HIGH DESERT POWER PROJECT LLC

SEP 0 5 2006

DOCKET
97-AFC-1C
DATE AUG. 30 2006
RECD SEP. 8 2006

August 30, 2006

Mr. Steve Munro
Compliance Project Manager
California Energy Commission
1516 9th Street, MS 2000
Sacramento, CA 95814-5512

Subject: **Petition for Revisions/Administrative Changes to Air Quality Conditions Commission Decision (97-AFC-1C)**
High Desert Power Project, LLC

Dear Mr. Munro:

High Desert Power Project, LLC ("HDPP") is submitting this petition for revisions to the Commission Decision (97-AFC-1C) for the High Desert Project located in Victorville, California. These proposed changes will not result in an emissions increase and are administrative in nature. As detailed in Attachment 1, this petition consists of the following revisions:

1. changes to AQ-16 related to the frequency compliance testing;
2. deletion of AQ-17 to bring the Air Quality Conditions of Certification inline with MDAQMD requirements;
3. changes to AQ-20 b & c related to startup and shutdown event reporting; and
4. minor editorial change to AQ-30, related to the CEC's letter of October 25, 2004 approving a petition related to startup events and other administrative changes.

The proposed revisions will not result in an increase to emission limits or have an adverse impact on ambient air quality. The proposed administrative changes do not affect compliance with applicable laws, ordinances, regulations, or standards (LORS). Accordingly, HDPP requests that the Energy Commission Staff expedite review of this petition, and request Commission approval of the proposed revisions in accordance with Title 20 CCR Section 1769 (a)(3).

Similar revisions to the Permits to Operate (PTOs) were discussed with the MDAQMD during a meeting with the CEC and MDAQMD earlier this year. MDAQMD recently approved the revisions

and copies of the revised permits are included in Attachment 2. A similar request for revisions to the PSD permit will be submitted to the EPA under separate cover.

In an effort to expedite the revisions, we will contact you next week to make arrangements for a phone conference to review and answer any questions you may have on our proposed revisions.

In the meantime, should you have any questions or need additional information regarding this submittal, please contact me at (949) 425-4755.

Sincerely,

R. Garcia R.

Ramiro Garcia
Environmental Director – West Region
Constellation Power Generation

cc: Mr. Gerardo Rios
US EPA, Region IX
75 Hawthrone Street (Air 5)
San Francisco, CA 94105

Mr. Alan DeSalvio
Mojave Desert AQMD
14306 Park Avenue
Victorville, CA 92392-2310

Dave Boward – High Desert Power Project, General Manager

Chris Milner, HDPP

Jon Boyer, Constellation Energy

Facility File: 13.1 (CEC Application)

ATTACHMENT 1

DESCRIPTION OF PROPOSED AIR QUALITY CONDITION REVISIONS

ATTACHMENT 1

DESCRIPTION OF PROPOSED AIR QUALITY CONDITION REVISIONS

1. Proposed Administrative Changes to Conditions of Certification AQ-16,

CHANGES TO CONDITIONS

Proposed changes to the following Conditions of Certification are provided with new text shown underlined and deleted text is shown as ~~strikethrough~~. A discussion of the reason for the requested changes is provided following the proposed condition language.

Condition of Certification (AQ-16)

AQ-16. The project owner shall perform the following ~~annual~~ compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual at least once every five years beginning in 2006 (at least once every three years for VOC). The test report shall be submitted to the MDAQMD no later than six (6) weeks prior to the expiration date of this permit. The following compliance tests are required:

a. NOx as NO2 in ppmvd at 15% O2 and lb/hr (measured per USEPA Reference Methods 19 and 20).

b. VOC as CH4 in ppmvd at 15% O2 and lb/hr (measured per USEPA Reference Methods 25A and 18).

c. SOx as SO2 in ppmvd at 15% O2 and lb/hr.

d. CO in ppmvd at 15% O2 and lb/hr (measured per USEPA Reference Method 10).

~~e. PM10 in mg/m3 at 15% O2 and lb/hr (measured per USEPA Reference Methods 5 and 202 or CARB Method 5).~~

f. Flue gas flow rate in scfmd.

~~g. Opacity (measured per USEPA reference Method 9).~~

h. Ammonia slip in ppmvd at 15% O2.

AQ-16a, c, d, and h require annual compliance testing for NO_x, CO, SO_x and Ammonia Slip. SO_x emissions are calculated by using fuel flow and the EPA fuel factor for natural gas. Custom monitoring of the natural gas has consistently shown that the sulfur content is well below the limit of 0.2 grains per 100 dscf on a rolling twelve month average basis. NO_x, CO, and ammonia

slip are continuously monitored using certified CEMS systems that are operated in accordance with all required QA/QC requirements and tested for accuracy every year.

The facility has conducted four (4) source emission tests since beginning operations and has passed each one. In each case, the source test results validated that the CEMS system was accurately monitoring the emissions from the facility. In addition, each of the four (4) RATA tests showed that the CEMS instrumentation was operating within the required specifications. A summary table showing the source test results is presented in Attachment 3.

Therefore, HDPP proposes to revise the compliance testing periodicity for NOX, CO, SOx flue gas flow rate, and ammonia slip to once every five years.

AQ-16e requires annual testing for PM10. The EPA has issued guidance to exempt natural gas-fired turbines from PM10 testing beyond the initial compliance, as long as pipeline quality natural gas is used. HDPP uses pipeline quality natural gas and previous tests have demonstrated that PM10 emissions are well below the emissions limit. See Attachment 3. Therefore, HDPP proposes eliminating PM10 from the testing requirements.

AQ-16g requires annual compliance testing for opacity. Per EPA guidance and based on actual opacity readings, HDPP believes that use of pipeline quality natural should be enough to demonstrate compliance with the Opacity permit limitations.

AQ-16b requires annual testing for VOC. Compliance testing during normal operations has shown VOC emissions to be consistently below permit limitations. See Attachment 3. Testing performed in 2005 at base load conditions showed all three units to emit 0.08 lbs/hr or less, approximately 3 percent of the permit limit. Testing performed in 2006 was non-detect for VOC for all three units at base load conditions. Given the insignificant emission levels, HDPP proposes to revise the compliance testing periodicity to once every three years.

1. Eliminate Condition of Certification AQ-17

~~AQ-17. The compliance test plan shall include a method for measuring CO/VOC surrogate relationship that can be used to demonstrate compliance with VOC hourly, daily, and annual emission limits. Compliance with the VOC emission limit shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by the CO and VOC source tests.~~

AQ-17 requires VOC emissions to be calculated based on a ratio between VOC and CO. HDPP proposes to eliminate this requirement to bring the Air Quality Conditions of Certification inline with the calculation method approved by the Mojave Desert Air Quality Management Districts (MDAQMD). The MDAQMD approved method is based on heat rate and mode of operation. HDPP believes that calculating VOC emissions by using the heat rate and the mode of operation is a more appropriate method of estimating emissions during transient conditions (startup and shutdown). Using heat rate and mode of operation, compliance with the VOC limits can be calculated as follows:

VOC Emissions (lbs/hr) = Unit Heat Rate (MMBtu/hr) X VOC Emissions Factor for Each Mode of Operation (lbs/MMBtu).

Note: VOC emission factors for mode of operation (cold, warm, hot startups) were determined during the initial compliance test.

2. Administrative Change to Condition of Certification AQ-20

AQ-20. The project owner shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on-site for a minimum of five (5) years and shall be provided to District personnel on request.

a. Operating parameters of emission control equipment, including but not limited to, ammonia injection rate, NOx emission rate, and ammonia slip.
b. Total plant operation time (hours), ~~number of startups,~~ hours in cold startup, hours in warm startup, hours in hot startup, and hours in shutdown.
~~c. Date and time of the beginning and end of each startup and shutdown period.~~

AQ-20 b & c requires HDPP to include in the quarterly report the dates and duration of each startup and shutdown events. As duration limits are no longer part of either the CEC and MDAQMD permit, HDPP proposes the elimination of this requirement.

3. Administrative Change to Condition of Certification AQ-30

AQ-30. Emissions from this equipment ~~this equipment power block~~, including the duct burner, may not exceed the following emission limits, based on a calendar day summary:

In an October 25, 2004 letter to HDPP, the CEC approved a petition related to startup events and other administrative changes. On page 5 of this decision, AQ-30 was changed to read as follows; "Emissions from ~~this equipment~~ the power block, including the duct burner, may not exceed the following emission limits, based on a calendar day summary." HDPP believes this change was inadvertently made by the CEC as HDPP did not request this change nor was it analyzed by CEC staff. Accordingly, HDPP requests that the condition be revised as noted above.

COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS AND STANDARDS

The initial HDPP AFC provided a comprehensive review of the requirements applicable to the facility and a demonstration of compliance. This petition does not change the compliance status with any of the LORS in the Commission Decision. The proposed administrative change to Conditions of Certification does not change the compliance determination with the NAAQS or CAAQS.

POTENTIAL EFFECTS ON PROPERTY OWNERS AND THE PUBLIC

The proposed revisions to the CEC Conditions in the Air Quality category will not affect project equipment or the significance of environmental impacts. Therefore, the proposed revisions are not anticipated to affect nearby property owners, the public, or parties in the application proceedings.

SUMMARY OF REQUEST

As demonstrated in this petition, the requested revisions of the air quality Conditions of Certification are not anticipated to have an adverse effect on the public or the environment. The revisions will not affect compliance with applicable LORS. Accordingly, HDPP requests that the Energy Commission Staff expedite review of this petition, and request Commission approval of the proposed modified conditions in accordance with Title 20 CCR Section 1769 (a)(3).

ATTACHMENT 2

REVISED PERMITS TO OPERATE

ISSUED BY

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

B005266

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 3 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: JUNE 2007

OWNER OR OPERATOR (1047)
High Desert Power Project, LLC
19000 Perimeter Road
Victorville, CA 92394

EQUIPMENT LOCATION: (01849)
High Desert Power Project
19000 Perimeter Road
Victorville, CA 92394

DESCRIPTION:
COMBUSTION TURBINE GENERATOR 3F-1 consisting of:

Natural gas fueled Westinghouse 501F combustion turbine generator power block with a connected heat recovery steam generator and steam condensing turbine, maximum heat input of 1711 MMBtu/hr and producing a nominal 250 MW(e).

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.2 grains per 100 dscf on a rolling twelve month average basis, and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment is subject to the federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and GG (Standards of Performance for Stationary Gas Turbines). This equipment is also subject to the Prevention of Significant Deterioration (40 CFR 51.166) and Federal Acid Rain (Title IV) programs. Compliance with all applicable provisions of these regulations is required.
4. Emissions from this combustion turbine generator (including its associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx, VOC and ammonia slip during periods of startup, shutdown and malfunction:
   a. Hourly rates, computed every 15 minutes, verified by CEMS and compliance tests:
      i. NOx as NO2 - 18.00 lb/hr (based on 2.5 ppmvd corrected to 15% oxygen and averaged over one hour)
      ii. CO - 17.53 lb/hr (based on 4.0 ppmvd corrected to 15% oxygen and averaged over 24 hours)
      iii. Ammonia Slip - 10 ppmvd (corrected to 15% oxygen and averaged over three hours)
   b. Hourly rates, verified by compliance tests or other compliance methods in the case of SOx:
      i. VOC as CH4 - 2.51 lb/hr (based on 1 ppmvd corrected to 15% oxygen)
      ii. SOx as SO2 - 1.11 lb/hr (based on LHV), 1.2 lb/hr (based on HHV)
      iii. PM10 - 18.14 lb/hr

Fee Schedule: 2(f) Rating: 1711.0 SIC: 4911 SCC: 20100201 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: _____ DATE: 6/15/2006
For: Charles L. Fryxell
Air Pollution Control Officer

High Desert Power Project, LLC
19000 Perimeter Road
Victorville, CA 92394

5. Emissions of CO and NOx from the power block (defined as B005266, B005267 and B005268 combined) may exceed the limits contained in Condition 4 during startup and shutdown periods as follows:
   a. Startup shall be defined as the period beginning with ignition and lasting until the power block has reached operating permit limits. Cold startup means a startup when the power block has not been in operation during the preceding 72 hours. Hot startup means a startup when the power block has been in operation during the preceding 8 hours. Warm startup means a startup that is not a hot or cold startup. Shutdown shall be defined as the period beginning with the lowering of the power block from normal operating load and lasting until fuel flow is completely off and combustion has ceased.
   b. During a cold startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 549 lb
      ii. CO - 10,623 lb
   c. During a warm startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 504 lb
      ii. CO - 10,788 lb
   d. During a hot startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 414 lb
      ii. CO - 11,187 lb
   e. During a shutdown emissions shall not exceed the following, verified by CEMS:
      i. NOx - 291 lb
      ii. CO - 717 lb

6. Emissions from this combustion turbine generator, including the duct burner, may not exceed the following emission limits, based on a calendar day summary:
   a. NOx - 848 lb/day, verified by CEMS
   b. CO - 8072 lb/day, verified by CEMS
   c. VOC as CH4 - 1448 lb/day, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 26.7 lb/day (based on LHV), 28.8 lb/day (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 435 lb/day, verified by compliance tests and hours of operation

7. Emissions from this facility, including the cooling towers, may not exceed the following emission limits, based on a rolling 12 month summary:
   a. NOx - 205 tons/year, verified by CEMS
   b. CO - 750 tons/year, verified by CEMS
   c. VOC as CH4 - 129 tons/year, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 14 tons/year (based on LHV), 15.8 tons/year (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 233.2 tons/year, verified by compliance tests and hours of operation

8. This equipment shall exhaust through a stack at a minimum height of 130 feet.

9. The owner/operator (o/o) shall not operate this equipment without the selective catalytic NOx reduction system with valid District permit C005272 and VOC and CO oxidation catalyst system with valid District permit C005275 installed and fully functional.

10. Emissions of NOx, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring System (CEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. The operator shall install, calibrate, maintain and operate these monitoring systems according to a District-approved monitoring plan and Rule 218, and they shall be installed prior to initial equipment startup. Six (6) months prior to installation the operator shall submit a monitoring plan for District review and approval.

11. The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing.

12. The o/o shall perform the following compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual at least once every five years beginning in 2006 (at least once every three years beginning in 2006 for VOC). The test report shall be submitted to the District no later and six weeks prior to the expiration date of this permit. The following compliance tests are required:
    a. NOx as NO2 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 7E, 19 or 20).
    b. VOC as CH4 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18)
    c. SOx as SO2 in ppmvd at 15% oxygen and lb/hr.
    d. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10)
    e. Flue gas flow rate in scfmd.
    f. Ammonia slip in ppmvd at 15% oxygen.

13. The o/o shall, at least as often as once every five years (commencing with the initial compliance test), perfom the following supplemental source tests in accordance with the MDAQMD Compliance Test Procedural Manual:
    a. Characterization of cold startup VOC emissions;
    b. Characterization of warm startup VOC emissions;
    c. Characterization of hot startup VOC emissions; and,
    d. Characterization of shutdown VOC emissions.

14. Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B (or applicable requirements and procedures from 40 CFR 75):
    a. For NOx, Performance Specification 2.
    b. For oxygen, Performance Specification 3.
    c. For CO, Performance Specification 4 or 4a.
    d. For ammonia, a District-approved procedure that is to be submitted by the o/o.

15. The o/o shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request:
a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip.
b. Total plant operation time (hours), hours in cold startup, hours in warm startup, hours in hot startup, and hours in shutdown.
c. Average plant operation schedule (hours per day, days per week, weeks per year).
d. All continuous emissions data reduced and reported in accordance with the District-approved CEMS protocol.
e. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol).
f. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by USEPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG).
g. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430.
h. Any permanent changes made in the plant process or production which would affect air pollutant emissions, and indicate when changes were made.
i. Any maintenance to any pollutant control system (recorded on an as-performed basis).

16. The o/o shall provide sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

B005267

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: JUNE 2007

OWNER OR OPERATOR (1047)
High Desert Power Project, LLC
19000 Perimeter Road
Victorville, CA 92394

EQUIPMENT LOCATION: (01849)
High Desert Power Project
19000 Perimeter Road
Victorville, CA 92394

DESCRIPTION:
COMBUSTION TURBINE GENERATOR 3F-2 consisting of:

Natural gas fueled Westinghouse 501F combustion turbine generator power block with a connected heat recovery steam generator and steam condensing turbine, maximum heat input of 1711 MMBtu/hr and producing a nominal 250 MW(e).

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.2 grains per 100 dscf on a rolling twelve month average basis, and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment is subject to the federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and GG (Standards of Performance for Stationary Gas Turbines). This equipment is also subject to the Prevention of Significant Deterioration (40 CFR 51.166) and Federal Acid Rain (Title IV) programs. Compliance with all applicable provisions of these regulations is required.
4. Emissions from this equipment (including its associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx, VOC and ammonia slip during periods of startup, shutdown and malfunction:
   a. Hourly rates, computed every 15 minutes, verified by CEMS and compliance tests:
      i. NOx as NO2 - 18.00 lb/hr (based on 2.5 ppmvd corrected to 15% oxygen and averaged over one hour)
      ii. CO - 17.53 lb/hr (based on 4.0 ppmvd corrected to 15% oxygen and averaged over 24 hours)
      iii. Ammonia Slip - 10 ppmvd (corrected to 15% oxygen and averaged over three hours)
   b. Hourly rates, verified by compliance tests or other compliance methods in the case of SOx:
      i. VOC as CH4 - 2.51 lb/hr (based on 1 ppmvd corrected to 15% oxygen)
      ii. SOx as SO2 - 1.11 lb/hr (based on LHV), 1.2 lb/hr (based on HHV)
      iii. PM10 - 18.14 lb/hr

Fee Schedule: 2(f) Rating: 1711.0 SIC: 4911 SCC: 20100201 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: _____ DATE: 6/15/2006
For: Charles L. Fryxell
Air Pollution Control Officer

High Desert Power Project, LLC
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5. Emissions of CO and NOx from the power block (defined as B005266, B005267 and B005268 combined) may exceed the limits contained in Condition 4 during startup and shutdown periods as follows:
   a. Startup shall be defined as the period beginning with ignition and lasting until the power block has reached operating permit limits. Cold startup means a startup when the power block has not been in operation during the preceding 72 hours. Hot startup means a startup when the power block has been in operation during the preceding 8 hours. Warm startup means a startup that is not a hot or cold startup. Shutdown shall be defined as the period beginning with the lowering of the power block from normal operating load and lasting until fuel flow is completely off and combustion has ceased.
   b. During a cold startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 549 lb
      ii. CO - 10,623 lb
   c. During a warm startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 504 lb
      ii. CO - 10,788 lb
   d. During a hot startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 414 lb
      ii. CO - 11,187 lb
   e. During a shutdown emissions shall not exceed the following, verified by CEMS:
      i. NOx - 291 lb
      ii. CO - 717 lb

6. Emissions from this equipment, including the duct burner, may not exceed the following emisison limits, based on a calendar day summary:
   a. NOx - 848 lb/day, verified by CEMS
   b. CO - 8072 lb/day, verified by CEMS
   c. VOC as CH4 - 1448 lb/day, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 26.7 lb/day (based on LHV), 28.8 lb/day (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 435 lb/day, verified by compliance tests and hours of operation

7. Emissions from this facility, including the cooling towers, may not exceed the following emission limits, based on a rolling 12 month summary:
   a. NOx - 205 tons/year, verified by CEMS
   b. CO - 750 tons/year, verified by CEMS
   c. VOC as CH4 - 129 tons/year, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 14 tons/year (based on LHV), 15.8 tons/year (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 233.2 tons/year, verified by compliance tests and hours of operation

8. This equipment shall exhaust through a stack at a minimum height of 130 feet.

9. The owner/operator (o/o) shall not operate this equipment without the selective catalytic NOx reduction system with valid District permit C005273 and VOC and CO oxidation catalyst system with valid District permit C005276 installed and fully functional.

10. Emissions of NOx, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring System (CEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. The operator shall install, calibrate, maintain and operate these monitoring systems according to a District-approved monitoring plan and Rule 218, and they shall be installed prior to initial equipment startup. Six (6) months prior to installation the operator shall submit a monitoring plan for District review and approval.

11. The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing.

12. The o/o shall perform the following compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual at least once every five years beginning in 2006 (at least once every three years beginning in 2006 for VOC). The test report shall be submitted to the District no later and six weeks prior to the expiration date of this permit. The following compliance tests are required:
    a. NOx as NO2 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 7E, 19 or 20).
    b. VOC as CH4 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18)
    c. SOx as SO2 in ppmvd at 15% oxygen and lb/hr.
    d. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10)
    e. Flue gas flow rate in scfmd.
    f. Ammonia slip in ppmvd at 15% oxygen.

13. The o/o shall, at least as often as once every five years (commencing with the initial compliance test), perform the following supplemental source tests in accordance with the MDAQMD Compliance Test Procedural Manual:
    a. Characterization of cold startup VOC emissions;
    b. Characterization of warm startup VOC emissions;
    c. Characterization of hot startup VOC emissions; and,
    d. Characterization of shutdown VOC emissions.

14. Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B (or applicable requirements and procedures from 40 CFR 75):
    a. For NOx, Performance Specification 2.
    b. For oxygen, Performance Specification 3.
    c. For CO, Performance Specification 4 or 4a.
    d. For ammonia, a District-approved procedure that is to be submitted by the o/o.

15. The o/o shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request:
    a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip.
    b. Total plant operation time (hours), hours in cold startup, hours in warm startup, hours in hot startup, and hours in shutdown.
    c. Average plant operation schedule (hours per day, days per week, weeks per year).
    d. All continuous emissions data reduced and reported in accordance with the District-approved CEMS protocol.
    e. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol).
    f. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by USEPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG).
    g. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430.
    h. Any permanent changes made in the plant process or production which would affect air pollutant emissions, and indicate when changes were made.
    i. Any maintenance to any pollutant control system (recorded on an as-performed basis).

16. The o/o shall provide sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

B005268

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: JUNE 2007

OWNER OR OPERATOR (1047)
High Desert Power Project, LLC
19000 Perimeter Road
Victorville, CA 92394

EQUIPMENT LOCATION: (01849)
High Desert Power Project
19000 Perimeter Road
Victorville, CA 92394

DESCRIPTION:
COMBUSTION TURBINE GENERATOR 3F-3 consisting of:

Natural gas fueled Westinghouse 501F combustion turbine generator power block with a connected heat recovery steam generator and steam condensing turbine, maximum heat input of 1711 MMBtu/hr and producing a nominal 250 MW(e).

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.2 grains per 100 dscf on a rolling twelve month average basis, and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment is subject to the federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and GG (Standards of Performance for Stationary Gas Turbines). This equipment is also subject to the Prevention of Significant Deterioration (40 CFR 51.166) and Federal Acid Rain (Title IV) programs. Compliance with all applicable provisions of these regulations is required.
4. Emissions from this equipment (including its associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx, VOC and ammonia slip during periods of startup, shutdown and malfunction:
   a. Hourly rates, computed every 15 minutes, verified by CEMS and compliance tests:
      i. NOx as NO2 - 18.00 lb/hr (based on 2.5 ppmvd corrected to 15% oxygen and averaged over one hour)
      ii. CO - 17.53 lb/hr (based on 4.0 ppmvd corrected to 15% oxygen and averaged over 24 hours)
      iii. Ammonia Slip - 10 ppmvd (corrected to 15% oxygen and averaged over three hours)
   b. Hourly rates, verified by compliance tests or other compliance methods in the case of SOx:
      i. VOC as CH4 - 2.51 lb/hr (based on 1 ppmvd corrected to 15% oxygen)
      ii. SOx as SO2 - 1.11 lb/hr (based on LHV), 1.2 lb/hr (based on HHV)
      iii. PM10 - 18.14 lb/hr

Fee Schedule: 2(f) Rating: 1711.0 SIC: 4911 SCC: 20100201 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: _____ DATE: 6/15/2006
For: Charles L. Fryxell
Air Pollution Control Officer

High Desert Power Project, LLC
19000 Perimeter Road
Victorville, CA 92394

5. Emissions of CO and NOx from the power block (defined as B005266, B005267 and B005268 combined) may exceed the limits contained in Condition 4 during startup and shutdown periods as follows:
   a. Startup shall be defined as the period beginning with ignition and lasting until the power block has reached operating permit limits. Cold startup means a startup when the power block has not been in operation during the preceding 72 hours. Hot startup means a startup when the power block has been in operation during the preceding 8 hours. Warm startup means a startup that is not a hot or cold startup. Shutdown shall be defined as the period beginning with the lowering of the power block from normal operating load and lasting until fuel flow is completely off and combustion has ceased.
   b. During a cold startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 549 lb
      ii. CO - 10,623 lb
   c. During a warm startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 504 lb
      ii. CO - 10,788 lb
   d. During a hot startup emissions shall not exceed the following, verified by CEMS:
      i. NOx - 414 lb
      ii. CO - 11,187 lb
   e. During a shutdown emissions shall not exceed the following, verified by CEMS:
      i. NOx - 291 lb
      ii. CO - 717 lb

6. Emissions from this equipment, including the duct burner, may not exceed the following emisison limits, based on a calendar day summary:
   a. NOx - 848 lb/day, verified by CEMS
   b. CO - 8072 lb/day, verified by CEMS
   c. VOC as CH4 - 1448 lb/day, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 26.7 lb/day (based on LHV), 28.8 lb/day (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 435 lb/day, verified by compliance tests and hours of operation

7. Emissions from this facility, including the cooling towers, may not exceed the following emission limits, based on a rolling 12 month summary:
   a. NOx - 205 tons/year, verified by CEMS
   b. CO - 750 tons/year, verified by CEMS
   c. VOC as CH4 - 129 tons/year, verified by compliance tests and hours of operation in mode
   d. SOx as SO2 - 14 tons/year (based on LHV), 15.8 tons/year (based on HHV), verified by fuel sulfur content and fuel use data
   e. PM10 - 233.2 tons/year, verified by compliance tests and hours of operation

8. This equipment shall exhaust through a stack at a minimum height of 130 feet.

9. The owner/operator (o/o) shall not operate this equipment without the selective catalytic NOx reduction system with valid District permit C005274 and VOC and CO oxidation catalyst system with valid District permit C005277 installed and fully functional.

10. Emissions of NOx, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring System (CEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. The operator shall install, calibrate, maintain and operate these monitoring systems according to a District-approved monitoring plan and Rule 218, and they shall be installed prior to initial equipment startup. Six (6) months prior to installation the operator shall submit a monitoring plan for District review and approval.

11. The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing.

12. The o/o shall perform the following compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual at least once every five years beginning in 2006 (at least once every three years beginning in 2006 for VOC). The test report shall be submitted to the District no later and six weeks prior to the expiration date of this permit. The following compliance tests are required:
    a. NOx as NO2 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 7E, 19 or 20).
    b. VOC as CH4 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18)
    c. SOx as SO2 in ppmvd at 15% oxygen and lb/hr.
    d. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10)
    e. Flue gas flow rate in scfmd.
    f. Ammonia slip in ppmvd at 15% oxygen.

13. The o/o shall, at least as often as once every five years (commencing with the initial compliance test), perform the following supplemental source tests in accordance with the MDAQMD Compliance Test Procedural Manual:
    a. Characterization of cold startup VOC emissions;
    b. Characterization of warm startup VOC emissions;
    c. Characterization of hot startup VOC emissions; and,
    d. Characterization of shutdown VOC emissions.

14. Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B (or applicable requirements and procedures from 40 CFR 75):
    a. For NOx, Performance Specification 2.
    b. For oxygen, Performance Specification 3.
    c. For CO, Performance Specification 4 or 4a.
    d. For ammonia, a District-approved procedure that is to be submitted by the o/o.

15. The o/o shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request:
a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip.
b. Total plant operation time (hours), hours in cold startup, hours in warm startup, hours in hot startup, and hours in shutdown.
c. Average plant operation schedule (hours per day, days per week, weeks per year).
d. All continuous emissions data reduced and reported in accordance with the District-approved CEMS protocol.
e. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol).
f. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by USEPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG).
g. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430.
h. Any permanent changes made in the plant process or production which would affect air pollutant emissions, and indicate when changes were made.
i. Any maintenance to any pollutant control system (recorded on an as-performed basis).

16. The o/o shall provide sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

ATTACHMENT 3

SUMMARY OF EMISSION TEST RESULTS

Summary of Source Test Results
High Desert Power Project

Emissions, CT-1 (average)

Year	FR (MMBtu/hr)	%O2	NOx (lbs/hr)	NOx Limit (lbs/hr)	CO (lbs/hr)	CO Limit (lbs/hr)	VOC (lbs/hr) (3)	VOC Limit (lbs/hr)
2003	1,822.5	13.38	15.87	18.00	0.70	17.53	0.87	2.51
2004	1,756.3	13.36	16.10	18.00	0.67	17.53	2.03	2.51
2005	1,823.2	13.39	17.40	18.00	0.32	17.53	0.04	2.51
2006	1,656.1	13.34	14.30	18.00	0.27	17.53	0.44	2.51
Average	1,764.5		15.92		0.49		0.85	

Emissions, CT-2 (average)

Year	FR (MMBtu/hr)	%O2	NOx (lbs/hr)	NOx Limit (lbs/hr)	CO (lbs/hr)	CO Limit (lbs/hr)	VOC (lbs/hr) (3)	VOC Limit (lbs/hr)
2003	1,816.9	13.41	15.75	18.00	0.28	17.53	1.31	2.51
2004	1,731.8	13.41	16.80	18.00	0.16	17.53	1.43	2.51
2005	1,851.3	13.48	17.20	18.00	0.33	17.53	0.08	2.51
2006	1,831.9	13.37	16.20	18.00	0.26	17.53	0.51	2.51
Average	1,808.0		16.49		0.26		0.83	

Emissions, CT-3 (average)

Year	FR (MMBtu/hr)	%O2	NOx (lbs/hr)	NOx Limit (lbs/hr)	CO (lbs/hr) (1)	CO Limit (lbs/hr)	VOC (lbs/hr) (3)	VOC Limit (lbs/hr)
2003	1,838.2	13.28	16.18	18.00	1.03	17.53	2.47	2.51
2004	1,711.7	13.39	16.60	18.00	0.21	17.53	0.45	2.51
2005	1,851.6	13.43	13.80	18.00	0.33	17.53	0.07	2.51
2006	1,788.0	13.26	15.00	18.00	0.31	17.53	0.49	2.51
Average	1,797.4		15.40		0.47		0.87	

Notes:

(1) - The 2003 NOx data is from a retest performed after tuning was performed on the turbine. The CO data is from the original source test. The FR during the initial source test is 1,838.7 MMBtu/hr (average). The O2 during the original source test is 13.43%.

(2) - The 2003 source test showed non-detect for SO2 emissions. For purposes of this table, the detection limit was used to calculate the lbs/hr emission.

(3) - The 2006 source test showed non-detect for VOC emissions. For purposes of this table, the detection limit was used to calculate the lbs/hr emission.

Summary of Source Test Results
High Desert Power Project

Emissions, CT-1 (average)

Year	PM (lbs/hr)	PM Limit (lbs/hr)	SO2 (lbs/hr) (2)	SO2 Limit (lbs/hr)	NH3 (ppmvd)	NH3 Limit (ppmvd)
2003	16.50	18.14	0.0004	1.11	5.38	10.00
2004	1.94	18.14	0.15	1.11	3.30	10.00
2005	11.48	18.14	0.14	1.11	3.20	10.00
2006	6.00	18.14	0.16	1.11	4.00	10.00
Average	8.98		0.11		3.97	

Emissions, CT-2 (average)

Year	PM (lbs/hr)	PM Limit (lbs/hr)	SO2 (lbs/hr) (2)	SO2 Limit (lbs/hr)	NH3 (ppmvd)	NH3 Limit (ppmvd)
2003	9.15	18.14	0.0004	1.11	6.54	10.00
2004	3.02	18.14	0.15	1.11	3.50	10.00
2005	15.05	18.14	0.29	1.11	2.40	10.00
2006	4.79	18.14	0.14	1.11	2.80	10.00
Average	8.00		0.15		3.81	

Emissions, CT-3 (average)

Year	PM (lbs/hr)	PM Limit (lbs/hr)	SO2 (lbs/hr) (2)	SO2 Limit (lbs/hr)	NH3 (ppmvd)	NH3 Limit (ppmvd)
2003	16.43	18.14	0.0004	1.11	0.95	10.00
2004	4.94	18.14	0.30	1.11	5.20	10.00
2005	11.26	18.14	0.15	1.11	2.70	10.00
2006	5.30	18.14	0.14	1.11	3.90	10.00
Average	9.48		0.15		3.19	

Notes:

(1) - The 2003 NOx data is from a retest performed after tuning was performed on the turbine. The CO data is from the original source test. The FR during the initial source test is 1,838.7 MMBtu/hr (average). The O2 during the original source test is 13.43%.

(2) - The 2003 source test showed non-detect for SO2 emissions. For purposes of this table, the detection limit was used to calculate the lbs/hr emission.

(3) - The 2006 source test showed non-detect for VOC emissions. For purposes of this table, the detection limit was used to calculate the lbs/hr emission.