

AIR QUALITY - SOX TO PM10 TRADING RATIO

To: Bill Pfanner, Project Manager
From: Brewster Birdsall, Air Quality Staff

DOCKET	
06-AFC-6	
DATE	DEC 21 2007
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Debate occurred on the issue of an appropriate trading ratio of SOx to PM10 during the Evidentiary Hearing for the Eastshore Energy Center on Monday December 17, 2007.

Energy Commission staff recommends use of a 5.3-to-1 ratio based on the Staff Assessment (June 2007) and Final Commission Decision for Russell City Energy Center Amendment No. 1 (October 2007, 01-AFC-7C).

The RCEC Staff Assessment says (p.4.1-12, footnote 10): "The analysis assumed equilibrium exists between sulfur compounds and sulfur based particulate matter in the area ambient air. Therefore, by examining the measured ambient concentrations of PM10, sulfur dioxide, and sulfate-based particulate matter; one can derive a ratio that can be used as a basis to determine the appropriate interpollutant trading ratio for SOx to PM10." We focused on the day of highest PM10 in Fremont, December 7, 2006 (Eastshore FSA, p.4.1-7). We also focused on locations nearest the project (the inner San Francisco Bay Area as described in our testimony on December 17, 2007) where sufficient data are simultaneously gathered. Only a limited number of monitoring stations in the BAAQMD satisfy all these conditions (RCEC SA, p.4.1-13 and Evidentiary Hearing Transcript 7/19/07, p.38, lines 3-11).

In the Eastshore FSA Air Quality Appendix 1, Table 1, we show the data from the RCEC Staff Assessment. The column "Total SOx" represents ambient SOx concentrations and the next two columns represent sulfate-based particulate matter concentrations [(NH4)2SO4 and (NH4)2SO4*2H2O]. To arrive at a "trade-off" ratio, divide either PM concentration from the SOx concentration in the first column (SOx/PM).

The Eastshore applicant clearly understands staff's work because it follows an identical method (Westbrook Testimony, Attachment 2 to Ex 15). The applicant's testimony expands the analysis to include more-distant monitoring stations and additional days. The more-distant monitoring stations generally show lower ratios, and data from Christmas Day 2006 shows lower ratios. Data from October 2006 shows higher ratios.

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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 12/4/2007)

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DECLARATION OF SERVICE

I, April Esau, declare that on December 27, 2007, I deposited copies of the attached Air Quality – SOx to PM10 Trading Ratio 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.


April Esau