

CALIFORNIA ENERGY COMMISSION

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May 4, 2010

DOCKET
08-AFC-11

DATE	MAY 04 2010
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Ms. Susan K. McLaughlin
Supervising Air Quality Engineer
Yolo-Solano Air Quality Management District
1947 Galileo Ct., Suite 103
Davis, CA 95618

Dear Ms. McLaughlin:

CPV Vaca Station Project (08-AFC-11) Comments on: Preliminary Determination of Compliance, Facility # 05586

Energy Commission staff appreciates the opportunity to provide written public comments on the Preliminary Determination of Compliance (PDOC) issued by the District on March 24, 2010 for the Vaca Station Project proposed by CPV Vacaville LLC.

Energy Commission staff, pursuant to both the Warren-Alquist Act and the California Environmental Quality Act (CEQA), must determine whether the facility is likely to conform with applicable laws, ordinances, regulations, and standards, and whether mitigation measures can be developed to lessen potential impacts to a level of insignificance. These determinations may be difficult or impossible without additional information from the Yolo-Solano Air Quality Management District (District) in the Final Determination of Compliance.

Emission Reduction Credits

The PDOC does not clearly show which emission reduction certificates (ERC) would be used to satisfy the requirements under District Rule 3.4 for offsets. The PDOC (pp. 55-65) states that “the applicant has proposed some combination of the ERC certificates listed in Attachment D...” (PDOC pp. 55-65), and the PDOC Attachment D shows one snapshot of the District bank. The PDOC does not show what ERC certificates are held by or proposed to be surrendered by the project applicant. With only this tentative information from the applicant and District, Energy Commission staff cannot discern whether the applicant has the ability to offset the project’s impacts. As noted in our Issues Identification Report in March 2009, this is a persistent information deficiency that makes it difficult for the Energy Commission to determine whether project impacts can be mitigated.

The District should identify the specific offsets that are in the control of the applicant and list which ERCs would be surrendered. For the ERCs listed in PDOC Attachment D and likely to be used by the project, the District should show the current ERC owner, the location where the offset occurred (whether located within the district or imported from

another air district), and the nature of the emission reduction. Normally, this kind of information is provided as part of the Determination of Compliance for disclosure.

Of additional concern is the applicant's apparent reliance on District rulemaking that has yet to occur (see PDOC p.60). The PDOC indicates that compliance depends on a proposed change to District Rule 3.4 to allow swapping credits from the two summer quarters. The District should disclose the potential timelines for this rule change, the necessary approvals by oversight agencies including the U.S Environmental Protection Agency (U.S. EPA), and the expected date the new rule would become effective.

New Source Review and BACT

The discussion of Rule 3.4 requirements and Best Available Control Technology (BACT, PDOC pp. 53-54) does not include information on minimizing startup emissions or the duration of startup and shutdown sequences. The U.S. EPA requires that BACT apply not only during normal steady-state operations but also during transient operating periods such as startups.¹ Energy Commission staff recommends that the District consider and provide, as part of the BACT analysis, a review of combustion turbine and combined cycle system operational controls or design features that can shorten start up and shutdown events and optimize emission control systems. We suggest that the District provide information demonstrating that the BACT analysis has considered the technologies available to reduce emissions during startup and shutdown events. Options for consideration could include control system modifications allowing injection of ammonia earlier or alternative designs for the heat recovery steam generator (HRSG) that reduce the time needed to heat the HRSG without causing excessive thermal stress.

Carbon Monoxide from Combustion Turbines

The BACT conclusion for carbon monoxide (CO) (PDOC p. 54) shows that an emission rate of 3.0 parts per million (ppm) is achievable, but experience with the Magnolia Power Plant in Burbank and others indicates that 2.0 ppm can be achieved in practice. In other recent cases, including the Lodi Energy Center and Avenal Energy Center, the San Joaquin Valley Air Pollution Control District had concluded that the turbines can be limited to no more than 2.0 ppm on a 3-hour basis, and the agency specified this level for BACT. Each of these cases includes combined-cycle combustion turbines similar to the ones proposed for Vaca Station. Energy Commission staff recommends the District reconsider its conclusion on BACT for CO specifically to determine whether 2.0 ppm CO is achievable in practice and therefore required.

Particulate Matter from Cooling Tower

The PDOC shows the proposed cooling tower with preliminary permitted emissions of particulate matter (PM10) at 76.6 pounds per day or an allowable 3.19 lb/hr. However, the modeling filed by the applicant with U.S. EPA in February 2010 for permitting under the Prevention of Significant Deterioration (PSD) program showed PM10 emissions of

¹ U.S. EPA letter to Antelope Valley Air Quality Management District. Comments on the PDOC for Palmdale Hybrid Power Project. Dated March 19, 2009.

only 0.15 lb/hr per cell x 12 cells or only 1.8 lb/hr. If the lower emission rate is used for PSD purposes, then the PDOC should establish the limit at the lower rate.

We appreciate the District working with Energy Commission staff on this licensing case. If you have any questions regarding our comments, please contact Gerald Bemis at (916) 654-4960. We look forward to discussing our comments in further detail with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew S Layton". The signature is fluid and cursive, with the first name being the most prominent.

MATTHEW S LAYTON
Supervising Mechanical Engineer

cc: Docket (08-AFC-11)
Proof of Service List
Dave Mehl, California Air Resources Board
Gerardo Rios, U.S. Environmental Protection Agency, Region IX