DOCKET
03-AFC-2
DATE JUN 23 2005
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STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of:	Docket No. 03-AFC-2
Application for Certification for the Los Esteros Critical Energy Facility 2 (Los Esteros Phase 2)	**Evidentiary Hearing Statement**

I. CONTACTS WITH PARTIES AND AGENCIES

In response to the Committee's June 17, 2005, Notice of Evidentiary Hearing, Staff has contacted the other parties. It has spoken with representatives for the Applicant ("Calpine"), Bob Sarvey (representing CARE), and Marc Joseph (representing CURE). In addition, it has contacted both the Bay Area Air Quality Management District ("BAAQMD") and U.S. EPA. Mr. Sarvey will be participating in the hearing as described below. Mr. Joseph stated that CURE will not be participating.

II. ISSUES AND WITNESSES

In its June 21, 2005, letter to the Staff, Calpine indicated that there were three unresolved issues pertaining to the Final Staff Assessment ("FSA"). These involved specific Staff-proposed conditions regarding Air Quality, Worker Safety, and a General Condition regarding power plant security. Mr. Sarvey also indicated that he is interested in participating in the hearing regarding Air Quality and bicycle trail repair measures. The nature of the issues between the parties, and the witnesses necessary for the hearing to resolve them, are discussed below.

A. AIR QUALITY

Calpine indicated that it would be filing testimony regarding Staff's proposed condition AQ-SC11, a condition that would require that LECEF replace the selective catalytic reduction ("SCR") catalyst within 12 months after 24-hour average ammonia concentrations are measured to exceed a 5 ppm ammonia slip level. Calpine indicates that it does not feel that this condition is justified, and will adjudicate the issue. Staff will support its proposed condition at hearing with its original FSA testimony and supplemental testimony that is filed with this Statement. This testimony is filed by Staff witness Gabriel Taylor, who will testify at the hearing.

Proof of Service (Revised 6/7/05) filed with original.
Mailed from Sacramento on 6/23/05

Mr. Sarvey indicated that he is interested in the same issue. He did not indicate that he would provide a witness on this issue, but wanted to cross-examine Staff's air quality witness and also Staff's Biological Resources witness with regard to nitrogen deposition. Accordingly, Staff will have two witnesses present: Gabriel Taylor for Air Quality and Natasha Nelson for Biological Resources.

Mr. Sarvey also indicated that he may have comments or cross-examination for the Staff and Calpine air witnesses regarding the BAAQMD's determination that BACT for carbon monoxide is 9 ppm for this facility. Steve Hill will be present representing BAAQMD, but not until approximately 10:30 a.m. Shahera Kelly of U.S. EPA indicated that her agency would send a letter to the Committee on this matter but would not attend.

B. WORKER SAFETY

Calpine's June 21 letter expressed disagreement with conditions Worker Safety 3 and 4. Calpine's letter also expressed a willingness to accept related conditions on Worker Safety adopted by the Commission in its recent Roseville decision. Staff agrees to resolution of this issue by changing Worker Safety 3 and 4 to be consistent with the Roseville decision. Staff's condition language is now identical to the language attached to Calpine's June 21 letter as Attachment A. Thus, there appears to be no need to adjudicate this issue, and Staff does not intend to present witnesses to testify with regard to it. No other parties have expressed interest in this issue.

C. GENERAL CONDITION COM-8 (POWER PLANT SECURITY)

Calpine's June 21 letter also took issue with COM-8, a "General Condition" that pertains to measures required for the project to have a "Construction and Operation Security Plan." Some elements of that security plan were presented to Calpine for the first time in the FSA. Calpine states that the Operation Security Plan is different from the measures required when the Commission licensed the existing Phase 1 project in March, and that it imposes significant new measures, some of which are not consistent with other mitigation the Commission has required with regard to aesthetics (Visual Resources). Staff has now revised this General Condition in response to the applicant's comments to remove any inconsistency with other conditions. Accordingly, it is Staff's belief that there is no longer any conflict on General Condition 8, and it does not intend to present a witness on this issue. Revised General Condition COM-8 is attached.

CONCLUSION

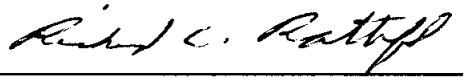
Staff believes that Air Quality (specifically, condition AQ-SC11) is the only issue requiring adjudication. It will submit all testimony by declaration and, unless directed by the Committee to do otherwise, present only the two witnesses identified above at the hearing. Staff will introduce into evidence three exhibits: 1) the FSA; 2) the supplementary testimony of Gabriel Taylor regarding indirect PM 2.5 from ammonia slip; and 3) an errata with revised language for the COM-8 condition, and any other minor corrections that Staff is aware of.

As of this date BAAQMD has not filed its Final Determination of Compliance ("FDOC"). They have informed me that its release is imminent, and will occur prior to the evidentiary hearing. Staff will need the opportunity to review the FDOC and to provide any comments or clarifications prior to its incorporation into a proposed Committee decision. This issue should be discussed at the evidentiary hearing.

In addition, as Staff has indicated in its FSA, the City will be making conforming zoning changes for Calpine's property. These changes are necessary if the project is to conform with the City's zoning. The City has indicated that it has received Calpine's application for such rezoning, and that it expects the rezoning to be accomplished in August of this year.

Dated: June 23, 2005

Respectfully submitted,



RICHARD C. RATLIFF
Staff Counsel IV

AIR QUALITY

Supplemental Testimony of Gabriel D. Taylor
June 23, 2005

Indirect PM10 from Ammonia Emissions

Ammonia in the atmosphere can react with nitrogen and sulfur compounds to form very small solid particles less than 10 microns in diameter (PM10), and predominately less than 2.5 microns in diameter (PM2.5), a size that can be deeply inhaled into the lungs. A mounting body of scientific evidence over the past few years has shown that particulate pollution can be significantly damaging to both humans and animals (e.g. Smith et al 2003 & SN 2004), and further that the smaller PM2.5 subset of PM10 pollution is likely the most dangerous part. New Ambient Air Quality Standards (AAQS) have also recently been established at the Federal and State levels for PM2.5, to augment existing AAQS for PM10. Based on this, Staff believes it is important to minimize secondary particulate generated by ammonia emissions from the facility to the extent feasible.

Although it is difficult to quantify the contribution of ammonia emissions to the PM10 problem because of the complexities of atmospheric chemistry, the direction of the air quality regulatory community with respect to ammonia slip is clear. For over five years, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB) have supported a 5 ppm ammonia slip limit from facilities of this class and category (EPA 2000 & ARB 1999) in order to reduce PM10 impacts on public health. Further, the South Coast Air Quality Management District has set a BACT (Best Available Control Technology) level for ammonia that requires ammonia slip from combined cycle facilities to be limited to 5 ppm in combination with a 2.0 ppm NOx limitation. This support is not only based on the scientific literature showing significant health impacts from PM10 and PM2.5, but also on the progress of control technologies. Manufacturers of selective catalytic reduction systems have offered guarantees of 5 ppm ammonia slip for many years (EPA 2000, pg. 3). The 5 ppm ammonia limit (in combination with a 2 ppm NO_x limit) has already been required for the following Commission-licensed facilities: Malburg-Vernon City[1], El Segundo[2], Inland Empire[3], Magnolia[4], Morro Bay[5], Palomar[6], Tesla[7], and Roseville Energy Park[8].

The applicant's June 21, 2005 comment letter (Harris et al 2005) predicts that the Bay Area Air Quality Management District (District) will likely propose a 10 ppm ammonia slip limit in their Final Determination of Compliance, which is less stringent than the modified 5 ppm limit Staff proposes. This issue of different PM10 mitigation requirements between the Energy Commission and the District has previously been

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[1] Malburg-Vernon City (01-AFC-25), South Coast AQMD: 2 ppm NO_x (AQ-9), 2 ppm CO (AQ-10), & 5 ppm NH_3 (AQ-12)
[2] El Segundo (00-AFC-14), South Coast AQMD: 2 ppm NO_x, 4 ppm CO, & 5 ppm NH_3 (AQ-9)
[3] Inland Empire (01-AFC-17), South Coast AQMD: 2 ppm NO_x (AQ-22), 3 ppm CO (AQ-23), & 5 ppm NH_3 (AQ-25)
[4] Magnolia (01-AFC-6), South Coast AQMD: 2 ppm NO_x (AQ-22), 4 ppm CO (AQ-23), & 5 ppm NH_3 (AQ-24)
[5] Morro Bay (00-AFC-12), San Luis Obispo County APCD: 2 ppm NO_x, 2 ppm CO, & 5 ppm NH_3 (AQ-26)
[6] Palomar (01-AFC-24), San Diego APCD: 2 ppm NO_x (AQ-31), 4 ppm CO (AQ-32), & 5 ppm NH_3 (AQ-SC11)
[7] Tesla (01-AFC-21), Bay Area AQMD: 2 ppm NO_x, 4 ppm CO, & 5 ppm NH_3 (AQ-24)
[8] Roseville (03-AFC-1), Placer County APCD: 2 ppm NO_x (AQ-52), 4 ppm CO (AQ-52), & modified 5 ppm NH_3 (AQ-51)

discussed extensively in the original Los Esteros and the Los Esteros Phase 1 siting cases. The District's threshold for PM10 mitigation is 100 tons per year of PM10 emissions, based on district rules, and is generally less stringent than Staff's proposals based on a California Environmental Quality Act analysis. Staff's analysis in this case considers the region's "nonattainment" designation for both the State PM10 and the more recent State PM2.5 AAQS (meaning that the people in the region currently breathe unhealthy levels of PM10 and PM2.5), and thus recommends the best mitigation and controls feasible in order to prevent cumulative increases. In previous permit reviews of this facility, Staff recommended, and the commission approved, best control and full mitigation for the facility's direct PM10 emissions even though they were not always required by the District. Consistent with that approach, we now recommend condition AQ-SC11 as a compromise towards reducing the indirect PM10 emissions from the facility generated by ammonia slip.

In workshop discussions, the applicant expressed concern that it may be difficult to retrofit the existing simple cycle Los Esteros facility to achieve compliance with a strict 5 ppm ammonia slip limit. Staff responded to this concern by proposing AQ-SC11, rather than a strict 5 ppm ammonia slip limit. This condition is identical to the recently approved condition for the Roseville Energy Park case (03-AFC-1), which allows a one year grace period for catalyst maintenance once ammonia slip reaches 5 ppm. AQ-SC11 will effectively limit the facility long term average emissions of ammonia to 5 ppm, without forcing the facility owner to replace or retrofit the SCR catalyst when the facility is emitting at or below 5 ppm ammonia. Staff proposed this as a compromise that satisfies both the public environmental concerns and the applicants understandable economic concerns.

For these reasons, Staff urges the Committee to adopt Staff's recommended mitigation for the ammonia slip problem, AQ-SC11.

REFERENCES

ARB 1999 (California Air Resources Board). Guidance for Power Plant Siting and Best Available Control Technology As Approved by the Air Resources Board on July 22, 1999. Sacramento, CA. September 1999.

EPA 2000 (United States Environmental Protection Agency). Letter from Matt Haber (USEPA, Region IX) to Mr. Seyed Sadredin (SJVAPCD) titled "Re: Preliminary Determination of Compliance for Pastoria Energy Facility (project 991233)." June 19, 2000.

Harris et al 2005 (Ellison, Schneider & Harris LLP). Letter from Greggory L. Wheatland and Jeffery D. Harris to Bob Eller (Energy Commission) titled "Re: Los Esteros Critical Energy Facility (03-AFC-2), Applicant's Response to the Final Staff Assessment." Sacramento, CA. June 21, 2005.

Smith et al 2003 (Kevin R. Smith, Seongheon Kim, Julian J. Recendez, Stephen V. Teague, Margaret G. Ménache, David E. Grubbs, Constantinos Sioutas, and Kent E. Pinkerton). *Airborne Particles of the California Central Valley Alter the Lungs of Healthy Adult Rats.* Environ Health Perspectives 111:902–908 (2003). Available via [http://dx.doi.org/]. June 2003.

SN 2004 (Science News). *Inhaled particles damage vascular lining.* Science News Vol. 166, No. 23, pg. 365; December 4, 2004.

ATTACHMENT B

COM-8, Construction and Operation Security Plan

At least 14 days prior to commencing construction of the Phase 2 project, a site-specific Security Plan for the construction phase shall be ~~submitted to the CPM for approval~~ completed. At least 30 days prior to the initial receipt of hazardous materials on-site, a site-specific Security Plan for the operational phase shall be ~~submitted to the CPM~~ completed ~~for review and approval~~.

Construction Security Plan

The Construction Security Plan shall include the following:

1. site fencing enclosing the construction area;
2. use of security guards;
3. check-in procedure or tag system for construction personnel and visitors;
4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and
5. evacuation procedures.

Operation Security Plan

1. The Operations Security Plan shall include the following:
2. permanent site fencing and security gate;
3. evacuation procedures;
4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;
5. fire alarm monitoring system;
6. site personnel background checks, including employee and routine on-site contractors [Site personnel background checks are limited to ascertaining that the employee's claims of identity and employment history are accurate. All site personnel background checks shall be consistent with state and federal law regarding security and privacy.];
7. site access for vendors; and
8. requirements for Hazardous Materials vendors to prepare and implement security plans as per 49 CFR 172.800 and to ensure that all hazardous materials drivers are in compliance with personnel background security checks as per 49 CFR Part 1572, Subparts A and B.

In addition, the Security Plan shall include one or more of the following in order to ensure adequate perimeter security:

1. security guards;
2. security alarm for critical structures;
3. perimeter breach detectors and on-site motion detectors; and
4. video or still camera monitoring system.

~~9. In addition, in order to ensure adequate perimeter security, the Security Plan shall include either:~~

~~a. guards on-site 24 hours per day, 7 days per week or~~

~~b. operations staff on-site 24 hours per day 7 days per week **plus** all of the following:~~

- ~~The entire power plant perimeter is protected by a chain-link fence topped with barbed or concertina wire.~~
- ~~The site is equipped with security cameras that can zoom, have low-light function, and are recorded, viewed, and controlled from the power plant control room and which are positioned such that they cover 100% of the perimeter fenceline, the aqueous ammonia storage tank, and the entrance to the control room.~~
- ~~Perimeter breach detectors (either infrared or microwave) that are placed inside along the entire perimeter fence and report to the control room.~~

Vulnerability Assessment

In addition, in order to determine the level of security appropriate for this power plant, the project owner shall prepare a Vulnerability Assessment and implement site security measures that is consistent with guidelines including but not limited to the Chemical Accident Prevention Alert regarding Site Security (EPA 2000), the Department of Justice Chemical Facility Vulnerability Assessment Methodology (US DOJ 2002), the North American Electric Reliability Council Security Guidelines for the Electricity Sector (NAERC 2002), the U.S. Department of Energy Vulnerability Assessment Methodology for Electric Power Infrastructure (DOE 2002), and from the California Energy Commission. The level of security to be implemented is a function of the likelihood of an adversary attack, the likelihood of adversary success in causing a catastrophic event, and the severity of consequences of that event. This Vulnerability Assessment will be based, in part, on the use and storage of certain quantities of acutely hazardous materials as described by the California Accidental Release Prevention Program (Cal-ARP, Health and Safety Code section 25531). Thus, the results of the off-site consequence analysis prepared as part of the Risk Management Plan (RMP)

will be used to determine the severity of consequences of a catastrophic event and hence the level of security measures to be provided.

The Project Owner shall fully prepare and implement the security plans and maintain the plans in a secure location at the project site. The security plans shall be available onsite for CPM review. ~~obtain CPM approval of a~~Any substantive modifications to the Security Plans must be approved by the CPM. The CPM may authorize modifications to these measures, or may recommend additional measures depending on circumstances unique to the facility, and in response to industry-related security concerns.

The Project Owner shall fully implement the security plans and obtain CPM approval of any substantive modifications to the Security Plan. The CPM may authorize modifications to these measures, or may recommend additional measures depending on circumstances unique to the facility, and in response to industry-related security concerns.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE LOS ESTEROS CRITICAL ENERGY FACILITY, PHASE 2 (LOS ESTEROS 2)	**DOCKET NO. 03-AFC-2** **(Revised 6/17/05)** ***PROOF OF SERVICE***

I, Scott McDonald, declare that on June 23, 2005, I deposited copies of the attached Evidentiary Hearing Statement, Air Quality, and Attachment B: COM-8, Construction and Operation Security Plan in the United States mail at Sacramento, CA with first class postage thereon fully prepaid and addressed to the following:

DOCKET UNIT

Send the original signed document plus the required 12 copies to the address below:

CEC DOCKET UNIT
Attn: Docket No. 03-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
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In addition to the documents sent to the Commission Docket Unit, also send individual copies of any documents to:

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I declare that under penalty of perjury that the foregoing is true and correct.

(Signature)

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