

- The petition meets all the filing criteria of Title 20, section 1769(a) of the California Code of Regulations concerning post-certification project modifications;
- The modification will not change the findings in the Energy Commission's Final Decision pursuant to Title 20, 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 and the project owner because the Starwood Project will continue to operate in compliance with both the Air District Permit and the Energy Commission Conditions of Certification; and
- There has been a substantial change in circumstances since the Energy Commission certification justifying the change, and the change is based on information that was not available to the parties prior to Energy Commission certification because the changes will permit emissions based on the history of actual operations as opposed to original modeling assumptions. The change(s) will also reestablish consistency between the Energy Commission conditions and the Permit to Operate issued by the Air District.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts Staff's recommendations and approves the following changes to the Commission Decision for the Starwood Power Project. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

CONDITIONS OF CERTIFICATION

AQ-1 The Conditions of Certification contained herein reference ATC C-7286-1-1, '-2-1, '-3-1 and '-4-1. [District Rule 2201]

Verification: No verification necessary.

AQ-42 Prior to initial operation of C-7286-1-0, C-7286-2-0, C-7286-3-0 or C-7286-4-0, the project owner shall provide NO_x (as NO₂) emission reduction credits for the following quantities of emissions: 1st quarter – 8,968 lb; 2nd quarter – 8,968 lb; 3rd quarter – 15,692 lb; and 4th quarter - 11,208 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201. [District Rule 2201]

Verification: At least 60 days prior to commencing CTG first fire, the project owner shall surrender NO_x ERC certificates in the amounts shown to the District and provide documentation of that surrender to the CPM.

AQ-3 Prior to operating under the modifications authorized by Authorities to Construct C-7286-1-1, '-2-1, '-3-1 or '-4-1, permittee shall provide NO_x (as NO₂) emission reduction credits for the following quantities of emissions: 1st quarter – 1,033 lb; 2nd quarter – 1,033 lb; 3rd quarter – 1,807 lb; and

4th quarter – 1,291 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201. [District Rule 2201]

Verification: **Prior to operating under the modifications authorized by Authorities to Construct C-7286-1-1, '-2-1, '-3-1 or '-4-1, the project owner shall surrender NOx ERC certificates in the amounts shown to the District and provide documentation of that surrender to the CPM.**

AQ-24 Prior to initial operation of C-7286-1-0, C-7286-2-0, C-7286-3-0 or C-7286-4-0, the project owner shall provide PM10 emission reduction credits for the following quantities of emissions: 1st quarter – 2,102 lb; 2nd quarter – 2,103 lb; 3rd quarter – 3,679 lb; and 4th quarter – 2,628 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201. SOx ERC's may be used to offset PM10 increases at an interpollutant ratio of 1.867 lb-SOx : 1.0 lb-PM10. [District Rule 2201]

Verification: At least 60 days prior to commencing CTG first fire, the project owner shall surrender PM10 and/or SOx ERC certificates in the amounts shown or based on the SOx interpollutant ratio shown to the District and provide documentation of that surrender to the CPM.

AQ-35 ERC certificate numbers (or any splits from these certificates) **N-820-2**, **S-2382-2**, **S-3086-2**, **S-3097-2** and **S-2459-5**~~S-2492-5~~ shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this determination of compliance (DOC) shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of the DOC. [District Rule 2201]

Verification: At least 60 days prior to commencing CTG first fire, the project owner shall surrender ERC certificates in the amounts shown to the District and provide documentation of that surrender to the CPM.

AQ-46 The project owner shall submit an application to comply with SJVAPCD District Rule 2520 - Federally Mandated Operating Permits within twelve months after commencing operation. [District Rule 2520]

Verification: The project owner shall submit a copy of their Title V – Federal Mandated Operating Permit Application to the CPM within 12 months of commencing operation.

AQ-57 The project owner shall submit an application to comply with SJVAPCD District Rule 2540 - Acid Rain Program. [District Rule 2540]

Verification: The project owner shall submit to the CPM copies of the Title IV permit at least fifteen (15) days prior to the initial firing of the CTG, and shall submit proof that necessary Title IV SO₂ emission allotments have been acquired as necessary for compliance with Title IV requirements annually in the first Quarterly Compliance Report (**AQ-SC10**) that is due after the annual SO₂ allotment due date.

AQ-68 District facilities C-3811 and C-7286 are the same stationary source for District permitting purposes. [District Rule 2201]

Verification: The project owner shall maintain operation and emissions data for facilities C-3811 and C-7286 available for inspection by representatives of the District, CARB and the Commission.

AQ-79 The owner/operator of the Starwood Power-Midway, LLC (Starwood Power) shall minimize the emissions from the gas turbines to the maximum extent possible during the commissioning period. Conditions **AQ-79** through **AQ-1921** shall apply only during the commissioning period as defined below. Unless otherwise indicated, Conditions **AQ-2022** through **AQ-8186** shall apply after the commissioning period has ended. [District Rule 2201]

Verification: The project owner shall provide in the monthly commissioning status report (see the verification for Condition **AQ-1416**) information regarding the types and effectiveness of methods used to minimize commissioning period emissions.

AQ-810 Commissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the Starwood Power construction contractor to insure safe and reliable steady state operation of the gas turbines and associated electrical delivery systems. [District Rule 2201]

Verification: The project owner shall provide written notification to the APCO and the CPM of the expected date of first turbine roll at least 15 days before the first turbine roll.

AQ-911 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 project owner shall provide written notification to the APCO and the CPM of the expected date of first turbine roll at least 15 days before the first turbine roll. The project owner shall provide written notification to the APCO within 5 day after the turbines are available for commercial operation.

AQ-1012 No more than one Swiftpac Unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) shall be operated at any one time during the commissioning period. [District Rule 2201].

Verification: The project owner shall provide operating data to demonstrate compliance with this condition, and that information shall be submitted to the CEC CPM as part of the monthly commissioning status report noted in the verification of Condition **AQ-1416**.

AQ-4113 At the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of these units shall be tuned to minimize emissions. [District Rule 2201]

Verification: The project owner shall provide combustor tuning information to demonstrate compliance with this condition, and that information shall be submitted to the CEC CPM as part of the monthly commissioning status report noted in the verification of Condition **AQ-4416**.

AQ-4214 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 these units. [District Rule 2201]

Verification: The project owner shall provide emission abatement system information (such as dates of catalyst installation and ammonia grid initial operation) to demonstrate compliance with this condition, and that information shall be submitted to the CEC CPM as part of the monthly commissioning status report noted in the verification of Condition **AQ-4416**.

AQ-4315 Coincident with the steady-state operation of the SCR system and the oxidation catalyst, NO_x and CO emissions from these units shall comply with the limits specified in Condition **AQ-2931**. [District Rule 2201]

Verification: The project owner shall provide NO_x and CO emissions information for steady-state operations of the SCR system and oxidation catalyst to demonstrate compliance with this condition, and that information shall be submitted to the CEC CPM as part of the monthly commissioning status report noted in the verification of Condition **AQ-4416**.

AQ-4416 The project owner shall submit a plan to the District at least four weeks prior to the first firing of these units, 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_x 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 a single commissioning plan to the District and the CPM at least four weeks prior to the first firing of the combustion turbine, describing in detail the procedures to be followed for the turbines. 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 commissioning plan and demonstrates compliance with all other substantive requirements listed in Conditions **AQ-79** through **AQ-1921**. The monthly commissioning status report shall be submitted to the CPM by the 10th of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date.

AQ-4517 Emission rates from each CTG, during the commissioning period, shall not exceed any of the following limits: NO_x (as NO₂) – 41.65 lb/hr; CO – 21.33 lb/hr; VOC (as methane) – 0.83 lb/hr; PM₁₀ – 1.85 lb/hr; or SO_x (as SO₂) – 0.89 lb/hr. [District Rule 2201]

Verification: The project owner shall provide CEM-derived emissions data for NO_x and CO and shall provide calculated PM₁₀ and VOC emissions from fuel consumption data and source test results to demonstrate compliance with this condition as part of the quarterly operation report (**AQ-SC10**).

AQ-4618 During the commissioning period, the project owner shall demonstrate compliance with the NO_x and CO limits specified in Condition **AQ-4517** through the use of properly operated and maintained continuous emissions monitors and recorders as specified in Conditions **AQ-5356** and **AQ-5457**. The monitored parameters for these units 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 CEM data to demonstrate compliance with Conditions **AQ-4315**, **AQ-4517**, and **AQ-2931** and that data shall be submitted to the CEC CPM as part of the monthly commissioning phase status report noted in the verification of Condition **AQ-4416**.

AQ-4719 The continuous monitors shall be installed, calibrated, and operational prior to the first firing of these units. After first firing, the detection range of the CEMS shall be adjusted as necessary to accurately measure the resulting range of NO_x and CO emission concentrations from each CTG and each Swiftpac unit. [District Rule 2201]

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 ten (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 ongoing calibration data in the monthly commissioning status reports (see verification of Condition **AQ-14**).

AQ-4820 The total number of firing hours of each CTG without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours during the commissioning period. Such operation of each CTG 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 100 firing hours without abatement shall expire. [District Rule 2201]

Verification: The project owner shall provide to the District and the CPM a reporting of the number of firing hours without abatement for the turbine in the monthly commissioning status reports (see verification of Condition **AQ-1416**).

AQ-1921 The total mass emissions of NO_x, CO, VOC, PM₁₀, and SO_x that are emitted during the commissioning period shall accrue towards the consecutive twelve month emission limits specified in Condition **AQ-4042**. [District Rule 2201]

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

AQ-2022 A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve each Swiftpac unit. 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 shall submit SCR and oxidation catalyst design details that demonstrate compliance with this condition to the APCO and the CPM 30 days prior to commencement of construction.

AQ-2123 The 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 shall submit continuous emission monitor design, installation, and operational details to the APCO and the CPM 30 days prior to commencement of construction.

AQ-2224 The project owner shall submit to the District before issuance of the Permit to Operate information correlating the NO_x control system operating parameters to the associated measured NO_x output. The information must be sufficient to allow the District to determine compliance with the NO_x emission limits of this permit when no continuous emission monitoring data for NO_x is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]

Verification: The project owner shall compile the required NO_x control system and emissions data and submit the information to the CPM and the APCO before issuance of the Permit to Operate.

AQ-2325 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: The project owner shall submit maintenance records for all equipment to the CPM and the APCO in the Quarterly Operation Report (**AQ-SC10**).

AQ-2426 No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

Verification: The project owner will document any complaints that it has received from the public in the Quarterly Operation Report (**AQ-SC10**). The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission.

AQ-2527 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% opacity. [District Rule 4101]

Verification: The project owner shall document any known opacity violations in the Quarterly Operation Report (**AQ-SC10**). The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission.

AQ-2628 Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Verification: The project owner shall submit the results of the initial and annual source tests per Condition **AQ-4750**.

AQ-2729 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% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission to verify the installation and proper operation of the lube oil vent mist eliminators.

AQ-2830 The CTGs shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain 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 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 Report (**AQ-SC10**).

AQ-2931 Emission rates from each CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) – 2.8 lb/hr and 2.5 ppmvd @ 15% O₂; CO – 4.19 lb/hr and 6.0 ppmvd @ 15% O₂; VOC (as methane) – 0.82 lb/hr and 2.0 ppmvd @ 15% O₂; PM₁₀ – 1.85 lb/hr; or SO_x (as SO₂) – 0.89 lb/hr. NO_x (as NO₂) 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 and APCO CTG emissions data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3032 Combined emission rates from the two Swiftpac unit CTG's operating under permit units C-7286-1 and C-7286-2, and the two Swiftpac unit CTG's operating under permit units C-7286-3 and C-7286-4, except during startup and shutdown periods, shall not exceed any of the following Swiftpac two turbine limits: NO_x (as NO₂) – 5.6 lb/hr and 2.5 ppmvd @ 15% O₂; CO – 8.38 lb/hr and 6.0 ppmvd @ 15% O₂; VOC (as methane) – 1.64 lb/hr and 2.0 ppmvd @ 15% O₂; PM₁₀ – 3.70 lb/hr; or SO_x (as SO₂) – 1.78 lb/hr. NO_x (as NO₂) 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 and APCO CTG emissions data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3133 The ammonia (NH₃) emissions from each CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O₂ over a 24 hour rolling average. [District Rules 2201 and 4102]

Verification: The project owner shall submit to the CPM and APCO CTG emissions data demonstrating compliance with this condition, using approved calculation methods (**AQ-4447**), as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3234 During start-up of each CTG, exhaust emission rates for that CTG shall not exceed any of the following limits: NO_x (as NO₂) – 4.47~~30.0~~ lb/hr; CO – 12.5 lb/hr; VOC (as methane) – 0.83 lb/hr; PM₁₀ – 1.85 lb/hr; or SO_x (as SO₂) – 0.89 lb/hr, based on a ~~one-hour~~ **per event** average. [District Rules 2201 and 4703]

Verification: The project owner shall submit to the CPM and APCO CEM-derived emissions data for NO_x and CO (except when source testing is required for startups) and shall provide calculated PM₁₀ and VOC emission from fuel consumption data and source test results to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3335 During shutdown of each CTG exhaust emission rates for that CTG shall not exceed any of the following limits: NO_x (as NO₂) – 1.50 lb/hr; CO – 21.33 lb/hr; VOC (as methane) – 0.83 lb/hr; PM₁₀ – 1.85 lb/hr; or SO_x (as SO₂) – 0.89 lb/hr, based on a ~~one-hour~~ **per event** average. [District Rules 2201 and 4703]

Verification: The project owner shall submit to the CPM and APCO CEM-derived emissions data for NO_x and CO (except when source testing is required for shutdowns) and shall provide calculated PM₁₀ and VOC emission from fuel consumption data and

source test results to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3436 Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. 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 shall submit to the CPM and APCO the CTG startup and shutdown event duration data demonstrating compliance with Condition **AQ-3537** as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3537 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 APCO the CTG startup and shutdown event duration data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3638 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 APCO the CTG startup and shutdown emissions data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-3739 Daily emissions from each CTG shall not exceed any of the following limits: NOx (as NO₂) – ~~67.3~~**79.8** lb/day; CO – ~~126.0~~**117.6** lb/day; VOC – 19.7 lb/day; PM₁₀ – 44.4 lb/day; or SO_x (as SO₂) – 21.4 lb/day. [District Rule 2201]

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 Report (**AQ-SC10**).

AQ-3840 Combined daily emissions from the two Swiftpac unit CTG's operating under permit units C-7286-1 and C-7286-2, and the two Swiftpac unit CTG's operating under permit units C-7286-3 and C-7286 shall not exceed any of the following Swiftpac two turbine limits: NOx (as NO₂) – ~~134.6~~**159.6** lb/day; CO – ~~252.0~~**235.2** lb/day; VOC – 39.4 lb/day; PM₁₀ – 88.8 lb/day; or SO_x (as SO₂) – 42.8 lb/day. [District Rule 2201]

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 Report (**AQ-SC10**).

AQ-3941 Quarterly hours of operation of each CTG shall not exceed any of the following limits: 1st Quarter – 800 hours, 2nd Quarter – 800 hours, 3rd Quarter – 1,400 hours, or 4th Quarter – 1,000 hours. [District Rule 2201]

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

AQ-4042 Annual emissions from each CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NO_x (as NO₂) – ~~41,209~~**12,736** lb/year; CO – ~~49,546~~**18,826** lb/year; VOC – ~~3,320~~**3,281** lb/year; PM₁₀ – 7,400 lb/year; or SO_x (as SO₂) – 3,560 lb/year. [District Rule 2201]

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 Report (**AQ-SC10**).

AQ-4143 Combined annual emissions from the two Swiftpac unit CTG's operating under permit units C-7286-1 and C-7286-2, and the two Swiftpac unit CTG's operating under permit units C-7286-3 and C-7286-4 calculated on a twelve consecutive month rolling basis, shall not exceed any of the following Swiftpac two turbine limits: NO_x (as NO₂) – ~~22,416~~**25,742** lb/year; CO – ~~39,096~~**37,652** lb/year; VOC – ~~6,400~~**6,562** lb/year; PM₁₀ – 14,800 lb/year; or SO_x (as SO₂) – 7,120 lb/year. [District Rule 2201]

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 Report (**AQ-SC10**).

AQ-44 The combined annual NO_x emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201]

Verification: The project owner shall compile required emission compliance data using these standards and shall submit the information to the CPM and the APCO as part of the Quarterly Operation Report (AQ-SC10).

AQ-4245 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 compile required emission compliance data using these standards and shall submit the information to the CPM and the APCO as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-4346 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 compile required emission compliance data using these standards and submit the information to the CPM and the APCO as part of the Quarterly Operation Report (**AQ-SC10**).

AQ-4447 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: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c / 1,000,000)) \times (1,000,000 / b)) \times d$, 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 NOx concentration ppmvd @ 15% O2 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% O2. 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 shall submit for approval their proposed ammonia calculation procedure using one of the methods identified above to the CPM and the APCO for approval 15 days prior to turbine first fire, and then submit to the CPM and APCO for approval any requested modifications to the calculation procedure, not including revised source test correction factors, at least 15 days prior to the Quarterly Operation Report (**AQ-SC10**) where the modified calculation procedure is first used.

AQ-4548 Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7286-1, C-7286-2, C-7286-3, or C-7286-4) prior to the end of the commissioning period and at least once every seven years thereafter. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

Verification: 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 for the CTG upon initial operation, and at least once every seven years.

AQ-4649 Initial source testing to determine compliance with the NO_x, CO and VOC emission rates (lb/hr and ppmvd @ 15% O₂) NH₃ emission rate (ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted within 120 days after initial operation. Initial source testing shall be conducted while unit C-7286-1 is operating independently and while unit C-7286-2 is operating independently and while units C-7286-1 and C-7286-2 are operating simultaneously. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

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-47** Source testing to determine compliance with the NO_x, CO, VOC and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every 12 months. Source testing shall be conducted while units C-7286-1 and C-7286-2 and units C-7286-3 and C-7286-4 are operating simultaneously. If any of units C-7286-1, C-7286-2, C-7286-3, or C-7286-4 are operated independently for more than 400 hours during any given calendar year, source testing for those units shall also be conducted while they are operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]~~

~~**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-50 Source testing to determine compliance with NO_x, CO, VOC and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of both units within a Swiftpac combined is less than 877 hours during any 12 consecutive month rolling period. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

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-51 Source testing shall be conducted while both units within a Swiftpac are operating simultaneously. If one unit operates independently from the other unit within the same Swiftpac for more than 400 hours during any given calendar year, source testing shall also be conducted while that unit is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

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-4852 The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

Verification: The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the CPM and the APCO in the Quarterly Operation Report (**AQ-SC10**).

AQ-4953 The following test methods shall be used: NO_x - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM₁₀ - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O₂ - EPA Method 3, 3A, or 20. 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)]

Verification: The project owner shall notify the CPM and the District 30 days prior to any compliance source test. The project owner shall provide a source test plan to the CPM and District for the CPM and District approval 15 days prior to testing.

AQ-5054 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 fuel sulfur content data shall be submitted to the CPM and the APCO in the Quarterly Operation Report (**AQ-SC10**).

AQ-5155 The exhaust stacks shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

Verification: Prior to construction of the turbine stacks the project owner shall provide to the CPM for approval detailed plan drawings of the turbine stacks that show the sampling ports and demonstrate compliance with the requirements of this condition. The project owner shall make the site available for inspection of the turbine stacks by representatives of the District, CARB and the Commission.

AQ-5256 Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified 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 shall notify the CPM and the District 30 days prior to any compliance source test. The project owner shall provide a source test plan to the CPM and District for approval 15 days prior to testing. The results and field data collected during source tests shall be submitted to the CPM and the District within 60 days of testing.

AQ-5357 Each CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

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

AQ-5458 The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns, 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 shall make the site available for inspection by representatives of the District, CARB and the Commission to verify the continuous monitoring system is properly installed and operational.

AQ-5559 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: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC10).

AQ-5660 The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 75, Appendix A, ~~60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS-2)~~, 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 submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC10).

AQ-5761 The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every Quality Assurance (QA) operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. 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 Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B]~~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 shall submit to the CPM and APCO the CEMS audits demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC10).

AQ-5862 The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO and O₂ CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two Quality Assurance (QA) operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 have been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted.~~60, Appendix F, 5.11, 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 75, Appendices A and B~~~~60,~~

Appendix F. [District Rule 1080, **40 CFR 60.4345(a) and 40 CFR 75, Appendices A and B**]

Verification: The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC10).

AQ-63 **For the purposes of performing quarterly audits and RATA on the CEMS, a Quality Assurance (QA) operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72]**

Verification: **The project owner shall submit to the CPM and APCO emission data required in the Quarterly Operation Reports (AQ-SC10) that follows the definitions of this condition.**

AQ-5964 Results of the CEM system shall be averaged over a one hour period for NO_x 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: The project owner shall submit to the CPM and APCO emission data required in the Quarterly Operation Reports (AQ-SC10) that follows the definitions of this condition.

AQ-6065 Excess **NO_x** emissions shall be defined as any operating hour in which the **1-hour**~~4-hour or 30-day~~ rolling average NO_x concentration exceeds applicable emissions limit and 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_x or O₂ (or both). [40 CFR **60.4350(g)**~~60.4380(b)(1)~~]

Verification: The project owner shall submit to the CPM and APCO emission data and monitor downtime data in the Quarterly Operation Reports (AQ-SC10) that follows the definitions of this condition.

AQ-6166 Results of continuous emissions monitoring shall be reduced according to the procedures established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080]

Verification: The project owner shall submit to the CPM and APCO emission data required in the Quarterly Operation Reports (AQ-SC10) that follows the definitions of this condition.

AQ-6267 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 provide a Continuous Emission Monitoring System (CEMS) protocol for approval by the CPM and the APCO at least 60 days prior to installation of the CEMS. The project owner shall make the site available for inspection of the CEMS by representatives of the District, CARB and the Commission.

AQ-6368 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 required non-pollled CEM data to the District by a District-approved alternative method.

AQ-6469 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 submit to the CPM and APCO CEMS summary data upon written notice from the APCO.

AQ-6570 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 NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventative 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 shall submit to the CPM and APCO the CEMS audits demonstrating compliance with this condition as part of the Quarterly Operation Report required by this condition and condition **AQ-SC10**.

AQ-6671 APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission to verify monitoring devices are functioning properly.

AQ-6772 The 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 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 Report (**AQ-SC10**).

AQ-6873 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 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 Report (**AQ-SC10**).

AQ-6974 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 shall make the site available for inspection of records by representatives of the District, CARB and the Commission.

AQ-7075 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, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

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

AQ-7176 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 shall make the site available for inspection of records by representatives of the District, CARB and the Commission.

AQ-7277 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 shall document compliance with Rule 8021 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7378 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 submit a Dust Control Plan to the CPM and APCO at least 30 days prior to the start of any construction activities to show compliance with this condition and Condition **AQ-SC2**.

AQ-7479 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 shall document compliance with Rule 8041 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7580 Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

Verification: The project owner shall document compliance with Rule 8051 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7681 Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

Verification: The project owner shall document compliance with Rule 8061 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7782 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% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

Verification: The project owner shall document compliance with Rule 8071 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7883 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% opacity. [District Rule 8011 and 8071]

Verification: The project owner shall document compliance with Rule 8071 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-7984 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, the 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% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

Verification: The project owner shall document compliance with Rule 8071 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-8085 Whenever any portion of the site becomes inactive, the 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 shall document compliance with Rules 8011 and 8071 in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

AQ-8486 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 document compliance with Regulation VIII rules in the Monthly Compliance Report (**AQ-SC3**), and as necessary after construction is complete in the Quarterly Operation Report (**AQ-SC10**).

IT IS SO ORDERED.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on March 14, 2012.

AYE: Weisenmiller, Douglas, Peterman

NAY: None

ABSENT: None

ABSTAIN: None

*Harriet Kallemeyn,
Secretariat*