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July 7, 2008

Mr. Anita Lee
US EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Subject: Comments Regarding the Proposed Victorville 2 Hybrid Power Project Prevention of Significant Deterioration Permit Conditions

Dear Ms. Lee,

On behalf of the City of Victorville and Inland Energy, ENSR is submitting this letter which provides comments regarding the proposed Victorville 2 Prevention of Significant Deterioration (PSD) Permit for the Victorville 2 (VV2) Hybrid Power Project.

1) Project Name

In some places in the permit and the Statement of Basis and Ambient Air Quality Impact Report, the project is listed as the "Victorville II" project. The project does not use a Roman numeral, and should be shown as the "Victorville 2 Hybrid Power Project".

2) Annual Facility Emission Limits

Condition IX.A of the proposed PSD permit lists the project's limited annual potential particulate (PM) emissions as 124.5 ton per year (tpy) and the particulate < 10 microns (PM10) emissions as 120.9 tpy. The annual facility PM and PM10 emission limits contained in the proposed PSD permit appear to be based on information provided in the original PSD application. That application made the assumption that PM10 emissions from the cooling tower would equal 50% of the Total Dissolved Solids (TDS) / PM emissions. However, the supplement to the PSD application dated January 30, 2008, clarified that the project would assume that PM10 emissions from the cooling tower are equal to the calculated PM emissions. Therefore, the PM10 emissions listed under Condition IX.A should be revised to equal 124.5 tpy in order to be consistent with the information submitted to the EPA on January 30, 2008 and contained within the Final Determination of Compliance (FDOC) prepared by the Mojave Desert Air Quality Management District.

3) Combustion Turbine Generator Emission Limits

a. Condition IX.C.1 limits the emission rate of NO_x from each combustion turbine generator (CTG) with duct burning to 14.6 lb/hr. This emission rate is based on average temperature conditions, and the maximum rate associated with low ambient temperatures should be used for maximum hourly limits. Please revise this limit to 15.60 lb/hr which is the correct emission rate as presented in the FDOC.

b. Condition IX.C.1 limits the emission rate of CO from each CTG with duct burning to 13.35 lb/hr. Please revise this limit to 14.25 lb/hr which is the correct emission rate as presented in the FDOC.

c. Condition IX.C.1 limits the emission rate of PM and PM10 from each combustion turbine generator (CTG) (no duct burning) to 12 lb/hr as a 12-month rolling average and the CTG (with duct burning) to 18 lb/hr as a 12-month rolling average. These limits are acceptable since they represent the approximate emission rates expected from the CTGs. However, it is important to note the following items regarding the proposed PM10 emission limits:

1) The proposed PM10 emission limits are lower than the CTG manufacturer's guarantee; and

2) The use of the Rapid Start Process (RSP) in association with the CTGs is a new technology and it is uncertain what impact it may have on the overall emission rates from the CTGs.

We are not requesting a change in these limits but identifying some associated uncertainties should they need to be re-visited at a future date.

d. Condition IX.C.1 limits the emission rate of CO from each CTG (no duct burning) to 7.65 lb/hr on a 12-month rolling average. The source of this emission limit could not be identified. We believe that the correct emission rate should be 7.04 lb/hr as presented in the PSD permit application and the FDOC.

e. Condition IX.C.2 states the following: "Combined hours of operation of both duct burners (D3 and D4) shall not exceed 2,000 hours per 12-month rolling average." The language proposed in this condition is not consistent with the information provided in the PSD application. The emission calculations provided with the PSD application are based on <u>each</u> duct burner operating up to 2,000 hours per year. In order to maintain maximum operational flexibility, we request that condition IX.C.2 be revised to read: "Combined hours of operation of both duct burners (D3 and D4) shall not exceed 4,000 hours per 12-month rolling average."

4) <u>Requirements during Gas Turbine (D1 and D2) Startup and Shutdown</u>

a. Condition IX.D.2 of the proposed PSD permit limits the duration of each transient event (startup and shutdown) associated with the CTGs. The limits are presented in hours per event in the proposed draft permit. It is requested that the limits be presented in minutes per event as shown in the following table:

	Duration
Cold Startup	110 minutes/event
Warm and Hot Startup	80 minutes/event
Shutdown	30 minutes/event

b. Condition IX.D.2 of the proposed PSD permit proposes to limit the number of cold startups, warm and hot startups, and shutdowns that each CTG could perform per year. The limit on the type of each operation per year appears to have been taken from the emissions calculations submitted as part of the original PSD permit application. The number of each operation used in the emission calculations was intended only as a basis for estimating the expected transient operation emissions and should not be listed as limits on the operation of the facility. The inclusion of limits on the number of these operations should not be required for the following reasons:

1) The facility is required to operate a continuous emissions monitoring system (CEMS) during start-ups and shutdowns that will monitor the total emissions associated with these operations. Therefore the requirement for use of a CEMS and the inclusion of annual emission limits in the permit is sufficient to limit the facility's emissions;

2) The limit on the type of each operation unnecessarily limits operational flexibility. For example, if during a given year the operating conditions dictate fewer cold startups and therefore more warm or hot startups, the overall facility emissions will actually be lower than estimate contained in the emission calculation included in the permit application; and

3) Most permits for combined-cycle power plants within EPA Region IX do not contain such limits as they are an unnecessary restriction on the operation of the plant with no commensurate air quality benefit.

Therefore, it is requested that the limits on the number of cold startups, warm or hot startups, and shutdowns be removed from the proposed permit.

5) Auxiliary Combustion Equipment Emission Limits

a. Condition IX.E of the proposed PSD permit limits NO_x emissions from Unit D7 (2000 kW emergency generator) to 6.0 g/kW-hr and Unit D8 (135 kW firewater pump) to 3.8 g/kW-hr. As presented in the PSD permit application, please revise Condition IX.E for Unit D7 to reflect the applicable California Tier 2 NO_x emission limit of 6.4 g/kW-hr (4.8 g/hp-hr) and Unit D8 to reflect the applicable California Tier 3 NO_x emission limit of 4.0 g/kW-hr (3.0 g/hp-hr).

b. Condition IX.E of the proposed PSD permit for Unit D8 (firewater pump) lists Footnote 2 with the associated NOx emission limit. Footnote 2 is not included in the copy of the proposed PSD permit provided for review. Please clarify if there is a footnote intended with this permit.

c. Condition IX.E of the proposed PSD permit limits Unit D9 (Cooling Tower) to < 5000 ppm total dissolved solids (TDS). Consistent with the PSD permit application and subsequent submittals, please revise this condition to read "≤ 5,000 ppm TDS".

d. Condition IX.E of the proposed PSD permit limits use of Unit D7 (2000 kW engine) to 50 hr/yr and Unit D8 (firewater pump) to "as required for fire safety testing" and "not to exceed 50 hr/yr". We believe that these restrictions do not clearly present that there cannot be restrictions on the use of the emergency generator or the firewater pump for emergencies. To clarify this restriction, we request that the proposed language be revised to read: "Maintenance and fire safety testing shall not exceed 50 hr/yr" for both Unit D7 and Unit D8.

6) Cooling Tower Emission Limits

Condition IX.F.2 states the following: The maximum hourly total PM emission rate from the cooling tower *and the evaporative condenser* shall not exceed 1.6 lb/hr." The proposed project does not include an evaporative condenser emission unit. We request that this condition be revised to read as follows: "The maximum hourly total PM emission rate from the cooling tower shall not exceed 1.6 lb/hr."

7) Continuous Emissions Monitoring System (CEMS) for Units D1 and D2

a. Condition IX.G.5 states the following: "The CEMS shall be certified and tested in accordance with Condition IX.G.7. We do not understand the reason for the inclusion of this condition. We believe that Conditions IX.G.6 and IX.G.7 are adequate with regard to the certification and testing of the CEMS. Therefore, we request that condition IX.G.5 be removed from the proposed permit.

b. We request that Condition IX.G.6 be revised as follows: "The initial certification of the CEMS may either be conducted separately, or as specified in 40 CFR 60.334(b)(1), or as part of the initial performance test of each emission unit. CEMS must undergo and pass initial certification testing on or before the date of the initial performance test.

c. Condition IX.G.9 requires that "The gas turbine CEMS shall be tested annually and quarterly in accordance with 40 CFR Part 60 Appendix F, Procedure 1." 40 CFR Part 60 Appendix F, Procedure 1 requires that a CEMS be audited quarterly with at least one Relative Accuracy Test Audit (RATA) being completed every 4 quarters. We believe that the proposed language should be clarified by revising it to read as follows: "The gas turbine CEMS shall be audited quarterly and tested annually in accordance with 40 CFR Part 60 Appendix F, Procedure 1.

d. Condition IX.G.10 states that: "Permittee shall submit a CEMS performance test protocol to the EPA not later than 30 days prior to the test date…". We request that this portion of Condition IX.G.10 be revised to read: "Permittee shall submit a CEMS certification test plan to the EPA no later than 30 days prior to the test date…".

8) Performance Tests

a. Condition IX.H.1.a.iii and iv of the proposed PSD permit requires that the 2,000 kW engine (Unit D7) and the firewater pump (Unit D8) complete initial and annual performance tests for NO_x, CO, PM, and PM10 (as a surrogate for PM2.5). We believe that the performance testing requirement contained in this condition is excessive for emission units that are limited to 50 hours per year of non-emergency operation and will be certified by the engine manufacturer to meet the emission standards. Therefore, we request that the requirement for annual testing of these units be deleted. Source testing would take additional time over what is needed for the normal testing (i.e., starting the engine to make sure that it is in operating condition, per Fire Department safety requirements), and hence if EPA does require such testing, it would require the engine to be run for more than 50 hr/yr for non-emergency purposes, which would then make the engine no longer exempt from California emission limits for diesel engines.

b. Condition IX.H.1.a.v of the proposed PSD permit requires initial and annual PM testing from the cooling tower. After submittal of the PSD application, the Applicant's consultant, Ms. Sara Head, had several discussions with Mr. Ed Pike of the EPA. Mr. Pike indicated that source testing of the cooling tower would only be required if an assumption that less than 100% of the TDS in the tower was assumed to be emitted as PM10. Therefore, it was agreed that the PM10 (and PM2.5) emissions from the cooling tower would be assumed to equal the PM emissions (see comment 2 above). This assumption was used in the subsequent supplemental submittals related to PM and PM2.5 emissions for the VV2 Project. Therefore, the requirement to source test the cooling tower should be deleted from the permit.

c. Condition IX.H.1.b of the proposed PSD permit states: "The annual performance tests shall be conducted in accordance with the requirements of 40 CFR Part 60, Appendix F, Procedure 1, Section

5.11.". Appendix F, Procedure 1 does not contain a Section 5.11. In addition, we do not see the applicability of Appendix F, Procedure 1 (QA Requirements for CEMS) to the performance test requirements of Section H of the proposed permit. We request that Condition IX.H.1.b be removed from the permit.

d. Condition IX.H.1.f of the proposed PSD permit states: "The performance methods specified in Condition X.F.3 may be modified as follows:". The proposed PSD permit does not contain condition X.F.3. The language of Condition IX.H.1.f.i and ii appear to be similar to 40 CFR 60.4405 which is applicable to performance of the initial certification testing required by 40 CFR 60 Subpart KKKK for a CTG that has selected to install a NO_x CEMS. Therefore, we believe that Condition IX.H.1.f should be revised to read: "The performance methods specified in Condition IX.H.1.d.i and ii may be modified as follows:" or removed from the proposed permit.

e. Condition IX.H.3.a of the proposed PSD permit states the following: "Permittee shall take monthly samples of the natural gas combusted…." The requirements of 40 CFR 60 Subpart KKKK allow the approval of custom fuel monitoring schedule approved by EPA for compliance with the fuel monitoring provisions. We believe that the fuel data that will be provided by the gas supplier will be sufficient to provide the necessary information. Therefore, we request that this condition be revised for consistency with the FDOC to allow that sulfur content of natural gas combusted at the facility shall be obtained by the Permittee through laboratory analysis or natural gas sulfur content reports from the natural gas supplier(s).

We appreciate your consideration of these comments. For your convenience, we have also provided these comments as a mark-up of the proposed PSD permit. Please contact me at 805-388-3775 if you have any questions about these comments regarding the proposed PSD permit for the VV2 Project.

Sincerely yours,

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