STARWOOD POWER-MIDWAY, LLC PEAKING PROJECT (06-AFC-10)

AMENDMENT NO. 4

SUBMITTED TO THE CALIFORNIA ENERGY COMMISSION

JULY 2011

SUBMITTED BY
Starwood Power-Midway LLC

STARWOOD ENERGY GROUP

WITH SUPPORT FROM
URS

4225 Executive Square, Suite 1600 | La Jolla, CA 92037 | 858.812.9292

This Page Intentionally Left Blank

URS

July 8, 2011

Christine Stora
Compliance Project Manager
California Energy Commission
1516 9th Street
Sacramento CA, 95814

Subject: Starwood Power-Midway, LLC Peaking Project Amendment (06-AFC-10), Amendment No. 4
URS Project/Reference No. 27656131.00900

Dear Ms. Stora:

On behalf of Starwood Power-Midway, LLC, URS Corporation Americas (URS) hereby submits Amendment No. 4 for the Starwood Power-Midway Project.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.

Sincerely,

URS CORPORATION

Angela Leiba, Vice President
Senior Project Manager/ Environmental
Department Manager

AL:kl

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

TABLE OF CONTENTS

TABLE OF CONTENTS

Tables

Executive Summary

Starwood Power-Midway, LLC hereby petitions for a modification to the California Energy Commission (CEC) Air Quality Conditions of Certification contained in the CEC Final Commission Decision (CEC-800-2007-007-CMF) for the Starwood Power-Midway, LLC Peaking Project (Project). Starwood Power-Midway, LLC is proposing a modification to the AQ-32 Condition of Certification, regarding startup emissions, that includes an increase in the quantity of oxides of nitrogen (NO_x) emissions during the startup period. Starwood Power-Midway, LLC is also proposing modifications to 17 other Air Quality Conditions of Certification and the addition of five new Conditions of Certification (23 total). All modified and new Conditions of Certification are related to the change in the startup emissions and clarifications in testing requirements.

The Starwood Power-Midway, LLC Peaking Project is a simple-cycle electric generating facility. The facility utilizes two (2) FT8-3 SwiftPac Combustion Turbine Generator (CTG) units installed in a simple-cycle power plant arrangement. The approved and operating Project is located on a 5.6 acre site within Fresno County, located adjacent to the Panoche Hills and east of the San Benito County line. It is approximately 50 miles west of the City of Fresno and approximately 2.0 miles east of Interstate 5 (I-5).

The current AQ-32 Condition of Certification requires that the Project shall not exceed any of the following limits during startup of each of the gas turbines: NO_x (as nitrogen dioxide [NO2]) - 4.17 pounds per hour (lb/hr); carbon monoxide (CO) - 12.5 lb/hr; volatile organic compounds (VOC as methane) - 0.83 lb/hr; or oxides of sulfur (SO_x as sulfur dioxide [SO2]) - 0.89 lb/hr; based on a one hour rolling average.

The proposed modification to the AQ-32 Condition of Certification includes changing the limits for NO_x emissions during start up of each turbine to 30 lb/hour and basing all startup emissions on a per event average. Several related conditions are subsequently affected by this change. Raising the limit and shortening the duration of the startup emissions will have a direct impact on the total daily and annual emissions, and thus affects conditions AQ-37, AQ-38, AQ-40 and AQ-41. Starwood is additionally requesting changes to other Conditions of Certification to make them more consistent with the actual operating mode of the facility and our experience in the area. All changes in the Conditions of Certification are outlined in Table 2-1 and Section 4.

This proposed modification to the Air Quality Conditions of Certification is designed and structured to assure compliance with CEC Siting Regulations (California Code of Regulations [CCR] Title 20, Section 1769, Post Certification Amendments and Changes). This Amendment includes seven (7) sections that address specific requirements set forth by the CEC. Section 1 provides an overview of the proposed modification and review of the ownership of the Project, the necessity for the proposed modification, and the consistency of the modification with the Commission Decision certifying the facility. Section 2 provides a complete description of the proposed modification. Section 3 assesses the potential environmental effects of the proposed modification in terms of each environmental discipline area. This assessment indicates that the adoption of this Amendment will not result in any significant, unmitigated adverse environmental impacts. In addition, the Midway Project will continue to comply with all applicable laws, ordinances, regulations and standards (LORS). The findings contained in the Midway 2006 Application for Certification (AFC) and the CEC Conditions of Certifications contained in the

January 2008 Final Commission Decision are still applicable to this Amendment. The proposed modifications to the Air Quality Conditions of Certification are located in Section 4.

SECTION 1 INTRODUCTION

1.1 OVERVIEW OF AMENDMENT

Starwood Power-Midway, LLC hereby petitions for a modification to the AQ-32 Condition of Certification for the Starwood Power-Midway, LLC Peaking Project and all related Conditions of Certification that are directly impacted by the proposed changes to AQ-32. The proposed modification is a result of changes to equipment made during construction and erroneous calculations of the start-up emissions resulting from a late stage change in the Final Determination of Compliance issued by the San Joaquin Valley Air Pollution Control District (SJVAPCD) that was not carried over in the calculations of the final permit condition. The proposed modification to the AQ-32 and all related Conditions of Certification for the Midway Project will be referred to in this document as the "proposed modification".

In addition to the changes in permitted emission limits, Midway is requesting changes to certain other permit conditions. Specifically, Midway is requesting that the following changes be made to quality assurance/ quality control (QA/QC) conditions in the permit to operate (PTO).

- Condition 3: Applicant requests reference to new ERCs is included.
- Condition 31: Applicant requests a clarification such that the ammonia limit is per CTG (not SwiftPac).
- Conditions 7, 13, 16, and 19: Applicant requests modifications to ensure these conditions accurately refer to other Conditions of Certification.
- Condition 32 and 33: Applicant requests that the startup and shutdown emissions be calculated on a per event basis (pounds per hour average, for the duration of the event).
- Condition 37 and 38: Applicant requests that the daily emission limits for NO_x and CO be changed.
- Condition 40 and 41: Applicant requests that the annual emission limits for NO_x, CO, and VOC be changed.
- Condition 45: Applicant requests that compliance testing during the startup and shutdown period be performed for a SwiftPac Unit.
- Conditions 47 and 58: Applicant requests to modify the frequency of compliance and RATA testing for all analyzers by adding a provision allowing for reduced testing frequency if the Unit(s) meet certain specific requirements.
- Conditions 56 and 57: Applicant requests to harmonize the CEMS audit frequencies with those of 40 CFR 75.
- Condition 60: Applicant requests the averaging period for excess emission be changed to maintain consistency with other conditions in the permit.

Midway is requesting five new Conditions of Certification, to match those in the revised SJVAPCD Authority to Construct (ATC).

- The new ATC cancels and replaces ATC C-7286-1-0.
- Prior to operating under the modifications authorized by Authorities to Construct, Midway shall provide new NO_x (as NO_2) emission reduction credits for the facility.
- The combined annual NO_x emissions from the four CTG's, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year.
- There are new definitions for an operating quarter and an operating hour for performing quarterly audits and relative accuracy test audit (RATA) on the continuous emission monitor system (CEMS).
- New SJVAPCD conditions 50 and 51 replace existing AQ-47.

A detailed description of the changes in the Conditions of Certification is described in Table 2-1 and Section 4.

This Amendment contains all of the information that is required pursuant to the California Energy Commission's (CEC or Commission) Siting Regulations (California Code of Regulations [CCR] Title 20, Section 1769, Post Certification Amendments and Changes). The information necessary to fulfill the requirements of Section 1769 is contained in Sections 1.0 through 7.0 as summarized in Table 1-1.

Table 1-1
Informational Requirements for Post-Certification Amendments and Changes

Section 1769(a)(1) Requirement	Section(s) of Petition Fulfilling Requirement
(A) A complete description of the proposed modifications, including new language for any conditions that will be affected.	Section 1.0 – Overview of Amendment; Explanation for Modifications; Section 2.0 – Description of Amendment; Section 4.0 – Proposed Modifications to the Conditions of Certification
(B) A discussion of the necessity for the proposed modifications.	Section 1.3
(C) If the modification is based on information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time.	Section 1.3
(D) If the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted.	Section 1.4
(E) An analysis of the impacts the modification may have on the environment and proposed measures to mitigate any significant adverse impacts.	Section 3.0
(F) A discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards.	Section 3.0

Table 1-1
Informational Requirements For Post-Certification Amendments And Changes
(Continued)

Section 1769(a)(1) Requirement	Section(s) of Petition Fulfilling Requirement
(G) A discussion of how the modification affects the public.	Section 5.0
(H) A list of property owners potentially affected by the modification.	Section 6.0
(I) A discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings.	Section 7.0

1.2 SUMMARY OF ENVIRONMENTAL IMPACTS

The CEC Siting Regulations require that an analysis be conducted to address the potential impact the proposed modification may have on the environment and proposed measures to mitigate any potentially significant adverse impacts (Title 20, CCR, Section 1769 [1][a][E]). The regulations also require a discussion of potential impacts the proposed modification may have on the facility's ability to comply with the applicable LORS (Section 1769 [1] [a][F]).

Section 3.0 of this Amendment includes a discussion of potential environmental impacts associated with the proposed modification as well as a discussion of the proposed modification's consistency with applicable LORS. Section 3.0 concludes that there will be no significant unmitigated environmental impacts associated with implementing the actions specified for the proposed modification and that the Midway Project will remain in compliance with all applicable LORS.

1.3 EXPLANATION FOR MODIFICATION

The CEC Siting Regulations require a discussion of whether the proposed modification to the Midway Project is based on information known by the Petitioner during the certification proceeding (Title 20, CCR, Sections 1769 [a][1][C]).

The AQ-32 Condition of Certification as written in the CEC 2008 Final Commission Decision (FCD) was to establish the rate of emissions for NO_x, CO, VOC, particulate matter of size 10 microns and less (PM10), and SO_x during the period of startup of the turbines. Midway performed an exhaustive evaluation of the potential for emissions during startup prior to the initial AFC. Subsequent changes to the equipment and language in the Final Determination of Compliance (FDOC) issued by the Air Board have resulted in the necessity to re-evaluate the method for determining the NO_x emission rate allowable during the start-up period, and the associated daily and annual limits.

All of the calculations made to determine the allowable emissions during startup were based on a 3-hour rolling average, in accordance with SJVAPCD Rule 4703 §5.1. Because the duration of a startup is short in comparison, a 3-hour rolling average allowed the higher startup emissions to be averaged with lower steady state emissions. Further, because the emission profile is not consistent over the duration of a

startup or shutdown event, using a 1-hour clock average is unrepresentative, and therefore inappropriate. Specifically, for a startup, the first five minutes generate the highest emission rates, and the subsequent minutes have a substantially lower emission rate. When this event spans two clock hours the first clock hour contains all or a disproportionate amount of data from the first five minute period which in turn creates an average emission rate significantly above the true average of the event – and subsequently an exceedance of the 1-hour limit. Thus, the 3-hour rolling average was necessary to demonstrate compliance with the proposed emission limits. When modifications to the FDOC changed the averaging period for NO_x emissions to a 1-hour average it invalidated the proposed emission rates. Therefore Starwood proposes that compliance for startup and shutdown emission limits specified in AQ-32 and AQ-33 be based on the average emission rate for the startup or shutdown event versus a clock hour or 3-hour rolling average.

After the engineering firm selected to build the facility inspected the selective catalytic reduction (SCR) equipment which was originally slated to be installed at this facility, it was determined that the storage methods for the equipment were inadequate resulting in excessive degradation of the equipment. A decision was made at that time to replace the equipment and change the site layout to accommodate the new SCR as was addressed in Amendment 1 to the FCD. Midway was reliant on the engineering company retained to purchase and install all of the equipment to insure it met the requirements and specifications of the air permits. We believe that the equipment were installed appropriately and that the primary problem with meeting the startup emissions is as previously stated - the change from 3-hour averaging to 1-hour averaging. However, the equipment change precipitated a change in the preheat function for the ammonia injection that we could not have anticipated, nor suspected to be an issue had we been aware of it. As opposed to free-standing electric heaters for the ammonia injection the newer system uses internal piping which relies on the gas turbine exhaust to preheat the ammonia.

The Compliance Program Manager (CPM) was notified in a letter dated September 29, 2009 of these issues. Midway has been working through both issues with the SJVAPCD since the problems were discovered after the start of commercial operations. Midway self reported the problems while complying with the present permit and filed for an interim variance to the permit to operate while the problem could be evaluated and addressed. The interim variance was granted on June 17, 2009 with the expectation that there would be a hearing and issuance of a regular variance issued on August 19th. The air district prior to the hearings to issue a regular variance determined that the more practical way to manage the process was to enter into a Settlement Agreement with Starwood Midway. The settlement agreement reached to settle all violations and pay penalties for all excessive emissions with the SJVAPCD was signed and in place on August 19, 2009 coinciding with the expiration of the Interim Variance. The settlement agreement levees specific penalties for any excess emissions generated during the equipment upgrades and determination of changes required for the new ATC. Due to the increase in startup emissions, the daily and annual emission limits specified in conditions AQ-37, AQ-38, AQ-40 and AQ-41 will need to be raised accordingly. Starwood is not requesting an increase the number of permitted startups or allowable run hours, and has procured the necessary emission reduction credits to mitigate the additional startup NO_x emissions contemplated by this amendment.

Condition AQ-45 requires that source testing to measure startup and shutdown mass emission rates be conducted periodically for one of the gas turbines. The applicant requests to perform this testing for a

Unit (two paired gas turbines) as this is the normal configuration and more representative of typical operation.

Condition AQ-47 requires that a source test be performed annually. AQ-56 requires continuous emission monitors meet the requirements contained in 40 Code of Federal regulations (CFR) 75 60 §4354(a). AQ-57 requires audits of continuous emission monitors to be conducted quarterly. Condition AQ-58 requires that a RATA be performed at least once every four calendar quarters. The applicant requests to harmonize these requirements with those contained in 40 CFR 75 as allowed by 40 CFR 60 §4354(a) and (e). The audit frequencies specified in 40 CFR 60 assume continuous operation and are excessive for a peaking plant such as this that seldom operates.

Condition AQ-60 defines excess emissions as those NO_x emissions that exceed the four (4) hour or thirty (30) day rolling average limit. Elsewhere in the permit, NO_x emissions are determined on a one (1) hour basis. Modifying this condition would create consistency within the permit.

Additional Conditions of Certification need modification to ensure they accurately refer to other Conditions of Certification. A detailed description of the changes to the Conditions of Certification is described in Table 2-1 and Section 4.

1.4 CONSISTENCY OF AMENDMENT WITH LICENSE

The CEC Siting Regulations also require a discussion of whether the modifications are based upon new information that changes or undermines the assumptions, rationale, findings, or bases of the final decision (Title 14, CCR Section 1769 [a][1][D]). If the Midway Project is no longer consistent with the certification, the Project must provide an explanation why the modification should be permitted.

The proposed modifications to the Conditions of Certification AQ-32, 33, 37, 38, 40, and 41 pertaining to emission limits and other related Conditions of Certification for the Midway Project do not undermine the assumptions, rationale, findings, or other bases of the 2008 Final Commission Decision (CEC-800-2007-007-CMF). It is specifically to modify some emission limits based the history of actual operations of the facility.

SECTION 2 DESCRIPTION OF PROPOSED AMENDMENT

2.1 STARWOOD POWER-MIDWAY, LLC PEAKING PROJECT

This section includes a complete description of the proposed modifications to the Conditions of Certification for the Midway Project.

2.2 SETTING

The Midway Project is located approximately 50 miles west of the City of Fresno and approximately 2 miles east of Interstate 5 (I-5). It is located within Fresno County adjacent to the Panoche Hills and east of the San Benito County line. It is a simple-cycle electric generating facility that includes two (2) FT8-3 SwiftPac combustion turbine generator (CTG) units installed in a simple-cycle power plant arrangement. The gas turbines are equipped with a water injection system to reduce production of NO_x, a SCR system with 19 percent aqueous ammonia to further reduce NO_x emissions, and an oxidation catalyst to reduce CO emissions. The nominal plant power rating is 120 megawatts (MW).

2.3 DESCRIPTION OF PROPOSED MODIFICATION

The proposed modification includes a revision to the AQ-32 Condition of Certification to change the startup NO_x emission rate from 4.17 lb/hr (per turbine) to 30.0 lb/hr (per turbine). The requested limit was determined by using actual plant emissions data for numerous startups in various operating conditions. This process included several iterations of gathering test data and SCR tuning for improved performance. With this change, the number of permitted startup evolutions would not change, nor would the total hours of operation permitted. Overall this change resulted in an increased NO_x emission rate during the startup period. However, the exhaustive SCR tuning and testing regimen performed by Midway resulted in a reduced startup duration, and increased allowance for steady state operation. Because other pollutants, namely CO and VOC, are permitted at higher levels during startup than during steady state, their daily and annual emissions profile changed favorably.

A modification to the method used to determine compliance with startup and shutdown (or "event") emissions has also been requested. It has been determined that the current method, using clock hours, is inappropriate. These emissions should be calculated on a per event basis (pounds per hour average, for the duration of the event). This change is necessary for two reasons. First, the averaging period for determining NO_x emissions was changed to one hour, versus three. Second, recent changes to the manner in which the unit is dispatched by the California Independent System Operator (CAISO) will result in startup and shutdown events spanning multiple clock hours. As described in section 1.3, the emission rate during an event is not consistent, thus the clock hour with a disproportionate number of higher emissions will always exceed the permitted limit.

This modification request includes a change to requirements for periodic compliance testing of the startup and shutdown emissions. Midway proposes that testing be performed for a SwiftPac Unit, versus an individual engine. Based on actual operations since commissioning, this change is more representative of the actual operating scenario at the facility.

Midway has requested to modify the frequency of compliance and RATA testing to include a provision allowing a reduced testing frequency if the facility meets certain specific requirements. Midway is requesting to use the reduced test frequency incentives specified in 40 CFR 75 and SJVAPCD District Rule 4703. Harmonization guidance has been promulgated by US Environmental Protection Agency (EPA), and is allowed by 40 CFR 60 §4354(a) and (e). Starwood does not request to modify the requirement to perform compliance testing on a single engine if any turbine operates independently for more than 400 hours during the year. A reduced frequency is currently allowed for many similar facilities permitted by the CEC, including CalPeak Power – Border, LLC (Docket No. 01-EP-14) and CalPeak Power – Enterprise, LLC (Docket No. 01-EP-10) in the San Diego air basin. This change is necessary to prevent deleterious environmental effects caused by additional testing of an otherwise offline facility.

Similarly, Midway requests to harmonize the CEMS audit frequencies with those of 40 CFR 75. This is allowed by allowed by 40 CFR 60 §4354(a) and (e), and by the SJVAPCD for very similar equipment operating under PTO C-3811-1(&-2) Condition 27.

Lastly, we are requesting that the averaging period for excess emission be changed to maintain consistency with other conditions in the permit. Additional conditions need modification to ensure they accurately refer to other Conditions of Certification.

The Table 2-1 presents each of the modifications to the current Conditions of Certification and the five new Conditions of Certification and provides the rationale for the changes. The modified permit language is shown in bold lettering.

Table 2-1
New or Modified Permit Conditions and
Corresponding CEC Condition of Certification

NEW SJVAPCD ATC PERMIT CONDITION	CORRESPONDING CEC CONDITION OF CERTIFICATION and REASON FOR CHANGE
1. This Authority to Construct cancels and replaces ATC C-7286-1-0. [District Rule 2201]	New permit condition.
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 NO_2) 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]	New permit condition.
5. Emission Reduction Credit (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 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this ATC shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of the ATC. [District Rule 2201]	AQ-3. New ERC certificates.

Table 2-1
New or Modified Permit Conditions and
Corresponding CEC Condition of Certification
(Continued)

NEW SJVAPCD ATC PERMIT CONDITION	CORRESPONDING CEC CONDITION OF CERTIFICATION and REASON FOR CHANGE
9. The owner/operator of the Starwood Power-Midway, LLC (Starwood Power) shall minimize the emissions from the gas turbine to the maximum extent possible during the commissioning period. Conditions #9 through #21 shall apply only during the commissioning period as defined below. Unless otherwise indicated, Conditions #22 through #86 shall apply after the commissioning period has ended. [District Rule 2201]	AQ-7. References new permit condition numbers.
15. Coincident with the steady-state operation of the SCR system and the oxidation catalyst, NO_x, CO and VOC emissions from this unit shall comply with the limits specified in condition #31. [District Rule 2201]	AQ-13. References new permit condition numbers.
18. During the commissioning period, the permittee shall demonstrate compliance with the NO_x and CO limits specified in condition #17 through the use of properly operated and maintained continuous emissions monitors and recorders as specified in conditions #56 and 57. The monitored parameters for this unit shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). [District Rule 2201]	AQ-16. References new permit condition numbers.
21. 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 conditions #42 and 44. [District Rule 2201]	AQ-19. References new permit condition numbers.
33. The ammonia (NH_3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O_2 over a 24 hour rolling average. [District Rules 2201 and 4102]	AQ-31. Change stresses that the limit is per CTG not a combined SwiftPac unit.
34. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NO_x (as NO_2) – 30.0 lb/hr; CO – 12.5 lb/hr; VOC (as methane) – 0.83 lb/hr; PM_{10} – 1.85 lb/hr; or SO_X (as SO_2) – 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]	AQ-32. New NO_x emission limits for start-up and new averaging time period.
35. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NO_x (as NO_2) – 1.50 lb/hr; CO – 21.33 lb/hr; VOC (as methane) – 0.83 lb/hr; PM_{10} – 1.85 lb/hr; or SO_X (as SO_2) – 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]	AQ-33. New averaging time period for shutdown.
39. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO_2) – 79.8 lb/day; CO – 117.6 lb/day; VOC – 19.7 lb/day; PM_{10} – 44.4 lb/day; or SO_X (as SO_2) – 21.4 lb/day. [District Rule 2201]	AQ-37. New NO_x and CO daily emission limits for each CTG.
40. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NO_x (as NO_2) – 159.6 lb/day; CO – 235.2 lb/day; VOC – 39.4 lb/day; PM_{10} – 88.8 lb/day; or SO_X (as SO_2) – 42.8 lb/day. [District Rule 2201]	AQ-38. New NO_x and CO daily emission limits for a combined SwiftPac unit.

Table 2-1
New or Modified Permit Conditions and
Corresponding CEC Condition of Certification
(Continued)

NEW SJVAPCD ATC PERMIT CONDITION	CORRESPONDING CEC CONDITION OF CERTIFICATION and REASON FOR CHANGE
42. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NO_X (as NO_2) – 12,736 lb/year; CO – 18,826 lb/year; VOC – 3,281 lb/year; PM_{10} – 7,400 lb/year; or SO_X (as SO_2) – 3,560 lb/year. [District Rule 2201]	AQ-40. New NO_x, CO, and VOC annual emission limits for each CTG.
43. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NO_X (as NO_2) – 25,742 lb/year; CO – 37,652 lb/year; VOC – 6,562 lb/year; PM_{10} – 14,800 lb/year; or SO_X (as SO_2) – 7,120 lb/year. [District Rule 2201]	AQ-41. New NO_x, CO, and VOC annual emission limits for a combined SwiftPac unit.
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]	New permit condition.
48. Source testing to measure startup and shutdown NO_X, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and 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 NO_X and CO startup emission limits, then source testing to measure startup NO_X and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]	AQ-45. Change in testing for each CTG to a combined SwiftPac.
50. Source testing to determine compliance with NO_x, CO, VOC and NH_3 emission rates (lb/hr and ppmvd @ 15 percent oxygen [O_2]) and PM_{10} 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 units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NO_x emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during annual compliance testing by measuring NO_x emissions at each load for a minimum of 5 minutes or until NO_x concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]	AQ-47. Source testing frequency may be changed, includes lower load testing and reference to 2nd SwiftPac turbine unit is removed. Old condition AQ-47 is now split into condition 50 and 51.

Table 2-1
New or Modified Permit Conditions and
Corresponding CEC Condition of Certification
(Continued)

NEW SJVAPCD ATC PERMIT CONDITION	CORRESPONDING CEC CONDITION OF CERTIFICATION and REASON FOR CHANGE
51. Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-1 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]	New permit condition. AQ-47. Reference to 2nd SwiftPac turbine unit is removed. Old condition AQ-47 is now split into condition 50 and 51.
60. The NO_X, CO and O_2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the Air Resources Board, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]	AQ-56. Change in CFR reference.
61. 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]	AQ-57. Includes CFR reference and definition of excluded quarters.
62. The owner/operator shall perform a RATA for the NO_X, CO and O_2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two 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. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]	AQ-58. Change in CFR reference, possible change in RATA frequency, and discussion of operating quarters.

Table 2-1
New or Modified Permit Conditions and
Corresponding CEC Condition of Certification
(Continued)

NEW SJVAPCD ATC PERMIT CONDITION	CORRESPONDING CEC CONDITION OF CERTIFICATION and REASON FOR CHANGE
63. For the purposes of performing quarterly audits and RATA on the CEMS, a 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]	New permit condition.
65. Excess NO_x emissions shall be defined as any operating hour in which the 1-hour rolling average NO_x concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O_2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]	AQ-60. Change in averaging time period and change in CFR reference.

2.4 REVISIONS AND CHANGES TO PROJECT ELEMENTS

The proposed modification described in Section 2.3 does not involve any changes to the Midway 2006 AFC (06-AFC-10) Project elements.

SECTION 3 ENVIRONMENTAL ANALYSIS OF THE PROJECT CHANGES

The proposed modifications to the air quality Conditions of Certification for the Midway Project would not involve changes to the findings and conclusions of the Midway 2006 AFC and all subsequent Project Amendments for the environmental disciplines listed below.

- Geologic Hazards and Resources (AFC Section 5.3)
- Agriculture and Soils (AFC Section 5.4)
- Water Resources (AFC Section 5.5)
- Biological Resources (AFC Section 5.6)
- Cultural Resources (AFC Section 5.7)
- Paleontological Resources (AFC Section 5.8)
- Land Use (AFC Section 5.9)
- Socioeconomics (AFC Section 5.10)
- Traffic and Transportation (AFC Section 5.11)
- Visual Resources (AFC Section 5.13)
- Waste Management (AFC Section 5.14)
- Hazardous Materials (AFC Section 5.15)
- Public Health and Safety (AFC Section 5.16)
- Worker Safety (AFC Section 5.17)
- Noise (AFC Section 5.12 as amended)

This Amendment contains all the information that is required pursuant to the CEC's Siting Regulations (CCR Title 20, Section 1769, Post Certification Amendments and Changes). Per Section 1769(a) (1) (E) the following section provides an environmental analysis for the potential air quality impacts from the proposed modifications to the Conditions of Certification.

3.1 AIR QUALITY

The proposed modification, as described in Section 2, Description of Proposed Amendment, would not involve substantial changes to the findings and conclusions in Section 5.2 Air Quality, of the Midway 2006 AFC (06-AFC-10) and all subsequent Amendments. Any additional emissions created by the plant as a result of this amendment have been ameliorated with the purchase of additional emission offset credits resulting in a net zero addition of emissions in the SJVAPCD.

3.1.1 Environmental Baselines

The discussion on the environmental baseline in Section 5.2 (Affected Environment) of the Midway 2006 AFC (06-AFC-10) is adequate to describe the baseline conditions for purposes of this Amendment.

3.1.2 Environmental Consequences

As the initial analysis was predicated on a three hour rolling average the actual quantity of pollutants emitted during start up will not change significantly. The change will primarily be in how the calculation of the startup emissions is determined. The total amount of emitted pollutants permitted is based on the terms of the Power Purchase agreement and allows for 4,000 hours of operations and 365 annual startups.

Units which operate as peaking power plants will typically only operate for approximately five percent of these contracted amounts. Starwood Midway facility Units -1 and -2 (combined) operated for 403 hours and had only 139 startups in 2010; Units -3 and -4 (combined) operated for 398 hours and had only 149 startups in 2010.

The following tables present the revised emission totals for the maximum hourly normal, startup, shutdown operations and daily and annual permit levels for individual CTGs. Maximum daily emissions for NO_x and VOC are based on 30 minutes of startup, 45 minutes of shutdown and 22 hours and 45 minutes of full load normal operations. Maximum daily emissions for VOC, PM_{10}, SO_x, and NH_3 occur when each CTG operates twenty-four hours at full load.

Table 3-1
Maximum Hourly Normal Operational Emissions

	NO_x	CO	VOC	PM_{10}	SO_2	NH_3
Normal Operations - Each CTG (lb/hr)	2.8	4.19	0.82	1.85	0.89	4.24
ppmvd @ 15% O_2 limits	2.5	6.0	2.0	--	--	10.0

Table 3-2
Permit Limits for Startup Emissions

Pollutant	NO_x	CO	VOC	PM_{10}	SO_2
Startup Operations - Each CTG (lb/hr)	30.0	12.5	0.83	NA	NA

Table 3-3
Permit Limits for Shutdown Emissions

Pollutant	NO_x	CO	VOC	PM_{10}	SO_2
Shutdown Operations - Each CTG (lb/hr)	1.50	21.33	0.83	NA	NA

Table 3-4
Daily Permit Limit for Normal Operations

Pollutant	NO_x	CO	VOC	PM_{10}	SO_2	NH_3
Normal Operations - Each CTG (lb/day)	79.8	117.6	19.7	44.4	21.4	101.8

Table 3-5
Annual Permit Limit for Normal Operations

Pollutant	NO_x	CO	VOC	PM_{10}	SO_2	NH_3
Normal Operations - Each CTG (lb/yr)	12,736	18,826	3,281	7,400	3,560	16,960

In the previous analyses, the worst-case startup NO_x emissions were not modeled, rather the higher commissioning emissions were modeled to determine the worst-case short-term operating impact for the project. The commissioning emissions from each CTG are still higher than the startup NO_x emissions, thus additional modeling is not necessary, as the peak 1-hour NO_x emissions have already been examined. As stated in the Final Commission Decision, "the modeling results indicate that the commissioning emissions, and by comparison the startup emission impacts, do not have the potential to cause significant short-term ambient air quality impacts. (FSA 4.1-32)"

Due to the increased startup emissions, annual NO_x emissions from each CTG increases by 1,527 pounds per year or 14 percent. The NO_x annual impact predicted in the air quality modeling presented in the AFC was 0.033 $\mu g/m^3$. If modeling were conducted to show the impact of this increase in NO_x emissions, the peak impact would at most be 14 percent higher, or 0.038 $\mu g/m^3$, which is significantly below the federal ambient air quality standard of 100 $\mu g/m^3$. Therefore, the increase in annual NO_x emissions will not cause a significant annual ambient air quality impact.

It should be noted that the analysis conducted in the Public Health section of the Midway 2006 AFC (06-AFC-10) and all subsequent Amendments, would not change due to the proposed modifications to the air quality Conditions of Certification. The health risk assessment evaluated the worst-case impacts associated with each CTG operating at maximum load for 4,000 hours per year. Fluctuations in startup TAC emissions were not incorporated in the HRA.

3.1.3 Mitigation Measures

The proposed modifications would not substantially change findings and conclusions discussed in the Midway 2006 AFC and all subsequent Amendments. The additional NO_x emissions anticipated based on 4,000 hours of operations and 365 startups have been fully offset with the acquisition of emission reduction credits in certificates N-897-2 and S-3371-2, copies of which have been provided.

3.2 CUMULATIVE IMPACTS

The air quality Conditions of Certification, as amended, will not induce any unmitigated cumulative impacts.

3.3 COMPLIANCE WITH LORS

The air quality Condition of Certification, as amended, will conform to all applicable LORS previously identified in the Midway 2006 AFC and all subsequent amendments.

3.4 CONCLUSION

The proposed modifications to the air quality Conditions of Certification for the Midway Project would not involve substantial changes to the findings and conclusions of the Midway 2006 AFC and all subsequent project amendments. None of the environmental disciplines would be significantly impacted by the proposed modification to the air quality Conditions of Certification.

SECTION 4 PROPOSED MODIFICATIONS TO THE CONDITIONS OF CERTIFICATION

The following are the proposed Conditions of Certification. New Conditions and changes to existing Conditions are in blue font and underlined. Conditions below are numbered according to the proposed modifications. Conditions in which the only change is the condition number are included for completeness. Rationale for the changes is provided in Table 2-1.

AQ-1

This Authority to Construct (ATC) cancels and replaces ATC C-7286-1-0. [District Rule 2201]

AQ-2

Prior to initial operation of C-7286-1, C-7286-2, C-7286-3 or C-7286-4, permittee 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]

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]

AQ-4

Prior to initial operation of C-7286-1, C-7286-2, C-7286-3 or C-7286-4, permittee shall provide PM_{10} 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. SO_x ERC's may be used to offset PM10 increases at an interpollutant ratio of 1.867 lb-SO_x : 1.0 lb-PM10. [District Rule 2201]

AQ-5

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 shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct (ATC) shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of the ATC. [District Rule 2201]

AQ-6

Permittee shall submit an application to comply with SJVUAPCD District Rule 2520 - Federally Mandated Operating Permits within 12 months after commencing operation. [District Rule 2520]

AQ-7

Permittee shall submit an application to comply with SJVUAPCD District Rule 2540 - Acid Rain Program. [District Rule 2540]

AQ-8

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

AQ-9

The owner/operator of the Starwood Power-Midway, LLC (Starwood Power) shall minimize the emissions from the gas turbine to the maximum extent possible during the commissioning period. Conditions #9 through #21 shall apply only during the commissioning period as defined below. Unless otherwise indicated, Conditions #22 through #86 shall apply after the commissioning period has ended. [District Rule 2201]

AQ-10

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]

AQ-11

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]

AQ-12

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]

AQ-13

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

AQ-14

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

AQ-15

Coincident with the steady-state operation of the SCR system and the oxidation catalyst, NO_x, CO and VOC emissions from this unit shall comply with the limits specified in condition #31. [District Rule 2201]

AQ-16

The permittee shall submit a plan to the District at least four weeks prior to the first firing of this unit, describing the procedures to be followed during the commissioning period. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the combustors, the installation and operation of the SCR systems and the oxidation catalyst, the installation, calibration, and testing of the NO_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]

AQ-17

Emission rates from this 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]

AQ-18

During the commissioning period, the permittee shall demonstrate compliance with the NO_x and CO limits specified in condition #17 through the use of properly operated and maintained continuous emissions monitors and recorders as specified in conditions #56 and 57. The monitored parameters for this unit shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). [District Rule 2201]

AQ-19

The continuous monitors specified in this permit shall be installed, calibrated, and operational prior to the first firing of this unit. 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. [District Rule 2201]

AQ-20

The total number of firing hours of this unit without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours during the commissioning period. Such operation of this unit without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities, the permittee shall provide written notice to the District and the unused balance of the 100 firing hours without abatement shall expire. [District Rule 2201]

AQ-21

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 conditions #42 and 44. [District Rule 2201]

AQ-22

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

AQ-23

Permittee 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]

AQ-24

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

AQ-25

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]

AQ-26

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

AQ-27

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]

AQ-28

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

AQ-29

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]

AQ-30

This CTG 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)]

AQ-31

Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NO_x (as NO_2) – 2.8 lb/hr and 2.5 ppmvd @ 15% O_2; CO – 4.19 lb/hr and 6.0 ppmvd @ 15% O_2; VOC (as methane) – 0.82 lb/hr and 2.0 ppmvd @ 15% O_2; PM_{10} – 1.85 lb/hr; or SO_x (as SO_2) – 0.89 lb/hr. NO_x (as NO_2) 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)]

AQ-32

Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NO_x (as NO_2) – 5.6 lb/hr and 2.5 ppmvd @ 15% O_2; CO – 8.38 lb/hr and 6.0 ppmvd @ 15% O_2; VOC (as methane) – 1.64 lb/hr and 2.0 ppmvd @ 15% O_2; PM_{10} – 3.70 lb/hr; or SO_x (as SO_2) – 1.78 lb/hr. NO_x (as NO_2) 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)]

AQ-33

The ammonia (NH_3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O_2 over a 24 hour rolling average. [District Rules 2201 and 4102]

AQ-34

During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NO_x (as NO_2) – 30.0 lb/hr; CO – 12.5 lb/hr; VOC (as methane) – 0.83 lb/hr; PM_{10} – 1.85 lb/hr; or SO_x (as SO_2) – 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

AQ-35

During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NO_x (as NO_2) – 1.50 lb/hr; CO – 21.33 lb/hr; VOC (as methane) – 0.83 lb/hr; PM_{10} – 1.85 lb/hr; or SO_x (as SO_2) – 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

AQ-36

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]

AQ-37

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]

AQ-38

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

AQ-39

Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO_2) – 79.8 lb/day; CO – 117.6 lb/day; VOC – 19.7 lb/day; PM_{10} – 44.4 lb/day; or SO_x (as SO_2) – 21.4 lb/day. [District Rule 2201]

AQ-40

Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NO_x (as NO_2) – 159.6 lb/day; CO – 235.2 lb/day; VOC – 39.4 lb/day; PM_{10} – 88.8 lb/day; or SO_x (as SO_2) – 42.8 lb/day. [District Rule 2201]

AQ-41

Quarterly hours of operation of this 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]

AQ-42

Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NO_x (as NO_2) – 12,736 lb/year; CO – 18,826 lb/year; VOC – 3,281 lb/year; PM_{10} – 7,400 lb/year; or SO_x (as SO_2) – 3,560 lb/year. [District Rule 2201]

AQ-43

Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NO_x (as NO_2) – 25,742 lb/year; CO – 37,652 lb/year; VOC – 6,562 lb/year; PM_{10} – 14,800 lb/year; or SO_x (as SO_2) – 7,120 lb/year. [District Rule 2201]

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]

AQ-45

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]

AQ-46

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]

AQ-47

Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O_2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O_2 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% O_2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia

emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

AQ-48

Source testing to measure startup and shutdown NO_X, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and 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 NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

AQ-49

Initial source testing to determine compliance with the NO_x, CO and VOC emission rates (lb/hr and ppmvd @ 15% O_2) NH3 emission rate (ppmvd @ 15% O_2) and PM_{10} 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)]

AQ-50

Source testing to determine compliance with NO_x, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O_2) 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 units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during annual compliance testing by measuring NO_x emissions at each load for a minimum of 5 minutes or until NO_x concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

AQ-51

Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-1 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

AQ-52

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)]

AQ-53

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 O_2 - 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)]

AQ-54

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)]

AQ-55

The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O_2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

AQ-56

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)]

AQ-57

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

AQ-58

The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O_2 concentrations. Continuous emissions monitor(s) shall 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)]

AQ-59

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)]

AQ-60

The NO_x, CO and O_2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

AQ-61

The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every 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]

AQ-62

The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO and O_2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two 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 has 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. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]

AQ-63

For the purposes of performing quarterly audits and RATA on the CEMS, a 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]

AQ-64

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]

AQ-65

Excess NO_x emissions shall be defined as any operating hour in which the 1-hour rolling average NO_x concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O_2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]

AQ-66

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]

AQ-67

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]

AQ-68

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]

AQ-69

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]

AQ-70

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 preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

AQ-71

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]

AQ-72

Permittee 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]

AQ-73

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]

AQ-74

The permittee 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)]

AQ-75

The permittee 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 NO_x mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

AQ-76

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]

AQ-77

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]

AQ-78

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]

AQ-79

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]

AQ-80

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]

AQ-81

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]

AQ-82

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 Rules 8011 and 8071]

AQ-83

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 Rules 8011 and 8071]

AQ-84

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, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

AQ-85

Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

AQ-86

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]

SECTION 5 POTENTIAL EFFECTS ON THE PUBLIC

This section addresses potential effects on the public from the proposed modifications to the air quality Conditions of Certification for the Midway Project, pursuant to the CEC's Siting Regulations (Title 1769[a][1][H]).

The proposed modifications would not require a change to the Project area, and would not situate the Project site closer to nearby property owners. The entire Project site was previously examined in the Midway 2006 AFC. No increased impacts on the public relating to any of the environmental disciplines will be caused by the proposed modification to the Midway Project as explained in Section 3.

SECTION 6 LIST OF PROPERTY OWNERS

Consistent with the CEC Siting Regulations Section 1769(a)(1)(H), this section lists the property owners affected by the proposed modifications to the air quality Conditions of Certification for the Midway Project. The proposed change does not alter the list of affected property owners previously submitted in the Midway 2006 AFC (06-AFC-10). The list of property owners is presented below.

Table 6-1
List of Property Owners

Ownership Information	Inst #	Date Received
02706053S		
Narr - SUR RTS 17.88 ACS IN N1/2 SEC 5 T15R13		
Loc - 043405 PANOCHE RD FIREBAUGH		
VAQUERO FARMS INC	112227	19831201
2800 W MARCH LM #330 STOCKTON CA 95219		
02706054S		
Narr - SUR RTS 163.53 AC IN N1/2 SEC 5 T15R13		
Site -		
PRUETT GREGORY R ASOPERATION TRUSTEE	179790	19991217
HYCKE CINDY PREUTT DISPOSITION TRUSTEE	179790	19991217
PRUETT GREGORY R DISPOSITION TRUSTEE -	179790	19991217
OF C P HUCKE IRREVOC TR DTD 2-18-97	179790	19991217
(CR 3179790 12-17-99)	064309	19970519
2800 W MARCH LM #330 STOCKTON CA 95219		
02706056S		
Narr - SUR RTS 120.32 AC IN SECS 5 & 6 T15R13		
Loc - 043946 W PANOCHE RD FIREBAUGH		
FARMERS INERNATIONAL INC	016911	20040123
1260 MUIR AVE CHICO CA 95973		
02706061SU		
02706077S		
Narr - SUR RT 64.24 AC IN NE1/4 SEC 5 T15R13		
Site -		
HANSEN ROBERT TRUSTEE -	118104	19900928
HANSEN ROBERT TRUSTEE -	000000	19900928
OF SMARLA BAKER U/T/D 6-13-78	118104	19900928
% PANOCHE FARMS PO BOX 867		

Table 6-1
List of Property Owners
(Continued)

Ownership Information	Inst #	Date Received
FIREBAUGH CA 93622		
02706078S		
Narr - SUR RTS 128.49 AC IN W1/2 SEC 5 T15R13		
Loc - 043649 W PANOCHE RD FIREBAUGH		
PAO INVESTMENTS LLC	061258	19060324
45499 W PANOCHE RD FIREBAUGH CA 93622		
02706079S		
Narr - SUR RT 160 AC SE1/4 SEC 5 T15R13		
Site -		
BAKER BARRY S TRUSTEE	159044	20001228
MC DOUGAL JUDITH M TRUSTEE -	159044	20001228
OF J R BAKER 1/U/D DTD 11-1-00	159044	20001228
PO BOX 867 FIREBAUGH CA 93622		

SECTION 7 POTENTIAL EFFECTS ON PROPERTY OWNERS

This section addresses potential effects of the proposed modifications to the air quality Conditions of Certification for the Midway Project on nearby property owners, the public, and parties in the application proceeding, per CEC Siting Regulations ((Title 1769[a][1][H]).

The proposed modifications to the air quality Conditions of Certification would not require a change to Project area or situate the Project site closer to property owners. The Midway Project is contained in a 5.6-acre site within a 128-acre parcel of land. This entire parcel was previously examined in the Midway 2006 AFC (06-AFC-10). The proposed modifications to the air quality Conditions of Certification would not involve substantial unmitigated changes; therefore, new significant impacts from the proposed modification are not anticipated. No increased impacts on the public relating to any of the environmental disciplines will be caused by the proposed modification to the Midway Project as explained in Section 3.

SECTION 8 LIST OF ATTACHMENTS

Attachment 1 Petition to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for an interim and regular variance

Attachment 2 Order Granting Interim Variance

Attachment 3 Notice of Violation for excess start up emissions prior to variance

Attachment 4 Application for the new ATC

Attachment 5 Notice of Violation for Equipment changes

Attachment 6 Settlement agreement in lieu of Variance continuation

Attachment 7 Notice of incomplete Application for ATC

Attachment 8 Response to Notice of incomplete application

Attachment 9 Notice to CEC Project Compliance Manager of ongoing Air district issues

Attachment 10 Supplemental information supplied for ATC

Attachment 11 Proposed Starwood Conditions of Certification Email

Attachment 12 Copies of Emission Reduction Credit Certificates

Attachment 1
Petition to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for an interim and regular variance

PETITION FOR A HEARING
BEFORE THE HEARING BOARD OF THE
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

[ ] Northern Region Office
4800 Enterprise Way
Modesto, CA 95356
(209) 557-6440

[X] Central Region Office
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-5950

[ ] Southern Region Office
34946 Flyover Court
Bakersfield, CA 93308
(661) 392-5540

TYPE OF HEARING

( ) A. Regular Variance
(X) B. Interim & Regular Variance
( ) C. Short Variance (90 Days or Less)
( ) D. Interim & Short Variance
( ) E. Emergency Variance
( ) F. Appeal Hearing
( ) G. Extension of Variance
( ) H. Modification of Variance
( ) I. Modification of Variance Schedule of Progress
( ) J. Product Variance
( ) K. Rehearing
( ) L. Revocation of Variance
( ) M. Special Hearing

FEES (Non-Refundable)

( ) A. $ 810.00
(X) B. $1134.00
( ) C. $ 702.00
( ) D. $1026.00
( ) E. $ 243.00
( ) F. $ 810.00
( ) G. $ 324.00
( ) H. $ 324.00
( ) I. $ 324.00
( ) J. $1080.00
( ) K. $ 810.00
( ) L. $ 324.00
( ) M. $ 810.00

Total: $ 1134.00

PETITION INFORMATION

A. NAME OF FACILITY: Starwood Power – Midway, LLC

FACILITY LOCATION: 43627 West Panoche Rd

CITY: Firebaugh STATE: CA ZIP CODE: 93622

TELEPHONE: 619-229-3770 FAX: 619-229-7616

NAME OF PERSON AUTHORIZED TO RECEIVE NOTICES: Jeff Paul

MAILING ADDRESS: 7365 Mission Gorge Rd., Suite C

CITY: San Diego STATE: CA ZIP CODE: 92120

TELEPHONE: 619-229-3770x302 FAX: 619-229-7616 E-MAIL: Jeff.paul@calpeak.com

B. TYPE OF ENTITY (Check One)

( ) Individual
( ) Co-Partnership
(X) Corporation
( ) Other Entity

Please include the name, title, and address of officers, if a corporation; partners, if a co-partnership; or the person(s) in control if other entity.

(Attach additional sheets, if needed)

NAME	TITLE	ADDRESS
JJ Fair	Vice President	7365 Mission Gorge Rd., Suite C San Diego, CA 92120

DISTRICT USE ONLY

CHECK NUMBER: RECEIPT NUMBER: DATE RECEIVED:

1. Briefly describe the type of business conducted at your facility.

Peak demand power generation.

2. Describe in detail the equipment or activity that is the subject of this petition, what the equipment is used for, and why it is necessary to the operation of your business. Please include all pertinent information necessary to describe the activity including: fuels burned, raw materials processed, product produced, true vapor pressure(s) of all volatile organic compounds, site diagrams, material flow charts, fuel systems, and diagrams of air pollution control systems if necessary. Include copies of all District **Permits to Operate and/or Authorities to Construct for each piece of equipment or activity relevant to this variance request.**

The facility generates power using four simple cycle natural gas fired turbines. There are two electrical generators, with two turbines driving each generator. These turbines are permitted by the SJVAPCD under Permits to Operate (PTO) C-7286-1, C-7286-2, C-7286-3 and C-7286-4.

3. List all Permit to Operate Condition numbers and District Rule numbers, including subsections, for which you are requesting variance relief and **explain** how you are violating or will violate the condition(s) and/or rule(s).

District Rule 2201 section sections 5.6 and 5.7

District Rule 4703 section 5.1

SJVAPCD Determination of Compliance, C1063535 (06-AFC-10) / District Permit C-7286-1(2,3,4) conditions 32, 33, 37, 38, 40 and 41

The turbine is not capable of operating within the permitted NOx limits during the startup and shutdown periods.

4. Is the equipment or activity subject to this request currently under a District variance? Yes: ___ No: _X_ If yes, give the Docket Number, date of the last variance action, final compliance date, and a brief explanation.

5. Have you received a variance for any other equipment or activity at this location within the previous six months? Yes: ___ No: _X_ If yes, give the Docket Number(s), date(s), final compliance date, and a brief explanation.

6. Why is it beyond your reasonable control to comply with the rule(s) and/or permit condition(s)?

This generating facility is newly constructed. All equipment is operating properly and has recently been tuned by the OEM. Startup and shutdown emissions account for the periods of time when the units transition from non-operating to operating, and vice versa. During these time periods the emissions control systems are not capable of normal operations due to various reasons - most notably equipment heat up and cooldown. By District definition the startup period is "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 emissions control system to reach full operations." Also by definition a shutdown is "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." Water injection and Ammonia injection are used for NOx control; neither of these can begin until other components have properly heated up and must cease prior to completely turning off fuel due to equipment cool down. Since no emissions controls are in place it is not possible to meet permitted limits.

7. What would be the harm to your business if the variance were not granted? Include business closure, economic losses in dollar amounts, breach of contracts, hardships on customers, employee lay-offs, and similar matters.

If this variance is not granted the Facility would potentially receive a Notice of Violation (NOV) for each startup or shutdown period. This would lead to significant economic losses and the inability to continue business, job loss and ultimately would reduce the amount of power available to PG&E and the San Joaquin Valley.

8. When, and under what circumstances, did your company first become aware that it would **not** be in compliance?

On 6/11 while reviewing emissions data for the recent Facility operations. Note that this Facility began commercial operations on 5/5/2009.

9. What actions have you taken since that time to achieve compliance?

CEMS calculations have been verified by hand calculations. The CEMS accuracy during startup and shutdown has been verbally verified with the stack tester – the test report for the initial compliance test and RATA during a single engine startup has not been finalized as yet but is expected be completed shortly. The OEM has been contacted to determine what assumptions were made when providing the emissions estimates for the units – a response has not yet been received. The ammonia injection system set-points have been reset to begin ammonia flow as soon as possible.

10. Explain what options have been evaluated towards curtailment or termination of operations in lieu of obtaining a variance.

In order to prevent exceedances all operations would have to cease.

11. Will there be excess emissions (emissions in excess of those allowed by the rules or permit conditions), including hazardous or toxic emissions, during this variance period? Yes: X No: ___ If no, explain why there will be no excess emissions and then continue to number 16.

Currently, NOx emissions, per turbine, are approximately 30 lbs/hr during a typical startup or shutdown period. A typical startup or shutdown for two turbines is approximately 30 minutes (2 hours is allowed by the permit). Single engine starts and operations at low loads take longer because of the time required to heat up the SCR and ammonia vaporizer heater.

12. Estimate the daily excess emissions on a pounds per day basis or, if applicable, the percent opacity of visible emissions during the variance period.

Pollutant	Permit Limit	Total Estimated Excess Emissions (lbs./day)	Reduction Due to Mitigation (lbs./day)	Net Excess Emissions After Mitigation (lbs./day)
NOx	67.3	20.2		20.2

Opacity: _____ %

13. Please show all calculations and provide references for emission factors used in estimating excess emissions.

Based on a startup and subsequent operation that occurred June 5, 2009: combined NOx emissions for two turbines averaged 59 lb/hr over a span of 27 minutes. Rounding to 60 lb/hr and 30 minutes to allow for slight variations yields 30 lbs NOx during the startup period. Since this was a two turbine start each turbine emitted approximately 15 lbs NOx. Assuming two 30 minute startup periods in a given day yields 30 lbs NOx emitted per turbine per day for the startup period. 23 hours of steady state operation emitting 2.5 lbs/hr per turbine yields 57.5 lbs for normal operation and a total of 87.5 lbs NOx for the day.

Note that these calculations are based on observed conditions, which are believed to be ideal. Typically a unit does not operate at it's permitted level so permitted limits will need to allow sufficient room for operational viability.

Typically this Facility does not typically operate in excess of 10 hours per day, so it is probable that the daily mass emissions limit will not be exceeded in many cases.

14. If there are excessive hazardous or toxic emissions, attach a health risk assessment and receptor modeling data.

15. Explain how you can reduce or mitigate excess emissions from the subject equipment, other facility equipment (in order to offset excess emissions), or other activity to the maximum extent feasible during the variance period.

Maintain equipment in proper working order, ensure that startup and shutdown periods are as short as possible and minimize the amount of unnecessary starts and stops.

16. Can you monitor or quantify emission levels from the subject equipment or activity during the variance period and make such records available to the District?
Yes: X No: ___ Provide an explanation of your response.

CEMS data will be maintained per the permit, and is available to the District upon request. Additionally, the Facility complies with SJVAPCD data polling requirements.

17. How do you intend to achieve compliance with the rule(s) or permit condition(s)? Include a detailed description of any equipment to be installed and/or modifications to be made, a listing of the dates by which the actions will be completed, and an estimate of the total cost, if available.

Verify assumptions made by the OEM when determining emissions estimates – August 7, 2009.

Prepare to Petition the District to modify the Permit to Operate as necessary – September 4, 2009

District review and approval process – June 5, 2010

18. Please state the dates you are requesting the variance to begin and end (the end date should be the date you expect to achieve compliance with the rules, regulations, and permit conditions).

Begin variance: 6/17/2009 End variance: 6/5/2010

19. If a regular variance is to extend over one year, you must attach a Schedule of Increments of Progress which must specify certain dates or milestones to be met in achieving compliance.

A Schedule of Increments of Progress is a detailed statement of the dates by which various steps will be completed in order to bring a source of air contaminants into compliance with District Rules, Regulations, or permit conditions. It shall include, as applicable, the following:

a) Submission of approved final control plan(s) and/or complete Authority to Construct application(s) by this date. (date)

b) Issuance of contract(s) or purchase order(s) for process and/or control equipment or repairs/maintenance by this date. . (date)

c) Initiation of on-site construction of process and/or control equipment or repairs/maintenance by this date. (date)

d) Completion of construction or process and/or control equipment or repairs/maintenance by this date. (date)

e) Final compliance with all Rules, Regulations, and/or permit condition by this date. (date)

Attach a Schedule of Increments of Progress for any variance request longer than one year or as required.

20. Were you issued a Notice of Violation or Notice to Comply concerning the current operation of this equipment or activity? Yes: ___ No: X **If yes, please attach a copy of the notice.**

21. Please list the names of any District personnel who are familiar with the facility or with whom facility representatives have had contact concerning this variance petition, or any related Notice of Violation or Notice to Comply.

John Copp (Compliance)

Dustin Brown (Permitting)

22. Have you received any complaints from members of the public regarding the operation of the subject facility, equipment, or related activities within the last six (6) months? Yes: ___ No: X **If yes, indicate date(s), nature of complaint(s), and address(s) of complainant(s).**

The undersigned, under penalty of perjury, states that the above petition, including attachments, and the items therein set forth are true and correct.

Date: 6/11/2009 **Signature:** JTB for JEFF PAUL

Title: EHS

Print Name: JASON BOWMAN

The original petition in this format, and any attachments must be submitted to the District. Any attachments that are extraordinarily difficult to reproduce, such as full color photographs, must be submitted as six copies. Petitions which are incomplete, illegible, submitted in the wrong format, or without the necessary filing fee will be returned. If you need assistance completing this Petition and/or developing a compliance schedule, contact the Compliance Division in your region.

MIDWAY 2 TURBINE S/U - S/D EXS FOR VARIANCE

Midway Peaking Project

Firebaugh, CA

Turbine 1- Hourly Emissions Report

June 5, 2009 - Hour 21

Emission Limits

1-Hr	*3-Hr Rolling*	*24-Hr Rolling*
NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6	NH3 Slip ppm @15% O2 - 10
NOx lbs - 5.6	CO lbs - 8.38	NH3 Slip lbs - 4.24

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 Slip ppm @15% O2	NH3 Slip lb/hr	Process Status
00	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
01	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
02	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
03	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
04	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
05	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
06	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
07	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
08	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
09	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
10	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
13	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
14	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
15	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
16	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
17	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Startup
18	20.24	0.00	Inval	Inval	Inval	14.51	Inval	Inval	Inval	Down	Down	Startup
19	18.73	5.81	15.80	0.0581	3.85	25.61	69.63	0.1558	10.33	Down	Down	Startup
20	18.88	13.38	39.08	0.1437	11.81	3.35	9.78	0.0219	1.80	Down	Down	Startup
21	18.32	14.64	33.48	0.1231	19.43	1.78	4.07	0.0091	1.44	Down	Down	Startup
22	17.16	36.72	57.93	0.2129	61.21	4.26	6.72	0.0150	4.31	Down	Down	Startup
23	16.62	63.04	86.90	0.3194	118.77	1.49	2.05	0.0046	1.71	Down	Down	Startup
24	16.00	55.71	67.08	0.2466	112.94	1.25	1.51	0.0034	1.56	Down	Down	Startup
25	15.44	61.62	66.59	0.2448	134.14	1.72	1.86	0.0042	2.30	Down	Down	Startup
26	14.90	44.83	44.08	0.1620	95.68	2.37	2.33	0.0052	3.07	Down	Down	Startup
27	14.81	32.87	31.84	0.1171	69.38	2.92	2.83	0.0063	3.73	Down	Down	Startup
28	14.80	31.84	30.80	0.1132	67.13	3.23	3.12	0.0070	4.15	Down	Down	Startup
29	14.81	31.38	30.40	0.1118	66.29	3.31	3.21	0.0072	4.27	Down	Down	Startup

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 Slip ppm @15% O2	NH3 Slip lb/hr	Process Status
30	14.82	30.93	30.91	0.1103	65.43	3.17	3.08	0.0069	4.09	Down	Down	Startup
31	14.94	30.55	30.24	0.1112	65.93	3.08	3.05	0.0068	4.03	Down	Down	Startup
32	15.14	30.09	30.82	0.1133	67.28	3.05	3.12	0.0070	4.16	Down	Down	Startup
33	15.33	29.34	31.06	0.1142	67.91	3.10	3.28	0.0073	4.34	Down	Down	Startup
34	15.47	28.54	31.01	0.1140	67.59	3.20	3.48	0.0078	4.63	Down	Down	Startup
35	15.61	28.01	31.24	0.1148	68.16	3.32	3.70	0.0083	4.93	Down	Down	Startup
36	15.69	27.48	31.12	0.1144	67.99	3.44	3.90	0.0087	5.17	Down	Down	Startup
37	15.71	27.16	30.88	0.1135	67.47	3.52	4.00	0.0090	5.35	Down	Down	Startup
38	15.72	27.05	30.81	0.1133	67.33	3.55	4.04	0.0090	5.35	Down	Down	Startup
39	15.75	26.95	30.87	0.1135	67.39	3.52	4.03	0.0090	5.34	Down	Down	Startup
40	15.76	26.89	30.87	0.1135	67.36	3.48	3.99	0.0089	5.28	Down	Down	Startup
41	15.78	26.17	30.16	0.1109	65.87	3.44	3.96	0.0089	5.29	28.0	22.57	Startup
42	15.78	4.90	5.65	0.0208	12.36	3.42	3.94	0.0088	5.23	5.9	4.76	Startup
43	15.78	2.23	2.57	0.0094	5.60	3.38	3.89	0.0087	5.18	3.9	2.98	Startup
44	15.77	1.73	1.99	0.0073	4.35	3.32	3.82	0.0085	5.06	0.2	0.00	Startup
45	15.77	1.67	1.92	0.0071	4.23	3.24	3.73	0.0083	4.94	0.0	0.00	Startup
46	15.76	1.65	1.89	0.0070	4.17	3.17	3.64	0.0081	4.83	0.0	0.00	Normal
47	15.76	1.68	1.94	0.0071	4.23	3.16	3.63	0.0081	4.83	0.0	0.00	Normal
48	15.77	1.65	1.91	0.0070	4.17	3.17	3.65	0.0082	4.87	0.0	0.00	Normal
49	15.77	1.57	1.81	0.0066	3.92	3.17	3.65	0.0082	4.88	0.0	0.00	Normal
50	15.77	1.76	2.02	0.0074	4.40	3.14	3.61	0.0081	4.82	0.0	0.00	Normal
51	15.77	1.88	2.16	0.0079	4.70	3.11	3.58	0.0080	4.76	0.0	0.00	Normal
52	15.77	1.74	2.00	0.0074	4.41	3.10	3.57	0.0080	4.77	0.0	0.00	Normal
53	15.77	1.58	1.82	0.0067	3.99	3.11	3.58	0.0080	4.76	0.0	0.00	Normal
54	15.78	1.58	1.82	0.0067	3.99	3.12	3.60	0.0080	4.77	0.0	0.00	Normal
55	15.78	1.69	1.95	0.0072	4.29	3.13	3.61	0.0081	4.82	0.0	0.00	Normal
56	15.78	1.69	1.95	0.0072	4.29	3.13	3.61	0.0081	4.83	0.0	0.00	Normal
57	15.77	1.61	1.85	0.0068	4.05	3.13	3.60	0.0081	4.83	0.0	0.00	Normal
58	15.78	1.61	1.86	0.0068	4.06	3.12	3.60	0.0080	4.78	0.0	0.00	Normal
59	15.77	1.60	1.84	0.0068	4.06	3.12	3.59	0.0080	4.78	0.0	0.00	Normal
Average	16.0	18.2		0.0806		3.9	4.7	0.0105	5.86	2.0	1.60	Startup
Total									3.88		1.12	
3-Hr Rlng							Inval *		Inval *			
24-Hr Rlng										0.1	0.05	

*- Excluding Startup & Shutdown Emissions

Midway Peaking Project

Firebaugh, CA

Turbine 1- Hourly Emissions Report

June 5, 2009 - Hour 22

Emission Limits

1-Hr	*3-Hr Rolling*	*24-Hr Rolling*
NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6	NH3 Slip ppm @15% O2 - 10
NOx lbs - 5.6	CO lbs - 8.38	NH3 Slip lbs - 4.24

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 Slip ppm @15% O2	NH3 Slip lb/hr	Process Status
00	15.77	1.68	1.93	0.0071	4.23	3.13	3.60	0.0081	4.84	0.0	0.00	Normal
01	15.77	1.71	1.97	0.0072	4.29	3.13	3.60	0.0081	4.83	0.0	0.00	Normal
02	15.77	1.64	1.89	0.0069	4.11	3.14	3.61	0.0081	4.83	0.0	0.00	Normal
03	15.77	1.63	1.87	0.0069	4.11	3.13	3.60	0.0081	4.83	0.0	0.00	Normal
04	15.77	1.63	1.87	0.0069	4.12	3.11	3.58	0.0080	4.78	0.0	0.00	Normal
05	15.78	1.65	1.90	0.0070	4.18	3.10	3.57	0.0080	4.78	0.0	0.00	Normal
06	15.78	1.66	1.91	0.0070	4.17	3.11	3.58	0.0080	4.77	0.0	0.00	Normal
07	15.78	1.65	1.90	0.0070	4.18	3.14	3.62	0.0081	4.83	0.0	0.00	Normal
08	15.78	1.64	1.89	0.0069	4.12	3.15	3.63	0.0081	4.83	0.0	0.00	Normal
09	15.78	1.64	1.89	0.0069	4.12	3.15	3.63	0.0081	4.83	0.0	0.00	Normal
10	15.78	1.67	1.92	0.0071	4.24	3.14	3.62	0.0081	4.83	0.0	0.00	Normal
11	15.78	1.69	1.95	0.0072	4.29	3.12	3.60	0.0080	4.77	0.0	0.00	Normal
12	15.77	1.68	1.93	0.0071	4.22	3.12	3.59	0.0080	4.77	0.0	0.00	Normal
13	15.78	1.69	1.95	0.0072	4.29	3.12	3.60	0.0080	4.78	0.0	0.00	Normal
14	15.78	1.71	1.97	0.0072	4.30	3.13	3.61	0.0081	4.83	0.0	0.00	Normal
15	15.77	1.71	1.97	0.0072	4.30	3.13	3.60	0.0081	4.84	0.0	0.00	Normal
16	15.78	1.72	1.98	0.0073	4.36	3.13	3.61	0.0081	4.83	0.0	0.00	Normal
17	15.78	1.71	1.97	0.0072	4.29	3.12	3.60	0.0080	4.77	0.0	0.00	Normal
18	15.79	1.72	1.99	0.0073	4.35	3.12	3.60	0.0081	4.83	0.0	0.00	Normal
19	15.79	0.69	0.80	0.0029	1.73	3.11	3.59	0.0080	4.77	0.0	0.00	Normal
20	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
21	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
22	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
23	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
24	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
25	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
26	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
27	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
28	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal
29	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Cal	Normal

CONDITIONS FOR APPLICATION C-7286-1-0

INSPECTION

ISSUANCE DATE: 07/12/2007

LEGAL OWNER OR OPERATOR: STARWOOD POWER-MIDWAY, LLC
MAILING ADDRESS: 591 W PUTNAM AVE
GREENWICH, CT 06830

WORKSHEET

LOCATION: 43699 PANOCHE RD
FIREBAUGH, CA

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

CONDITIONS

1. Prior to initial operation of C-7286-1-0, C-7286-2-0, C-7286-3-0 or C-7286-4-0, permittee shall provide NOx (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 - 11,308 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201 [District Rule 2201]
2. Prior to initial operation of C-7286-1-0, C-7286-2-0, C-7286-3-0 or C-7286-4-0, permittee 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]
3. ERC certificate numbers (or any splits from these certificates) S-2382-2 and 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]
4. Permittee shall submit an application to comply with SJVUAPCD District Rule 2520 - Federally Mandated Operating Permits within twelve months of commencing operation. [District Rule 2520].
5. Permittee shall submit an application to comply with SJVUAPCD District Rule 2540 - Acid Rain Program. [District Rule 2540]
6. District facilities C-3811 and C-7286 are the same stationary source for District permitting purposes. [District Rule 2201]
7. The owner/operator of the Starwood Power-Midway, LLC (Starwood Power) shall minimize the emissions from the gas turbine to the maximum extent possible during the commissioning period. Conditions #7 through #19 shall apply only during the commissioning period as defined below. Unless otherwise indicated, Conditions #20 through #81 shall apply after the commissioning period has ended. [District Rule 2201]
8. 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]
9. 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]
10. 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]
11. At the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201]

CONDITIONS FOR APPLICATION C-7286-1-0

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

13. Coincident with the steady-state operation of the SCR system and the oxidation catalyst, NOx and CO emissions from this unit shall comply with the limits specified in condition #29. [District Rule 2201]

14. The permittee shall submit a plan to the District at least four weeks prior to the first firing of this unit, describing the procedures to be followed during the commissioning period. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the combustors, the installation and operation of the SCR systems and the oxidation catalyst, the installation, calibration, and testing of the NOx 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]

15. Emission rates from this CTG, during the commissioning period, shall not exceed any of the following limits: NOx (as NO2) - 41.65 lb/hr; CO - 19.9 lb/hr; VOC (as methane) - 0.80 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. [District Rule 2201]

16. During the commissioning period, the permittee shall demonstrate compliance with the NOx and CO limits specified in condition #15 through the use of properly operated and maintained continuous emissions monitors and recorders as specified in conditions #53 and 54. The monitored parameters for this unit shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). [District Rule 2201]

17. The continuous monitors specified in this permit shall be installed, calibrated, and operational prior to the first firing of this unit. After first firing, the detection range of the CEMS shall be adjusted as necessary to accurately measure the resulting range of NOx and CO emission concentrations. [District Rule 2201]

18. The total number of firing hours of this unit without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours during the commissioning period. Such operation of this unit without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities, the permittee shall provide written notice to the District and the unused balance of the 100 firing hours without abatement shall expire. [District Rule 2201]

19. The total mass emissions of NOx, CO, VOC, PM10, and SOx that are emitted during the commissioning period shall accrue towards the consecutive twelve month emission limits specified in condition #40. [District Rule 2201]

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

21. Permittee 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]

22. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]

23. 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]

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

25. 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]

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

27. 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]

INSPECTION

28. The CTG 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)]

29. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (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 SOx (as SO2) - 0.89 lb/hr. NOx (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)]

30. Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (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 SOx (as SO2) - 1.78 lb/hr. NOx (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)]

31. The ammonia (NH3) emissions 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]

32. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 4.17 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on three hour averages. [District Rules 2201 and 4703]

33. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on three hour averages. [District Rules 2201 and 4703]

34. 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]

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

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

37. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 67.3 lb/day; CO - 126.0 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201]

38. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NOx (as NO2) - 134.6 lb/day; CO - 252.0 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201]

39. Quarterly hours of operation of this 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]

40. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 11,209 lb/year; CO - 19,546 lb/year; VOC - 3,320 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201]

41. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 22,416 lb/year; CO - 39,096 lb/year; VOC - 6,400 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201]

42. 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]

CONDITIONS FOR APPLICATION C-7286-1-0

43. 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]

44. Compliance with the ammonia emission limits shall be demonstrated by utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = (a - [b/c e/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured 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 permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

45. 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]

46. Initial source testing to determine compliance with the NOx, 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)]

47. Source testing to determine compliance with the NOx, 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 at least once every 12 months. Source testing may be conducted while unit C-7286-1 is operating independently or when units C-7286-1 and C-7286-2 are operating simultaneously. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

48. 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)]

49. The following test methods shall be used: NOx - 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)]

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

51. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, 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]

INSPECTION COPY

52. 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)]

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

54. 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 NOx, 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)]

55. 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)]

56. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 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)] PS4?

57. 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]

58. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

59. Results of the CEM system shall be averaged over a one hour period for NOx 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]

60. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOx 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 NOx or O2 (or both). [40 CFR 60.4380(b)(1)]

61. 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]

62. 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]

63. 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]

64. 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]

CONDITIONS FOR APPLICATION C-7286-1-0

65. 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, date and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

66. 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]

67. Permittee 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]

68. 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]

69. The permittee 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 2201 and 4703]

70. The permittee 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]

71. 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 and 4703]

72. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

73. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 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]

74. 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]

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

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

77. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

78. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

79. 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, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

80. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

81. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

JJ Fair

From: John_Lague@URSCorp.com
Sent: Tuesday, April 24, 2007 3:35 PM
To: Rich Weiss; d.tyburski@energy-usa.com
Cc: JJ Fair; Ron Watkins
Subject: Draft SJVAPCD conditions
Attachments: Draft Starwood Conditions.doc

All

I went through these conditions one by one to identify issues we need to have changed. I recently did this for the EIF project and the conditions are very similar. Things I thought we needed to ask to be changed I entered in Track Change mode. I made notes shaded in yellow for items people on our team need to check to make sure you can live with specific conditions. Text shaded in green indicates information we need to share with APCD to help them get a condition right.

Dustin Brown already called me to ask why we haven't completed this review, so we should get our input to him asap, but you will be building and running this plant so you need to make sure there are not issues that will give you big problems.

Thanks and best regards - jsl

(See attached file: Draft Starwood Conditions.doc)

John Lague
Senior Air Quality Consultant
URS Corporation
1615 Murray Canyon Road, Suite 1000
San Diego, California 92108
Phone: (619) 294-9400
Fax: (619) 293-7920

EQUIPMENT DESCRIPTION, UNIT C-7286-1-0:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

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

2. Prior to initial operation of C-7286-1-0, C-7286-2-0, C-7286-3-0 or C-7286-4-0, permittee shall provide PM_{10} emission reduction credits for the following quantities of emissions: 1st quarter – 2,628 lb; 2nd quarter – 2,628 lb; 3rd quarter – 2,628 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 [redacted]

Formatted: Bullets and Numbering

3. ERC certificate numbers (or any splits from these certificates) S-2382-2, 2368-1, 2423-1 and S-2366-1 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]

4. Permittee shall submit an application to comply with SJVUAPCD District Rule 2520 - Federally Mandated Operating Permits within twelve months of commencing operation. [District Rule 2520] -OK

5. Permittee shall submit an application to comply with SJVUAPCD District Rule 2540 - Acid Rain Program within 12 months of commencing operation. [District Rule 2540] -OK

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

7. The owner/operator of the Starwood Power-Midway, LLC (Starwood Power) shall minimize the emissions from the gas turbine to the maximum extent possible during the commissioning period. Conditions #7 through #18 shall apply only during the commissioning period as defined below. Unless otherwise indicated, Conditions #19 through #79 shall apply after the commissioning period has ended. [District Rule 2201] OK

8. 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] OK

9. 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] OK

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

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

12. Coincident with the steady-state operation of the SCR system and the oxidation catalyst, NOx and CO emissions from this unit shall comply with the limits specified in condition #28. [District Rule 2201] OK

13. The permittee shall submit a plan to the District at least four weeks prior to the first firing of this unit, describing the procedures to be followed during the commissioning period. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the combustors, the installation and operation of the SCR systems and the oxidation catalyst, the installation, calibration, and

testing of the NOx 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]

14. Emission rates from this CTG, during the commissioning period, shall not exceed any of the following limits: NOx (as NO2) – 41.65 lb/hr; CO – 19.9 lb/hr; VOC (as methane) – 0.80 lb/hr; PM10 – 1.85 lb/hr; or SOx (as SO2) – 0.89 lb/hr. [District Rule 2201]

15. During the commissioning period, the permittee shall demonstrate NOx and CO compliance with condition #14 through the use of properly operated and maintained continuous emissions monitors and recorders as specified in conditions #51 and 52. The monitored parameters for this unit shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). [District Rule 2201]

16. The continuous monitors specified in this permit shall be installed, calibrated, and operational prior to the first firing of this unit. After first firing, the detection range of the CEMS shall be adjusted as necessary to accurately measure the resulting range of NOx and CO emission concentrations. [District Rule 2201] OK

17. The total number of firing hours of this unit without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours during the commissioning period. Such operation of this unit without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities, the permittee shall provide written notice to the District and the unused balance of the 100 firing hours without abatement shall expire. [District Rule 2201 this was in EIF condition][[Starwood team, are you sure you can live with this number of commissioning hours per turbine? If you need more we can probably get it, but this is the time to ask for it]

18. The total mass emissions of NOx, CO, VOC, PM10, and SOx that are emitted during the commissioning period shall accrue towards the consecutive twelve month emission limits specified in condition #38. [District Rule 2201]. [Note to Starwood team. This only would be a problem if you actually might need to operate each turbine an appreciable part of 3,000 hours in the first year?]

19. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall

submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201] OK

20. Permittee 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] OK

21. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit during times that the CEMS is not functioning properly. [District Rule 4703] OK

22. 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] OK

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

24. 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] OK

25. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] OK

26. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators.[Are we OK with this?] 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]

27. The CTG 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)] OK

28. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NO_X (as NO_2) – 2.8 lb/hr and 2.5 ppmvd @ 15% O_2; CO – 4.19 lb/hr and 8.0 ppmvd @ 15% O_2; VOC (as methane) – 0.82 lb/hr and 2.0 ppmvd @ 15% O_2; PM_{10} – 1.65 lb/hr; or SO_X (as SO_2) – 0.89 lb/hr. NO_X (as NO_2) 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)]

29 Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NO_X (as NO_2) – 5.7 lb/hr and 2.5 ppmvd @ 15% O_2; CO – 8.38 lb/hr and 6.0 ppmvd @ 15% O_2; VOC (as methane) – 1.60 84 lb/hr and 2.0 ppmvd @ 15% O_2; PM_{10} – 3.70 lb/hr; or SO_X (as SO_2) – 1.78 lb/hr. NO_X (as NO_2) 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)] [Starwood team; Note the averaging times]

30 The ammonia (NH_3) emissions shall not exceed 10 ppmvd @ 15% O_2 over a 24 hour rolling average. [District Rules 2201 and 4102] OK

31 DDuring start-up, CTG exhaust emission rates shall not exceed any of the following limits: NO_X (as NO_2) – 4.17 lb/hr; CO – 12.5 lb/hr; VOC (as methane) – 0.830 lb/hr; PM_{10} – 1.85 lb/hr; or SO_X (as SO_2) – 0.89 lb/hr based on three hour averages.. {this was in EIF condition][District Rules 2201 and 4703]

Formatted: Highlight

32. .During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NO_X (as NO_2) – 1.50 lb/hr; CO – 21.33 lb/hr; VOC (as methane) – 0.800.83 lb/hr; PM_{10} – 1.85 lb/hr; or SO_X (as SO_2) – 0.89 lb/hr based on three hour averages thie was in EIF condition][... [District Rules 2201 and 4703]

33.-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 by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

34 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] OK

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

36 Daily emissions from the CTG shall not exceed the following limits: NO_X (as NO_2) – 67.3 lb/day; CO – 126.0 lb/day; VOC – 19.2 7 lb/day; PM_{10} – 44.4 lb/day; or SO_X (as SO_2) – 21.4 lb/day. [District Rule 2201] OK

37 Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed the following limits: NO_X (as NO_2) –

134.6 lb/day; CO – 252.0 lb/day; VOC – 389..4 lb/day; PM_{10} – 86.8 lb/day; or SO_X (as SO_2) – 42.8 lb/day. [District Rule 2201] [Note to Startwood team. I know you hate this condition, but we would only exceed these limits if we exceed the hourly limits as these are just 24 x the hourly limits.]

38 Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NO_X (as NO_2) – 22,416 lb/year; CO – 39,096 lb/year; VOC – 6,400 lb/year; PM_{10} – 14,600 lb/year; or SO_X (as SO_2) – 7,120 lb/year. [District Rule 2201]

39 Combined NO_X emissions from units C-7286-1, C-7286-2, C-7286-3 and C-7286-4 shall not exceed 32,416 pounds during the months of April through November. [District Rule 2201] We should ask to delete this condition because our the PPA with PG&E limits the number of hours we can operate each quarter (800, 800, 1400, 1100)

3940 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] OK

4041 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] OK

4142 Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured 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 permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the

permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] OK

4243 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] OK

4344 Initial source testing to determine compliance with the NOx, CO and VOC emission rates (lb/hr and ppmvd @ 15% O_2) NH3 emission rate (ppmvd @ 15% O_2) and PM_{10} 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)] OK

4445 Source testing to determine compliance with the NOx, CO and VOC emission rates (lb/hr and ppmvd @ 15% O_2), NH3 emission rate (ppmvd @ 15% O_2) and PM_{10} emission rate (lb/hr) shall be conducted at least once every 12 months. Source testing may be conducted while unit C-7286-1 is operating independently or when units C-7286-1 and C-7286-2 are operating simultaneously. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] OK

4546 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)] OK

4647 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 [what tests does P&W associate with its emissions

guarantees]; and O_2 - 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)]

4748 Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D8667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] OK

4849 The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_X, CO, and O_2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] OK

4950 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)] OK

5051 The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

5152 The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_X, CO and O_2 concentrations. Continuous emissions monitor(s) shall 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)] - Ok

5253 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)] OK

54 The NO_X, CO and O_2 CEMS shall meet the requirements in 40 CFR 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)] OK

5355 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] OK

5456 The owner/operator shall perform a relative accuracy test audit (RATA) for NO_X, CO and O_2 as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] OK

5557 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] OK

5658 Excess emissions shall be defined as any operating hour in which the 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 60.4380(b)(1)] OK

5759 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] OK

5860 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] OK

6061 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] OK

6062 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] OK

6163 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 preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] OK

6264 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] OK

6365 Permittee 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] OK

6466 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] OK

6567 The permittee 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 2201 and 4703] OK

6868 The permittee 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 and lb/twelve month rolling period). [District Rules 2201 and 4703] OK

6769 The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 1070 and 4703] OK

6870 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] OK

6971 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] OK

7072 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] OK

7173 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] OK

7274 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] OK

7375 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 Rules 8011 and 8071] OK

7476 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 Rules 8011 and 8071] OK

7577 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, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071] OK

7678 Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071] OK

7779 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] OK

Comment by Starwood Power-Midway, LLC on Draft PDOC for Starwood-Midway Project

1. Page *1, last sentence of Section I* Statement the project is subject to PSD requirements in incorrect, since project will not result in emissions increases for attainment pollutants in excess of the Significant Increase levels. Recommend sentence be deleted.
2. *Page 3, second sentence of second paragraph* This sentence should be deleted, as the permit conditions clearly limit emissions by quarter.
3. *Page 5, fifth sentence of fourth paragraph* For the proposed turbines and catalyst systems, the appropriate temperature range is 750 600 to 830 deg F.
4. *Page 6, Section VII.A, second bullet* Please start this bullet as follows "The commissioning period **for each CTG** will not exceed 100 hours and ....."
5. *Page 7, third bullet* Change "estimate" to "estimated".
6. *Page 8, notes on equation for calculating ammonia slip emission rate* For gas turbines, the reference percent oxygen in the exhaust stream should be 15%, not 3%.
7. *Page 14, Section VIII, Rule 1080 discussion, second sentence of first paragraph* Please change text to make clear that there will be one stack and one CEMS for each pair of CTGs.
8. *Page 19, third sentence of final paragraph* Please change sentence to read: "Pursuant to information provided by the applicant for this project, Starwood Energy GroupGlobal LLC is a partial owner of the existing CalPeak Power-Panoche facility and the full owner of the proposed Starwood Power facility.
9. *Page 22, second bullet* Change "filed" to "fired"
10. *Page 34, second sentence of second paragraph* Typo: ..."shut down the other turbine ~~down~~".
11. Page 37, second full paragraph, the Title V Permit should not be commingled with the permit for CalPeak Power – Panoche. These are two separate units under different debt structures with different contracts. Each facility needs to stand on its own from a permitting perspective.
11. *Page 38, second sentence of first paragraph* The anticipated beginning of commercial operation should be changed from June of 2004 to May of 2009.
12. *Page 38, bullet* The term "within 12 months of commencing operation" is unclear. We expect this means within 12 months **before** commencement of operations. The same clarification should also be made to Condition 5 of the permit for each CTG.
13. *Page 45, paragraph after Bullet (b).* It is not true that Starwood Power has asked to use the option of physically monitoring sulfur content. Applicant wishes to comply with fuel sulfur content limits based on purchase contract, tariff sheet or transportation contract for the fuel. Given this fact, the remainder of the discussion on monitoring of fuel sulfur content could should be deleted. Permit Rules 47 and 49 for each gas turbine should be adjusted accordingly.
14. *Page 46, paragraph after Bullet (c)* Starwood Power is not proposing a custom monitoring schedule.

15. *Page 47, first sentence of last paragraph* Typo: word "document is repeated.
16. *Attachment B* Project site plan has undergone minor changes. [illegible]
17. *Attachment C, Commissioning Emissions Table* "Maximum Emission Rates" header should read "Average Emission Rates".
18. *Attachment D, Low Catalyst Temps Table and High Catalyst Temps Table* For clarification, "1 Unit" and "2 Unit" headers should be "1 CGT" and "2 CGT" and "Turbine Outlet Temp" should be "Stack Outlet Temp".
19. *Attachment D, Average Emission Rates Table:* VOC and CO emission rates should be scaled up to 2 ppm and 6 ppm, respectively to reflect manufacturer's contractual guarantees.
20. *Attachment D, Startup and Shutdown Emission Rates Tables:* VOC and CO emission rates should be scaled up to 2 ppm and 6 ppm, respectively to reflect manufacturer's contractual guarantees.
21. Updated/corrected versions of the tables referred to in Comments 17-20 are attached. [illegible]

STARWOOD POWER MIDWAY, LLC • 7365 MISSION GORGE RD STE C • SAN DIEGO, CA 92120

1235

VENDOR ID	NAME	PAYMENT NUMBER	CHECK DATE
SANJ001	San Joaquin Valley APCD	00000000000000517	5/12/2009

OUR VOUCHER NUMBER	YOUR VOUCHER NUMBER	DATE	AMOUNT	AMOUNT PAID	DISCOUNT	WRITE-OFF	NET
00000000000000503	20090612 PETITION	6/12/2009	$1,134.00	$1,134.00	$0.00	$0.00	$1,134.00
			$1,134.00	$1,134.00	$0.00	$0.00	$1,134.00

COMMENT

1235

STARWOOD POWER MIDWAY, LLC
7365 MISSION GORGE RD STE C
SAN DIEGO, CA 92120

SUMITOMO MITSUI BANKING CORP
NEW YORK BRANCH
277 PARK AVENUE, N.Y., N.Y. 10172
1-967-260

DATE
5/12/2009

AMOUNT
$1,134.00

PAY
One Thousand One Hundred Thirty Four Dollars And 00 Cents

TO THE ORDER OF San Joaquin Valley APCD

Security Features Included. Details on back.

⑈001235⑈ ⑆026009674⑆ 304406⑈

Attachment 2
Order Granting Interim Variance

BEFORE THE HEARING BOARD
OF THE
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
CENTRAL REGION
STATE OF CALIFORNIA

In the matter of: Starwood Power – Midway LLC 7365 Mission Gorge Road, Suite C San Diego, CA 92120	)	**DOCKET NO. C-09-101**
For a variance from: 2010 – *Permits Required* 2201 – *New and Modified Stationary Source Review Rule* 4703 – *Stationary Gas Turbines*	)	**ORDER GRANTING AN INTERIM VARIANCE**
District Permit #: C-7286-1-0, -2-0, -3-0, and -4-0	)	**Granted on:** June 17, 2009
EPA Airs Number: N/A	)	**Effective from:** June 17, 2009 **Effective to:** August 19, 2009

On June 12, 2009, Starwood Power – Midway LLC (STARWOOD) filed with the Central Region Hearing Board a petition for an interim and regular variance. An interim variance was requested to allow the continued operation of the power plants pending the decision of the Hearing Board on the petition for regular variance. All parties of concern were given reasonable notice of the interim variance petition and hearing. STARWOOD requested that the Hearing Board grant an interim variance from San Joaquin Valley Air Pollution Control District (District) Rules 2010, 2201, and 4703.

On June 17, 2009, a hearing on the petition for an interim variance was held. Mr. JJ Fair and Mr. Kent Miles represented STARWOOD, while Mr. Patrick Houlihan, Senior Air Quality Specialist, represented the District. All persons, including the public, were given the opportunity to give testimony or make comment.

The Hearing Board declared the hearing closed after receiving testimony and took the matter under submission for the decision. The Hearing Board made the following findings of fact.

LOCATION AND EQUIPMENT

1. STARWOOD owns and operates for natural gas-fired combustion turbine generators located at 43627 W. Panoche Road in Firebaugh.

2. The subject of this variance is the start-up and shutdown emission limits of each respective turbine.

3. Operation of the subject equipment is authorized by duly issued Authorities to Construct (ATC)s.

BACKGROUND

STARWOOD is an electrical power peaker plant that only operates when the California Independent System Operator (Cal-ISO) calls on them to provide electrical power during periods of increased demand. STARWOOD is contracted with Cal-ISO to remain in standby mode and must be ready to provide electrical power when called into service.

STARWOOD is a new constructed facility that only began operations on May 5, 2009. They currently utilize four natural gas-fired combustion turbine generators for power production. During initial operations, it became apparent that they were unable to meet the permitted NO_X (oxides of nitrogen) emission limit for the period of turbine start-up and shutdown. The permit currently specifies that NO_X emissions during start-up cannot exceed 4.7 lbs/hr, and 1.50 lbs/hr during shutdown. Based on observed emissions during these operations, each unit is currently emitting approximately 20.2 pounds of excess NO_X each time they complete a start-up and shutdown cycle.

In order to meet their contractual obligations, STARWOOD has requested variance relief to allow them to provide electrical power at the behest of Cal-ISO while they move forward with modifying their start-up and shutdown NO_X emission limits.

RULE REQUIREMENTS AND VIOLATIONS

1. The equipment subject to this variance is regulated by the following District Rules:

   A. 2010 – *Permits Required*
   B. 2201 – *New and Modified Stationary Source Review Rule*
   C. 4703 – *Stationary Gas Turbines*

2. District Rules 2010 requires that the subject equipment not be operated contrary to the conditions of the applicable ATCs. Rule 2201 and 4703 establish limits for NO_X emissions upon start-up and shutdown of each respective turbine.

3. The subject equipment will be in violation of the applicable District Rules and ATC conditions when the turbines go through a start-up and shutdown cycle.

FINDINGS OF FACT

Pursuant to California Health and Safety Code Section 42351 (b), the Hearing Board finds that good cause can be made based on its belief that there is a reasonable possibility that the required findings could be made during the hearing on the regular variance request.

GENERAL COMMENTS

A nuisance as defined in District Rule 4102 is not expected to occur as a result of this variance. Nor would continued operations likely create an immediate threat or hazard to public health or safety.

CONCLUSIONS AND ORDER

NOW, THEREFORE, the CENTRAL REGION HEARING BOARD ORDERS that an interim variance is hereby granted to Starwood Power – Midway LLC. subject to the following:

1. The variance shall be effective from June 17, 2009, to August 19, 2009, or until the Central Region Hearing Board has heard the petition for the regular variance or until STARWOOD has successfully raised the start-up and shutdown NO_X emission limit, whichever occurs first.

2. Variance relief shall be granted from the requirements of the applicable sections of District Rules 2010, 2201, and 4703, in addition to the following:

    1. Conditions 32, 33, 37, and 38, of ATCs #C-7286-1-0, -2-0, -3-0, & -4-0.

3. The variance shall allow NO_X emissions to exceed the ATC condition limits during start-up and shutdown.

4. Excess NO_X shall not exceed 30 lbs/day during start-up and shutdown for each respective turbine during the variance period. A note about excess emissions: While it is entirely possible that STARWOOD may not exceed their daily NO_X limit, they will have hourly excess emissions and it is those emissions that must be calculated and referenced in conjunction with condition #5 below.

5. Should the aggregate of excess NO_X emissions as a result of this variance exceed one ton over the variance period, STARWOOD shall do one of the following:

    A. Surrender emission reduction credits (ERCs) equal to 20% of the total amount of excess NO_X emissions. Initiation of said surrender shall occur within 30 days of achieving compliance;

    -OR-

    B. In lieu of surrendering ERCs, STARWOOD can opt to pay three dollars and seventy five cents ($3.75) for each pound of total excess NO_X emissions. Payment of this fee shall occur within 30 days of achieving compliance.

6. No excess emissions, other than NO_X, shall be granted relief under this variance.

7. Excess NO_X emissions emanated during the variance period shall not be included in the calculation of annual emissions when totaling the annual emissions as required by conditions #40 and #41 of the subject ATCs.

8. An ATC application for each unit shall be submitted to the District with a request for expedited processing and accompanied by the appropriate fees as soon as possible, but no later than 5:00 PM on August 1, 2009.

9. Should the District receive complaints or if the facility experiences operational conditions likely to cause a public nuisance, STARWOOD shall cease the operations causing the complaints or problems and take all necessary actions to abate the problem immediately.

10. By September 2, 2009, or no later than 15 days after returning to compliance, whichever occurs first, STARWOOD shall submit to the District a summary report. However, if regular variance #C-09-10R should be granted by the Central Region Hearing Board, submittal of said summary report shall occur in accordance with the time frames established within the regular variance. The report shall include:

    A. A summary of verification of assumptions the original equipment manufacturer used to determine emissions estimates when filing the original ATC application;
    B. A daily summary of all excess NOX emissions data; and

    C. The total amount of payment or surrendering of offsets in accordance with condition #5 above, if applicable.

11. All notifications and submittals to the District pursuant to this variance shall be submitted to the attention of:

    Mr. Ryan Hayashi, Supervising AQS
    SJVUAPCD – Compliance Department
    1990 E. Gettysburg
    Fresno, CA 93726
    Telephone: (559) 230-6000
    E-mail: ryan.hayashi@valleyair.org

12. Failure to comply with any condition of this variance may render the variance null and void.

MOTION: Waterman **SECOND:** Glaser

Ayes: Boren, Schumacher, Glaser, Mulligan, Waterman
Noes: None
Abstained: None
Excused: None
Recused: None
Absent: None

THE FOREGOING DECISION IS APPROVED:

Mr. Jerry K. Boren, Chair
Hearing Board – Central Region
San Joaquin Valley Unified APCD

Date 6/26/09

ATTEST:

Angie DeSantiago, Clerk to the Boards

Date 7-2-09

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

PROOF OF SERVICE

I, Patrick Houlihan, declare:

I am a resident of the State of California and over the age of 18 years, and not a party to the within action; my business address is San Joaquin Valley Unified Air Pollution Control District, 1990 E. Gettysburg, Fresno, California 93726.

On July 10, 2009, I served the within documents:

ORDER GRANTING AN INTERIM VARIANCE – **DOCKET #C-09-101**

XX by placing the document(s) listed above in a sealed envelope, and placing the same for mailing in the United States mail at Fresno, California, in accordance with the company's ordinary practices, and addressed as set forth below.

_____ by transmitting via facsimile the above listed document(s) to the fax number(s) set forth below on this date before 5 p.m.

_____ by personally delivering the document(s) listed above to the person(s) at the Address(es) set forth below:

Mr. Jeff Paul
Starwood Power –Midway LLC
7365 Mission Gorge Rd. Suite C
San Diego, CA 92120

Mr. Doug McDaniel
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Mr. Ed Virgin
CARB – Compliance Division
PO Box 2815
Sacramento, CA 95814
(916) 445-7986

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on July 10, 2009, at Fresno, California.

Patrick Houlihan
Senior Air Quality Specialist

Northern Region Office	Central Region Office	Southern Region Office
4800 Enterprise Way	1990 East Gettysburg Avenue	34946 Flyover Court
Modesto, CA 95356-9321	Fresno, CA 93726-0244	Bakersfield, CA 93308-9725
(209) 557-6400 ♦ FAX (209) 557-6475	(559) 230-6000 ♦ FAX (559) 230-6062	(661) 392-5500 ♦ FAX (661) 392-5585
	www.valleyair.org	

Attachment 3
Notice of Violation for excess start up emissions prior to variance

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

July 27, 2009 **CERTIFIED MAIL**

Jeff Paul, Plant Manager
Starwood Power-Midway, LLC
7365 Mission Gorge Rd., Suite C
San Diego, CA 92120

Subject: Notice of Violation (NOV) #39444

Mr. Paul:

On June 12, 2009, staff of the San Joaquin Valley Unified Air Pollution Control District (District) received emissions data recorded on June 6, 2009, from the Starwood Power-Midway, LLC power generation project located at 43699 Panoche Road near the City of Firebaugh, CA. The data and the associated emissions calculations were submitted in support of a variance request and demonstrated that Turbine Unit #1 was unable to meet the oxides of nitrogen in pounds per hour (NOx lb/hr) startup emission limits stipulated in Condition 32 of Authority to Construct (ATC) C-7286-1-0. By inference, the emissions data indicated that similar conditions existed for the three other units at the facility operated under ATC #s C-7286-2-0, -3-0, and -4-0.

Section 4.1 of District Rule 2010 – *Permits Required* states *"A person shall notify the APCO before operating or using any source operation granted an Authority to Construct. Upon such notification, the Authority to Construct shall serve as a temporary Permit to Operate for the source operation until the Permit to Operate is granted or denied. The source operation shall not be operated contrary to the conditions specified in the Authority to Construct."* Therefore, enclosed is your copy of Notice of Violation (NOV) #39444, which was issued for failing to comply with the requirements of Rule 2010 and the ATC conditions noted. **PLEASE READ BOTH SIDES OF THE ENCLOSED NOTICE CAREFULLY AND RESPOND APPROPRIATELY.** You will receive further correspondence from the District regarding settlement of these matters. However, you should be aware that any continuance or reoccurrence of these violations could result in a civil action and the imposition of an additional monetary penalty.

Should you have questions or require further information regarding this matter, you are encouraged to contact Mr. John Copp at the District's Fresno Office. You may contact him by telephone at 559-230-5977. His office hours are from 8:00 a.m. to 5:00 p.m., Monday through Thursday, and alternate Fridays.

Sincerely,

Michael Carrera
Supervising Air Quality Inspector

Enclosure: NOV #39444

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

☐ Northern Regional Office
4800 Enterprise Way
Modesto, CA 95356
(209) 557-6400

☒ Central Regional Office
1990 East Gettysburg Avenue
Fresno, CA 93726
(559) 230-5950

☐ Southern Regional Office
2700 "M" Street, Suite 275
Bakersfield, CA 93301
(661) 326-6900

NOTICE OF VIOLATION NO. 39444

ISSUED TO:

NAME: Starwood Power - Midway, LLC PERMIT NO. C-7286

ADDRESS: 7365 Mission Gorge Rd., Ste C

CITY: San Diego STATE: CA ZIP: 92120

PHONE: (619) 229-3770

OCCURRENCE LOCATION:

NAME:

ADDRESS: 43697 Panoche Rd ☐ Same as Above

CITY: Firebaugh STATE: CA ZIP:

DATE: 5/06/09 TIME: 2300 hrs

THIS NOTICE HAS BEEN ISSUED AS A RESULT OF A VIOLATION OF:

☒ San Joaquin Valley Unified Air Pollution Control District Rules and Regulations ☐ California Health and Safety Code

Rule(s) / Section(s): Rule 2010- Permits Required, Sec 4.1 - New Equipment

Equipment Type (if Applicable): Four 30 MW natural gas fired simple cycle power generation units

Description: Failure to comply with the NOx lb/hr emission limit for turbine startup conditions specified in Cond. 32 of ATC C-7286-1-0 -2-0, -3-0, & -4-0

RECIPIENT NAME: Jeff Paul (Received) TITLE: Plant Manager

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT X _____

SIGNATURE

RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT A CONTINUED OR RECURRENT VIOLATION.

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTIES. YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: John Corps (SJVAPCD)

DATE: 7/24/09 TIME: 1553 hrs ☒ MAILED

Attachment 4
Application for the new ATC

STARWOOD
POWER - MIDWAY, LLC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.761

July 30, 2009

Mr. Ryan Hayashi, Supervising AQS
San Joaquin Valley Air Pollution Control District
Compliance Department
1990 E. Gettysburg
Fresno, CA 93726

RE: Permit Application for Authority to Construct – Modification Of Emission Unit PTO Starwood Power – Midway, LLC

Dear Mr. Hayashi;

Attached please find a Permit Application for an Authority to Construct (ATC) to modify four existing valid Permits to Operate (PTO's) issued to Starwood Power-Midway, LLC (Starwood). This letter supplements the Permit Application and is intended to provide a detailed description of the requested modifications, including background information to support the request. Starwood is requesting changes to certain, specific provisions of PTO's C-7286-1-0, C-7286-2-0, C-7286-3-0 and C-7286-4-0 for four stationary natural gas-fired turbine generators located at 43627 West Panoche Road, Firebaugh, California. These PTO's were issued pursuant to the Revised Final Determination of Compliance (RFDOC) dated September 5, 2007, following Starwood's Application for Certification (AFC) for a peaking power plant to the California Energy Commission (CEC).

One Permit Application form has been completed to request modifications to all four PTO's as they contain identical conditions. Provided in this application package is the completed Permit Application form and a check in the amount of $284.00 per District Rule 3010 (filing fee of $71.00 per permit unit) to cover processing of the applications.

Starwood has been operating the Midway electrical peaking generating station since May 5, 2009, and is contractually obligated to the California Independent System Operator (Cal-ISO) to remain in standby mode and to be ready to provide electric power when requested. The plant contains four identical Pratt & Whitney model FT8-3 natural gas-fired turbine generators operating in simple cycle mode. Each turbine has a fuel input energy rating of 311-MMBtu/hr and a nominal generating capacity of 30 MW. The four turbines are configured in two pairs, each of which constitutes a unit called a SwiftPac. The two turbines in each SwiftPac are served by a single inlet air filtration and cooling system, water injection, selective catalytic reduction (SCR) system, and CO oxidation catalyst and are exhausted through a common stack.

The initial source tests conducted on the operational turbines indicated that the permitted nitrogen oxides (NO_x) emission limit of 4.17 lbs/hr was being exceeded during periods of turbine startup. In order to fulfill its contractual obligations to provide peaking power when called upon by the Cal-ISO, Starwood requested and SJVAPCD granted an interim variance to allow the plant to provide electrical power while the applicant works to

STARWOOD
POWER - MIDWAY, LLC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.761

determine the causes of the NO_x emission problem during turbine startups. This effort is ongoing as of the date of this application. This interim variance is effective from June 17, 2009 to August 19, 2009. Starwood also applied for a regular variance #C-09-10R to allow continued operation beyond August 19, 2009 while adjustments to the turbines are made to reduce startup emissions as much as possible and until the issue has been resolved.

One condition of the interim variance is to submit an ATC/PTO application for modification of the current Permits to Operate for the four turbines to SJVAPCD no later than August 1, 2009. This letter, the attached Permit Application form, and filing fee are intended to comply with condition 7. As also specified in condition 7 of the interim variance, Starwood is requesting expedited processing of this application and hereby approves the charges for staff to work overtime to expedite the processing.

The technical elements of this application include (1) a discussion of turbine emissions during startup events to explain the recent source testing results, and (2) recommended changes to the current permit conditions to accommodate actual emissions.

The observed discrepancies between the Original Equipment Manufacturer (OEM) guaranteed emissions reflected in the PTO's and the actual measured emissions during startup are due, at least in part, to changes in the design of the SCR system on each Swiftpac. Each unit was originally expected to be equipped with an electric heater to achieve the minimum temperature for proper SCR operation within a startup time of 18 minutes per event. The SCR systems, as constructed, are actually heated with re-circulated flue gas, which extends the startup time to about 30 minutes per turbine/unit.

By contractual agreement, the plant is required to have the ability to accomplish up to two startup/shutdown cycles on a given day and up to 365 such cycles per year. Furthermore, in order to meet Starwood's obligations to ISO, the turbines must each be permitted to operate up to 4,000 hours per year, including the times for startup and shutdown.

Based on the source testing data conducted on the Starwood turbines to date and subsequent work that has been done on the turbine control system, the allowable limit on NO_x emissions per startup event will need to be increased to a higher number than in the current permits. Further coordination with the OEM is needed to achieve the lowest possible startup emissions and thus determine the appropriate pounds of NO_x per startup to be specified in the permits. In the revised permits, Starwood is requesting that the startup emission limit be stated in pounds per turbine per startup event, rather than in lbs/hour. Likewise, Starwood requests that the shutdown emission limit be stated in pounds per turbine per shutdown event, rather than in lbs/hour. The most recent tests indicate that the current permit limit for shutdown emissions can be achieved in practice.

Thus, Starwood is requesting that the maximum allowable daily emissions be revised to include up to two startups and shutdowns plus operation at full load for the remainder of the 24-hour period. Maximum allowable annual emissions for each turbine would then

STARWOOD
POWER - MIDWAY, LLC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.761

include 365 startup/shutdown cycles plus operation at full load for the remainder of the 4,000 hour period.

Testing conducted on the subject generating units shows that changes to the startup/shutdown emissions for the other pollutants from their presently permitted levels are not required. Also, no changes are sought for the steady-state operational emissions limits that are stipulated in the current permits for the pollutants other than NO_x.

Starwood understands that if changes to the allowable NO_x emissions during startup lead to increased total annual and calendar quarter totals, this would potentially trigger an increase in the required ERCs for this pollutant. When the revised startup emissions are determined by the OEM, an estimate of additional ERCs will be prepared, if required, and provided to the SJVAPCD. However, no changes in offset amounts are anticipated for any other pollutants.

By this application, Starwood is requesting the following modifications to certain permit conditions for the Starwood-Midway generating units:

- Applicant would prefer to have all permit conditions pertain to Swiftpac units rather than to individual turbines, provided that: (a) this does not result in a loss of the ability to operate turbines independently; and (b) the permit condition that requires the performance of compliance testing on individual turbines if single turbine operations exceed 400 hours per year is retained.
- Conditions 32 and 33: Applicant requests a change in the limits on startup and shutdown emissions from lb/hr values to total lbs per event for the reasons described above.
- Conditions 37 and 38: Applicant requests that Condition 37 be removed and Condition 38 be modified so that the maximum allowable daily emissions from each Swiftpac unit reflect the changes in the startup period duration and NO_x startup emissions that will be determined by the OEM and allow for up to 2 startups and shutdowns, in addition to full-load operation for the remainder of the 24-hour period.
- Conditions 40 and 41: Applicant requests that Condition 40 be removed and Condition 41 be modified so that the maximum allowable annual emissions from each Swiftpac unit reflect the changes in the startup period duration and NO_x startup emissions that will be determined by the OEM, and allow for up to 365 startups and shutdowns, in addition to full-load operation for the remaining portion of the 4,000 total hours of operation per year.
- Conditions 29, 30 and 59: Applicant requests that these conditions by reworded to present the normal operating emissions as limits on a 3-hr rolling average basis, as is done in SJVAPCD permit C-3811-1(& 2) Conditions 17 and 18 for similar equipment at the existing Calpeak Panoche facility.
- Conditions 47 and 58: Due to infrequent operations for the peaking plant and applicable regulations under 40 CFR 75, Applicant requests that these conditions allow the source testing and RATA testing frequencies to be those specified in

STARWOOD
POWER - MIDWAY, LLC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.761

40 CFR 75 for all analyzers. EPA Harmonization guidance has been promulgated in the past covering this scenario [discussed in 40 CFR 60, Section 4345(e)]. Applicant requests that the relevant language of Condition 47 be changed to the following: "Source test and the NO_x, CO and O_2 RATA tests shall be conducted in accordance with RATA frequency requirements of 40 CFR 75, Appendix B, Sections 2.3.1 and 2.3.2". Applicant requests that the relevant language of Condition 58 be changed to the following: "A relative accuracy test audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with 40 CFR 75 Appendices A and B ..."

- Condition 57: Applicant requests a change to allow 40 CFR 75 frequencies for the CEMS audits. This is currently allowed by SJVAPCD for very similar equipment in Permit C-3811-1(& 2) Condition 27 for similar units at the existing Calpeak Panoche facility. EPA Harmonization guidance has been promulgated in the past covering this scenario. Discussed in 40 CFR 60, Section 4345(e). Applicant requests that the phrase "shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed" be changed to "quarters audits shall be conducted in accordance with the procedures and frequencies as specified in CFR part 75 appandix B"
- Condition 45: Applicant requests that the language of this condition be changed such that the source test is per Swiftpac unit instead of a single engine (normal operating mode). Single engine testing would still occur on any individual engine that operated independently for greater than 400 hours in a year as stipulated in condition 47.
- Condition 60: Applicant requests that this condition be modified to define the criteria for excess emissions of pollutants other than NO_x.
- Conditions 31: Applicant requests that this condition be modified to state "Except during startup and shutdown, the ammonia emission rates shall not exceed 4.24 lb/hr or 10 ppm @15% over a 24 hr rolling average". This language is similar to SJVAPCD Permit C-3811-1(& 2) Condition 17.
- Condition 44: Applicant requests that compliance with the ammonia emission limits shall be demonstrated using district approved source testing methods. The source test frequency of 40CFR75 appendix B shall be used.

Starwood looks forward to working closely with the District to implement the requested permit modifications over the coming weeks. Please let me know as soon as possible if you require additional information or wish to discuss any aspect of this application.

Sincerely,

Jeff Paul
General / Plant Manager
Starwood Power Midway, LLC

cc: Dustin Brown, Permit Engineer, SJVAPCD

STARWOOD
POWER - MIDWAY, LLC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.7616

ATTACHMENT A

SJVAPCD Modified Application for Permit to Operate

San Joaquin Valley Air Pollution Control District

www.valleyair.org

Permit Application For:

[ ] AUTHORITY TO CONSTRUCT (ATC) - New Emission Unit
[x] AUTHORITY TO CONSTRUCT (ATC) - Modification Of Emission Unit With Valid PTO/Valid ATC
[ ] AUTHORITY TO CONSTRUCT (ATC) - Renewal of Valid Authority to Construct
[ ] PERMIT TO OPERATE (PTO) - Existing Emission Unit Now Requiring a Permit to Operate

1. PERMIT TO BE ISSUED TO: **Starwood Power Midway**

2. MAILING ADDRESS: **7365 Mission Gorge Road, Ste C**
STREET/P.O. BOX: _____
CITY: **San Diego** STATE: **CA** 9-DIGIT ZIP CODE: **92120**

3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:
STREET: **43627 W. Panoche Rd** CITY: **Firebaugh, CA**
SW/4 SECTION **5** TOWNSHIP **15** RANGE **13 East**
WITHIN 1,000 FT OF A SCHOOL? [ ] YES [x] NO
S.I.C. CODE(S) OF FACILITY: **4911**

4. GENERAL NATURE OF BUSINESS: **Electric Power Generation**
INSTALL DATE: **May 5, 2009**

5. TITLE V PERMIT HOLDERS ONLY: Do you request a COC (EPA Review) prior to receiving your ATC (*If yes, please complete and attach a Compliance Certification form (TVFORM-009)*)? [ ] YES [x] NO

6. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)

Operating Permits C-7286-1-0, C-7286-2-0, C-7286-3-0 and C-7286-4-0 -- Revision of permit conditions to reflect actual turbine startup emissions.

7. PERMIT REVIEW PERIOD: Do you request a three- or ten-day period to review the draft Authority to Construct permit? Please note that checking "YES" will delay issuance of your final permit by a corresponding number of working days. See instructions for more information on this review process.
[ ] 3-day review
[X] 10-day review
[ ] No review requested

8. HAVE YOU EVER APPLIED FOR AN ATC OR PTO IN THE PAST? [x] YES [ ] NO
If yes, ATC/PTO #: C-7286-1-0, C-7286-2-0, C-7286-3-0 and C-7286-4-0

9. IS THIS APPLICATION FOR THE CONSTRUCTION OF A NEW FACILITY? *(If "Yes" is checked, please complete the CEQA Information form)* [ ] YES [x] NO

10. IS THIS APPLICATION SUBMITTED AS THE RESULT OF EITHER A NOTICE OF VIOLATION OR A NOTICE TO COMPLY? [ ] YES [x] NO
If yes, NOV/NTC #: _____

Optional Section

11. DO YOU WANT TO PARTICIPATE IN EITHER OF THE FOLLOWING VOLUNTARY PROGRAMS:
"HEALTHY AIR LIVING (HAL)"
[ ] Yes, please send info
"INSPECT"
[ ] Yes, please send info

12. TYPE OR PRINT NAME OF APPLICANT: **Jeff Paul**
TITLE OF APPLICANT: **General / Plant Manager**

13. SIGNATURE OF APPLICANT: Jeff Paul
DATE: **July 30, 2009**
PHONE #: **(619) 606-1318**
FAX #: **(619) 229-7616**
E-MAIL: **jeff.paul@calpeak.com**

FOR APCD USE ONLY:

DATE STAMP:	FILING FEE RECEIVED: $_____ CHECK #:_____ DATE PAID: _____ PROJECT #: _____ FACILITY ID:_____

STARWOOD POWER MIDWAY, LLC • 7365 MISSION GORGE RD STE C • SAN DIEGO, CA 92120

1297

VENDOR ID	NAME	PAYMENT NUMBER	CHECK DATE
SANJO01	San Joaquin Valley APCD	00000000000000600	7/24/2009

OUR VOUCHER NUMBER	YOUR VOUCHER NUMBER	DATE	AMOUNT	AMOUNT PAID	DISCOUNT	WRITE-OFF	NET
00000000000000730	200907 C-7286	7/17/2009	$284.00	$284.00	$0.00	$0.00	$284.00
			$284.00	$284.00	$0.00	$0.00	$284.00

COMMENT

1297

STARWOOD POWER MIDWAY, LLC
7365 MISSION GORGE RD STE C
SAN DIEGO, CA 92120

SUMITOMO MITSUI BANKING CORP
NEW YORK BRANCH
277 PARK AVENUE, N.Y., N.Y. 10172
1-967-260

DATE
7/24/2009

AMOUNT
$284.00

PAY
Two Hundred Eighty Four Dollars And 00 Cents

TO THE ORDER OF
San Joaquin Valley APCD

Security Features Included. Details on back.

050128/12-03

⑈001297⑈ ⑆026009674⑆ 304405⑈

Attachment 5
Notice of Violation for Equipment changes

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

RECEIVED
AUG 2 1 2009
BY:_____

August 19, 2009

CERTIFIED MAIL

J. J. Fair, Vice President
Starwood Power-Midway, LLC
7365 Mission Gorge Rd., Suite C
San Diego, CA 92120

Subject: Notice of Violation (NOV) #5003991

Dear Mr. Fair:

During this summer there have been several discussions between the staff of the San Joaquin Valley Unified Air Pollution Control District (District) and the staff operating the Starwood Power-Midway LLC power generation project located at 43699 Panoche Road near the City of Firebaugh, CA. The discussions were instigated by hourly oxides of nitrogen (NOx) emissions recorded during startup activities that were in excess of the limits stipulated in Condition 32 of Authority to Construct(s) C-7286-1-0, -2-0, -3-0, and -4-0. The limits mandated by the ATC were based upon engineering data contained in the permit applications, which described an emission control system with a selective catalytic reduction (SCR) system that is not the same system that was installed on the Swiftpac units.

Section 3.0 of District Rule 2010 – *Permits Required* states *"Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall first obtain authorization for such construction from the APCO."* Therefore, enclosed is your copy of Notice of Violation (NOV) #5003991, which was issued for failing to comply with the requirements of Rule 2010 and the ATC conditions noted. **PLEASE READ BOTH SIDES OF THE ENCLOSED NOTICE CAREFULLY AND RESPOND APPROPRIATELY.** You will receive further correspondence from the District regarding settlement of these matters. However, you should be aware that any continuance or reoccurrence of these violations could result in a civil action and the imposition of an additional monetary penalty.

Should you have questions or require further information regarding this matter, you are encouraged to contact Mr. John Copp at the District's Fresno Office. You may contact him by telephone at 559-230-5977. His office hours are from 8:00 a.m. to 5:00 p.m., Monday through Thursday, and alternate Fridays.

Sincerely,

Michael Carrera
Supervising Air Quality Inspector

Enclosure: NOV #5003991

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

☐ Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400

☒ Central Region Office
1990 E Gettysburg Ave
Fresno, CA 93726-0244
(559) 230-5950

☐ Southern Region Office
34946 Flyover Court
Bakersfield, CA 93308
(661) 392-5500

NOTICE OF VIOLATION NO. 5003991

ISSUED TO:

NAME: Starwood Power-Midway LLC
ADDRESS: 7365 Mission Gorge Road / Suite C
CITY: San Diego **STATE:** CA **ZIP:** 92120
PHONE: (619) 229-3770

PERMIT/FACILITY: C-7286
PERMITS: 1-0, -2-0, -3-0 & -4

OCCURRENCE LOCATION:

NAME: Starwood Power-Midway LLC
ADDRESS: 43699 Panoche Rd ☐ Same as Above
CITY: Firebaugh **STATE:** CA **ZIP:** 93622
DATE: May 06, 2009 **TIME:** 12:00 am

THIS NOTICE HAS BEEN ISSUED AS A RESULT OF A VIOLATION OF:

☒ San Joaquin Valley Unified Air Pollution Control District Rules and Regulation ☐ California Health and Safety Code

Rule(s)/Section(s): 2010 - Permits Required

Equipment Type (If Applicable): Natural Gas-Fired Turbines

Description: Failure to install equipment as proposed in permit application.

RECIPIENT NAME: J.J. Fair **TITLE:** Vice President

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT x _____
SIGNATURE

RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT A CONTINUED OR RECURRENT VIOLATION.

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY.
YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: John Copp
DATE: Tue August 18, 2009 **TIME:** 5:00 pm ☒ MAILED

Continued

Attachment 6
Settlement agreement in lieu of Variance continuation

SETTLEMENT AGREEMENT AND GENERAL RELEASE

This Settlement Agreement and General Release (the "Agreement") is made, entered into and executed this 19th day of August 2009 (the "Effective Date"), by and between **SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT**, its predecessors, successors, assigns, subsidiaries, parents, affiliates, agents, representatives, attorneys, insurers, officers, directors and employees ("District"), and, **STARWOOD POWER-MIDWAY LLC**, a Delaware Limited Liability Company, its predecessors, successors, assigns, subsidiaries, parents, affiliates, agents, representatives, attorneys, insurers, officers, directors and employees ("Starwood Power").

RECITALS:

WHEREAS, Starwood Power operates a natural gas-fired electrical power generation facility located at 43627 Panoche Road, Firebaugh, California; and

WHEREAS, Starwood Power is operating a 120 megawatt power generation facility including 4 natural gas-fired turbines covered by Authorities to Construct (ATCs) #C-7266-1 through -4; and

WHEREAS, the associated equipment for the turbines was not installed as proposed in the initial permit applications, resulting in the facility's inability to comply with the start-up NO_X emission limit of 4.17 lb/hr as specified in condition #32 of said ATCs; and

WHEREAS, Starwood Power was issued Notice of Violation 39144 by the District on July 27, 2009 for operating the turbines in violation of District Rule 2010; and

WHEREAS, Starwood Power was issued Notice of Violation NOV 5003991 by the District on August 19, 2009 for installing the subject turbines contrary to what was proposed in their permit application in violation of District Rule 2010; and

WHEREAS, Starwood Power and the District desire to settle, resolve and compromise any and all disputes between them.

NOW, THEREFORE, in consideration of the covenants, promises, and undertakings set forth herein, and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Starwood Power and District agree as follows:

1. Payment

Except as provided in Section 3, Starwood Power shall pay the District the total sum of five thousand dollars ($5,000) for installing the equipment contrary to what was proposed in their initial permit applications. Further, Starwood Power shall pay a penalty of five dollars per pound of excess NO_X emissions during start-

up periods ("excess emissions penalty"). The excess emissions penalty will be based upon the new ATC limit for start-up. If no offsets are required, excess NO_x emissions will be all start-up emissions, since first start-up on May 6, 2009, that were in excess of the new ATC limits. If offsets are required in order to receive an increased start-up emission limit, excess NO_x emissions will be all emissions in excess of what was allowed by the original ATCs. Within 30 days of receiving the new ATCs, Starwood Power shall pay a total lump sum of five thousand dollars ($5,000) plus the excess emissions penalty upon completion of the schedule set forth in Section 3 below, by delivery of a check to the District Counsel's Office made payable to the San Joaquin Valley Unified Air Pollution Control District. If one lump-sum payment is not feasible, the parties may mutually agree on a payment schedule not to exceed six months from the date of compliance. The parties agree that, pursuant to section 723(a)(7) of the Federal Bankruptcy Code, 11 U.S.C. § 723(a)(7), the above fine is non-dischargeable should Starwood Power file for bankruptcy prior to paying the fine in full. Full payment is due by the end of 6 months after achieving compliance.

The above monetary fine was based on failing to comply with District Rule 2010 and the magnitude of excess emissions.

2. Operating Conditions and Compliance Schedule

Pursuant to this Agreement, Starwood Power shall implement the following conditions and comply with the following compliance schedule:

A. Starwood Power submitted permit applications, on July 30, 2009, explaining what equipment was actually installed and requested an increase in the start-up emissions limits for all four turbines.

B. Starwood Power requested priority application process from the District when they submitted the permit applications.

C. Starwood Power may continue to operate the facility while the District processes the applications for the new ATCs.

D. Once the new ATCs are issued, if offsets are required, Starwood Power will obtain and surrender said offsets within 30 days of receiving the new ATCs.

E. Within 30 days of receipt of the new ATCs, Starwood Power will calculate total excess NO_x emissions during start-ups beginning with the initial start-up on May 6, 2009 through the time of the new ATC issuance. If no offsets are required, the excess emissions will be anything above the new ATC limit. If offsets are required, the excess emissions will be anything excess of the original ATC limits.

F. Full compliance with all District requirements, including but not limited to, all emission limits shall occur within 30 days of receiving the new ATCs.

3. Non-Compliance with Conditions

In the event that Starwood Power does not comply with the conditions set forth in Paragraph 2 and doing so was within their reasonable control, this agreement is null and void.

4. Release

As a material inducement to Starwood Power to enter into this Agreement, District hereby irrevocably and unconditionally releases, acquits and forever discharges Starwood Power and each of Starwood Power's predecessors, successors, assigns, and heirs, and as to each of the aforementioned, their agents, managing agents, directors, officers, shareholders, servants, employees, representatives and attorneys, and all persons acting by, through, under or in concert with any of them (collectively "Starwood Power Releasees"), from any and all charges, complaints, claims of action, suits, rights, demands, costs, losses, debts and expenses (including attorneys' fees and costs actually incurred) of any nature whatsoever, whether known or unknown, direct or indirect, suspected or unsuspected, fixed or contingent, which District now has, owns or holds, or claims to have, own or hold, or which District at any time heretofore had, owned or held, or claimed to have, own or hold, against each and all of Starwood Power Releasees which arises out of or is related in any way to Notices of Violation 39444 and 5003991.

5. Authority of Signatories

Starwood Power and District, individually, represent and warrant that no other person or entity has, or has had, any interest in the claims, demands, obligations and causes of action referred to in this Agreement; that it has sole right and exclusive authority to execute this Agreement and receive the sums specified in it; and that it has not sold, assigned, transferred, conveyed or otherwise disposed of any of the claims, demands, obligations or causes of action referred to in this Agreement.

6. No Admission of Liability

Starwood Power and District, individually, acknowledge and agree that the payment and acceptance of the sums described in Paragraph 1 and the execution of this Agreement are the result of a compromise of disputed claims. Neither the payment of money by Starwood Power nor this Agreement shall be deemed to be an admission of liability concerning any of the claims and/or the Notice of Violations referenced in this Agreement, and no past or present wrongdoing or liability upon the part of any of those herein released shall be implied by any of the agreements herein. This Agreement shall not constitute any admission of violation as to any District rule, nor shall it be inferred to be such an admission in any

administrative or judicial proceeding.

7. Waiver

Starwood Power and District, individually, expressly waive and assume the risk of any and all claims for damages which exist as to the claims and/or the Notice of Violations which are the subject of this Agreement, but which it does not know of or suspect to exist, whether through ignorance, oversight, error, negligence or otherwise, and which, if known, might materially affect its decision to enter into this Agreement and, further assumes the risk that it may suffer damages in the future which it does not now anticipate or suspect may occur and **therefore waive all rights under Section 1542 of the Civil Code of California** which reads as follows:

"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE WHICH, IF KNOWN BY HIM, MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."

8. Construction

In entering into this Agreement, each party, individually, represents that it has relied upon the legal advice of its attorneys who are attorneys of its own choice; it further represents that the terms of this Agreement have been completely read by it, or fully understood and voluntarily accepted by both its attorneys and itself, it and its counsel has reviewed and revised, or had the opportunity to revise this Agreement, and accordingly the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party is not applicable and therefore shall not be employed in the interpretation of this Agreement or any amendment of it.

9. Entire Agreement

This Agreement contains the entire understanding of Starwood Power and District with regard to the matters set forth herein and may only be amended by writing executed by both Starwood Power and District.

10. California Law

This Agreement has been entered into in the State of California and shall be construed and interpreted in accordance with the laws of said state.

11. Venue

The parties agree that venue for any action arising out of this agreement shall be only in Fresno County, California.

12. Counterparts

This Agreement may be executed in counterparts, and each of those counterparts shall be deemed an original for all purposes.

WHEREFORE, the authorized representatives of the parties hereto have executed this Agreement on the date first above written.

STARWOOD POWER-MIDWAY LLC

By: _____
JJ FACA
VICE PRESIDENT

Approved as to legal form:

By: _____
Attorney for Starwood Power
SUSANNAH M. MITCHELL

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

By: _____
Seyed Sadredin
Executive Director / APCO

Approved as to legal form:

By: _____
Phillip M. Jay
Attorney for District

Received Time Aug. 19. 2009 2:39PM No. 2059

Attachment 7
Notice of incomplete Application for ATC

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

SEP 04 2009

Jeff Paul
Starwood Power-Midway, LLC
7365 Mission Gorge Road, Suite C
San Diego, CA 92120

Re: Notice of Incomplete Applications
Project Number: C-1093352

Dear Mr. Paul:

The District has received your Authority to Construct applications for the modification of four 30 MW Pratt & Whitney, model FT8-3, natural gas-fired gas turbines to increase the startup and shutdown emission rates and convert them from units of lb/hr to lb/event, located at 43699 Panoche Road in Firebaugh, CA. Based on our preliminary review, the applications have been determined to be incomplete. The following information is required prior to further processing:

1. For each pollutant, please provide the actual startup and shutdown emission rates you would like to have included as limits on each of the permits for your gas turbines. Please also include any additional justification you have for these emission limits. The justification can include, but is not limited to, manufacturer's data, source test data, or continuous emissions monitoring system (CEMS) data.

2. As a part of the proposed project, the District will have to perform a Best Available Control Technology (BACT) analysis for startup and shutdown requirements from simple cycle gas turbines. However, the District does not currently have a BACT guideline for startup and shutdown requirements on simple cycle gas turbines.

   In order to aid the District in completing this BACT analysis, please provide any information Starwood Power-Midway has on other simple cycle power plant facilities that operate identical, or any other comparable gas turbine engines. If possible, please include the name and location of the facility and any contact information you may have (i.e. address, phone number, etc.).

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
2700 M Street, Suite 275
Bakersfield, CA 93301-2373
Tel: (661) 326-6900 FAX: (661) 326-6985

www.valleyair.org

Please note that as a part of the BACT analysis, the District will evaluate startup and/or shutdown durations, control technologies and emission rates. Starwood Power-Midway will be required to meet the requirements for each of these categories that are determined to be the best control alternatives being achieved in practice within this class and category of operation.

3. Based on the most current stationary source potential to emit (SSPE) calculations for your facility, you are over the offset thresholds for NO_X and PM_{10} emissions. Therefore, any increases in annual NO_X and/or PM_{10} emissions from the proposed increases in the startup and shutdown emission rates will trigger offset requirements. Please identify the Emission Reduction Credit (ERC) certificates (and/or irrevocable purchasing contracts if the ERC's are not owned by Starwood Power-Midway, LLC or it's parent company) to provide as offsets for the increases in NO_X or PM_{10} emissions for this project.

In response, please refer to the above project number, and send to the attention of Mr. Dustin Brown.

Please submit the requested information within 30 days. The District will not be able to process your application until this information is received.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Dustin Brown at (559) 230-5932.

Sincerely,

David Warner
Director of Permit Services

Jim Swaney, P.E.
Permit Services Manager
DW:ddb

Attachment 8
Response to Notice of incomplete application

STARWOOD
ENERGY GROUP

September 22, 2009

Dustin Brown
Air Quality Engineer
San Joaquin Valley APCD
1990 Gettysburg Ave.
Fresno, CA 93726-0244

RE Starwood Power-Midway LLC Authority to Construct Application Project No C-1093352

Dear Mr. Brown

This letter is in response to David Warner's letter dated September 04, 2009, requesting information to complete the above noted application. I will address each sectlon as presented in David's letter.

1. This section asks for the actual startup and shutdown emission rates we are requesting to be included in the permit. We have been working diligently with the SCR manufacturer to obtain the best results in accordance with our request in the letter accompanying the application, and we don't believe we have gotten there yet. To date we have installed additional heating elements on the ammonia vaporizer system and incorporated the following changes.

- Added heat tracing to the ammonia supply lines and Vaporizer piping
- Added drain lines with isolation valve on each Dilution Air Fan casing
- Added one pressure and one temperature test port on the suction header of the Dilution Air Fans
- Added one pressure and one temperature test port on the discharge header of the Dilution Air Fans
- Added drain line with isolation valve on each vaporizer header
- Move primary ammonia injection nozzle further downstream of elbow to provide an additional straight run of pipe
- Added secondary ammonia injection nozzle upstream of dilution air fans (to include isolation valves on ammonia and air supply lines)

Even after making these changes, we believe there is an opportunity to make additional improvements to the operational controls and to the equipment so that it is operating at its highest possible efficiency. We would like to request additional time to insure that the SCR is operating at its maximum potential prior to making the request for a specific Startup and Shutdown emissions rates. As stated in our application, our goal is to reduce Startup and Shutdown emissions as low as reasonably achievable.

2. Attached Please find CEMS start up and shut down data for the CalPeak Power Plants and the Starwood Midway Plant. While it is true that the equipment is similar in design there are some distinct differences that could make the comparison less than effective. CalPeak's engines have a different temperature profile as they are an earlier version of the Pratt & Whitney FT-8 which produce less power than the engine presently offered by Pratt. In addition to being an earlier lower powered version they are equipped with Dry Low NOx Combustors and have a different exhaust profile than the present day engine which produces a higher power output and is water injected to control engine emissions. Should you need any assistance interpreting the data provided please do not hesitate to call.

3. Under the Settlement agreement reached on August 19, 2009 Starwood is required to provide any emissions offsets that will be required within 30 days of the issuance of the new ATC. We believe the process must run its course to completion before we can correctly assess the total number of offsets required.

Should you wish to discuss any part of this letter or have any questions about our progress in upgrading the equipment please don't hesitate to call.

JJ Fair
Vice President
Starwood Power-Midway LLC
7365 Mission Gorge Road, Ste C
San Diego, CA 92120
619-606-1318

Attachment 9
Notice to CEC Project Compliance Manager of ongoing Air district issues

ENERGY GROUP

September 29, 2009

Mr. Chris Davis, Compliance Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

RE: Starwood Power-Midway Air Permit

Dear Mr. Davis

After beginning Commercial operations in May of this year Starwood Midway noticed that we were not able to stay in compliance with our emissions limits during a Startup. We have determined there were a couple of reasons for it. As you are aware because of the 1st Amendment to the Final Commission Decision (FCD), submitted in April of 2008, we changed the Selective Catalytic Converter (SCR) equipment on the Engineering Procurement and Construction (EPC) contractor's advice. The equipment designated for the site was in poor condition after being stored outside for 6 years prior to the expected installation. The new equipment caused the relocation of the SCR on the site and a reconfiguration of some of the components of the system. The amendment was approved in October 2008 and we went forward with the procurement of the new SCR. Additionally there was a change to the permit from a 3 hour rolling average to a 1 hour rolling average towards the end of the permit review that was requested by the CEC which was not carried over into the calculation of the Start-up emissions. Starwood anticipated that the actual equipment change would have no impact on the equipment guarantees from the Original Equipment Manufacturer (OEM).

Immediately upon Starwood's determination that we were exceeding our startup limits we self reported the issue the San Joaquin Valley Air Pollution Control District (District) and requested a variance. An Interim Variance was issued on June, 17th 2009. A notice of violation (NOV) was issued on July 27th associated with this issue but we were already operating under the Variance. A requirement of the Variance was for Starwood to apply for a new authority to construct, whieh was done in accordance with the variance requirements on July 30, 2009. An additional NOV was issued related to this because the equipment installed did not have all of the components listed in the original application.

After meetings with the District a plan of resolution was agreed to. Instead of following the path of converting the Interim Variance to a Regular Variance the District requested that we enter into a Settlement Agreement with specific penalties and a path of resolution of the violations spelled out. Starwood entered into that agreement on August 19th, 2009 prior to the Interim Variance expiration.

We are working diligently with the OEM and the EPC contractor and with the District to resolve these issues. Further we are aware based on your conversation with Amy Gramlich of URS that once the resolution has been found and the air permits updated we, Starwood will need to apply for an amendment to the FCD's to address the permit changes that will have been made. The District has also requested our assistance, as part of this process, in their attempt to develop Best Available Control Technology) BACT limits for Startup and Shut Down for simple cycle turbines. We will assist however we can.

I have attached in chronological order for your review all documents related to this issue. If you have any question or need more information please do not hesitate to call.

JJ Fair
Vice President
Starwood Power-Midway LLC
7365 Mission Gorge Road Ste C
San Diego, CA 92120
619-606-1318

Attachment 10
Supplemental information supplied for ATC

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.7618

March 11, 2010

Mr. Ryan Hayashi, Supervising AQS
San Joaquin Valley Unified Air Pollution Control District, Central Region
Compliance Department
1990 East Gettysburg Ave
Fresno, CA 93726
(559)230-5958

Subject: Starwood Power – Midway, LLC Authority to Construct – Modification of Emission Unit Permit to Operate, and Settlement agreement

Dear Mr. Hayashi,

Please find the enclosed supplemental information for the Starwood Power – Midway, LLC (Starwood) Authority to Construct (ATC) dated July 30, 2009 to modify four existing permits issued to Starwood. Starwood has requested changes to specific provisions of Permits to Operate (PTO's) C-7286-1-0, C-7286-2-0, C-7286-3-0, C-7286-4-0 for the four stationary natural gas fired turbine generators located at 43627 West Panoche Road, Firebaugh California. All four PTO's contain identical language, and the changes requested herein are applicable to all four PTO's.

Starwood coordinated with the Original Equipment Manufacturer (OEM) to conduct an extensive evaluation, modification and testing regimen resulting in several physical, operational and control system changes which have improved the startup performance of the gas turbines. As discussed in our ATC cover letter dated July 30, 2009; these changes have produced the lowest achievable startup emissions. Starwood is requesting that the following specific changes be made to permitted emission limits in the PTO's.

- Condition 32: Applicant requests to increase the NOx limit to 30 lb/hr (per CTG).[1]
- Condition 37: Applicant requests to increase the daily NOx limit to 80 lbs (per CTG).[2]
- Condition 38: Applicant requests to increase the combined daily NOx emissions for paired turbines to 160 lbs (per pair of CTG's).
- Condition 40: Applicant requests to increase the annual NOx emissions limit to 12736 lbs (per CTG).[3]
- Condition 41: Applicant requests to increase the combined annual NOx emission limit for paired turbines to 25472 lbs (per pair of CTG's).

In addition to the changes in permitted emission limits, Starwood has requested changes to certain other permit conditions. Specifically, Starwood is requesting that the following changes be made to QA/QC conditions in the PTO's.

[1] Calculation of start up emissions will be determined by averaging the recorded emission rate during the entire startup event rather than clock hours. Startup periods will be tracked independent of steady state operations.
[2] Daily emissions assume three startup and shutdown events in a given day.
[3] Annual emissions assume 365 startup and shutdown events and a total of 4000 hours operation in a given year.

7365 Mission Gorge Road, Suite C, San Diego, CA 92120-1273
Tel: 619.229.3770 Fax: 619.229.7616

- Condition 45: Applicant requests that startup compliance testing be performed for a Swiftpac Unit, as this is the normal operating mode, rather than for a single engine.
- Conditions 47 and 58: Applicant requests to modify the frequency of compliance and RATA testing for all analyzers to that specified in 40 CFR 75 as discussed in harmonization guidance promulgated by EPA and 40 CFR 60 §4354(e). Starwood does not request to modify the requirement to perform compliance testing on a single engine if any turbine operates independently for more than 400 hours during the year.
- Condition 57: Applicant requests to allow the audit frequencies of 40 CFR 75 for CEMS audits. This is currently allowed by the SJVAPCD for very similar equipment operating under PTO C-3811-1(&-2) Condition 27.

Starwood will continue to comply with terms set forth in the Settlement Agreement and General Release (Agreement) dated August 19, 2009. As stipulated in Section 2E of the Agreement, Starwood will calculate total excess NOx emissions during start-ups. The "excess emissions penalty" will be paid within 30 days of receiving the new ATC's as required by Section 1. Further, Starwood will obtain and surrender the necessary emissions offsets within 30 days of receiving the revised ATC's as required by Section 2D of the Agreement.

CalPeak Power and Starwood Power are committed to the safe and environmentally responsible operation of this facility. If you have questions or require any additional information please contact Jason Bowman at (619) 229-3770 x 301.

Based on information and belief formed after reasonable inquiry, the statements and information presented in this document are true, accurate, and complete.

Sincerely,

J. J. Fair
Vice President
Starwood Power
7365 Mission Gorge Rd, Suite C
San Diego, CA 92120
619.229.3770

cc: Dustin Brown, Permit Engineer, SJVAPCD
Jeff Paul, General Manager, Starwood Power – Midway, LLC
Chris Davis, California Energy Commission Project Manager

Attachment 11
Proposed Starwood Conditions of Certification Email

JJ Fair

From: Dustin Brown [Dustin.Brown@valleyair.org]
Sent: Monday, February 14, 2011 2:21 PM
To: Jason Bowman
Cc: JJ Fair
Subject: Draft Conditions for Review
Attachments: Proposed Starwood Conditions 2-14-11.doc

Good Afternoon Jason,

My supervisor and I are going to try and make a push to get your project moving again. We would like to prepare all the documents and forward it on to Jim for his review. We are going to draft everything up as you proposed, including source testing every 24 months. Can you take one more look over the attached draft conditions and let me know if you have any questions or comments. Thanks!

Dustin Brown
San Joaquin Valley APCD
1990 E. Gettysburg Avenue
Fresno, CA 93726
(559) 230-5932

JJ Fair

From: Chris Davis [Cmdavis@energy.state.ca.us]
Sent: Wednesday, June 30, 2010 2:31 PM
To: JJ Fair
Subject: RE: Starwood-Midway Amendment

Hey JJ,

Every Air District does these things differently. For Humboldt, the District approved both and ATC and PTO before we approved our amendment.

In this case, Energy Commission Air quality staff will be happy to review the District's (SJVAPCD) draft ATC conditions and provide comments. The Engineering office manager says though that the District usually has to approve an ATC before we approve our amendment, but we can work that out later when our staff talks to their staff. In the meantime, to get things rolling, please include the District's proposed conditions in the amendment, get it submitted and we'll get to work on it.

Joseph Hughes (Joey) is the air quality engineer who will be doing our analysis. His contact info is:

Phone: 916-651-0970
E-mail: jhughes@energy.state.ca.us

We will get this going yet!

- Chris

CHRIS DAVIS | Compliance Project Manager
Direct: (916) 654-4842 | Fax: (916) 654-3882
CMDavis@energy.state.ca.us

California Energy Commission
Siting, Transmission, & Environmental Protection (STEP) Division
1516 Ninth Street, Sacramento, CA 95814
www.energy.ca.gov

Regular Contact Hours:
Monday - Friday 7:30 a.m. to 4:00 p.m.

>>> JJ Fair <JJ.Fair@calpeak.com> 6/24/2010 8:06 AM >>>
Chris
Please see the e-mail from Dustin Brown of the APCD below. Based on the conversations you and I had I was just looking to not put the cart before the horse. I need a little guidance about process. My understanding was that we needed to file an amendment which was as complete as we could get it. Without the draft ATC we will have a difficult time doing that. Would it be proper for the commissions air quality group to review and approve the draft ATC prior to filing the amendment so that when it is filed it will be accurate and just need to go through the approval process, or should we file the amendment without the conditions from the ATC and then amend the amendment after the approval of the draft ATC. Efficiency is my goal.

JJ

JJ Fair
Senior Advisor

Starwood and Tyr Energy
7365 Mission Gorge Road Ste C
San Diego Ca 92120
619-606-1318

From: Dustin Brown [mailto:Dustin.Brown@valleyair.org]
Sent: Thursday, June 24, 2010 7:56 AM
To: JJ Fair; Jason Bowman
Subject: RE: Midway ERC's

Someone at the CEC is going to need to review our draft ATC conditions and approve them (as those conditions are also included in your license). I would think you need to get the application filed so they can begin working on the amendments, and a staff person can be assigned to the project. Then I would have a direct contact that I can send our draft conditions to for review. In any case, please note that we cannot issue the final ATC for this project until we get the CEC's approval of the conditions.

I will try to finish up the work on your project within the next couple of weekends. Hopefully I can get everything turned in to my supervisor after the 4th of July holiday.

Let me know if you have any further questions or need additional information. I will let you know right away if any further questions come up on our end as well. Thanks!

Dustin

From: JJ Fair [mailto:JJ.Fair@calpeak.com]
Sent: Thursday, June 24, 2010 7:44 AM
To: Dustin Brown; Jason Bowman
Subject: FW: Midway ERC's

Dustin
We are waiting on you guys to give us a draft ATC before filing the Amendment. (See attached e-mail) We discussed this with the CEC and they are expecting an amendment petition which is pretty clear about what we are asking for. I do know who we are going to be working with if there is something you need to discuss.

JJ

JJ Fair
Senior Advisor
Starwood and Tyr Energy
7365 Mission Gorge Road Ste C
San Diego Ca 92120
619-606-1318

Attachment 12
Copies of Emission Reduction Credit Certificates

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718

Emission Reduction Credit Certificate
N-897-2

ISSUED TO: STARWOOD POWER - MIDWAY, LLC

ISSUED DATE: April 20, 2010

LOCATION OF REDUCTION: 605 S. SANTA CRUZ AVE.
Modesto, CA

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
965 lbs	376 lbs	813 lbs	None

[ ] Conditions Attached

Method Of Reduction

[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Units
[X] Other

CONVERT FURNACE #2 TO GAS/OXY FIRING

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

Emission Reduction Credit Certificate
S-3371-2

ISSUED TO: STARWOOD POWER-MIDWAY, LLC

ISSUED DATE: April 20, 2010

LOCATION OF REDUCTION: 400 SOUTH M STREET
TULARE, CA

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
643 lbs	1,456 lbs	2,394 lbs	1,391 lbs

[ ] Conditions Attached

Method Of Reduction
[ ] Shutdown of Entire Stationary Source
[ ] Shutdown of Emissions Units
[X] Other

RETROFIT TWO BOILERS WITH FGR & LO-NOX BURNERS

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services