

## DOCKETED

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**Appendix A**  
**Conditions of Certification**

## 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 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.

- a) Areas to be excavated shall be thoroughly pre-wetted prior to excavation.
- b) All unpaved roads and disturbed areas in the project and linear construction sites shall be watered as frequently as necessary to

comply with the dust mitigation objectives of **AQ-SC4**. The frequency of watering may be reduced or eliminated during periods of precipitation.

- c) No vehicle shall exceed 10 miles per hour within the construction site.
- d) The construction site entrances shall be posted with visible speed limit signs.
- e) All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.
- f) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.
- g) All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.
- h) 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.
- i) 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.
- j) 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.
- k) At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways.
- l) On-site paved roads shall be swept at least once daily after the evening peak period.
- m) 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.
- n) 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.
- o) 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.

- p) Ground cover will be replaced in disturbed areas as soon as possible.

**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 shutdown source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, provided that the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

**Verification:** The AQCMP shall include a section detailing how 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.

- a) 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.
- b) 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.
- c) All construction diesel engines, which have a rating of 100 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) unless certified by the on-site AQCMM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is “not practical” if, among other reasons:
  - (1) There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or
  - (2) The construction equipment is intended to be on-site for 10 days or less.
  - (3) The CPM may grant relief from this requirement if the AQCMM can demonstrate that he/she has made a good faith effort to comply with this requirement and that compliance is not possible.
- d) The use of a soot filter may be terminated immediately if one of the following conditions exists, provided that the CPM is informed within 10 working days of the termination:
  - (1) The use of the soot filter is excessively reducing normal

availability of the construction equipment due to increased downtime for maintenance and/or reduced power output due to an excessive increase in backpressure.

- (2) The soot filter is causing or is reasonably expected to cause significant engine damage.
  - (3) The soot filter is causing or is reasonably expected to cause a significant risk to workers or the public.
  - (4) Any other seriously detrimental cause which has the approval of the CPM prior to the termination being implemented.
- e) 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.
  - f) All diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.
  - g) Construction equipment will employ electric motors when feasible.

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

**AQ-SC6** The project owner shall submit to the CPM for review and approval any modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA and any revised permit issued by the District or U.S. EPA, for the project.

**Verification:** The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

**AQ-SC7** The project shall surrender the emission offset credits listed in Appendix A or a modified list, as allowed by this condition, at the time and in the quantities required by condition AQ-27 and herein. The project owner may request CPM approval for any substitutions or modification of credits listed in Appendix A. The CPM, in consultation

with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards; the requested change(s) clearly will not cause the project to result in a significant environmental impact; and each requested change is consistent with applicable federal and state laws and regulations. In addition to the offset requirements of stipulated in AQ-27, the applicant will provide sufficient VOC and S02 ERCs to mitigate the VOC and S02 emissions on a 1:1 basis annually. Revisions to the offset package that require review and approval by the CPM include revisions in the amount of stationary source ERCs that are stipulated to be surrendered, whereas currently stipulated all stationary source ERCs for NOx, PM10 and S02 as listed in Appendix A will be surrendered and all VOC ERCs needed to offset the project will come from the listed stationary source VOC ERCs. Additionally, any increase in the amount of VOC for NOx interpollutant offsets must be approved with an updated interpollutant offset ratio analysis.

**Verification:** The project owner shall submit to the CPM a list of the ERC certificates and quantities surrendered to the District within 30 days of their surrender. The project owner shall request any changes to the ERC certificates to be surrendered at least 60 days prior to their surrender date as required in condition AQ-27. If the CPM, in consultation with the District, approves a substitution or modification, the CPM shall file a statement of the approval with the commission docket and mail a copy of the statement to every person on the post-certification mailing list. The CPM shall maintain an updated list of approved ERCs for the project.

**AQ-SC8** Until the California Global Warming Solutions Act of 2006 (AB32) is implemented, the project owner shall either participate in a GHG registry approved by the CPM, or report on an annual basis to the CPM the quantity of greenhouse gases (GHG) emitted as a direct result of facility electricity production.

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

The project owner may perform annual source tests of CO<sub>2</sub> and CH<sub>4</sub> emissions from the exhaust stacks while firing the facility's primary fuel, using the following test methods or other test methods as approved by the CPM. The project owner shall produce fuel-based emission factors in units of lbs CO<sub>2</sub> equivalent per MMBtu of fuel burned from the annual source tests. If a secondary fuel is approved for the facility, the project owner may also perform these source tests while firing the secondary fuel.



Pollutant	Test Method
CO <sub>2</sub>	EPA Method 3A
CH <sub>4</sub>	Protocol: EPA Method 18 (VOC measured as CH <sub>4</sub> )

As an alternative to performing annual source tests, the project owner may use the Intergovernmental Panel on Climate Change (IPCC) Methodologies for Estimating Greenhouse Gas Emissions (MEGGE). If MEGGE is chosen, the project owner shall calculate the CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions using the appropriate fuel-based carbon content coefficient (for CO<sub>2</sub>) and the appropriate fuel-based emission factors (for CH<sub>4</sub> and N<sub>2</sub>O). The project owner shall convert the N<sub>2</sub>O and CH<sub>4</sub> emissions into CO<sub>2</sub> equivalent emissions using the current IPCC Global Warming Potentials (GWP). The project owner shall maintain a record of all SF<sub>6</sub> that is used for replenishing on-site transformers. At the end of each reporting period, the project owner shall total the mass of SF<sub>6</sub> used and convert that to a CO<sub>2</sub> equivalent emission using the IPCC GWP for SF<sub>6</sub>. The project owner shall maintain a record of all PFCs and HFCs that are used for replenishing on-site refrigeration and chillers directly related to electricity production. At the end of each reporting period, the project owner shall total the mass of PFCs and HFCs used and convert that to a CO<sub>2</sub> equivalent emission using the IPCC GWP.

On an annual basis, the project owner shall report the CO<sub>2</sub> and CO<sub>2</sub> equivalent emissions from the described emissions of CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, SF<sub>6</sub>, PFCs, and HFCs.

**Verification:** The project annual greenhouse gas emissions shall be reported, as a CO<sub>2</sub> equivalent, by the project owner to a climate action registry approved by the CPM, or to the CPM as part of the fourth Quarterly or the annual Air Quality Report, until such time that GHG reporting requirements are adopted and in force for the project as part of the California Global Warming Solutions Act of 2006.

**AQ-SC9** The project owner shall submit to the CPM Quarterly Operation Reports, following the end of each calendar quarter, as also required under Condition of Certification **AQ-22**, that include operational and emissions information as necessary to demonstrate compliance with the Conditions of Certification herein. The Quarterly Operation Report will specifically note or highlight incidences of noncompliance.

**Verification:** The project owner shall submit the Quarterly Operation Reports to the CPM and APCO no later than 30 days following the end of each calendar quarter.

**AQ-SC10** The wet surface air cooler shall have a mist eliminator with a

manufacturer guaranteed mist reduction rate of 0.005% or less of the water recirculation 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.

**AQ-SC11** 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).

**Verification:** 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-SC9).

#### **DISTRICT FINAL DETERMINATION OF COMPLIANCE CONDITIONS (COC2007H, CEC 2007P)**

**AQ-1** All facility operating Staff shall be advised of and familiar with these permit conditions.

**Verification:** The project owner shall submit to the CPM and APCO signed records of facility operating Staff indicating review of permit conditions at least 30 days prior to commencement of operation and shall maintain this training and records documenting this training at the site for inspection.

**AQ-2** The "Right of Entry," as provided by the California Health and Safety Code Section 41510 of Division 26, shall apply at all times.

**Verification:** The project owner shall make the site available to representatives of the District, ARB, and the Energy Commission for inspection, including securing samples of emissions or any records required to be maintained in connection with the emissions sources.

**AQ-3** In the case of shutdown or restart of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Air Pollution Control Officer at least 24 hours prior to the planned shutdown. Such notification does not exempt the facility from complying with all permit limits and requirements.

**Verification:** The project owner shall submit to the CPM and APCO notification of scheduled maintenance of air pollution control equipment at least 24 hours prior to any planned shutdowns.

~~**AQ-4** If any upset or breakdown occurs with equipment under permit~~

~~in such a manner that may cause excess emissions of air contaminants, the APCO shall be notified of such failure or breakdown within 24 hours or by 9:00 a.m. by the following working day. The person responsible shall also submit a written statement of full disclosure of the upset/breakdown to the District within 72 hours. The report shall contain the date, time, duration, estimated emissions, cause, and remedy.~~  
**Upset/Breakdown Condition**

- a. **If any upset or breakdown occurs with equipment under permit in such a manner that may cause excess emissions of air contaminants, the APCO shall be notified of such failure or breakdown within twenty-four (24) hours or by 9:00 a.m. by the following working day.**
- b. **The breakdown shall be logged, investigated and handled to its final disposition.**
- c. **The project owner shall also submit a written statement of full disclosure of the upset/breakdown to the District within 72 hours. The report shall contain the date and time of the event and also the following information:**
  1. **Duration of excessive emissions;**
  2. **Estimate of quantity of emissions;**
  3. **Statement of the cause of the occurrence; and**
  4. **Corrective measures to be taken to prevent a recurrence.**
- d. **A breakdown condition is an unforeseeable failure or malfunction of any air pollution control equipment or related operating equipment which causes a violation of any emission limitation or restriction prescribed by the District's rules and regulations, or by state law, or similar failure of any required in stack continuous monitoring equipment.**

**In the case of shut-down or re-start of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Colusa County Air Pollution Control District (District) Air Pollution Control Officer (APCO) at least twenty-four (24) hours prior to the planned shutdown. Such notification does not exempt the facility from complying with all permit limits and requirements.**

**Verification:** The project owner shall comply with the notification requirements of the District and submit written copies of these notification reports to the CPM and the APCO as part of the Quarterly Operation Reports (AQ-22).

**AQ-5** **At all times, including periods of startup, shutdown, and malfunction, PG&E shall, to the extent practicable, maintain and operate all fuel burning equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.** Fugitive emissions, including dust and odors, shall be controlled at all times such that a nuisance is not created at any point beyond the facility's property lines.

**Verification:** The project owner will document any complaints that it has received from the public in the Quarterly Operation Reports (AQ-22). The project owner shall make the site available for inspection by representatives of the District, ARB, and the Energy Commission.

**AQ-6** A person shall be designated to oversee the fugitive dust control program described in the application and this document. Entry roads to the proposed facility site will be paved prior to commencing construction. During construction, the people on site shall access real-time weather information from the Western Weather Group to determine the prevailing local wind speed. If wind gusts at the Maxwell weather station exceed 15 mph, construction personnel shall increase the frequency of watering the exposed soil. All of the mitigation measures will be implemented.

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

**AQ-7** The placement of the source testing ports shall be as specified in 40CFR Part 60, Appendix A, Method 1. A source test protocol shall be submitted to the District for approval the Air Pollution Control Officer (APCO), at least 45 days prior to conducting the annual source tests. The District shall be notified at least 10 days prior to actual source testing.

**Verification:** The project owner shall supply diagrams of the proposed source testing port design and location for approval at least 30 days before erecting the HRSG stacks. The project owner shall provide a source test plan to the CPM and District for approval 45 days prior to testing. The project owner shall notify the CPM and the District 10 days prior to any compliance source test.

**AQ-8** Stack gas testing, using EPA, ARB, or other APCO approved methods shall be required on an annual basis for NO<sub>x</sub>, VOC, and CO on the HRSG stacks. The HRSG stacks shall also be tested for SO<sub>x</sub> and PM<sub>10</sub> emissions during the first year and if requested by the APCO, in subsequent years. The natural gas water bath heater shall be tested for NO<sub>x</sub>, SO<sub>x</sub>, VOC, CO, and PM<sub>10</sub> during the first year and thereafter only as requested by the APCO. The results and field data collected during

source tests shall be submitted to the CPM and the District within 60 days of testing.

**Verification:** The results and field data collected during source tests shall be submitted to the CPM and the District within 60 days of testing.

**AQ-9** Annual testing of the HRSG stacks shall include quantification of formaldehyde and ammonia (NH<sub>3</sub>) emissions for compliance with permit limits. The facility owner/operator shall verify, by continuous recording, the ammonia injection rate to the system. The ammonia source test shall be conducted over the expected operating range of the turbine (including, but not limited to 50%, 75%, and 100% load) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining the ammonia slip levels. The source test shall also determine the correlation between the heat input rates of each gas turbine and ammonia mass emissions.

**Verification:** The results and field data collected during source tests shall be submitted to the CPM and the District within 60 days of testing. The proposed ammonia injection/emission rate correlation will be provided to the District and CPM for approval with the ammonia source test report.

**AQ-10** **Stationary fuel burning equipment including,** the gas turbines, duct burners, and natural gas water bath heater shall be fired exclusively on **California Public Utility Commission (CPUC) regulated** pipeline quality natural gas.

**Verification:** The project owner shall submit information on the quality and type of fuel used for the gas turbines, duct burners, and natural gas water bath heater to the CPM and the APCO in the Quarterly Operation Reports (AQ-22).

**AQ-11** The annual average sulfur content in the natural gas used at the facility shall be less than or equal to 0.3 grains per 100 SCF. Monthly testing, at the site, using approved methods (i.e., EPA 19 and ASTM D-3246) is required to determine the sulfur content of the natural gas. ~~Pacific Gas and Electric natural gas testing data from Burney will be also be reviewed and provided to the District.~~

**Verification:** The project owner shall compile the required data on the sulfur content of the natural gas and submit the information to the CPM and the APCO in the Quarterly Operation Reports (AQ-22).

**AQ-12** The sulfur content limit in diesel fuel used in the construction equipment shall be no more than 15 ppm.

**Verification:** The project owner shall compile and submit the required data on the sulfur content of the diesel fuel as required in staff condition AQ-SC5.

**AQ-13** All applicable federal standards and test procedures of Subpart KKKK -- Standards of Performance for Stationary Combustion Turbines shall be met.

The project owner shall not cause to be discharged into the atmosphere from the General Electric gas turbines, any gases which contain nitrogen oxides (NOx) in excess of 15 parts per million by volume (ppmv) when the unit is operating above 75% of peak load and 96 ppmv when operating below 75% of peak load. All concentrations are to be calculated on a 4 hour rolling average and corrected to 15 percent oxygen.

The Project Owner shall not burn in the General Electric gas turbines any fuel which contains total potential sulfur emissions in excess of 0.06 pounds SO2 per million Btu (lb SO2/MMBtu) heat input.

When conducting the source test required in Condition of Certification AQ-8, Method 20 (or subsequent or approved alternative method) shall be used to determine the nitrogen oxides, and oxygen concentrations. The NOx emissions shall be determined at a point within plus or minus 25 percent of 100 percent of peak load.

Upon District request, the project owner shall use ASTM D 1072, or alternatively D3246, D4084, D4486, D4810, D6228, D6667, or gas processors association Standard 2377 (or subsequent or approved alternative method) to determine fuel sulfur levels for compliance with the SOx emission limits specified in Conditions of Certification AQ-14, AQ-15, AQ-18, AQ-25, AQ-26, and AQ-27.

The project owner shall submit an excess emissions and monitoring systems performance report and/or a summary report to the District and the EPA semiannually. This report shall contain the information specified in 40 CFR Part 60 Subpart A - General Provisions, Section 60.7(c) and (d) and shall be postmarked by the 30th day following the end of each calendar quarter.

**Verification:** The project owner shall provide copies of all correspondence with U.S.EPA regarding compliance with Subpart KKKK provisions to the District and CPM in the Quarterly Operation Reports (AQ-22), and shall integrate required testing procedures into the facility source testing plan (AQ-8).

**AQ-14** The CTGs shall meet a VOC limit of 2.0 ppmvd with duct burner firing and 1.38 ppmvd without duct burner firing @ 15% O<sub>2</sub> averaged over one hour. Maximum hourly steady state emission limits for each CTG are:

Pounds VOC with Duct Firing	Pounds VOC without Duct Firing
7.2	3.4

**Verification:** The project owner shall submit to the CPM and APCO CTG source test emissions data demonstrating compliance with this condition as required by condition **AQ-8** and shall provide operating data that establishes ongoing compliance with this condition using a determined relationship with CO emissions, previously approved by the CPM and APCO using source test data, as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-15** The CTGs shall meet a NOx limit of 2.0 ppmvd @ 15% O<sub>2</sub> averaged over one hour except during commissioning. Maximum hourly steady state emission limits for each CTG are:

Pounds NOx with Duct Firing	Pounds NOx without Duct Firing
20.7	15.3

**Verification:** The project owner shall submit to the CPM and APCO CTG continuous emissions monitoring system data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-16** The CTGs shall meet a CO limit of 3.0 ppmvd @ 15% O<sub>2</sub> over a three-hour rolling average except during commissioning. Maximum hourly steady state emission limits for each CTG are:

Pounds CO with Duct Firing	Pounds CO without Duct Firing
18.9	14.0

**Verification:** The project owner shall submit to the CPM and APCO CTG continuous emissions monitoring system data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-17** The natural gas water bath heater shall have a low NOx burner and shall meet a NOx limit of 30.0 ppmvd @ 3% O<sub>2</sub> averaged over one hour.

**Verification:** The project owner shall submit to the CPM and APCO natural gas water bath heater source test emissions data demonstrating compliance with this condition as required in condition **AQ-8** and shall provide confirmation of normal operations of the heater as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-18** Ammonia slip shall be limited to 5.0 ppmvd @ 15% O<sub>2</sub> over one hour. Formaldehyde emissions will be limited to 0.917 lbs per million standard cubic feet (MMscf) of natural gas. Maximum hourly steady state emission limits for each CTG are:

Pounds NH <sub>3</sub> with Duct Firing	Pounds NH <sub>3</sub> without Duct Firing
19.2	14.2

**Verification:** The project owner shall submit to the CPM and APCO CTG emissions data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-22**). The project owner shall provide for

approval of the CPM and APCO a calculation method to determine the ammonia slip emissions, using source test data, based on the NO<sub>x</sub> concentration and the ammonia injection rate; and this calculation shall be revised for approval as necessary after each source test performed under **AQ-9**.

**AQ-19** Continuous emission monitoring (CEM) systems shall be installed to sample, analyze, and record NO<sub>x</sub>, CO, and O<sub>2</sub> concentration in the exhaust gas of both HRSG stacks. This system will generate reports of emissions data in accordance with permit requirements and will send alarm signals to the plant distributed control system (DCS) control room when the level of emissions approaches or exceeds pre-selected limits. ~~Relative accuracy test audits (RATA) shall be conducted annual to verify the performance of the CEM system.~~ **A Relative Accuracy Test Audit (RATA) must be conducted on the CEMS at least once every four calendar quarters, according to the performance specifications for continuous monitoring systems under 40 CFR Part 60, appendix B.**

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Energy Commission to verify the continuous monitoring system is properly installed and operational. Emissions data generated by the CEMS system shall be submitted to the CPM and APCO as part of the Quarterly Operation Reports (**AQ-22**). The RATA test results shall be provided along with the annual source test report as required under **AQ-8**.

**AQ-20** The Colusa County APCD shall have ~~remote~~ **real-time** access to the ~~data logger~~ **CEM data** at the facility to enable District staff to monitor ~~real-time~~ **and compliance with these permit conditions** emissions as recorded by the CEMs. **The format and content of the data display shall be approved by the District.**

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Energy Commission to confirm remote access to CEMs data is accessible remotely by Colusa County Air Pollution Control District.

**AQ-21** The CEMs shall be installed, calibrated, and operational prior to the first firing of the gas turbines. The commissioning phase of the turbines and heat recovery steam generators without abatement of emissions shall not exceed 500 total hours. All reasonable efforts will be made to shorten the length of time of the commissioning phase. Only one gas turbine may be commissioned at a time. Emissions from the commissioning phase of the turbines and heat recovery steam generators shall accrue toward the quarterly and annual emission limits specified in these conditions.

**Verification:** The project owner shall provide notification to the District and



the CPM of the anticipated dates for installation, calibration, and testing for the CEMS at least 10 days prior to installation. The project owner shall provide a report to the District and CPM for approval demonstrating compliance with CEMS calibration requirements prior to turbine first fire. The project owner shall provide monthly commissioning status reports, which include hours of operation without abatement and associated emissions data.

**AQ-22** ~~Quarterly reports of CEM and process data, including startup information, shall be submitted to the District within 30 days after the end of each quarter. Format of the data submission will be determined by the District and may include both electronic spreadsheet and hard copy files.~~ **The project owner shall submit quarterly reports of the facility Continuous emission monitoring (CEM) and process data (including fuel use for each combustion equipment unit), including startup information, to the District within 30 days after the end of each quarter. Format of the data submission will be determined by the District and includes both electronic and hard copy files.**

**The monitoring report shall include, at a minimum:**

- a. **A report for each deviation from permit requirements that occurred during the reporting period, including emergency events. PG&E shall use district approved forms to report each deviation from permit requirement;**
- b. **Results of any emission testing done during the reporting period; and**
- c. **A Certification Report form (Form 3.17-J1), which includes a certification regarding the truth, accuracy, and completeness of the report from the responsible official.**

**An annual report shall also be submitted for the CGS facility including: total emissions for all pollutants for each combustion unit and the entire facility, total operating hours for each combustion unit, numbers and types of startups and shutdowns for each CTG, total fuel used for each combustion unit, results of the monthly sulfur content tests, and total ammonia used. Format of the data submission will be determined by the District and includes both electronic and hard copy files.**

**Verification:** The project owner shall submit to the CPM and APCO the CEM

audits demonstrating compliance with this condition in Quarterly Operation Reports.

**AQ-23** The emissions from the natural gas water bath heater shall not exceed the hourly limits established in the table below

One-Hour Maximum Emissions (lbs)		
Source	Bath Heater	
NOx	0.39	
CO	0.79	
VOC	0.03	
PM10	0.03	
SO <sub>2</sub>	0.03	

**Verification:** The project owner shall submit to the CPM and APCO for approval the natural gas water heater selected manufacturer emissions data demonstrating compliance with this condition at least 30 days prior to installation.

**AQ-24** The emission rates from the auxiliary boiler shall not exceed the hourly limits established in the table below. The boiler shall not operate more than 3,744 hours per year.

One-Hour Maximum Emissions (lbs)		
Source		Auxiliary Boiler
NOx		0.79
CO		1.61
VOC		0.18
PM10		0.33
SO <sub>2</sub>		0.13

**Verification:** The project owner shall submit to the CPM and APCO for approval the auxiliary boiler selected manufacturer emissions data and specifications demonstrating compliance with this condition and condition **AQ-17** at least 30 days prior to installation. The project owner shall submit to the CPM and APCO auxiliary boiler source test emissions data required under condition **AQ-8** demonstrating compliance with the emission limits for the pollutants included in the source test.

**AQ-25** The total emissions from the CTGs and HRSGs shall not exceed those established below for hourly and daily operations.

Maximum Emissions Both Turbines (lbs)		
Pollutant	1-Hour Emissions	24-Hour Emissions
NOx	666.60	2,994.60
CO	967.00	7,659.00
VOC	55.40	630.60
PM10	27.00	648.00
SO <sub>2</sub>	14.80	355.20

**The following table shows emission limits for each GE 7FA gas turbine during startup and shutdown operations. Only one gas turbine may be started at a time.**

<b><u>Time and Emissions During Startup and Shutdown Operations</u></b>								
<b><u>Pollutant</u></b>	<b><u>Cold Startup</u></b>		<b><u>Warm Startup</u></b>		<b><u>Hot Startup</u></b>		<b><u>Shutdown</u></b>	
	<b><u>270 Minutes</u></b>		<b><u>180 Minutes</u></b>		<b><u>90 Minutes</u></b>		<b><u>30 Minutes</u></b>	
	<b><u>Max lb/hour</u></b>	<b><u>Total lb/270 min</u></b>	<b><u>Max lb/hour</u></b>	<b><u>Total lb/180 min</u></b>	<b><u>Max lb/hour</u></b>	<b><u>Total lb/90 min</u></b>	<b><u>Max lb/hour</u></b>	<b><u>Total lb/30 min</u></b>
<b><u>NO<sub>x</sub></u></b>	<b><u>333.3</u></b>	<b><u>779.1</u></b>	<b><u>249.9</u></b>	<b><u>456.2</u></b>	<b><u>152.0</u></b>	<b><u>259.9</u></b>	<b><u>115.0</u></b>	<b><u>115.0</u></b>
<b><u>CO</u></b>	<b><u>429.6</u></b>	<b><u>1,355.6</u></b>	<b><u>373.6</u></b>	<b><u>790.5</u></b>	<b><u>370.3</u></b>	<b><u>679.6</u></b>	<b><u>483.5</u></b>	<b><u>483.5</u></b>
<b><u>VOC</u></b>	<b><u>27.7</u></b>	<b><u>106.7</u></b>	<b><u>27.7</u></b>	<b><u>47.4</u></b>	<b><u>27.7</u></b>	<b><u>38.0</u></b>	<b><u>23.9</u></b>	<b><u>23.9</u></b>
<b><u>PM<sub>10</sub></u></b>	<b><u>12.0</u></b>	<b><u>48.8</u></b>	<b><u>12.0</u></b>	<b><u>30.8</u></b>	<b><u>12.0</u></b>	<b><u>12.8</u></b>	<b><u>6.0</u></b>	<b><u>6.0</u></b>
<b><u>SO<sub>2</sub></u></b>	<b><u>0.4</u></b>	<b><u>1.8</u></b>	<b><u>0.4</u></b>	<b><u>1.2</u></b>	<b><u>0.4</u></b>	<b><u>0.6</u></b>	<b><u>0.2</u></b>	<b><u>0.2</u></b>

**Verification:** The project owner shall submit to the CPM and APCO CTG and HRSG emissions data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-26** The total emissions from the Colusa Power Plant shall not exceed the limits established below.

<b><u>Quarterly and Annual Estimated Combustion Emissions from CGS Facility</u></b>					
<b><u>Pollutant</u></b>	<b><u>1st Quarter Emissions (tons)</u></b>	<b><u>2nd Quarter Emissions (tons)</u></b>	<b><u>3rd Quarter Emissions (tons)</u></b>	<b><u>4th Quarter Emissions (tons)</u></b>	<b><u>Annual Emissions (tons)</u></b>
<b><u>NO<sub>x</sub></u></b>	45.56	43.58	51.30	44.27	184.70
<b><u>CO</u></b>	54.29	52.49	107.15	53.95	267.89
<b><u>VOCs</u></b>	12.30	11.63	11.84	11.76	47.54
<b><u>PM<sub>10</sub></u></b>	25.54	25.78	26.02	26.02	103.36
<b><u>SO<sub>2</sub></u></b>	4.07	3.85	3.89	3.89	15.69

**Verification:** The project owner shall submit to the CPM and APCO plant emissions data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-22**).

**AQ-27** Offsets for the Colusa Generating Station power plant shall be in effect prior to operation of the facility and will not be less than the following amounts at any time. The offsets presented in the first table

below do not reflect distance factor adjustments, the 1.4:1 VOC:NOx interpollutant ratio, nor the 25 tons per year emission allowance. No less than 5.08 tons of PM10 ERCs per quarter shall be provided prior to start of construction activities to offset construction PM10 emissions.

Emission Offsets by Calendar Quarter (not adjusted)					
Pollutant in tons	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
Oxides of nitrogen (NO <sub>2</sub> )	36.79	35.41	31.36	37.93	141.49
Volatile organic compounds	39.89	39.89	39.89	39.89	159.56
Particulate Matter PM10	30.43	28.33	22.15	31.75	112.66

Emission Offsets by Calendar Quarter (adjusted for distance and interpollutant offset ratio)					
Pollutant in tons	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
Oxides of nitrogen (NO <sub>2</sub> )	26.20	47.01	36.55	53.80	99.83
Volatile organic compounds	26.59	26.59	26.59	26.59	106.36
Particulate Matter PM10	21.22	19.73	15.21	22.20	78.36

**Verification:** At least 30 days prior to commencing construction, the project owner shall surrender PM10 ERC certificates in the amounts to offset the emissions shown above to the District and provide documentation of that surrender to the CPM and APCO. At least 60 days prior to commencing CTG first fire, the project owner shall surrender the remaining ERC certificates to offset the emissions in the amounts shown above and as required in Condition AQ-SC7, to the District and provide documentation of that surrender to the CPM and APCO.

**AQ-28** The construction of the facility cannot commence until all construction permits, including the U.S. EPA PSD permit, are obtained. Specified, limited construction activities are allowed prior to issuance of the PSD permit as stated in the USEPA policy document dated December 18, 1978:

**Verification:** The project owner shall keep proof of the project's District air permit and Energy Commission certification including copies of all permit conditions and conditions of certification on site 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 and the Energy Commission for inspection. The project owner shall provide a copy of the U.S. EPA PSD permit to the CPM once it is available.

**AQ-29** Total facility emissions of Hazardous Air Pollutants (HAP) shall not exceed 10 tons per year for any single pollutant except ammonia, formaldehyde, and propylene.

**Verification:** The project owner shall submit to the CPM and APCO a HAPs

emissions estimation plan for approval within one year of initiating operation that will consider integrating both emission source test data and recognized HAPs emission factors for the calculation of HAPs emissions. The project owner shall submit to the CPM and APCO emission estimates using the approved emission estimation plan methodology to demonstrate compliance with this condition as part of the Quarterly Operation Reports (AQ-22) fourth quarter report.

**AQ-30 Equipment located at the Colusa Generating Station (CGS) facility, including the gas turbines, shall not discharge air contaminants into the atmosphere for a period or periods aggregating more than three (3) minutes in any one hour which is as dark or darker than Ringlemann No. 2 (40% opacity).**

**AQ-31 Particulate emissions from fuel burning equipment, including the gas turbines, shall not exceed 0.30 grains per cubic foot of dry gas calculated to 12 percent CO<sub>2</sub> at standard conditions.**

**AQ-32 The emissions of sulfur compounds, calculated as sulfur dioxide (SO<sub>2</sub>), from fuel burning equipment, including the gas turbines, shall not exceed 0.2 percent by volume.**

**AQ-33 Emergency event**

- a. **Within two working days of the emergency event, the project owner shall provide the APCO, via phone, written statement, fax or email the following information:**
  1. **A description of the emergency;**
  2. **Estimated duration of the emergency; and**
  3. **Any mitigating or corrective actions taken.**
- b. **Within two weeks of an emergency event, project owner shall submit to the District a properly signed, contemporaneous log or other relevant evidence which demonstrates that:**
  1. **An emergency occurred;**
  2. **The cause(s) of the emergency can be identified;**
  3. **The facility was being properly operated at the time of the emergency; and**
  4. **All steps were taken to minimize the emissions resulting from the emergency.**
- c. **The APCO shall be notified when the condition causing the emergency event has been corrected and the equipment is again in operation.**
- d. **A report for each emergency event shall be submitted to the APCO as part of project owner's quarterly monitoring report.**

- e. An emergency event is any situation arising from a sudden and reasonably unforeseeable event beyond the control of project owner which causes the exceedance of a technology-based emission limitation. An emergency event constitutes an affirmative defense to an action brought for non-compliance with technology-based emission limitations if the conditions in 11.b. are met.

AQ-34 The project owner shall report any deviation from permit requirements in these conditions of certification, other than emergency events, to the APCO, via phone, fax or email within 96 hours. A report for each deviation from permit requirement shall be prepared by the project owner within two weeks after the initial detection of the deviation. Unless requested earlier by the APCO, these reports shall be submitted to the APCO as part of the project owner's quarterly monitoring report.

AQ-35 The project owner shall submit compliance certification reports to the U.S. EPA and the APCO every twelve months. The report shall be submitted every February 1. PG&E shall use District approved forms for the compliance certification and shall also include a written statement from the responsible official which certifies the truth, accuracy, and completeness of the report.

AQ-36 No annual testing requirement is specified for the sulfur dioxide limits specified in Conditions of Certification AQ-25 unless a test is requested by the APCO. All fuel burning equipment at the facility is expected to be in compliance with those limits due to being fired on CPUC regulated natural gas. At the request of the APCO, the project owner shall provide results of testing done to determine the sulfur content of the natural gas used as fuel at the facility.

AQ-37 Records of all CEM and support information shall include the following: 1) date, place and time of measurement or monitoring equipment maintenance activity; 2) operating conditions at the time of measurement or monitoring equipment maintenance activity; 3) date, place, name of company or entity that performed the measurement or monitoring equipment maintenance activity and the methods used; and 4) results of the measurement or monitoring equipment maintenance. The CEM and support information shall be retained for at least five years from date of collection of the measurements.

- AQ-38 The annual emission limits specified in Condition AQ-26 shall be based on a 12-month rolling average. The daily emission limits specified in condition AQ-25. shall be based on a 24-hour rolling average.
- AQ-39 Compliance with the NO<sub>x</sub>, CO, VOC and PM<sub>10</sub> emission limits specified in Conditions of Certification AQ-14, AQ-15, AQ-16 AQ-17, AQ-25 and AQ-26 shall be determined based on emissions source tests and the CEMs system.
- AQ-40 When conducting the source test required in Conditions of Certification AQ-7 and AQ-8, Method 20 (or subsequent or approved alternative method) shall be used to determine the nitrogen oxides, and oxygen concentrations. The NO<sub>x</sub> emissions shall be determined at a point within plus or minus 25 percent of 100 percent of peak load.
- AQ-41 The zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts for the continuous monitoring system shall be checked at least once daily. The zero and span must, as a minimum, be adjusted whenever either the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in Appendix B of part 60 of Title 40 of the Code of Federal Regulations. The system must allow the amount of excess zero and span to be recorded and quantified whenever specified.
- AQ-42 Except for CEM system breakdowns, repairs, calibration checks, and zero and span adjustments, the continuous monitoring system shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- AQ-43 The CEM shall reduce all data to 1-hour averages which shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of CEM breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages.
- AQ-44 The project owner shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the General Electric gas turbines; any malfunction of the air

pollution control equipment; or any periods during which the continuous monitoring system is inoperative.<sup>1</sup>

**AQ-45 The project owner shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems or devices recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.**

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<sup>1</sup> PTO Permit Condition 29.



**AIR QUALITY CONDITIONS OF CERTIFICATION APPENDIX**

**EMISSION REDUCTION CREDITS**

**Condition of Certification AQ-SC7  
Required Emission Reduction Credits <sup>a</sup>**

<b>ERC Certificate Number and Number Reduction Source Location Distance from Project</b>	<b>Pollutant</b>	<b>Total Q1 (lb)</b>	<b>Total Q2</b>	<b>Total Q3 (lb)</b>	<b>Total Q4 (lb)</b>	<b>Annual (lbs)</b>
<b>Stationary Source ERCs</b>						
Highway 70 Industrial Park, LP// Oroville, CA// Butte County <sup>b</sup> (Cert. 08-05-36, 08-05-37, 08-05-39) > 20 < 50 miles	NOx	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
	VOC	87,500.0	87,500.0	87,500.0	87,500.0	350,000.0
	PM10.	33,500.0	33,500.0	33,500.0	33,500.0	134,000.0
	SO <sub>2</sub>	0.0	0.0	0.0	0.0	0.0
PGE Credits/Gerber Compressor Station//Gerber, CA//Tehama County (Cert. 01-009) > 20 < 50 miles	NOx	15,995.9	15,995.9	15,995.9	15,995.9	63,983.6
	VOC	0.0	0.0	0.0	0.0	0.0
	PM10	352.2	352.2	352.2	352.2	1,408.8
	SO <sub>2</sub>	18.0	18.0	18.0	18.0	72.0
Jack W. Baber // Sierra Mountain Mills, Camptonville, CA // Yuba County <sup>c</sup> (Cert. ERC-9937006-00T)	NOx	420.0	707.0	641.0	501.0	2,269.0
	VOC	199.0	335.0	304.0	238.0	1,076.0
	SO <sub>2</sub>	166.0	279.0	254.0	198.0	897.0
<b>Agricultural Burn Cessation ERCs</b>						
Baber Family Trust // Colusa, CA // Colusa County <sup>d</sup> (Cert. 06-01-02-03) < 20 miles						
	SO <sub>2</sub>	212.5	171.4	68.6	233.1	685.6
Jack W. Baber and Judith S. Baber // Colusa, CA // Colusa County <sup>d</sup> (Cert. 06-01-02-04) < 20 miles						
	SO <sub>2</sub>	508.1	409.7	163.9	557.2	1,638.9
Estate of Jack W. Baber Jr.// Colusa, CA // Colusa County <sup>d</sup> (Cert. 06-01-02-05) < 20 miles						
	SO <sub>2</sub>	179.5	144.8	57.9	196.9	579.1
Pixie E. Baber // Colusa, CA// Colusa County <sup>d</sup> (Cert. 06-01-02-05.2) < 20 miles	NOx	809.0	625.5	261.0	887.3	2,582.8
	PM10	980.2	790.5	316.2	1,075.0	3,161.9
	SO <sub>2</sub>	171.1	138.0	55.2	187.7	552.0
Jack W. Baber and Judith S. Baber // Colusa, CA // Colusa County <sup>d</sup> (Cert. 06-01-02-06) < 20 miles	NOx	587.8	474.1	189.6	644.7	1,896.2
	VOC	531.3	428.5	171.4	582.7	1,713.9

ERC Certificate Number and Number Reduction Source Location Distance from Project	Pollutant	Total Q1 (lb)	Total Q2 (lb)	Total Q3 (lb)	Total Q4 (lb)	Annual (lbs)
<b>Stationary Source ERCs</b>						
<b>Highway 70 Industrial Park, LP // Oroville, CA // Butte County<sup>b</sup></b> (Cert. 08-05-36, 08-05-37, 08-05-39) > 20 < 50 miles	NOx	35,000.0	35,000.0	35,000.0	35,000.0	140,000.0
	VOC	87,500.0	87,500.0	87,500.0	87,500.0	350,000.0
	PM10	33,500.0	33,500.0	33,500.0	33,500.0	134,000.0
	SO <sub>2</sub>	0.0	0.0	0.0	0.0	0.0
<b>Jack W. Baber // Sierra Mountain Mills, Camptonville, CA // Yuba County<sup>c</sup></b> (Cert. ERC-9937006-00T) > 50 miles	NOx	420.0	707.0	641.0	501.0	2,269.0
	VOC	199.0	335.0	304.0	238.0	1,076.0
	PM10	6,034.0	10,156.0	9,218.0	7,201.0	32,609.0
	SO <sub>2</sub>	166.0	279.0	254.0	198.0	897.0
<b>Agricultural Burn Cessation ERCs</b>						
<b>Baber Family Trust // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-03) < 20 miles	NOx	1,004.8	810.3	324.1	1,102.0	3,241.2
	VOC	908.1	732.4	292.9	996.0	2,929.4
	PM10	1,217.3	981.7	392.7	1,335.1	3,926.8
	SO <sub>2</sub>	212.5	171.4	68.6	233.1	685.6
<b>Jack W. Baber and Judith S. Baber // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-04) < 20 miles	NOx	2,401.8	1,936.9	774.8	2,634.2	7,747.7
	VOC	2,170.8	1,750.7	700.3	2,380.9	7,002.7
	PM10	2,909.8	2,346.6	938.7	3,191.4	9,386.5
	SO <sub>2</sub>	508.1	409.7	163.9	557.2	1,638.9
<b>Estate of Jack W. Baber Jr. // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-05) < 20 miles	NOx	848.5	684.3	273.7	930.7	2,737.2
	VOC	767.0	618.5	247.4	841.2	2,474.1
	PM10	1,028.0	829.1	331.6	1,127.5	3,316.2
	SO <sub>2</sub>	179.5	144.8	57.9	196.9	579.1
<b>Pixie E. Baber // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-05.2) < 20 miles	NOx	809.0	625.5	261.0	887.3	2,582.8
	VOC	731.2	589.7	235.9	802.0	2,358.8
	PM10	980.2	790.5	316.2	1,075.0	3,161.9
	SO <sub>2</sub>	171.1	138.0	55.2	187.7	552.0
<b>Jack W. Baber and Judith S. Baber // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-06) < 20 miles	NOx	587.8	474.1	189.6	644.7	1,896.2
	VOC	531.3	428.5	171.4	582.7	1,713.9
	PM10	712.2	574.3	229.7	781.1	2,297.3
	SO <sub>2</sub>	124.3	100.3	40.1	136.4	401.1
<b>Inez Garrette // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-07) < 20 miles	NOx	195.9	158.0	63.2	214.9	632.0
	VOC	177.1	142.8	57.1	194.2	571.2
	PM10	237.4	191.4	76.6	260.4	765.8
	SO <sub>2</sub>	41.4	33.4	13.4	45.5	133.7

<b>Jack W. Baber and Judith S. Baber // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-08) < 20 miles	NOx	2,083.5	1,680.2	672.1	2,285.1	6,720.9
	VOC	1,883.1	1,518.7	607.5	2,065.4	6,074.7
	PM10	2,524.2	2,035.6	814.3	2,768.5	8,142.6
	SO <sub>2</sub>	440.7	355.4	142.2	483.4	1,421.7
<b>Jack W. Baber Jr. // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-09) < 20 miles	NOx	1,577.2	1,271.9	508.8	1,729.8	5,087.7
	VOC	1,425.5	1,149.6	459.9	1,563.5	4,598.5
	PM10	1,910.8	1,541.0	616.4	2,095.7	6,163.9
	SO <sub>2</sub>	333.6	269.1	107.6	365.9	1,076.2
<b>Davis Ranches // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-7-2001-1) > 20 miles < 50 miles	NOx	13,034.2	10,511.5	4,204.6	14,295.6	42,045.9
	VOC	11,780.9	9,500.7	3,800.3	12,921.0	38,002.9
	PM10	15,791.4	12,735.0	5,094.0	17,319.6	50,940.0
	SO <sub>2</sub>	2,752.2	2,223.6	889.4	3,024.1	8,889.3
<b>Gunnersfield Ent., Inc. // Maxwell, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-02) < 20 miles	NOx	5,616.0	4,529.0	1,811.6	6,159.4	18,116.0
	VOC	5,076.0	4,093.5	1,637.4	5,567.2	16,374.1
	PM10	6,803.9	5,487.0	2,194.8	7,462.4	21,948.1
	SO <sub>2</sub>	1,188.0	958.1	383.2	1,303.0	3,832.3
<b>Jon B. Chaney // Maxwell, CA // Colusa County<sup>d</sup></b> (Cert. 06-01-02-01) < 20 miles	NOx	2,104.1	1,696.9	678.5	2,307.8	6,787.3
	VOC	1,901.8	1,533.7	613.5	2,085.9	6,134.9
	PM10	2,549.3	2,055.8	822.3	2,796.0	8,223.4
	SO <sub>2</sub>	445.1	359.0	143.6	488.2	1,435.9
<b>Jack DeWit // Maxwell, CA // Colusa County<sup>d</sup></b> (Cert. 06-07-02-05) < 20 miles	NOx	1,143.0	921.8	368.7	1,253.7	3,687.2
	VOC	1,033.1	833.2	333.3	1,133.1	3,332.7
	PM10	1,384.8	1,116.8	446.7	1,518.8	4,467.1
	SO <sub>2</sub>	241.8	195.0	78.0	265.2	780.0
<b>Jerry Maltby et. al. // Williams, CA // Colusa County<sup>d</sup></b> (Cert. 06-06-11-01) < 20 miles	NOx	4,522.5	3,647.2	1,458.9	4,960.2	14,588.8
	VOC	4,087.7	3,296.5	1,318.6	4,483.3	13,186.1
	PM10	5,479.2	4,418.7	1,767.5	6,009.5	17,674.9
	SO <sub>2</sub>	956.7	771.5	308.6	1,049.3	3,086.1
<b>Keeley Family Limited Partnership // Colusa, CA // Colusa County<sup>d</sup></b> (Cert. 06-07-06-01) < 20 miles	NOx	1,685.2	1,359.0	543.6	1,848.2	5,436.0
	VOC	1,523.1	1,228.3	491.3	1,670.5	4,913.3
	PM10	2,041.6	1,646.5	658.6	2,239.2	6,585.9
	SO <sub>2</sub>	356.5	287.5	115.0	391.0	1,149.9
<b>Jim Lagrande // Colusa, CA // Colusa County<sup>e</sup></b> (Cert. 06-01-03-01) < 20 miles	NOx	1,315.0	1,118.2	567.0	1,448.9	4,449.1
	VOC	1,192.2	1,110.7	634.7	1,312.5	4,250.1
	PM10	1,598.0	1,496.9	864.4	1,758.3	5,717.6
	SO <sub>2</sub>	279.0	242.7	119.6	305.5	946.8
<b>Charles Tuttle, Gordon Ranch // Maxwell, CA // Colusa County<sup>e</sup></b> (Cert. 06-07-02-01) < 20 miles	NOx	1,592.3	1,448.5	789.1	1,750.8	5,580.7
	VOC	1,439.2	1,451.0	951.0	1,586.3	5,427.5
	PM10	1,929.2	1,960.9	1,301.1	2,126.8	7,318.0
	SO <sub>2</sub>	336.8	306.0	166.3	370.3	1,179.5

<b>Charles Tuttle, Tenant Ranch // Maxwell, CA // Colusa County</b> <sup>f</sup> (Cert. 06-07-02-03) < 20 miles	NOx	1.6	118.8	352.8	3.2	476.4
	VOC	5.1	210.0	857.5	5.7	1,078.3
	PM10	5.1	292.9	1,095.4	7.9	1,401.3
	SO <sub>2</sub>	0.2	24.9	62.2	0.7	88.0
<b>Charles Tuttle, Helphenstine Ranch // Maxwell, CA // Colusa County</b> <sup>g</sup> (Cert. 06-07-02-02) < 20 miles	NOx	0.0	85.8	143.8	2.3	232.0
	VOC	0.0	151.7	254.2	4.1	410.0
	PM10	0.0	211.6	354.5	5.7	571.8
	SO <sub>2</sub>	0.0	18.0	30.1	0.5	48.5
<b>Charles Tuttle, Williams Ranch // Maxwell, CA // Colusa County</b> <sup>g</sup> (Cert. 06-07-02-04) < 20 miles	NOx	0.0	60.9	102.1	1.6	164.7
	VOC	0.0	107.7	180.4	2.9	291.0
	PM10	0.0	150.2	251.7	4.1	405.9
	SO <sub>2</sub>	0.0	12.8	21.4	0.3	34.5
<b>William Payne // Woodland, CA // Sutter County</b> <sup>d</sup> (Cert. ERC 2001-26) > 20 miles < 50 miles	NOx	1,701.0	1,874.0	3,033.0	1,901.0	8,509.0
	VOC	1,538.0	2,362.0	8,034.0	1,718.0	13,652.0
	PM10	2,061.0	3,240.0	9,931.0	2,303.0	17,535.0
	SO <sub>2</sub>	360.0	395.0	489.0	402.0	1,646.0

Source: E&LW, 2006d.

<sup>a</sup> The quantities listed are the certificate totals. The total quantity required for offsetting may be less than the total for each pollutant shown above, and those remaining credits can be retained by the applicant at their discretion after surrendering the amounts required as shown in Condition of Certification AQ-SC7.

<sup>b</sup> These emission reductions were the result of the permanent shutdown of the Louisiana Pacific fiberboard production plant and associated emission sources (hardboard production line, two boilers, etc.) in Oroville.

<sup>c</sup> These emission reductions were the result of the permanent shutdown of two wood-fired boilers at Sierra Mountain Mills.

<sup>d</sup> Agricultural burn cessation crop is rice for these sources.

<sup>e</sup> Agricultural burn cessation crop is rice and wheat for these sources.

<sup>f</sup> Agricultural burn cessation crop is safflower and wheat for this source.

<sup>g</sup> Agricultural burn cessation crop is wheat for these sources.