



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

May 21, 2009

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David Warner
Director of Permit Services
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Re: EPA Comments on Project Number N-1083212
Facility Name: GWF Energy, LLC – Tracy (N-4597)

Dear Mr. Warner:

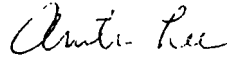
Thank you for the opportunity to comment on San Joaquin Valley Air Pollution Control District's (District) Preliminary Determination of Compliance (PDOC) for Project Number N-1083212 at GWF Energy, LLC – Tracy (GWF Tracy) (N-4597). We understand that the project is a proposed Title V significant modification and the applicant has requested that a Certificate of Conformity (COC) be issued for this project.

Our comments provided in the enclosure are made in reference to the PDOC submitted to us on April 7, 2009. They address the PDOC evaluation and proposed permit conditions as they pertain to the federal New Source Review (NSR) program and title V program requirements. While this project does not trigger review under the requirements for Prevention of Significant Deterioration (PSD), it is subject to the requirements for a major modification under Non-attainment NSR review for NOx emissions.

Based on our review, we are concerned that several issues fail to meet federal requirements, such as the proposal to re-bank NOx offsets that have been surrendered previously and the proposal to use inter-pollutant offset ratios that EPA has not yet approved. Because these proposals are inconsistent with the requirements of the Clean Air Act, we recommend that the District work with the applicant to address these deficiencies.

We look forward to working with you to address our comments prior to the issuance of the Final Determination of Compliance (FDOC). Please contact Andrew Chew at (415) 947-4197 or Laura Yannayon at (415) 972-3534 of my staff if you have any questions.

Sincerely,



^{FOR} Gerardo C. Rios
Chief, Permits Office

Enclosure

cc: Keith Golden, California Energy Commission
Michael Tollstrup, California Air Resources Board

EPA Comments on the Preliminary Determination of Compliance (PDOC) for GWF Tracy Combined Cycle Power Plant (N-4597)

1. Offsets required for PM10 and VOC emissions

GWF Tracy is required to provide offsets for the net emission increases of VOC and PM10 resulting from the project. To meet this requirement, GWF Tracy proposed (on page 49) to allocate any excess NOx emissions towards meeting the VOC and PM10 offset requirements by “re-bank[ing] the [NOx] ERCs that they originally provided.” However, this type of “re-banking” does not comply with the Clean Air Act’s requirement under Section 173(a) that the offsets be real emission reductions¹. The ERCs that GWF Tracy surrendered to permit the original Tracy Peaker Project in 2003 were consumed by the original permitting action and cannot be re-banked as ERCs. Accordingly, GWF has no valid NOx ERCs to use as interpollutant offsets for VOC and PM10. Therefore the project does not meet the NSR requirements to provide offsets for increased VOC and PM10 emissions.

2. Inter-pollutant Offsetting

Although the project relies on inter-pollutant offset ratios of 1:1 and 2.629:1 for NOx-to-VOC and NOx-to-PM10, respectively, the underlying methodology to determine the appropriate ratios for inter-pollutant offsets has not been approved by EPA as required by District Rule 2201. The burden in seeking approval for inter-pollutant offsets rests with GWF Tracy to demonstrate that the proposed inter-pollutant offsets will ensure a net benefit to air quality levels in the area of the proposed project. It is important to note that modeling is a critical component of an inter-pollutant offset analysis, and subsequent models are evaluated on a case-by-case basis. Any approach for inter-pollutant offsets, therefore, must be carefully considered by the agencies in the context of a thorough and descriptive protocol. EPA must concur with the assumptions and methodology before such ratios may be used in this project. Even though a proposed methodology has been presented in a District attainment plan, it should not be inferred that the methodology has been automatically approved for use in this project. Accordingly, GWF Tracy and SJVAPCD must work with EPA on such protocol to be reviewed in advance of an acceptable methodology. We are available to discuss the schedule for submission of such a protocol and its components. At a minimum, the protocol should include standard information, such as model choice, episode selection, emissions inventory parameters, and performance criteria.

3. BACT Evaluation for Startup and Shutdown Operating Scenarios

We note that the District has included permit conditions for startup and shutdown (SU/SD) operating scenarios (e.g., mass limits, duration of startups and shutdowns, definitions of operating scenarios, etc.) for two combustion turbine generators in the PDOC. However we do not see a proper BACT analysis for operation during these periods. We are aware of several projects in California that are considering technologies and work practices that

¹ While District Rule 2301 may allow a source to bank offsets that have been previously provided if its associated Permit to Operate has been voluntarily modified, that Rule has not been SIP-approved and is not consistent with the requirements of the Clean Air Act.

minimize duration and emissions during such operating scenarios from stationary combustion turbines in their BACT evaluations. Please provide an appropriate BACT analysis for operation during startup and shutdown periods.

Although the District imposes the condition on the project to maintain the units in good operating condition and operate in a manner to minimize emissions, we request additional information be included in the District's evaluation that supports the proposed permit conditions (such as emission limits, durations, and definitions) for SU/SD operations.

EPA requires that BACT apply not only during normal, steady-state operations but also during all transient operating periods such as SU/SD periods. Therefore, as part of the BACT evaluation, we expect applicants to consider operating approaches, operating controls, work practices, and equipment performance and design that would minimize SU/SD emissions. Please refer to the following two decisions from EPA's Environmental Appeals Board (EAB) that provide context in this matter. They are Rockgen Energy Center (PSD Appeal No. 99-1) (<http://www.epa.gov/eab/disk11/rockgen.pdf>) and Tallmadge Generating Station (PSD Appeal No. 02-12) (<http://www.epa.gov/eab/orders/tallmadge.pdf>).

4. Federally enforceable limits on PTE for stationary gas turbines and auxiliary boiler

While the PDOC contains conditions for startup and shutdown (SU/SD) operating scenarios (e.g., mass limits, duration of startups and shutdowns, definitions of operating scenarios, etc.), it should also contain limits on the number of such events when operating under combined-cycle operation, since the evaluation is based on an assumed number of these events (page 26 and Attachment G of the PDOC). Likewise, the calculations were based on a total of 8,639 hours of operation per year rather than the maximum of 8,760 hours in a year. For these reasons, the proposed permit conditions must include limits on the capacity utilization and/or hours of operation to properly reflect the scenarios used in the emission calculations. Furthermore, the permit must include proper monitoring and recordkeeping conditions for such limits.

5. Limiting fuel usage and the PTE of HAPs

Because the calculated PTEs of any individual HAP (e.g., formaldehyde) and of the total HAPs are within close to 6% of triggering the threshold for a major HAP source, the final DOC must include federally enforceable limits on the annual fuel usage rates for each emission unit at the source and the PTE for any individual HAP and for total HAPs. As calculated annual PTE's and fuel usage rates are indicated on pages 64-65, the PTE for formaldehyde is 9.4 tons per year and total HAPs of 23.3 tons per year. As such, the final DOC must include recordkeeping conditions that require the operator to calculate, on a monthly basis, the rolling 12-month averages of actual fuel usages for each emission unit and to comply with their associated conditions that limit the PTEs of any individual HAP and of the total HAPs.

Furthermore, should the number of operating hours increase and/or, in turn, calculations of HAP emissions result in a finding that the source is a major source for HAPs, please evaluate

the applicability of NESHAPs/MACTs (including, but not limited to, CFR Subparts YYYY and DDDDD of Part 63 of title 40), identify the applicable requirements for this source, and include adequate permit conditions to assure compliance with them. While this is not necessary to address NSR requirements, the issuance of the COC is contingent upon the District adding the necessary conditions to the title V portion of the permit.

6. 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, and their applicable requirements

Please indicate whether NSPS Subpart IIII and MACT Subpart ZZZZ apply to the project, identify the applicable requirements for this project, and include adequate permit conditions to assure compliance with them. While this is not necessary to address NSR requirements, the issuance of the COC is contingent upon the District adding the necessary conditions to the title V portion of the permit.

7. PDOC is not a written certificate of conformity (COC)

Because the conditions under section 6.1 of District Rule 2201 have not been met, the PDOC does not serve as a written COC despite the proposed permit condition on page 61 stating otherwise. Section 6.0 (Certification of Conformity) of District Rule 2201 states that the COC may be issued only after all of the conditions under section 6.1.1 through 6.1.6 are met. Generally, some of these conditions include conformity with the Enhanced Administrative Requirements of District Rule 2201 and mandatory permit content for title V permits in District Rule 2520. Because the Authority to Construct has not been issued and will not be issued until our comments in this letter and comments from other agencies are resolved, the PDOC cannot serve as a written COC. Please make appropriate changes to reflect this in the FDOC.

8. SCR operation and startup and shutdown events

It is unclear if the PDOC assumes operation of the SCR during startup and shutdown events. If it is the District's intention, as part of BACT that the SCR should be in operation as soon as technically feasible, please add conditions to both require its use and monitoring provisions to ensure the SCR unit is in operation during startup and shutdown events. Examples of such conditions could include: 1) require the installation and maintenance of a working temperature gauge at the inlet or the catalyst bed of the SCR system and 2) require the monitoring and recording of the temperature over which the control system ought to be operating.

9. Monitoring, recordkeeping, and recording for visible emissions

Visible emissions from the electrical generator lube oil vents and from the exhaust of the diesel-fired internal combustion engine are subject to SIP-approved District Rule 4101. While subsection 6.1 of the rule identifies US EPA Method 9 for visual determination of the opacity, provisions for monitoring, recordkeeping, and recording should be considered and are required under title V (per section 9.0 of District Rule 2520). Examples of considerations include: 1) requirement to conduct periodic monitoring/inspection and to record the opacity

readings (along with their times and dates); 2) requirement to conduct the monitoring while the equipment is operating and during daylight hours; 3) requirement to take corrective action that eliminates the visible emissions during X hours and report the visible emissions as a potential deviation in accordance with the permit's reporting requirements; 4) requirement to verify and certify within X hours that the equipment causing the visible emissions has been fixed; and 5) requirement that the operator maintain and make available upon request records of emission point(s), of descriptions of corrective actions taken, of date and time emissions were abated, and of records of emission readings. Please include these requirements as appropriate into the FDOC. Issuance of the COC is contingent upon the District adding the necessary conditions to the title V portion of the permit.

In addition, please provide an evaluation whether compliance with District Rule 4101 would be expected of the two compression-ignited reciprocating internal combustion engines.

10. CEM during all startup, shutdown, and malfunction events

Please propose a permit condition that requires the operator to keep the Continuous Emission Monitoring running during all startup, shutdown, and malfunction events provided that the CEM data is certifiable to determine compliance with startup and shutdown emission limits. Even though it may be implicit that CEM equipment is required to operate during all startup, shutdown, and malfunction events, it should be clarified to the operator through an explicit permit condition.

11. PM2.5 emissions from project

Please provide actual calculations of PM2.5 emissions that would be expected from the project and perform an evaluation whether the amounts of emissions would trigger new source review. The PDOC (on page 119) has only an abbreviated discussion of PM2.5 emissions on the applicability of 40 CFR 51 Appendix S.

12. Fuel sulfur content limit (rolling 12-month average)

Please provide an alternative calculation methodology to determine the rolling 12-month average fuel sulfur content contained in proposed Condition 50 in Attachment A-20. The currently proposed methodology can potentially bias the rolling average by allowing more than one data point in a month. Because of the potential for under-estimation of actual emissions, an alternative methodology should be proposed.

13. FGR control technology in auxiliary boiler

Please propose a permit condition that requires the operator to properly operate and maintain the flue gas recirculation system since it is an important part of NOx control for the boiler.

14. CTG SOx emission limit during shutdown

Please correct the proposed permit condition containing the SOx emission limit for the CTG during shutdown (Condition 31 in Attachment A-5) to reflect the amount of 0.85 lb/event as indicated in the table titled "Shutdown Emission Factors, Per Turbine, Scenario 1," on page 18.

15. 40 CFR 60 Subpart Dc

a. Please edit proposed Condition 11 on Attachment A-28 to require the fuel flow meter to be calibrated and maintained properly.

b. Please propose a permit condition that requires the operator to conduct a performance test since section 60.8 in 40 CFR 60 requires one; as section 60.8 of part 60 applies, the operator must conduct a performance test according to the requirements in section 60.44c. Also, please consider re-evaluating the applicability of section 60.44c as it pertains to the auxiliary boiler.

c. Please clarify the applicability of subsections 60.47c(e) and 60.47c(f) as they pertain to the auxiliary boiler. Under those requirements, the operator may have to evaluate whether COMS would be required.

16. 40 CFR 60 Subpart KKKK

a. Subsection 60.4345(a). Please propose a condition that requires the RATA of the CEMS to be performed on a lb/MMBtu basis.

b. Subsection 60.4345(e) (CEM Quality Assurance Plan). Please propose conditions in the final Determination of Compliance (FDOC) that require the owner or operator to develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of subsection 60.4345.

c. Subsection 60.4350(b). Please propose conditions that 1) impose a maximum of 19% O₂ diluent cap value and 2) calculate and record hourly NO_x rate in ppm using Method 9 of 40 CFR 60, Appendix A. As currently proposed, the requirements contained in paragraphs 5.2 through 5.3.3 of Appendix P in 40 CFR 51 do not apply here as the project does not involve any nitric acid plants nor sulfuric acid plants.

d. Subsection 60.4350(h) (data calculation protocols). Please propose conditions in the FDOC that capture the applicable requirements contained in paragraph (h) of subsection 60.4350 after its evaluation has been performed.

e. Subsection 60.4380(b)(1). Please consider proposing conditions that reflect the applicable calculation methodologies in this subsection.

f. Subsection 60.4385(a) and (c). Please consider proposing conditions that indicate the sets of circumstances that would constitute excess emissions and downtime.

g. Subsection 60.4400(a). Please consider proposing conditions that reflect the applicable elements contained in paragraphs (a)(2), (a)(3), and (b).

17. Rule 4304

Please propose permit conditions that reflect the applicable requirements of District Rule 4304 as they pertain to equipment tuning procedures for boilers and steam generators.

18. Rule 4703

a. Subsection 6.2.6. Please propose a permit condition that includes the applicable elements in the operating log.