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Via Email and U.S. Mail

Weyman Lee,
Senior Engineer
Bay Area Air Quality Management District
939 Ellis Street,
San Francisco, California 94109

Re: **Chabot-Las Positas Air Files Concerning Russell City Energy Center (RCEC) Application No. 15487 re Additional SOB**

Dear Weyman:

Earlier this week you requested that we provide to you the AERMOD modeling files for the air quality impacts analysis referred to on pages 4 to 7 in the Chabot-Las Positas comment letter and the cost effectiveness calculations for \$11,515 per ton of CO emissions.

Enclosed by mail is the CD to the air modeling run we conducted applying the same inputs as utilized by the applicant Calpine, but using the EPA approved AERMOD program, not a commercial program as used by Calpine.

In this regard, noted under footnote 3 is that we utilized "An emission rate of 1.134 g/s ... for each turbine, which is higher than the rate of 0.945 g/s specified in Table 2 of Calpine's SIA Report." You should note that the emission rate of 1.134 g/s is the rate that is reflected in the air files that your office provided, and that the rate of 0.945 g/s reflected in Calpine's SIA Report is different. As a result, there is an inconsistency between Calpine's SIA Report and the air files you provided. We relied on the air file inputs. Not included on the CD is the run under the single urban run we performed (which resulted in slightly higher concentrations), since the project only of a maximum impact of 6.33 $\mu\text{g}/\text{m}^3$ under the "rural" run applied to the Additional SOB's background concentration of 29 $\mu\text{g}/\text{m}^3$ (with which we disagree), results in exceeding 35 $\mu\text{g}/\text{m}^3$ in violation of the Clean Air Act.

As far as the cost effectiveness amounts, upon re-reviewing our September 16, 2009, letter, I believe that this calculation generally already is reflected:

Based on the Siemen's data provided in their application dated December 14, 2004, however, we disagree that "12.4 tons of CO per year" would be reduced. (ASOB, pp. 69-70.) Instead, applying the Additional SOB's

limited assumed annual operating profile of 6 cold startups and 100 warm startups, to which we object as it contradicts Calpine's representations before the CEC, we arrive at 84.4 tons of CO reduced for warm-startups and 5 tons of CO reduced for cold start-ups, **resulting in an 89.9 ton reduction of CO, eight times more than the amount represented in the ASOB.** Applying the assumptions in the June 2007 CEC FSA, the emission reductions that would be achieved would be even far greater.

As a result, applying the "annualized cost of \$1,029,521 for the installation and operation of the auxiliary boiler," as provided by Calpine, ASOB, p. 70, the cost effectiveness for the CO reduction as calculated by Calpine likewise falls from Calpine's "estimate of \$83,025 per ton for CO reduction" by eight times to \$11,515 per ton for CO reduction. As a result, BACT clearly requires an auxiliary boiler. Given Calpine's refusal to abide by BACT as documented by the record, requires that the application be denied.

(September 16, 2009 letter, p. 4.)

We applied the same calculations as Calpine, which took its amount for installation of \$1,029,521 and divided that by its claimed reduction of 12.4 tons resulting in \$83,025/ton. What you may have caught is that our amount of \$11,515 results from using the lower number reduced tonnage of 84.4 tons for warm start-ups alone, divided into \$1,029,521. Applying the *total* tonnage reduced by utilizing an auxiliary boiler, 89.9 tons for both cold and warm start-ups, under your limited assumption of six cold start ups and 100 warm start ups, results in even a lower amount of \$11,451/ton.

Hopefully that provides the information you are seeking. Please let me know if you also would like the results from the single urban run and I will forward that to you too.

Sincerely,

Jewell J. Hargleroad

Cc: (Via Email Only)
Golden Gate Law School Clinic, Helen Kang
Earthjustice, Paul Cort
Communities for A Better Environment