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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: **Addendum to Comments Submitted Concerning Russell City Energy Center (RCEC) Application No. 15487 re Additional SOB**

Dear Weyman:

On behalf of Chabot-Las Positas Community College District, this is to add as an addendum to our earlier comments submitted on September 16, 2009 the following additional observations that were inadvertently omitted.

Under section (B), pp. 43-46, of the Additional SOB, the Air District states the following:

The Air District has considered this issue further in light of these comments and has concluded that requiring a urea SCR system over an ammonia system would not be the most appropriate BACT alternative. Although urea substitution could reduce the potential for accidental ammonia releases, the Air District has found that it would involve offsetting negative environmental impacts in the form of increased emissions of formaldehyde, a hazardous air pollutant and toxic air contaminant. The Air District reviewed data from a similar facility in Sumas, Washington, which demonstrated that urea injection (as opposed to the use of ammonia) resulted in a nearly five-fold increase in formaldehyde emissions.[fn]

To draw this conclusion, the Air District relies on the communications from the applicant Calpine set forth in footnote 85, page 45, citing to “Valid Results, Inc., test report for June 13, 2002, EPA Method 316 Source Test (0.226 tpy formaldehyde emissions with urea); email message from Brian Fretwell to Barbara McBride, Calpine, March 4, 2009 (prior test without urea was 0.049 tpy formaldehyde emissions).”

To reject urea, however, due to formaldehyde emissions, based on one set of tests, is erroneous. The formaldehyde emissions can be avoided by using liquid urea. Formaldehyde is present only in the coating on the solid urea pellets. From what we understand, urea can be purchased as a 50% to 70% solution and the solution does not contain formaldehyde. In fact, SNCR systems normally use 50% urea solution. This completely eliminates the formaldehyde.

The first step in converting solid urea to ammonia is to transfer it from dry storage to a dissolver tank where it is mixed with heated de-ionized water to make up a urea solution of 40% to 50%. (Spencer et al. 2001.) By importing urea solution, this initial step can be eliminated, offsetting a portion of the increase in transportation cost.

Although the new PM10 BACT limit, page 51, is a step in the right direction, it should be lower. The Blyth facility, using the same turbine, has a lower PM10 BACT limit.

We also want to bring to your attention that Condition No. 24, limiting sulfuric acid mist to 7 ton/yr in any twelve-month period, we understand as a practical matter is not enforceable.

The permit does not identify the test methods that will be used for annual stack testing. This is particularly critical for PM10 and PM2.5, as the magnitude of the emissions is determined by the method used to measure them. Similarly, the standard sulfuric acid mist test methods are known to be inaccurate. Also not verified is whether the SAM levels can be detected as low as 7 ton/yr.

Additionally, given the District's nonattainment status for PM2.5, LAER for the cooling towers should be dry cooling.

Your attention in this matter is greatly appreciated.

Sincerely,

Jewell J. Hargleroad

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