UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

November 21, 2005

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Commissioners John Geesman and Arthur Rosenfield
California Energy Commission
1516 Nineth St.
Sacramento, CA 95814

Subject: Blythe Energy Project Phase II Proposed Decisions

Dear Commissioners Geesman and Rosenfeld:

Thank you for the opportunity to comment on your proposed decision to approve this application, subject to the restrictions in the proposed decision. We previously provided comments to the Mojave Desert Air Quality Management District that the offset proposal is seriously flawed (see attached letter, dated December 26, 2002) due to the use of proposed road paving as a source of Emissions Reduction Credits for PM10 is a major concern (as noted on p. 24 of the proposed decision). The proposed use of inter-precursor trading without a technical justification approved by EPA is another issue (p. 39 of the proposed decision). Therefore, we recommend that the Commission revise the proposed decision to require that the applicant obtain offsets that meet federal requirements.

If you have any questions regarding our comments, please have Commission staff contact me at (415) 972-3974, or Manny Aquitania of my staff at (415) 972-3977.

Sincerely,

Gerardo C. Rios
Chief, Air Permits Office

Enclosure

cc: CEC Docket
Robert Looper, Blythe II
Mr. Charles Fryxell, Mojave Desert AQMD
Mr. Mike Tollstrup, California Air Resources Board

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

December 26, 2002

Mr. Charles Fryxell
Air Pollution Control Officer
Mojave Desert AQMD
14306 Park Avenue
Victorville, CA 92392

Re: Comments on Preliminary Determination of Compliance for Blythe Energy Project II

Dear Mr. Fryxell:

Please find enclosed our comments on your Preliminary Determination of Compliance (PDOC) for the Blythe Energy Project II (BEPII). Our comments on the PDOC for this project, discuss several permit conditions that must be corrected prior to final permit issuance, including: (1) your BACT/LAER analysis for NO_x; (2) an ammonia slip concentration limit that exceeds ARB guidelines; (3) the enforceability of the cooling tower PM_{10} emission limit; (4) authorizing the use of invalid PM_{10} offsets; (5) inter-pollutant trading, (6) malfunction exemption from CO, NOx, and VOC emission limits and (7) the turbine power train Authority to Construct condition for CO. These permit deficiencies are explained in detail in the enclosed comments.

We appreciate the District's cooperation and look forward to working with you and your staff to correct the permit conditions prior to the issuance of the Final Determination of Compliance (FDOC). Please have your staff contact Curt Taipale at (415) 972-3966 in our Permits Office if you need further discussion on any of our comments.

Sincerely,

N. Zoueshtiagh for

Gerardo C. Rios
Chief, Permits Office

enclosure

cc: Mike Tollstrup, CARB
Jim Bartridge, CEC
Larry Carpenter, Caithness Blythe II, LLC

EPA Comments on Preliminary Determination of Compliance (PDOC) for Blythe Energy Project II (BEPII)

1. EPA LAER/California BACT Evaluation:

NO_X: The PDOC contains a LAER/BACT limit of 2.5 ppm NO_x over one hour, but must be revised to require a limit of **2.0 ppm NO_x** over a one hour averaging time. Where, as here, a technology may achieve a range of control efficiencies, EPA's NSR Manual (Draft 1990), at B.23, states that "the applicant should use the most recent regulatory decisions and performance data for identifying the emissions performance level(s) to be evaluated in all cases." The Manual, at B. 24, concludes: "In the absence of a showing of differences between the proposed source and previously permitted sources achieving the lower emissions limits, the permitting agency should conclude that the lower emissions limit is representative for that control alternative." Several recently permitted California power plants, which are similar if not identical in all material respects to the BEPII facility, are required to meet a LAER/BACT emission rate of 2.0 ppm NO_x over a one hour average. These permits include the Sunrise Power Project (NSR Permit-SJVUAPCD, PSD Permit-EPA), the San Joaquin Valley Energy Center (FDOC) and the Avenal Energy Power Plant Project (PDOC) permitted by San Joaquin Valley Unified Air Pollution Control District; the East Altamont Energy Center (FDOC) and Tesla Power Project (PDOC) permitted by the Bay Area Air Quality Management District. Additionally, the ANP Blackstone units #1 and #2 in Massachusetts were permitted and since 2001 have been operating at a LAER rate of 2.0 ppm NO_x over one hour (excluding start-up and shut-down). Therefore, regulatory decisions and available performance data demonstrate that the LAER/BACT rate for BEPII is presumptively 2.0 ppm NO_x over one hour. Your engineering analysis does not explain any ways in which the BEPII units differ from the numerous units that have been permitted and are operating at a LAER/BACT emission rate of 2.0 ppm NO_x averaged over one hour. Please revise the PDOC to require BEPII to meet the LAER/BACT limit of 2.0 ppm NO_x over one hour.

2. Selective Catalytic NO_x Reduction System Authority to Construct (ATC) Conditions:

Condition 4: The District has proposed the ammonia slip shall not exceed 10 ppmvd (corrected to 15% O_2) averaged over three hours. We strongly recommend that the District lower the proposed ammonia slip limit from 10 ppm to 5 ppm. A number of power plants in California have accepted the 5 ppm limits, e.g., AES Huntington Beach, Metcalf Energy Center, and Three Mountain. The CARB's Power Plant Guidance also suggested the 5 ppm concentration, citing evidence that a couple of power plants in Massachusetts using SCR have been permitted at 2 ppm and that several SCR manufacturers have now guaranteed a 5 ppm ammonia slip.

3. Cooling Tower ATC Conditions:

Condition 3: The District has determined the use of mist eliminators to limit drift to 0.0006 percent as PM_{10} is LAER/BACT for the BEPII cooling towers. The Clean Air Act considers LAER as the most stringent controls identified in a SIP or achieved in practice. 42 U.S.C. § 7501(3). Dry cooling has been achieved in practice for many years, and various permitting authorities are currently deciding whether it is now considered LAER in PM_{10} non-attainment areas for new power plants. Even if EPA ultimately accepts wet cooling as LAER,

BEPII must propose and accept appropriate LAER limits for particulate emissions from the wet cooling tower that contemplate the use of mist eliminators and include enforceable total dissolved solids (TDS) concentration limits for the circulation water.

Condition 3, states that *"the maximum hourly PM_{10} emission rate shall not exceed 0.67 pounds per hour...."* This corresponds to about 1,500 ppm of total dissolved solids at a circulation rate of 146,000 gallons per minute and a drift rate of 0.0006 percent. The cooling tower PM_{10} emission limit of 0.67 pounds per hour, however, is practically unenforceable unless the permit includes an expressed limit on the TDS concentration. Therefore, we require you to add an additional permit condition specifying the maximum TDS concentration corresponding to the calculated maximum hourly PM_{10} LAER/BACT emission limit. A maximum TDS permit limit combined with conditions 4, 5 and 6 will ensure the enforceability of the maximum hourly PM_{10} emission limit.

4. PM_{10} Emission Reduction Credits From Road Paving:

The PM_{10} emissions (from twin F Class turbines and cooling tower) are estimated at 56 tons per year. You are proposing to offset these emissions at a 1:1 ratio by paving an unpaved road (identified as CRIT Road Paving). The District has indicated that the CRIT Road Paving would create 126 tons per year of PM_{10} ERCs, but no other details are provided in the PDOC. The road paving credits discussed in the PDOC do not satisfy the fundamental requirements for NSR offsets to be surplus, quantifiable, permanent, and federally enforceable. To ensure creditability of non-traditional ERC's, such as those generated by road paving, the SIP must contain an approved protocol for quantifying and guaranteeing the permanence, surplus nature and enforceability of such credits. The PM_{10} credits in the BEPII PDOC cannot be allowed to offset the PM_{10} increases. Therefore, you must require the applicant to obtain and publicly notice valid PM_{10} ERCs before issuing the FDOC.

5. Inter-pollutant Trading:

The District's proposal for BEPII's inter-pollutant offset trading cannot be allowed because it has not received EPA approval. It is clear from the language in Rule 1305(B)(6) that EPA must affirmatively approve the trade and a mere failure to object is irrelevant. The MDAQMD Rule 1305(B)(6) states:

> *(a) Emissions reductions of one type of Air Pollutant may be used as Offsets for another type of Air Pollutant upon approval of the APCO, in consultation with CARB and* ***the approval of USEPA****, on a case-by-case basis as long as the following apply:*
>
> *(i) The trade must be technically justified; and*
>
> *(ii) The applicant must demonstrate, to the satisfaction of the APCO, that the combined effect of the Offsets and emissions increases from the new or modified Facility will not cause or contribute to a violation of an Ambient Air Quality Standard.*

Moreover, the interpollutant offsets proposed in the PDOC are not approvable based on the criteria established in the Rule. The District proposes to establish an inter-pollutant offset ratio of 1:1 for NO_x to VOC and PM_{10} to SOx. The EPA has not approved a methodology for

determining the appropriate ratio for inter-pollutant offsets. Several methods might be acceptable in conjunction with other considerations for this specific project. The burden in seeking approval for inter-pollutant offsets rests with the applicant to demonstrate that the inter-pollutant offsets being proposed will ensure a beneficial effect on air quality levels in the area of the proposed project. Modeling is a critical component of this analysis, and several Urban Airshed Modeling methodologies have been considered and made available to applicants on a case-by-case basis. Nevertheless, each such trade must be affirmatively approved by EPA.

6. Malfunction Exemption from Emission Limits in Tubine Power Train ATC:

Under condition #4, the District has proposed CO, NO_x and VOC emission limits except during periods of startup, shutdown, and malfunction. The term "malfunction" does not appear in applicable District Rules. In PSD permits issued by Region 9, we define a malfunction as a sudden and unavoidable breakdown of equipment or of a process beyond reasonable control of the source. We allow an affirmative defense in the context of enforcement proceedings for a malfunction only under strict conditions. The District should either define what constitutes a malfunction consistent with federal guidelines or remove this language to avoid confusion.

7. Turbine Power Train ATC Condition for CO:

Under a separate action for this proposed project, the EPA will be performing a PSD review for CO and NO_2 and making a BACT determination. We anticipate that the BACT determination may require a lower CO concentration limit than proposed in this PDOC. A final permit for the facility will include the most stringent requirements.

The PDOC BACT discussion for CO, BEPII proposes a concentration of 5 ppm (at loads greater than 80%) and 8.4 ppm (at loads between 70-80%) **averaged over three hours**, without an oxidation catalyst. However, the District BACT determination and the proposed Turbine Power Train ATC permit condition #4(a)(ii) permits a higher averaging period in the following:

*(ii) CO 35.20 lb/hr (based on 5.0 ppmvd (8.4 ppmvd with duct firing or when between 70 and 80 percent of full load) corrected to 15% O2 and **averaged over 24 hours**)*

The 24-hour averaging period appears to be a typographical error and must be changed to the three hour averaging period.