

State of California

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06-AFC-6	
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The Resources Agency of California

Memorandum

To: Commissioner Jeffery D. Byron, Presiding Member

Date: July 15, 2008

Telephone: (916) 654-4206



From: **California Energy Commission** - Bill Pfanner, Project Manager
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Eastshore Energy Center (06-AFC-6) – Supplemental Testimony of Energy Commission Staff.

Attached please find Energy Commission staff's supplemental testimony for the Eastshore Energy Center (07-AFC-1). This supplemental testimony has been prepared in response to the following language in the Notice of Availability of the Presiding Member's Proposed Decision and Notice of Evidentiary Hearing and Notice of Committee Conference, issued June 20, 2008:

AIR QUALITY. Applicant and Staff shall consult with the California Air Resources Board (CARB) to identify and implement the appropriate modeling protocol to ensure that the project complies with the new state NO₂ standard (adopted March 20, 2008), which lowered the existing 1-hour-average standard for NO₂ of 0.25 ppm to 0.18 ppm, not to be exceeded, and established a new annual-average standard of 0.030 ppm, not to be exceeded.

PUBLIC HEALTH. Applicant and Staff shall provide evidence regarding the relevance of new ambient air quality data from CARB's March 18, 2008, Draft Health Risk Assessment on diesel particulate emissions in the Oakland area for the purpose of characterizing ambient air quality in the East Bay for the risk assessment required by Condition **PUBLIC HEALTH-1**.

WORKER SAFETY AND FIRE PROTECTION. No mitigation is proposed to address Staff's preliminary finding that the *project's incremental effect on fire and emergency response would be cumulatively considerable*. Although the Hayward Fire Department (HFD) did not provide information on the costs of upgrading Opticom¹, the HFD's failure to respond does not obviate the project's potential cumulative impact on HFD services. We believe this impact must be mitigated. The Applicant, Staff, and City of Hayward are directed to draft a Condition of Certification to resolve this issue.

PROOF OF SERVICE (REVISED 4/21/08) FILED WITH ORIGINAL MAILED FROM SACRAMENTO ON 7/15/08
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¹ Opticom is a traffic signal light control system for use by emergency vehicle drivers.

AIR QUALITY

Brewster Birdsall, June 30, 2008

Supplemental Testimony

Response to PMPD Air Quality Finding #24: Applicant and Staff shall consult with the California Air Resources Board (CARB) to implement the appropriate modeling protocol to ensure the project will comply with CARB's new NO₂ emissions standard.

Staff and the applicant developed the air dispersion modeling protocol for this project in 2006, before the AFC was filed, and the modeling protocol was followed throughout the proceeding. The Bay Area Air Quality Management District (BAAQMD) reviewed the modeling while preparing the Determination of Compliance and concluded that it was conducted using the appropriate methodologies and applicable standards. The protocol identified the Industrial Source Complex Short Term model (ISCST3) with the option to use the Ozone Limiting Method (OLM) if nitrogen dioxide (NO₂) concentrations needed to be examined more rigorously than with ISCST3 alone.

The California Air Resources Board (CARB) recommended amending the NO₂ ambient standards in 2007. On February 19, 2008, after the record for this proceeding was closed, the Office of Administrative Law approved the amendments to the regulations, reducing the State 1-hour-average standard from 0.25 ppm (470 µg/m³) to 0.18 ppm (339 µg/m³), not to be exceeded, and establishing a new annual-average standard of 0.030 ppm (57 µg/m³), not to be exceeded. The new standards became effective on March 20, 2008. Staff believes that the appropriate standards are those that were in effect at the time the application was determined to be complete, consistent with BAAQMD rules.

CARB has recently confirmed that no formal guidance is available for determining compliance with the new State NO₂ standards (CARB, 2008) and that the governing guidance would be the U.S. EPA Guideline on Air Quality Models (Appendix W to 40 CFR 51, most recently updated at 70 FR 68218, November 9, 2005). At the time of the most recent U.S. EPA guideline in 2005, the Plume Volume Molar Ratio Method (PVMRM) was being tested for NO₂ modeling. The protocol for the Eastshore project allowed OLM for rigorous examination of NO₂ impacts because PVMRM was not a guideline model at the time the protocol was approved.

Use of OLM for rigorous NO₂ modeling was **not needed** for the Final Staff Assessment to conclude that operation of the project would comply with the applicable NO₂ standard (see FSA AIR QUALITY Table 16 and Table 20). Note that the NO₂ modeling of construction emissions did use the OLM method, and it showed lower NO₂ impacts than modeling with ISCST3 alone. However, without a new protocol and the results of new modeling, staff cannot predict whether OLM or PVMRM would similarly show reductions in modeled impacts for operational emissions.

Developing a new protocol for NO₂ modeling with the applicant and the air agencies would be the first step in a new modeling analysis, possibly requiring discovery and/or

workshops to resolve differences with the applicant. Generally, the ISCST3 model is used for evaluating non-reactive pollutant emissions, and the analysis for Eastshore conservatively assumes all nitrogen oxides occur in the form of NO₂, even though only a fraction of this will convert to NO₂. Determining compliance with the new NO₂ standard in conjunction with background concentrations could require modeling of the reactive components using either OLM or PVMRM. The two major compounds in nitrogen oxides (NO_x) are nitric oxide and NO₂, and these are highly reactive. The project NO_x emissions would be approximately 90 percent NO that could oxidize into NO₂ with sufficient time, sunlight, and availability of organic compounds or ozone. Concurrent representative hourly NO₂ and organic compound data could be needed, along with the hourly ozone data. Significant improvements in background NO₂ air quality have been achieved since the 1980s after tighter controls on mobile and stationary sources of NO_x became effective (CARB/OEHHA, 2007). Additionally, existing ambient air quality conditions monitored in Fremont do not violate the new standards (FSA, p. 4.1-11). In conclusion, staff believes that the applicable standards are those that were used in developing the FSA and that evaluating the project's compliance with the new standards would require developing a protocol and a new modeling analysis.

References

- CARB/OEHHA (California Air Resources Board/Office of Environmental Health and Hazard Assessment). 2007. Review of the California Ambient Air Quality Standard for Nitrogen Dioxide. Technical Support Document. January 5, 2007.
- CARB. 2008. Personal communication with Tony Servin, Planning and Technical Support Division. June 24, 2008.

PUBLIC HEALTH

Testimony of Alvin J. Greenberg, Ph.D.

Supplemental Testimony

Applicant and Staff shall provide evidence regarding the relevance of new ambient air quality data from CARB's March 18, 2008, Draft Health Risk Assessment on diesel particulate emissions in the Oakland area for the purpose of characterizing ambient air quality in the East Bay for the risk assessment required by Condition PUBLIC HEALTH-1.

The March 19, 2008 ARB study entitled "Draft Diesel Particulate Matter Health Risk Assessment for the West Oakland Community, Preliminary Summary of Results" is not relevant to the proposed Eastshore project nor is it information that is needed in order to comply with proposed Condition of Certification **PUBLIC HEALTH-1**. The study addresses the impacts on the West Oakland Community due to diesel particulate emissions from trains and diesel trucks in the West Oakland area and from ships in the Port of Oakland and traversing San Francisco Bay. It does not specifically address the impact of those emissions on distant communities such as those in the City of Hayward, which is 15 miles from the port, nor does it characterize the ambient air quality in Hayward.

Staff has estimated that the maximum theoretical cancer risk posed by this project would be 3.7 in one million, less than one percent of the background risk due to diesel particulate matter alone. Nothing in the March 19, 2008 study indicates that this estimate should be revised.

WORKER SAFETY AND FIRE PROTECTION

Testimony of Alvin J. Greenberg, Ph.D. and Rick Tyler

Supplemental Testimony

No mitigation is proposed to address Staff's preliminary finding that the project's incremental effect on fire and emergency response would be cumulatively considerable. Although the Hayward Fire Department (HFD) did not provide information on the costs of upgrading Opticom, the HFD's failure to respond does not obviate the project's potential cumulative impact on HFD services. We believe this impact must be mitigated. The Applicant, Staff, and City of Hayward are directed to draft a Condition of Certification to resolve this issue.

Staff has reviewed the estimates for upgrades to the Opticom (i.e., a traffic signal light control system for use by emergency vehicle drivers) system included in the Declaration of Steve Jolly, filed July 10, 2008. Staff agrees that those estimates are reasonable. However, since the impact for which mitigation is required is a cumulative impact, due to both the Russell City Energy Center project and the EEC, the EEC should only be responsible for a proportional share of the mitigation. Unless staff is mistaken in understanding that the costs identified in the Declaration are due to the impact of both projects, staff recommends that the Committee revise the Condition of Certification offered by the City to require that the applicant contribute half the total amount identified. This would ensure that the EEC's contribution to the fire protection impact identified in Exhibit 200 (the Final Staff Assessment) is not cumulatively considerable.

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

APPLICATION FOR CERTIFICATION
FOR THE EASTSHORE ENERGY CENTER
IN CITY OF HAYWARD
BY TIERRA ENERGY

Docket No. 06-AFC-6

PROOF OF SERVICE
(Revised 4/21/2008)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

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DECLARATION OF SERVICE

I, Christina Flores, declare that on July 15, 2008, I deposited copies of the attached Memorandum – Supplemental Testimony of the CEC Staff for the Eastshore Energy Center (06-AFC-6), in the United States mail at Sacramento, CA, with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of the California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

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


Christina Flores