sampling methodology and analytes. Analytes shall include pH, total organic compounds, total petroleum hydrocarbons, oil & grease, metals, total suspended solids and specific conductance. The CPM may require additional analytes if additional concerns arise.

**Verification:** The project owner shall submit a storm water monitoring program to the CPM for approval no later than 60 days prior to initiation of site mobilization activities. The project owner shall submit results of the monitoring program, including laboratory reports, to the CPM as part of the annual compliance report.

**SOIL & WATER-7** Prior to site mobilization, the project owner shall obtain CPM approval for a project-specific Water Use Compliance Plan (WUCP) that identifies all lands with surface water entitlements that may be used to transfer water supply to GWF Henrietta. The WUCP shall limit increases in groundwater pumping associated with transfers of surface water entitlements and identify fallow land management practices. The WUCP shall require monitoring of water use at the GWF Henrietta Site and at all lands with surface water entitlements to be utilized at GWF Henrietta. Water used for the HPP shall be CVP water allocated to the 9.86 acres of the GWF Henrietta parcel converted to Manufacturing and Industrial Use and SWP entitlement water as described in the County of Kings will-serve letter dated August 23, 2001 and the memorandum from Michael Nordstrom dated September 20, 2001. Total water use at GWF Henrietta shall be limited to a maximum of 158 acre-feet per year. Any additional lands with purchase options intended to provide surface water entitlements must be identified and details of the purchase options provided to the CPM for review and approval. The WUCP shall include the following elements:

**Water Transfer Lands** – All lands for which the project owner may transfer surface water entitlements to provide water supply for GWF Henrietta shall be clearly identified on a map and by parcel number.

**Water Use History** – The history of groundwater pumping and surface water use for the previous five years (minimum) shall be provided for each parcel of land for which surface water entitlements may be transferred to provide water supply for GWF Henrietta. Groundwater pumping may not increase above historic levels on any parcel of land that transfers surface water entitlements to GWF Henrietta.

**Fallowed Land Management Practices** – Customary and accepted practices shall be identified and utilized to maintain the agricultural productivity of the fallowed lands and to protect neighboring land owners from erosion related impacts associated with fallow of lands.

The project owner shall submit a water use summary annually. The water use summary shall state the source and quantity of the water used at GWF Henrietta on a monthly basis, whether the water used was obtained from the current year allocation or the banked surplus allocations from previous years. The water use summary shall include the percentage of the entitlements delivered for the current year from the SWP and CVP, as well as, the amount of the current year's water banked for future use and cumulative total banked water available for future use. The annual water use summary shall include records of annual surface water and groundwater use at each parcel identified in

the approved WUCP that may transfer surface water entitlements to GWF Henrietta.

**Verification:** No later than 90 days prior to the start of site mobilization, the project owner shall submit a copy of the WUCP to the Tulare Lake Basin Water Storage District and the CPM for review and comment. A copy shall be provided to the CPM no later 60 days prior to the start of site mobilization for review and approval. The CPM shall consider comments received from the Tulare Lake Basin Water Storage District. During operation. The project owner shall submit as part of its annual compliance report a Water Use Summary to the CPM on an annual basis for the life of the project. The project owner must submit a revised WCOP that identifies any new parcels that may provide surface water entitlements for GWF Henrietta prior to use of water from a new parcel.

#### **SOIL & WATER-8 Deleted**

**SOIL & WATER-9** During project operation, the project will not discharge any stormwater offsite. All stormwater shall be collected and directed to the onsite retention basin. The project owner shall submit a Notice of Non-Applicability (NONA) to the RWQCB to apply for an exemption to general NPDES permit. If conditions at the site change and the project will discharge stormwater from the site, the project owner shall 1) comply with the requirements of the general NPDES permit for discharges of storm water associated with industrial activity, 2) develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the operation of the site, and 3) discharge solely stormwater from the site.

**Verification:** Prior to commencing operations, the project owner shall submit a letter from the RWQCB indicating that there is no requirement for a general NPDES permit for discharges of stormwater associated with industrial activity to the CPM. At least 30 days prior to the discharge of stormwater during commercial operation, the project owner shall submit copies to the CPM of the operational storm water pollution prevention plan for the GWF Henrietta site. Within 10 days of its mailing or receipt, the project owner shall submit to the CPM any correspondence between the project owner and the RWQCB about the general NPDES permit for discharge of 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 and the notice of termination.

## **C. CULTURAL RESOURCES**

The Staff's testimony of Beverly E. Bastian stated that because of the disturbed nature of the HPP site, and because no artifacts were found in the excavations done for the HPP, the amended project has no potential to create a significant impact to cultural resources. Staff recommended minor revisions to the existing Cultural Resources Conditions of Compliance **CUL-1** through **CUL-6** to reflect the changes proposed in the amendment, and to assure that excavations for the amended project do not occur at depths that could potentially contain artifacts.. With implementation of those Conditions, the project will comply with all applicable LORS and will not cause significant environmental effects to cultural resources. (Ex. 100, p. 4.3-1 – 4.3-14.)

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Cultural Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **DESIGNATED CULTURAL RESOURCES SPECIALIST**

**CUL-1** Prior to the start of ground disturbance, the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) with the name and resume of its Cultural Resources Specialist (CRS), and one alternate CRS, if an alternate is proposed, who will be responsible for implementing all cultural resources conditions of certification. No ground disturbance shall occur prior to CPM approval of the CRS and alternates, unless such activities are specifically approved by the CPM.

(1) The resume for the CRS and alternate, if an alternate is proposed, shall include information that demonstrates that the CRS meets the minimum qualifications specified in the U.S. Secretary of Interior Guidelines, as published in the Code of Federal Regulations, 36 CFR Part 61.

The technical specialty of the CRS shall be appropriate to the needs of this project and shall include a background in anthropology, archaeology, history, architectural history, or a related field.

The background of the CRS shall include at least three years of archaeological or historic, as appropriate, resources mitigation and field experience in California.

The resume shall include the names and phone numbers of contacts familiar with the CRS's work on referenced projects. The resume shall also demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the cultural resources tasks that must be addressed during project ground disturbance, construction, and operation.

(2) The CRS may obtain qualified cultural resources monitors to monitor as necessary on the project. Cultural resources monitors shall meet the following qualifications:

A BS or BA degree in anthropology, archaeology, historical archaeology, or a related field, and one year experience monitoring in California; or

An AS or AA in anthropology, archaeology, historical archaeology, or a related field, and four years experience monitoring in California; or

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.

(3) The project owner shall ensure that the CRS completes any monitoring, mitigation, and curation activities necessary to this project and fulfills all the requirements of these conditions of certification. The project owner shall also ensure that the CRS obtains additional technical specialists, or additional monitors, if needed, for this project. The project owner shall also ensure that the CRS evaluates any cultural resources that are newly discovered or that may be affected in an unanticipated manner for eligibility to the California Register of Historical Resources (CRHR). Moreover, the project owner shall ensure that all archaeological technical reports are submitted in Archaeological Resource Management

Report (ARMR) format as recommended by the California Office of Historic Preservation (OHP).

**Verification:** (1) At least 45 days prior to the start of ground disturbance, the project owner shall submit the name and statement of qualifications of its CRS and alternate CRS, if an alternate is proposed, to the CPM for review and approval.

At least 10 days prior to the termination or release of the CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval.

(2) At least 20 days prior to ground disturbance, the CRS shall provide a letter naming anticipated monitors for the project and stating that the identified monitors meet the minimum qualifications for cultural resources monitoring required by this condition. If additional monitors are obtained during the project, the CRS shall provide additional letters to the CPM, identifying the monitor and attesting to the monitor's qualifications. The letter shall be provided one week prior to the monitor beginning on-site duties.

At least 10 days prior to the start of ground disturbance, the project owner shall confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement the cultural resources conditions of certification.

### **Project Maps Showing Ground Disturbance**

**CUL-2** (1) Prior to the start of ground disturbance, the project owner shall provide the CRS and the CPM with maps and drawings showing the footprint of the power plant and all linear facilities. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting individual artifacts. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide them to the CPM. If the footprints of the power plant or linear facilities change, the project owner shall provide maps and drawings reflecting these changes to the CRS and the CPM. Maps shall identify all areas of the project where ground disturbance is anticipated. No ground disturbance shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM.

(2) If construction of this project will proceed in phases, maps and drawings may be submitted in phases. A letter identifying the proposed schedule of each project phase shall be provided to the CPM. Prior to implementation of additional phases of the project, current maps and drawings shall be submitted to the CPM.

(3) At a minimum, the CRS shall consult weekly with the project superintendent or construction field manager, until ground disturbance is completed, to determine whether depths identified in CUL-6 as requiring archaeological monitoring would be reached, and to confirm area(s), if any, to be worked during the next week. A current schedule of anticipated project activity shall be provided to the CRS on a weekly basis during ground disturbance and provided to the CPM in each Monthly Compliance Report (MCR).

**Verification:** (1) At least 40 days prior to the start of ground disturbance, the project owner shall provide the designated cultural resources specialist and the CPM with the maps and drawings.

(2) If this is to be a phased project, a letter identifying the proposed schedule of the ground disturbance or construction phases of the project shall also be submitted.

(3) At least 30 days prior to the start of ground disturbance on each phase of the project, following initial ground disturbance, copies of maps and drawings reflecting additional phases of the project shall be provided to the CPM for review and approval.

(4) If there are changes to the scheduling of the construction phases of the project, a letter shall be submitted to the CPM within 5 days of identifying the changes.

A copy of the current schedule of anticipated project activity and a copy of current maps shall be submitted in each MCR.

### **Cultural Resources Monitoring and Mitigation Plan**

**CUL-3** Prior to the start of ground disturbance the designated cultural resources specialist shall prepare, and the project owner shall submit for CPM review and approval, an updated Cultural Resources Monitoring and Mitigation Plan (CRMMP). The updated CRMMP shall consist of the original Henrietta Peaker Plant (HPP) CRMMP with a new appendix that discusses the implementation of the modifications in the conditions.. CPM approval of the updated CRMMP shall occur prior to any ground disturbance, unless such activities are specifically approved by the CPM.

The CRRMP shall include, but not be limited to, the following elements and measures:

- a. A discussion of the inclusion of Native American observers or monitors, the procedures to be used to select them, and their role and responsibilities. Native American monitors/consultants shall be provided an opportunity to provide comments regarding the choice of the curation facility.



- b. A discussion of the location(s) where monitoring of project construction activities is deemed necessary. Monitoring shall be conducted full time during ground disturbance that reaches deeper than the 8 feet below grade projected by GWF for the foundation of the air-cooled condenser (ACC) in the area at and near the extant storm water retention basin or deeper than the 4 feet below grade projected by GWF for the new storm water retention basin to the east of the extant basin, or anywhere excavation exceeds the depths proposed in the petition and data responses.
- c. A discussion of the requirement that, if there is an unanticipated discovery, all cultural resources encountered will be recorded on a Department of Parks and Recreation Primary Form 523 and mapped (may include photos).
- d. A discussion that all archaeological materials collected as a result of the archaeological investigations shall be curated in accordance with the State Historical Resources Commission's "Guidelines for the Curation of Archaeological Collections," into a retrievable storage collection in a public repository or museum.

If there is an unanticipated discovery and materials are collected, an addendum to the CRMMP shall be provided that discusses any requirements, specifications, or funding needed for curation of the materials to be delivered for curation, and how requirements, specifications, and funding will be met. The name and phone number of the contact person at the curating institution shall also be included. In addition, information shall be included indicating that the project owner will pay all curation fees and that any agreements concerning curation will be retained and available for audit for the life of the project.

- e. A discussion of the proposed Cultural Resources Report (CRR), which shall be written only if any monitoring is conducted and prepared according to ARMR (Archaeological Resource Management Report) Guidelines. The CRR shall consist of the original HPP CRR, with a new appendix that reports on the new monitoring and its results. Any new records or reports not previously submitted to the California Historical Resources Information System (CHRIS) shall be included as an appendix to the CRR. Comments provided by Native American monitors/consultants regarding newly discovered Native American artifacts, if any, shall be included in this report. This report shall be submitted to the CPM after the conclusion of ground disturbance (including landscaping). This report shall be considered final upon approval by the CPM.

**Verification:** At least 30 days prior to the start of ground disturbance, the project owner shall provide the updated Cultural Resources Monitoring and

Mitigation Plan, prepared by the designated cultural resources specialist, to the CPM for review and written approval.

At least 30 days prior to ground disturbance the project owner shall submit a letter to the CPM indicating that they will pay any fees for curation of any collected archaeological artifacts.

The updated CRR shall be submitted to the CPM within ninety (90) days after completion of ground disturbance (including landscaping) for review and approval.

Within 10 days after CPM approval, the project owner shall provide documentation to the CPM that copies of the updated CRR have been provided to the curating institution (if archaeological materials were collected), the SHPO, and the CHRIS.

### **Cultural Resources Awareness Training**

**CUL-4** Cultural Resources Awareness Training for all new employees shall be conducted on a weekly basis prior to and during periods of ground disturbance (including landscaping). Concerns, if any, of representatives of the Santa Rosa Rancheria regarding treatment of Native American artifacts and burials shall be incorporated into the training program. The training may be presented in the form of a video. The training shall include a discussion of applicable laws and penalties under the law. Training shall also include samples or visuals of artifacts that might be found in the project vicinity and the information that the CRS, alternate CRS, or monitor has the authority to halt construction in the event of a discovery or unanticipated impact to a cultural resource. The training shall also instruct employees to halt or redirect work in the vicinity of a find and to contact their supervisor and the CRS or monitor. An informational brochure shall be provided that identifies reporting procedures in the event of a discovery. Workers shall sign an acknowledgement form that they have received training and a sticker shall be placed on hard hats indicating that environmental training has been completed.

**Verification:** Copies of signed acknowledgement forms shall be provided in the MCR.

### **CULTURAL RESOURCES SPECIALIST AUTHORITY**

**CUL-5** The CRS, alternate CRS, and the Cultural Resources Monitor(s) shall have the authority to halt or redirect construction if previously unknown cultural resources sites or materials are encountered or if known resources may be impacted in a previously unanticipated manner.

If such resources are found, the halting or redirection of construction shall remain in effect until all of the following have occurred:

- a. the CRS has notified the CPM and the project owner of the find and the work stoppage;
- b. the CRS, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed; and
- c. any necessary data recovery and mitigation has been completed.

If data recovery or other mitigation measures are required, the CRS and/or the alternate CRS and cultural resources monitor(s), including Native American monitor(s), shall monitor these data recovery and mitigation measures, as needed.

For any cultural resource encountered, the project owner shall notify the CPM within 24 hours after the find.

All required data recovery and mitigation shall be completed expeditiously unless all parties agree to additional time.

**Verification:** At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM with a letter confirming that the CRS, alternate CRS, and cultural resources monitor(s) have the authority to halt construction activities in the vicinity of a cultural resource find and stating that the CRS will notify the CPM and project owner within 24 hours after a find.

### **Cultural Resources Specialist Duties**

**CUL-6** (1) The CRS, alternate CRS, or monitors shall monitor ground disturbance full time on the project site where project ground disturbance reaches deeper than the 8 feet below grade projected by GWF for the foundation of the ACC in the area at and near the extant storm water retention basin or deeper than the 4 feet below grade projected by GWF for the new storm water retention basin to the east of the extant basin, or anywhere excavation exceeds the depths proposed in the petition and data responses. In the event that the CRS determines that full-time monitoring is not necessary in certain locations, a letter providing a detailed justification for a reduction in the level of monitoring shall be provided to the CPM for review and approval.

(2) Monitors shall keep a daily log of any monitoring or cultural resources activities, and the CRS shall prepare a weekly summary report on the progress or status of cultural resources-related activities. The CRS may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

(3) The CRS shall notify the project owner and the CPM, by e-mail or telephone, of any incidents of non-compliance with any cultural resources conditions of certification within 24 hours of becoming aware of the situation. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the conditions of certification.

(4) A Native American monitor shall be obtained to monitor ground disturbance in areas where archaeological monitoring is required per clause (1) in this condition, and where Native American artifacts may be discovered. Informational lists of concerned Native Americans and Guidelines for Monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that will be monitored. Native American monitors shall also be given an opportunity to comment on any discovered Native American artifacts. These comments shall be included in the CRR, if a CRR is required.

**Verification:** (1) During the ground disturbance phases of the project, if the CRS wishes to reduce the level of monitoring occurring at the project, a letter identifying the area(s) where the CRS recommends the reduction and justifying the reductions in monitoring shall be submitted to the CPM for review and approval.

(2) During the ground disturbance phases of the project, the project owner shall include in the MCR to the CPM copies of the weekly summary reports prepared by the CRS regarding project-related cultural resources monitoring. Copies of daily logs shall be retained and made available for audit by the CPM as needed.

(3) Within 24 hours of recognition of a non-compliance issue, the CRS shall notify the CPM by telephone of the problem and of steps being taken to resolve the problem. The telephone call shall be followed by an e-mail or fax detailing the non-compliance issue and the measures necessary to achieve resolution of the issue. Daily logs shall include forms detailing any instances of non-compliance with conditions of certification. In the event of a non-compliance issue, a report written no sooner than two weeks after resolution of the issue that describes the issue, resolution of the issue and the effectiveness of the resolution measures, shall be provided in the next MCR.

(4) One week prior to ground disturbance in areas where there is a potential to discover Native American artifacts, the project owner shall send notification to the CPM identifying the person(s) retained to conduct Native American monitoring. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM who will initiate a resolution process.

## **D. GEOLOGICAL AND PALEONTOLOGICAL RESOURCES**

Dal Hunter, Ph.D., C.E.G, testified on behalf of the Staff that with the continued implementation of the existing geological and paleontological Conditions of Certification, the amended project will continue to comply with all applicable LORS and will not create significant adverse direct or cumulative impacts related to geological and paleontological resources. The site is subject to geological hazards such as strong ground shaking and liquefaction, but those hazards can be mitigated through facility design as required by the 2007 California Building Code. Potential impacts to paleontological resources, if found during construction, can be mitigated by procedures specified in the recommended Conditions of Certification. Staff proposes no changes to the existing Conditions of Certification. (Ex. 100, p. 5.2-1)

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The existing Conditions of Certification below will continue to ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Geological and Paleontological Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **DESIGNATED PALEONTOLOGICAL RESOURCES SPECIALIST**

**PAL-1:** Prior to the start of any project-related construction activities (defined as any construction-related vegetation clearance, ground disturbance and preparation, and site excavation activities), the project owner shall ensure that the designated paleontological resource specialist approved by the CPM is available for field activities and prepared to implement the conditions of certification.

The designated paleontological resources specialist shall be responsible for implementing all the paleontological conditions of certification and for using qualified personnel to assist in this work.

Protocol: The project owner shall provide the CPM with the name and statement of qualifications for the designated paleontological resource specialist.

The statement of qualifications for the designated paleontological resources specialist shall demonstrate that the specialist meets the following minimum qualifications: a degree in paleontology or geology or paleontological resource management and at least three years of paleontological resource mitigation and field experience in California, including at least one year's experience leading paleontological resource mitigation and field activities.

The statement of qualifications shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.

If the CPM determines that the qualifications of the proposed paleontological resource specialist do not satisfy the above requirements, the project owner shall submit another individual's name and qualifications for consideration.

If the approved, designated paleontological resource specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM approval of the new designated paleontological resource specialist by submitting the name and qualifications of the proposed replacement to the CPM, at least 10 days prior to the termination or release of the preceding designated paleontological resource specialist.

Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

**Verification:** At least 60 days prior to the start of construction (or a lesser number of days mutually agreed to by the project owner and the CPM), the project owner shall submit the name, statement of qualifications, and the availability for its designated paleontological resource specialist, to the CPM for review and approval. The CPM shall approve or disapprove of the proposed paleontological resource specialist.

At least 10 days prior to the termination or release of a designated paleontological resource specialist, the project owner shall obtain CPM approval

of the replacement specialist by submitting to the CPM the name and resume of the proposed new designated paleontological resource specialist. Should emergency replacement of the designated specialist become necessary, the project owner shall immediately notify the CPM to discuss the qualifications of its proposed replacement specialist.

## **PALEONTOLOGICAL RESOURCES MONITORING & MITIGATION PLAN**

**PAL-2:** Prior to the start of project construction, the designated paleontological resource specialist shall prepare a Paleontological Resources Monitoring and Mitigation Plan to identify general and specific measures to minimize potential impacts to sensitive paleontological resources, and submit this plan to the CPM for review and approval. After CPM approval, the project owner's designated paleontological resource specialist shall be available to implement the Monitoring and Mitigation Plan, as needed, throughout project construction.

Protocol: The project owner shall develop a Paleontological Resources Monitoring and Mitigation Plan in accordance with the guidelines of the Society of Vertebrate Paleontologists (SVP, 1994) that shall include, but not be limited to, the following elements and measures:

- A discussion of the sequence of project-related tasks, such as any pre-construction surveys, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation;
- Identification of the person(s) expected to assist with each of the tasks identified within this condition for certification, a discussion of the mitigation team leadership and organizational structure, and the inter-relationship of tasks and responsibilities;
- Where monitoring of project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring;
- An explanation that the designated paleontological resource specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined;
- A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;
- Inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meets

the Society of Vertebrate Paleontologists standards and requirements for the curation of paleontological resources; and

- Identification of the institution that has agreed to receive any data and fossil materials recovered during project-related monitoring and mitigation work, discussion of any 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.

**Verification:** At least 45 days prior to the start of construction (or a lesser number of days mutually agreed to by the project owner and the CPM), the project owner shall provide the CPM with a copy of the Paleontological Resources Monitoring and Mitigation Plan prepared by the designated paleontological resource specialist for review and approval. If the plan is not approved, the project owner, the designated paleontological resource specialist, and the CPM shall meet to discuss comments and negotiate necessary changes.

#### **WORKER PALEONTOLOGICAL RESOURCES AWARENESS PROGRAM**

**PAL-3:** Prior to ground disturbance, and throughout the project construction period, as needed for all new employees, the project owner and the designated paleontological resource specialist shall prepare and conduct CPM-approved training for all project managers, construction supervisors, and workers who operate ground disturbing equipment. The project owner and construction manager shall provide the workers with the CPM-approved set of procedures for reporting any sensitive paleontological resources or deposits that may be discovered during project-related ground disturbance.

The paleontological training program shall discuss the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources.

The training shall also include the set of reporting procedures that workers are to follow if paleontological resources are encountered during project activities. The training program shall be presented by the designated paleontological resource specialist and may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

**Verification:** At least thirty (30) days prior to site mobilization, or a lesser number of days agreed to by the CPM, the project owner shall submit to the CPM for review, comment, and written approval, the proposed employee training program and the set of reporting procedures the workers are to follow if paleontological resources are encountered during project construction.



If the employee training program and set of procedures are not approved, the project owner, the designated paleontological resource specialist, and the CPM shall meet to discuss comments and necessary changes, before the beginning of construction. Documentation for training of additional new employees shall be provided in subsequent Monthly Compliance Reports, as appropriate.

#### **DESIGNATED PALEONTOLOGICAL RESOURCE SPECIALIST DUTIES**

**PAL-4:** The designated paleontological resource specialist shall be present at all times he or she deems appropriate to monitor construction-related grading, excavation, trenching, and/or augering in areas where potential fossil-bearing sediments have been identified. If the designated paleontological resource specialist determines that full-time monitoring is not necessary in certain portions of the project area or along portions of the linear facility routes, the designated specialist shall notify the project owner.

**Verification:** The project owner shall include in the Monthly Compliance Reports a summary of paleontological activities conducted by the designated paleontological resource specialist.

#### **PALEONTOLOGICAL RESOURCE RECOVERY**

**PAL-5:** The project owner, through the designated paleontological resource specialist, shall ensure recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during the monitoring, data recovery, mapping, and mitigation activities related to the project.

**Verification:** The project owner shall maintain in its compliance files copies of signed contracts or agreements with the designated paleontological resource specialist and other qualified research specialists who will ensure the necessary data and fossil recovery, mapping, preparation for analysis, analysis, identification and inventory, and preparation for and delivery of all significant paleontological resource materials collected during data recovery and mitigation for the project. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved Paleontological Resources Report and shall keep these files available for periodic audit by the CPM.

#### **PALEONTOLOGICAL RESOURCE REPORT**

**PAL-6:** The project owner shall ensure preparation of a Paleontological Resources Report by the designated paleontological resource specialist. The Paleontological Resources Report shall be completed following completion of the analysis of the recovered fossil materials and related

information. The project owner shall submit the paleontological report to the CPM for approval.

Protocol: The report shall include (but not be limited to) a description and inventory list of recovered fossil materials; a map showing the location of paleontological resources encountered; determinations of sensitivity and significance; and a statement by the paleontological resource specialist that project impacts to paleontological resources have been mitigated.

**Verification:** The project owner shall submit a copy of the Paleontological Resources Report to the CPM for review and approval under a cover letter stating that it is a confidential document. The report is to be prepared and submitted to the CPM by the designated paleontological resource specialist within ninety (90) days following completion of the analysis of the recovered fossil materials.

# **Certification of Completion** **Worker Environmental Awareness Program** **Henrietta Combined-Cycle Power Plant (01-EP-7C)**

This is to certify these individuals have completed a mandatory California Energy Commission-approved Worker Environmental Awareness Program (WEAP). The WEAP includes pertinent information on cultural, paleontological, and biological resources for all personnel (that is, construction supervisors, crews, and plant operators) working on site or at related facilities. By signing below, the participant indicates that he/she understands and shall abide by the guidelines set forth in the program materials. Include this completed form in the Monthly Compliance Report.

<b>No.</b>	<b>Employee Name</b>	<b>Title/Company</b>	<b>Signature</b>
<b>1.</b>			
<b>2.</b>			
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<b>25.</b>			

Cultural Trainer: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Paleo Trainer: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Biological Trainer: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

## **E. WASTE MANAGEMENT**

Staff witness Ellie Townsend-Hough testified that the amended project will comply with applicable LORS and that, with the continued implementation of existing Conditions of Compliance WASTE-1 through WASTE-5, construction and operation of the Henrietta Combined-Cycle Power Plant will not cause significant environmental effects. (Ex. 100, pp. 4.12-1 – 4.12-2.)

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The existing Conditions of Certification below will ensure the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Waste Management aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **WASTE GENERATOR ID NUMBER**

**WASTE-1:** The project owner and, if necessary, its construction contractor shall obtain unique hazardous waste generator identification numbers from the Department of Toxic Substances Control (DTSC) in accordance with DTSC regulatory authority.

**Verification:** The project owner and its construction contractor shall keep copies of the identification numbers on file at the project site and notify the CPM via the monthly compliance report of their receipt.

### **WASTE MANAGEMENT PLAN**

**WASTE-2:** Prior to the start of construction and operation, the project owner shall prepare and submit to the Energy Commission CPM, for review

and comment, a waste management plan for all wastes generated during construction and then operation and maintenance of the facility, respectively. The plans shall contain, at minimum, the following:

- a description of all waste streams, including projections of frequency, amounts generated, and hazard classifications;
- methods of managing each waste, including but not limited to: waste testing methods to assure correct classification, specific waste segregation and storage procedures and facilities, treatment methods and companies contracted with for treatment services, methods of transportation and companies contracted with for transportation, disposal requirements and sites, employee hazmat training, employee protection, spill response and reporting, and recycling and waste minimization/reduction plans. These methods must include, but not be limited to, the eight Waste Mitigation Measures listed by the Applicant in section 8.13.7 of the AFC; and
- methods to be put into place to audit and ensure continuing compliance with the Workplan and all applicable LORS.

**Verification:** No less than 30 days prior to the start of construction the project owner shall submit the construction waste management plan to the CPM for review. The operation waste management plan shall be submitted no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions within 20 days of notification by the CPM (or mutually agreed upon date). In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to planned management methods.

## **WASTE MANAGEMENT ENFORCEMENT ACTION**

**WASTE-3:** Upon becoming aware of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

**Verification:** The project owner shall notify the CPM in writing within ten (10) days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.

## REGISTERED PROFESSIONAL ENGINEER/GEOLOGIST

**WASTE-4:** The project owner shall have a Registered Professional Engineer or Geologist, with experience in remedial investigation and feasibility studies, available for consultation during soil excavation and grading activities.

**Verification:** At least 30 days prior to the start of construction, the project owner shall submit the name, affiliation, qualifications and experience of the Registered Professional Engineer or Geologist contracted for consultation to the CPM for approval.

## CONTAMINATED SOIL EXCAVATION

**WASTE-5:** The unidentified crystalline substance found in soil at the site as reported in the Phase I ESA along with any other potentially contaminated soil unearthed during excavation at either the proposed site or in linear facilities as evidenced by discoloration, odor, detection by handheld instruments, or other signs, shall be the subject of a review and evaluation by a Registered Professional Engineer or Geologist. This review and evaluation shall include at a minimum:

- an inspection of the site,
- a determination of the need for sampling to confirm the nature and extent of contamination,
- actions to ensure that verbal notification has been made to the project owner and the CPM, and
- the filing of a written report to the project owner and the CPM stating the recommended course of action.

Depending on the nature and extent of contamination, the Registered Professional Engineer or Geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the Registered Professional Engineer or Geologist, significant remediation may be required, the project owner shall contact representatives of the Central Valley Regional Water Quality Control Board, the Kings County Division of Environmental Health Services (CUPA), and the Northern California Regional Office of the California Department of Toxic Substances Control for guidance and possible oversight.

**Verification:** The project owner shall submit any reports filed by the Registered Professional Engineer or Geologist to the CPM within 5 days of their receipt.

## **VII. LOCAL IMPACT ASSESSMENT**

### **A. LAND USE**

Staff's witness Robert Fiore testified that with the effective implementation of the modified Condition of Certification, **LAND-3**, the amended project will not pose additional land use planning and agricultural resources impacts and would be in compliance with land use planning LORS. Staff's revised Condition of Compliance **LAND-3** requires that the project site plan be submitted to the Kings County Planning Department for review and comment, to help ensure the modified project is constructed and operated in accordance with applicable LORS.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Land Use aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

**LAND-1** Prior to the start of construction, the project owner shall submit an agricultural mitigation plan subject to the approval of the CPM. The agricultural mitigation plan shall include details as to how the on-site preservation of agricultural land on the subject property not converted for the power generation facility is to occur.

**Verification:** At least 30 days prior to site mobilization, the project owner shall provide the CPM with the finalized agricultural mitigation plan.

**LAND-2** Prior to the start of commercial operation, the project owner shall provide to the CPM, a copy of their signed, notarized and recorded Notice, Disclosure and Acknowledgement of Agricultural Land Use Protection

and Right to Farm Policies of the County of Kings, pursuant to Section 2 of Ordinance No, 546 (Right To Farm Ordinance) of the County of Kings.

**Verification:** At least 30 days prior to the start of commercial operation, the project owner shall provide to the CPM, a copy of their signed, notarized and recorded Notice, Disclosure and Acknowledgement of Agricultural Land Use Protection and Right to Farm Policies for the County of Kings.

**LAND-3** Prior to the start of construction, the project owner shall provide to the CPM a site plan with dimensions showing the locations of the proposed buildings and structures in compliance with the minimum yard requirements (setbacks) from the property line as stipulated in Section 406.D. yard requirements of the Kings County Zoning Ordinance.

**Verification:** No later than 30 days prior to the start of construction, the project owner shall provide to the CPM for approval, and Kings County Planning Department for review and comment, a site plan showing the HPP project in yard area compliance with Section 406.D. of the Kings County Zoning Ordinance.



## **B. NOISE**

The testimony of Staff witness Shahab Khoshmashrab indicates that the conclusions in the 2002 Decision would not be changed by the proposed amendment. Staff concluded that since the HPP was licensed no new sensitive receptors have located in the project vicinity, and though the addition of the steam turbine-generator and air-cooled condenser will raise noise levels slightly near the project, it will remain in compliance with the original conditions of certification relating to Noise and Vibration and the Kings County's applicable noise requirements.

Staff recommends two changes to noise-related Conditions of Certification. Staff recommended modifying **NOISE-1** to specify that post-construction noise surveys taken to ensure the project's continued compliance with the Kings County's noise requirements are conducted at power levels of at least 90 percent. This will ensure that all six of the air-cooled condenser fans are in operation during the survey, meaning that the plant will still comply with all noise-related requirements even when operating at its loudest levels. Staff also recommended a new condition, NOISE-5, addressing restrictions placed on high pressure steam blows to ensure the modified project remains in compliance with the County's noise ordinances.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.

3. The Noise aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **PRE-CONSTRUCTION NOTICE & CONSTRUCTION NOISE COMPLAINT HOTLINE**

**NOISE-1:** At least 15 days prior to the start of project-related ground disturbing activities, the project owner shall notify all residents and business owners within one-half mile of the site, by mail or other effective means, of the commencement of project construction. At the same time, the project owner shall establish and disseminate a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. The telephone number shall be posted at the project site during construction in a manner visible to passersby. 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 maintained until the project has been operational for at least one year.

**Verification:** The project owner shall transmit to the Energy Commission Compliance Project Manager (CPM) in the first Monthly Construction Report following the start of project-related ground disturbing activities, a statement, signed by the project manager, attesting that the above notification has been performed, and describing the method of that notification. This statement shall also attest that the telephone number has been established.

### **NOISE COMPLAINT PROCESS**

**NOISE-2:** Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall:

1. use the Complaint Resolution Form or functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
2. attempt to contact the person(s) making the noise complaint within 24 hours;
3. conduct an investigation to determine the source of noise related to the complaint;

4. if the noise is project related, take all feasible measures to reduce the noise at its source; and
5. if the noise is project related, submit a report documenting the complaint and the actions taken. The report shall include: a complaint summary, including final results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to the complainant's satisfaction.

**Verification:** Within 5 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the local jurisdiction, and 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 3-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.

## **OPERATING NOISE LIMITATION**

**NOISE-3:** The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause resultant noise levels to exceed the ambient background noise level (L90) at residential receivers by more than 5 dBA, and that the noise due to plant operations will comply with the noise standards of the Kings County General Plan.

No new pure tone components may be produced by operation of the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints. Pressure relief valves shall be adequately treated or located to preclude noise that draws legitimate complaints.

Within 30 days of the project first achieving an output of 90 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey at the same Site 1 used for the ambient noise survey (i.e., housing at NAS Lemoore). The survey shall also include the one-third octave band pressure levels to ensure that no new pure-tone noise components have been introduced. If the results from the survey indicate that the project noise level at the residential location exceeds the standards and requirements cited above, additional mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

**Verification:** Within 15 days after completing the post-construction survey, the project owner shall submit a summary report of the survey to the local jurisdiction, and to the CPM. Included in the post-construction survey report will

be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. Within 15 days of implementation of the mitigation measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

## **CONSTRUCTION TIME RESTRICTIONS**

**NOISE-4:** Construction noise levels as measured at any affected residence shall be limited to 60 dBA Leq during daytime hours (7 a.m. to 10 p.m.) and 45 dBA Leq during nighttime hours (10 p.m. to 7 a.m.). If construction noise levels exceed an hourly average noise level of 60 dBA Leq daytime or 45 dBA Leq nighttime, the construction equipment that is the source of the excessive noise shall be shut down or the noise mitigated to a noise level below 60 dBA Leq or 45 dBA Leq, respectively.

**Verification:** The Project Owner shall monitor noise levels at the nearest residential noise receptor at random evening times when nighttime construction activities are in progress. The project owner shall transmit to the CPM in the first Monthly Construction Report a statement acknowledging that the above restrictions will be observed throughout the construction of the project and monitoring data.

**NOISE-5** If a high-pressure steam blow is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 89 dBA measured at a distance of 50 feet. The project owner shall conduct steam blows only during the hours of 8:00 a.m. to 5:00 p.m.

If a low-pressure continuous steam blow is employed, the project owner shall limit the noise of steam blows to no greater than 80 dBA measured at a distance of 100 feet.

**Verification:** At least 15 days prior to the first high pressure steam blow, the project owner shall submit to the CPM drawings or other information describing the temporary steam blow silencer and the noise levels expected and a description of the steam blow schedule.

At least 15 days prior to any low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the projected time schedule for execution of the process.

## **C. SOCIOECONOMICS**

Hedy Koczwara testified on behalf of staff that the amended project will not cause significant socioeconomic effects. The estimates of project benefits show a total construction cost of \$79.3 million, construction wages of \$23.5 million, and sales taxes during construction of \$87,000. Property tax revenues to the Kings County will be approximately \$800,000 annually. Project labor will peak at 157 persons, with the workforce staged such that the same workforce will also work on GWF Energy's nearby Hanford Combined-Cycle Power Plant (Ex. 100, p. 4.7-7 and 4.7-8). Staff recommended no new or modified Conditions of Certification in the area of Socioeconomics.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The existing Condition of Certification below will ensure that the project is in compliance with all applicable LORS.
3. The Socioeconomics aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

**SOCIO-1:** The project owner shall pay the one-time statutory school facility development fee as required at the time of filing for the in-lieu building permit with the Kings County.

**Verification:** The project owner shall provide proof of payment of the statutory development fee in the Monthly Compliance Report following the payment.

## **D. TRAFFIC AND TRANSPORTATION**

Staff witness Scott Debauche testified that the proposed amendment would not be a significant change from the original project in terms of traffic and transportation impacts. Staff recommended deleting Condition of Compliance **TRANS-2** because the amended project includes acceptable plans to locate construction crew parking adjacent to the site, rather than within it. The amended project would continue to comply with all applicable LORS, and with continued implementation of existing Conditions of Certification **TRANS-1** and **TRANS-3** through **TRANS-8**, would not have a significant impact in the area of Traffic and Transportation.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Traffic and Transportation aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **OVERWEIGHT & OVERSIZE VEHICLES**

**TRANS-1:** The project owner shall comply with the California Department of Transportation (Caltrans) and Kings County on limitations on vehicle sizes and weights. In addition, the project owner or their contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

**Verification:** In the Monthly Compliance Reports, the project owner shall submit copies of any oversize and overweight transportation permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

**TRANS-2: Deleted**

**LICENSED HAZARDOUS MATERIALS HAULERS**

**TRANS-3:** The project owner shall ensure that all federal and state regulations for the transportation of hazardous materials are observed during both construction and operation of the facility and that all permits and/or licenses are secured from the California Highway Patrol and Caltrans for the transportation of hazardous material.

**Verification:** The project owner shall include in its Monthly Compliance Reports to the CPM copies of all permits and licenses acquired by the project owner and/or subcontractors concerning the transportation of hazardous substances.

**ENCROACHMENT PERMITS**

**TRANS-4:** The project owner or their contractor shall comply with Kings County and Caltrans limitations for encroachment into public rights-of-way and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.

**Verification:** In the Monthly Compliance Reports, the project owner shall submit copies of any encroachment permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

**DESIGNATED ROUTES**

**TRANS-5:** The project owner shall designate travel routes for construction workers and truck deliveries in consultation with Kings County and Caltrans.

**Verification:** The project owner shall provide a copy of the designated route in its contracts for truck deliveries and maintain copies onsite for inspection by the CPM.

## **ROADWAY REPAIRS**

**TRANS-6:** Following completion of construction of the power plant and all related facilities, the project owner shall return all roadways to original or as near original condition as possible.

**Protocol:** Prior to start of construction, the project owner shall photograph sections of public roadways that will be affected by project construction traffic. The project owner shall provide the CPM and the affected jurisdiction: Kings County and /or Caltrans with copies of these photographs.

**Verification:** Within 30 days of the completion of project construction, the project owner will meet with the CPM and Kings County and Caltrans to determine and receive approval for the action necessary and schedule to complete the repair of identified sections of public roadways to original or as near original condition as possible.

## **TRAFFIC CONTROL PLAN**

**TRANS-7:** Prior to the start of construction, the project owner shall consult with Kings County, Fresno County, Caltrans, and the City of Lemoore to prepare and submit a construction traffic control plan and implementation program which addresses the following issues to the extent practical:

- timing of heavy equipment and building material deliveries;
- signing, lighting, and traffic control device placement;
- provision of a person to direct traffic if necessary for workers leaving the site during the peak period of construction;
- on-site parking for construction workers;
- establishing construction work hours outside of peak traffic periods;
- maintain emergency access;
- temporary travel lane closures;
- maintaining access to adjacent property,
- requirements for construction worker ridesharing; and
- traffic conflicts with other ongoing or planned projects.

The project owner shall submit the traffic control plan to Kings County and Caltrans for review and comments, and to the CPM for review and approval.



**Verification:** At least 30 days prior to start of construction the project owner shall provide to the CPM for review and approval, a copy of its traffic control and implementation program that has been reviewed and commented on by the jurisdictions.

## **E. VISUAL RESOURCES**

Staff witness Marie McLean testified that the proposed modifications to the HPP do not significantly alter the visual resources findings found in the Energy Commission's May 2002 Decision pertaining to the HPP. (Ex. 100, pp. 4.11-2) The HPP is located in a rural area with no nearby residences, and the changes proposed to the project would not significantly alter the overall visual character of the area. To ensure no impact to visual resources are created during construction of the Henrietta Combined-Cycle Power Plant, Staff recommended new Condition of Certification **VIS-7** addressing screening of construction parking, staging and laydown areas.

## **FINDINGS AND CONCLUSIONS**

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Visual Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

## **CONDITIONS OF CERTIFICATION**

### **CONSTRUCTION VISUAL REMEDIATION**

**VIS-1:** The project owner shall ensure that visual impacts of the project construction are adequately mitigated by implementing the following measures:

All evidence of construction activities, including ground disturbance due to staging and storage areas, shall be removed and remediated upon completion of construction. Any vegetation removed in the course of construction will be replaced on a 1-to-1, in-kind basis. Such

replacement planting shall be monitored for a period of three years to ensure survival. During this period, all dead plants shall be replaced.

Protocol: The project owner shall submit a plan for restoring the surface conditions of any right-of-way disturbed during construction of the transmission line and underground pipelines. The plan shall include grading to the original grade and contouring and revegetation of the rights-of-way.

The project owner shall not implement the plan until receiving written approval of the submittal from the California Energy Commission Compliance Project Manager (CPM).

**Verification:** At least 60 days prior to the start of site mobilization, the project owner shall submit the plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plans are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

The project owner shall notify the CPM within 7 days after completing the surface restoration that the areas disturbed during construction are ready for inspection.

## **STRUCTURE COLOR PLAN**

**VIS-2:** Prior to the first turbine roll, the project owner shall treat project structures, including the transmission facilities, buildings and fences in appropriate colors or hues that minimize visual intrusion and contrast by blending with the surrounding landscape, and shall treat those items in non-reflective, appropriately textured finishes. The project owner shall ensure that the transmission facilities use non-specular conductors, and non-reflective and non-refractive insulators. A specific treatment plan shall be developed for CPM approval to ensure that the proposed colors and treatment do not unduly contrast with the surrounding landscape. The plan shall be submitted sufficiently early to ensure that any pre-colored buildings, structures, and linear facilities will have colors approved and included in bid specifications for such buildings or structures, to the extent practicable. Prior to submittal of the plan to the CPM, the project owner shall submit the plan to the Kings County Planning Department for review and comment.

Protocol: Following review of the treatment plan by the Kings County Planning Department and submittal of the County's comments to the CPM, the project owner shall submit the treatment plan for the project to the CPM for review and approval. The treatment plan shall include:

- specifications, and 11" x 17" color simulations, of the treatment proposed for use on project structures, including structures treated during manufacture;
- a list of each major project structure, building, tank, and fence specifying the color(s) proposed for each item;
- documentation that a non-reflective finish will be used on all project elements visible to the public;
- documentation that non-specular conductors, and non-reflective and non-refractive insulators will be used on the transmission facilities;
- a procedure to ensure proper treatment maintenance for the life of the project, and
- documentation that fences and walls for the project will comply with the applicable requirements in the Kings County zoning ordinance, that relates to visual resources.

After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project.

For any structures that are treated during manufacture, the project owner shall not specify the treatment of such structures to the vendors until the project owner receives notification of approval of the treatment plan by the CPM.

The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM.

**Verification:** At least 30 days prior to construction, the project owner shall submit its proposed plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plans are needed before the CPM will approve the plan, within 30 (thirty) days of receiving that notification, the project owner shall submit to the CPM a revised plan.

Not less than 30 (thirty) days prior to the start of commercial operation, the project owner shall notify the CPM that all structures treated during manufacture and all structures treated in the field are ready for inspection.

The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

## **SHIELDED LIGHTING**

**VIS-3:** Prior to first turbine roll, the project owner shall design and install all lighting such that light bulbs and reflectors are not visible from public viewing areas and illumination of the vicinity and the nighttime sky is minimized during both project construction and operation. The project owner shall develop and submit a lighting plan for the project to the CPM for review and approval. Prior to submittal of the plan to the CPM, the project owner shall submit the plan to the Kings County Planning Department for review and comment. Lighting shall not be installed before the plan is approved.

Protocol: Following review of the lighting plan by the Kings County Planning Department and submittal of the Department's comments to the CPM, the project owner shall submit the lighting plan for the project to the CPM for review and approval. The lighting plan shall require that:

- all new night lighting shall be of minimum necessary brightness consistent with operational safety;
- exterior lighting and parking lot lighting shall be provided in accordance with the Kings County ordinance;
- non-glare light fixtures shall be specified;
- lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of this outdoor lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;
- high illumination areas not occupied on a continuous basis such as maintenance platforms or the main entrance shall be provided with switches or motion detectors to light the area only when occupied; and
- a complaint resolution form shall be used by plant operations, to record all lighting complaints received and to document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file.

**Verification:** At least 60 days prior to ordering the exterior lighting, the project owner shall provide the lighting plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

The project owner shall notify the CPM within 7 days of completing exterior lighting installation that the lighting is ready for inspection.

**VIS-4:** Where signs are visible by the public, the project owner shall design project signs using non-reflective materials and unobtrusive colors. The project owner shall ensure that signs comply with the applicable Kings County zoning requirements that relate to visual resources. The design of any signs required by safety regulations shall conform to the criteria established by those regulations.

Protocol: The project owner shall submit a signage plan for the project to the Kings County Planning Department for review and comment, and to the CPM for review and approval. The submittal to the CPM shall include the Department's comments.

The project owner shall not implement the plan until the project owner receives approval of the submittal from the CPM.

**Verification:** At least 60 days prior to installing signage, the project owner shall submit the plan to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within 7 days after completing installation of the signage that they are ready for inspection.

## **LANDSCAPE SCREENING**

**VIS-5:** Prior to the start of commercial operation, the project owner shall prepare and implement an approved perimeter landscape plan to partially screen the west and south views of the power plant to the greatest extent possible. Fast growing tree species, such as but not limited to evergreens, shall be used to ensure that maximum screening is achieved as quickly as possible. Plant species shall be selected that will blend the landscaping into the surrounding environment. Suitable irrigation shall be installed, if necessary, to ensure survival of the plantings. Landscaping shall be installed consistent with the Kings County zoning ordinance.

Protocol: Prior to the start of commercial operation, the project owner shall submit a perimeter landscape plan to the Kings County Planning Department for review and comment, and to the CPM for review and approval. The submittal to the CPM shall include the Department's comments. The plan shall include, but not be limited to:

1. a detailed landscape, grading, and irrigation plan, at a reasonable scale, which includes a list of proposed tree and shrub species and installation sizes, and a discussion of the suitability of the plants for the site conditions and mitigation objectives. A list of potential tree species that would be viable in this location shall be prepared by a qualified arborist familiar with local growing conditions, with the objective of providing the widest possible range of species from which to choose. The plan shall demonstrate how the screening conditions called for above shall be met, including evidence provided by a qualified professional arborist that the species selected are both viable and available;
2. maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project; and
3. a procedure for monitoring for and replacement of unsuccessful plantings for the life of the project.

The project owner shall not implement the plan until the project owner receives approval of the plan from the CPM.

**Verification:** At least 60 days prior to the start of commercial operation, the project owner shall submit the perimeter landscape plan to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the submittal, within 30 (thirty) days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within 7 (seven) days after completing installation of the landscape screening that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in the Annual Compliance Report.

## **Construction Screening**

**VIS-6** The project owner shall reduce the visibility of construction equipment, materials, and activities at the project site and as appropriate at any staging and material and equipment storage areas with temporary

screening, such as fabric attached to fencing or berms, prior to the start of ground disturbance. Screening shall be of an appropriate height, design, opacity, and color for each specific location, as determined by the CPM.

The project owner shall submit to the CPM for review and approval a specific screening plan whose proper implementation will satisfy those requirements. The project owner shall notify the CPM when installation is completed.

**Verification:** At least 30 days prior to the start of site mobilization, the project owner shall submit the screening plan to the CPM for review and approval. The screening shall be installed during the site mobilization phase. The project owner shall notify the CPM when installation is completed.

The project owner shall provide the CPM with electronic color photographs after installing screening at the power plant site and at staging and material and equipment storage areas indicating the effectiveness of the screening.