

Jewell J. Hargleroad  
Law Office Of Jewell J. Hargleroad  
1090 B Street, No. 104  
Hayward, California 94541  
Telephone: 510-331-2975  
jewellhargleroad@mac.com

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**Via Email and U.S. Mail**

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

Re: **Russell City Energy Center (RCEC) Application No. 15487:  
clarification and correction concerning Utah's Lakeside Power Plant  
referred to in February 6, 2009 comments and April 6, 2009 e-mail.**

Dear Weyman and Sandy:

In our earlier comments to you dated February 6, 2009 and later email dated April 6, 2009, we asserted that the 550 MW Lake Side combined cycle power plant in Utah is a Siemens Flex Plant 30 fast start plant, a trademark package which includes a triple pressure heat recovery steam generator (HRSG) with a Benson once-through boiler section, and an auxiliary boiler to pre-heat the HRSG to allow more rapid startup. In support, on April 6, 2009, we referred Weyman to the Lake Side plant manager to corroborate these assertions.

In a subsequent telephone conversation on April 29, 2009, Sandy informed me that Weyman determined that the Lake Side plant was not a trademarked "Flex Plant 30 design" nor did it have a Benson boiler but a conventional boiler. We also followed up on this, apologize for this inadvertent confusion, and correct and clarify our earlier representation mistakenly referencing the Lake Side plant as a "Flex Plant 30."

We suspect that the source of the confusion arose because although Lake Side does not incorporate all elements of the trademarked "Flex Plant 30" design, nevertheless Lake Side is equipped with an auxiliary boiler, a major element which provides the Lake Side plant with the capability to startup much more quickly and with much lower air emissions than RCEC. In this regard, **this clarification as supported by the accompanying documentation further supports, and in no way takes away from, our**

**point on behalf of Chabot-Las Positas College District that RCEC is *not* utilizing the best available control technology (BACT).**

Attached via email and enclosed by mail for your records is the January 2004 application submitted by Summit Vineyard LLC, the Lake Side power plant developer, to the Utah Division of Air Quality (UDAQ), and the statement of basis which relies on this application. The application states that it is based on data provided by Siemens on guarantee startup NOx, CO, and VOC emissions. The startup emissions provided by Siemens in the Lake Side air permit application provides the following in the application's Table 3-6 copied below:

**TABLE 3-6 CT STARTUP AND SHUTDOWN EMISSIONS (PER CT)**

| Start Type | NOx |       | CO   |       | VOC |       | SO <sub>2</sub> |       | PM <sub>10</sub> |       | Duration<br>minutes |
|------------|-----|-------|------|-------|-----|-------|-----------------|-------|------------------|-------|---------------------|
|            | lbs | lb/hr | lbs  | lb/hr | lbs | lb/hr | lbs             | lb/hr | lbs              | lb/hr |                     |
| Cold       | 102 | 37.3  | 1267 | 464   | 164 | 60.0  | 2               | 0.8   | 22               | 8.0   | 164                 |
| Warm       | 97  | 45.5  | 1260 | 591   | 163 | 76.4  | 2               | 0.9   | 19               | 8.9   | 128                 |
| Hot        | 77  | 42.0  | 1062 | 579   | 126 | 68.7  | 2               | 0.9   | 16               | 8.7   | 110                 |
| Shutdown   | 18  | 51.4  | 403  | 1151  | 36  | 102.9 | 1               | 3.1   | 4                | 11.4  | 21                  |

Based on vendor data for operations at 52 degrees F.

RCEC's startup emissions shown in Table 2 of your December 2008 PSD Draft, pp. 12-13 (as corrected on Jan. 21, 2009), reflect substantially much higher emissions with longer startup times.

**Table 2. RCEC Startup and Tuning Emission Rates**

| Pollutant    | Cold Start-Up/Combustor Tuning |            | Warm Start-Up |            | Hot Start-Up |            |
|--------------|--------------------------------|------------|---------------|------------|--------------|------------|
|              | lb/hr                          | lb/startup | lb/hr         | lb/startup | lb/hr        | lb/startup |
| NOx (as NO2) | 97.2                           | /480.0     | 83.8          | /125       | 97.2         | /125       |
| CO           | 1,348.8                        | /5,028     | 1,154.2       | /2,514     | 1,348.2      | /2,514     |
| POC (as CH4) | 14.9                           | /83        | 26.3          | /79        | 14.9         | /35.3      |
| PM10         | 9                              | /54        | 9.0           | /27        | 9            | /27        |
| SOx (as SO2) | 6.2                            | /33        | 6.2           | /16.5      | 6.2          | /16.5      |

Footnoted is that cold starts and combustor tuning are not to exceed six hours or 360 minutes, and warm starts are not to exceed 3 hours or 180 minutes, occurring between 8 and 72 hours of a shutdown. Hot starts are not to exceed 3 hours or 180 minutes, which occur within 8 hours of a shutdown. (RCEC SOB as corrected Jan. 21, 2009, pp. 12-13.)

As reflected by these tables, Lake Side has much better cold startup, warm startup, and hot startup performance capability than what is proposed as BACT for RCEC. Lake Side has the capability to emit only 37.3 pounds per hour of NOx and 102 total pounds of NOx over a 2.7 hour cold start-up period. This compares to RCEC's

permitted 97.2 pounds per hour of NOx and *480 pounds of NOx* over a 6-hour start up, four to five times higher emissions.

The CO startup emissions performance of Lake Side likewise is equally impressive. Lakeside has the guaranteed capability to emit for cold start only *464 pounds per hour, compared to RCEC's cold startup CO emissions of 1,348 pounds per hour, almost three times amount of CO.*

This same pattern of much lower startup emissions capability of the Lake Side plant relative to the proposed startup limits for RCEC also hold for PM10 and dramatically better for SO2.

The startup emission capability identified voluntarily by Summit Vineyard LLC and Siemens for the Lake Side plant in 2004 was obviously available when the RCEC application was submitted in 2007. As a result, at a minimum, these startup emissions as proposed by Siemens for a similar combined-cycle plant five years ago in 2004 provides further evidence and confirmation that RCEC is not utilizing BACT.

If you have any questions concerning these points, please let me know. We appreciate the opportunity to clarify these important points.

Sincerely,

Jewell J. Hargleroad

Cc: (Via Email Only)  
California Native Plant Society, Laura Baker  
Golden Gate Law School Clinic, Helen Kang  
Earthjustice, Paul Cort  
Sanjay Narayan, Sierra Club