

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re Russell City Energy Center)	PSD Appeal No. 10-02
)	
Russell City Energy Company, LLC)	
PSD Permit Application No. 15487)	
_____)	

PETITIONER CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT'S
REPLY BRIEF TO RESPONSES BY BAAQMD AND RCEC

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INTRODUCTION

Pursuant to the Order issued on May 20, 2010, by the Honorable Edward E. Reich, petitioner Chabot Las-Positas Community College District (the “School District”)¹ now replies to the following arguments by the applicant Russell City Energy Center (RCEC) and the Bay Area Air Quality Management District (BAAQMD). In doing so, the School District notes that this reply does not necessarily address all additional points raised in RCEC or BAAQMD’s oppositions to the parties motions seeking leave to reply. If, however, the Board intends to entertain any of those arguments not addressed here, the School District seeks leave to address those issues or supplement this reply.

A. The School District Is Entitled To Raise Arguments That Did Not Arise Until The Publication Of The Response To Comments.

RCEC argues that “[t]he appropriateness of using 7.5 lb/hr in the air quality impacts analysis was not previously raised in any public comment and, accordingly, was not preserved for appeal.” RCEC Response at 15-16: “[b]ecause no one ever previously raised any comment that the emissions limit of 7.5 lb/hr was too low for use in the air quality impacts analysis, this issue was not preserved . . . and cannot be raised”]; RCEC Oppo. to mot. to reply at 6, *relying on* 40 C.F.R. §124.13. What RCEC omits is that according to the Response to Comments (“Response”), it apparently was of BAAQMD’s “own volition after the first comment period ended . . . [that it] determined that lower limits would be appropriate,” which coincided with BAAQMD’s decision that a full impact study was necessary for PM2.5. Response at 83.

As RCEC admits, the Response discusses “comments submitted after the close of the comment period by the power plant owners and operators, who had argued that the

¹ Petitioner Chabot Las-Positas Community College District also is referred to as the “College District.”

lower limit of 7.5 lb/hr is not achievable.” (RCEC Response at 15.) Further, in rejecting the comparison of Blyth in Southern California made by the School District for BACT purposes that the “Blyth facility has a lower PM10 limit and that Russell City limit should also be lower,” BAAQMD’s response virtually contradicts its position here. In addition to Blyth’s smaller turbines, BAAQMD responded that the “[e]missions in pounds per hour were estimated at between 6.4 and 7.6,” and that “the facility has not yet been built so there is **no test data available to indicate whether the facility is capable of achieving compliance with its permit limit.**” RCEC Response to the School District’s Petition (“RCEC”) at 17, quoting Response at 84-85, n. 173, emphasis added.

Due to the School District’s proximity to this major stationary source, the School District sought to review the air modeling run for PM2.5 project when BAAQMD published its Additional SOB in August 2009 and conceded that RCEC’s application was not to seek to amend any existing PSD permit, but an application for a new permit. In doing so, the School District obtained the air modeling files associated with the PM2.5 air modeling runs and made the following comments.

Utilizing the air modeling files provided from the District, the rural option (with which we disagree-see p. 7 & footnote 5), and the exact same inputs as the applicant, our modeling run resulted in a **24-hour average concentrations for the project only of a maximum impact of 6.33** $\mu\text{g}/\text{m}^3$. The high 2nd high concentration was 5.53 $\mu\text{g}/\text{m}^3$ and the high 8th high concentration was 3.75 $\mu\text{g}/\text{m}^3$. **The only difference between these runs, from what we can tell, is that our modeling run utilized the EPA’s AERMOD Program.[fn] Calpine utilized a commercial version as reflected on the air run files stating AERMOD software from BEE-Line**

Sept. 16, 2009 Comments at 6, original emphasis and emphasis added. *Also see* discussion of BAAQMD utilizing the wrong program for the Class I analysis, Sept. 16, 2009 Comments at 4-5. Footnoted was the following:

An emission rate of 1.134 g/s was used for each turbine, which is higher than the rate of 0.945 g/s specified in Table 2 of Calpine's SIA Report. In addition to two turbines, there are ten other point sources representing the cooling towers (9 point sources with an emission rate of 0.03066 g/s for each point source) and a fire pump (with an emission rate of 4.167E-04 g/s). Emissions rates modeled for these ten other sources are the same as those in Table 2 of Calpine's SIA Report.

Sept. 16, 2009 Comments at 6, fn. 3.

BAAQMD's Response was that it had not utilized an impermissible commercial modeling program, but that the School District had utilized an "old" modeling report—a modeling report dated April 30, 2009 which BAAQMD provided on September 1, 2009 in support of its August 2009 ASOB.

... Based upon the Air District's analysis, the discrepancy between the commenter's modeled results and those of the applicant and Air District appears to have resulted from the commenter's use of the wrong emission rate for the gas turbines. The commenters stated that they used an emission rate of 1.134 grams per second (g/s), which they note is higher than the rate of 0.945 g/s specified by the applicant's Source Impact Analysis. Apparently, **the commenters selected the wrong emissions rate because the commenters had relied upon an outdated modeling report generated by the Air District**, which used the combustion turbine/HRSG emissions rate proposed in the December 2008 Draft Permit (9 lbs/hr), rather than the reduced emissions rate (7.5 lb/hr) proposed in the August 2009 Draft Permit and in the modeling reports referenced in the Additional Statement of Basis. (The higher emission rate of 9 lb/hr equals 1.134 g/s.) According to the Air District's assessment, the differences which the commenter modeled resulted from its use of the wrong emissions rate, and not from any other differences in the modeling inputs or methods.

Response at p. 160. Based on the Response to Comment and the additional inquiries on what air modeling files were provided to the School District, what began as what the School District attributed BAAQMD utilizing the wrong program, just as BAAQMD did for the Class I analysis, became apparent that BAAQMD and/or Calpine had run and knew that by applying the achievable emissions rate on which BAAQMD had based

RCEC's two earlier proposed permits for 2007 and 2008, and upon which its Response to Comments disclosed vendors would guarantee and other power plant operators pointed out was achievable, that this project violated the NAAQS for 24 hour PM_{2.5} 24.

Compare BAAQMD's Response on Blyth at 84-85, n. 173: "facility has not yet been built [and] . . . **no test data available to indicate whether the facility is capable of achieving compliance with its permit limit.**" Emphasis added.

To date, still not disclosed, plotted out or circulated for public review are those modeling results for 24-hour PM_{2.5} at the achievable emissions rate of 9 lbs/hour, which results in a higher concentration level of 6.33 ug/m³ and the locations of the additional 2,400 sensitive receptors within a larger impact area of over 7 miles. As the Response to Comments admits, this concentration level will cause and contribute to the violation of the NAAQS under the Clean Air Act. *See* Response at 144: "This evaluation examined whether the modeled concentration from the proposed facility plus other modeled sources would be above 6.0 ug/m³ at any such receptor location, because the background level is 29.0 ug/m³, meaning a further increase above 6.0 ug/m³ would exceed the 24-hour NAAQS of 35 ug/m³."

As set forth in the School District's petition, "[t]he issues . . . in this petition were raised during the public comment period *or* are **new issues arising from the Air District's responses to comments after the comment period closed**, and therefore could not reasonably be raised before now." Petition at 4, emphasis added, relying on 40 C.F.R. § 124.13. As § 124.13 provides, a petitioner's obligation is to raise "all *reasonably ascertainable* issues and submit all *reasonably available* arguments." Italics added. According to the August 2009 ASOB,

Since the Air District initially issued the Draft Federal PSD permit (December 2008), the District has explored whether particulate

emissions limits for the turbines and heat recovery boilers could be **further reduced in order to ensure that the facility will not cause exceedances of the National Ambient Air Quality Standards for particulate matter. Based on this further review, the Air District is proposing a revised limit** on particulate matter emissions (for both PM10 and PM2.5) from each gas turbine and heat recovery boiler train of 7.5 lb/hr or 0.0036 lb/MMBTU natural gas fired (with or without duct firing). This emissions limit would include all filterable and condensable particulate emissions (i.e., “front” and “back” half, respectively).

The Air District has concluded that a lower limit of 7.5 lb/hr would be achievable by this equipment based on a review of additional source testing data from a number of similar combined-cycle facilities. . . . The Air District is therefore proposing a revised PM10/PM2.5 limit for each gas turbine/heat recovery boiler train of 7.5 lb/hr, or 0.00335 lb/MMBTU of natural gas fired, as the BACT limit for the sources.

Response at 51.

In response to its request for the supporting air modeling files, the School District received what was suppose to be the air modeling run upon which BAAQMD based its ASOB reflecting a concentration level of 4.9 ug/m³ with thousands of less sensitive receptors and a smaller impact area. Instead, what it received was the modeling run which BAAQMD never disclosed – a run dated April 30, 2009 reflecting that RCEC violated the NAAQS, reflecting thousands of additional sensitive receptors which to date remain unplotted out and unmapped, and a larger impact area. The fact that this was BAAQMD’s “outdated” modeling run and that BAAQMD knew that the project violated NAAQS at the achievable emissions rate was never disclosed until BAAQMD’s

Response to Comments in February 2010.

B. BAAQMD And RCEC’s Argument That A PSD Permit May Be Issued In The Face Of The Violation Of The NAAQS Because Of The Region’s Designation Of Non-Attainment Violates The Clean Air Act.

The underlying foundational argument against review presented by both RCEC and BAAQMD is whether BAAQMD is required to analyze the 24hour PM2.5 NAAQS at all because the Bay Area is now non-attainment for 24 hour PM2.5. BAAQMD at 10-12. According to BAAQMD, the “PSD air quality impact analysis showing that the facility would not cause or contribute to a violation of the ... NAAQS” is only required for the annual PM2.5, *but not* to the 24-hour PM2.5.” BAAQMD at 12, italics added. In effect, BAAQMD asserts that it had no obligation to even conduct any analysis for any pollutant that is in non-attainment in response to an application for a PSD permit. The fact that it is undisputed that the modeling for 24-hour PM2.5 at 9 lbs/hour establishes a concentration level of 6.33 ug/m3, which admittedly violates the NAAQS, highlights the importance of this legal issue and underscores that BAAQMD and RCEC’s arguments would undermine the enforcement of the Clean Air Act.

BAAQMD argues against review on the ground that

[it] did not receive any comments claiming that this approach was incorrect under the applicable PSD and Non-Attainment NSR permitting authorities. **The District therefore went ahead and finalized the permit as a PSD permit for the annual PM2.5 standard *only*; it did not issue the PSD permit as a permit for the 24-hour PM2.5 standard**, which is subject to the Non-Attainment NSR permit requirements of Appendix S.

BAAQMD Response at 11, emphasis added. What BAAQMD omits is that the School

District set forth the following analysis in its September 16, 2009 Comment at page 8:

Here, as acknowledged by the Additional SOL, the Bay Area is in nonattainment for PM2.5 and at any time that designation will become officially effective. Applying the Proposed PM2.5 Increment, SIL & SMC Rule, the concentrations from the project by itself are three to five times the Significant Impact Level and clearly fall within the provisions discussed above that **“the source is considered to cause or contribute to a violation of the NAAQS and may not be issued a PSD permit**

without obtaining emissions reductions.” (*Op cit.*, 54113738.) As a nonattainment region, this is where the analysis starts and stops.

Emphasis added.

In its response to the School District’s petition, BAAQMD relies on *In re Prairie State Generating Co.*, 13 E.A.D. ___, PSD Appeal No. 05-05 (EAB Aug. 24, 2006), *aff’d sub nom.*, *Sierra Club v. EPA*, 499 F.3d 653 (7th Cir. 2007), slip op. at 6 and *In re Northern Michigan University*, 14 E.A.D. ___, PSD Appeal No. 08-02 (EAB Feb. 18, 2009), slip op. at 5 quoting that “The PSD program is not applicable in nonattainment areas.” However, these cases did not address the question before this Board where an Air District attempts to issue a PSD permit for a major stationary source in a region which is in non-attainment without a SIP contending that no examination need be made of the project’s impact on emissions of a pollutant in nonattainment. BAAQMD makes the following argument:

Furthermore, as the Board has explained, a single region may be designated as “attainment” for some standards and “non-attainment” for others; where that is the case, as here, a facility will be subject to PSD requirements only for the pollutants for which the region is in “attainment”. See *In re Sutter Power Plant*, 8 E.A.D. 680, 682 & n.2. (EAB 1999). That is the case with Clean Air Act permitting in the Bay Area. Facilities are subject to PSD permitting under 40 C.F.R. Section 52.21 only where the region is designated “attainment” (or “unclassifiable”) of a particular NAAQS.² Where the region is designated as “non-attainment” of a particular NAAQS, as the Bay Area is for the 24-hour PM_{2.5} NAAQS, Non-Attainment NSR permitting applies instead.

(BAAQMD Response at 10-11.)

This argument, however, that “non-attainment NSR requirements apply” is carefully qualified that the annual estimated of PM emissions, approximately 86.8 tons, fall “below the threshold at which substantive requirements become applicable” under Appendix S. (BAAQMD at 11-12.) In essence, according to BAAQMD and RCEC, emissions which violate the NAAQS in a region in which the pollutant is in non-attainment without a State Plan may cause and contribute to the exceedance concentrations of the pollutant for which the region is nonattainment as long as the

annual tonnage, such as 99.99 tons, falls just below Appendix S's 100 tons/yr threshold. ¹

As the Response to Comments, p. 78, fn 158 explains:

Here, the facility is exempt from Appendix S because it will emit less than 100 tons per year of PM_{2.5}. (See 40 C.F.R. Appendix S, ¶ II.A.4(i)(a) (establishing 100 tpy threshold for regulation of Major Stationary Sources); *see also* Additional Statement of Basis at p. 55.) ***There are therefore no additional Clean Air Act regulatory requirements applicable beyond the PSD regulations, and no additional federal permit required beyond the PSD Permit.***

(Emphasis and italics added.)

Such a construction of the Clean Air Act, including BAAQMD and RCEC's contention that this Board has no jurisdiction to address this important statutory question, impermissibly attempts to apply the different parts of the Act in isolation rather than construing the parts together to accomplish Congress's purpose to protect the public's health. The School District submits that 40 C.F.R. § 52.24, otherwise known as the "construction moratorium" for major stationary sources such as RCEC, clearly prohibits the approval of any PSD for RCEC. This section is based on 42 U.S.C. § 7410 in Part A of the Clean Air Act, "Air Quality and Emissions Limitations," which *Connecticut Fund for Environment v. EPA* (2nd Cir. 1982) 672 F.2d 998, 1008, observed is "absolute and unqualified." Although at issue in *Connecticut* was the predecessor statute, section 7410, subdivision (n), subpart (3), expressly provides a savings clause to retain the construction moratorium:

(3) Retention of construction moratorium in certain areas

In the case of an area to which, immediately before November 15, 1990, **the prohibition on construction or modification of major stationary sources prescribed in subsection (a)(2)(I) of this section (as in effect immediately before November 15, 1990) applied by virtue of a finding of the Administrator that the State containing such area had not submitted an implementation plan meeting the requirements of section 7502 (b)(6) of this title (relating to establishment of a permit program [non-attainment plan provisions])** (as in effect immediately

before November 15, 1990) or 7502(a)(1) of this title (to the extent such requirements relate to provision for attainment of the primary national ambient air quality standard for sulfur oxides by December 31, 1982) as in effect immediately before November 15, 1990, **no major stationary source of the relevant air pollutant or pollutants shall be constructed or modified in such area until the Administrator finds that the plan for such area meets the applicable requirements of section 7502 (c)(5) of this title (relating to permit programs) . . .**

As *Connecticut Fund for Environment, supra*, 672 F.2d at 1002 explains, “Section 7502(a)(1) makes clear that the Part D SIP revisions ‘required by [former] section 7410(a)(2)(I) [are] a precondition for the construction or modification of any major stationary source.’”

"The statutory language and legislative history indicate that the **[moratorium] is automatic and mandatory under the Act and existing state implementation plans, and is not a new prohibition that can be imposed or withheld at EPA's discretion.**" 44 Fed.Reg. 38471, 38472 (July 2, 1979). Accordingly, EPA promulgated a rule codifying this statutory restriction and adding it to all SIPs. 40 C.F.R. § 52.24(a), (b) (1981), 44 Fed.Reg. 38471 (July 2, 1979).[fn]

To ensure that the new deadlines were not jeopardized at the start by the usual delays, Congress specified a precise schedule for the implementation of the 1977 Amendments. The states were to identify nonattainment areas by December 5, 1977. EPA was then to promulgate a list of nonattainment areas within sixty days (February 3, 1978). § 7407(d). States were required to submit Part D revisions by January 1, 1979. § 7502 note. The revisions were to take effect not later than July 1, 1979. **As of that date, any major new construction would be governed either by a § 7503 permit system of an approved Part D submission or by the construction moratorium of § 7410(a)(2)(I).**[fn]

(*Ibid*, emphasis added.) In addition to section 7410, subdivision (n)’s savings clause, Subpart 6 of Part D also provides an additional savings clause, 42 U.S.C. § 7515, making it clear that Congress did not intend to permit major stationary sources such as RCEC, which violate the NAAQS of the pollutant for which the region is in non-attainment, but have no SIP to implement Part D, to obtain a PSD or any permit:

Each regulation, standard, rule, notice, order and guidance promulgated or issued by the Administrator under this chapter, as in effect before November 15, 1990, shall remain in effect according to its terms, except to the extent otherwise provided under this chapter, inconsistent with any provision of this chapter, or revised by the Administrator. No control requirement in effect, or required to be adopted by an order, settlement agreement, or plan in effect before November 15, 1990, in any area which is a nonattainment area for any air pollutant may be modified after November 15, 1990, in any manner unless the modification insures equivalent or greater emission reductions of such air pollutant.

40 C.F.R. §52.24, contained in part 52 under “approval and promulgation of plans,” and cited in *Connecticut Fund*, is entitled “statutory restrictions on new sources.”

Subdivision (b) of section 52.24 provides the following:

(b) Permits to construct and operate as required by permit programs under section 172(c)(5) of the Act [nonattainment] may not be issued for new or modified major stationary sources proposing to locate in nonattainment areas or areas in a transport region where the Administrator has determined that the applicable implementation plan is not being adequately implemented for the nonattainment area or transport region in which the proposed source is to be constructed or modified in accordance with the requirements of part D of title I of the Act.

(Emphasis added.) Subdivisions (d) and (e) continue that the construction moratorium applies to major stationary facilities such as RCEC which violate the NAAQS within that non-attainment area.

(d) The restrictions in paragraphs (a) and (b) of this section apply only to major stationary sources of emissions that cause or contribute to concentrations of the pollutant (or precursors, as applicable) for which the transport region or nonattainment area was designated such, and for which the applicable implementation plan is not being carried out in accordance with, or does not meet, the requirements of part D of title I of the Act.

(e) For any transport region or any area designated as nonattainment for any national ambient air quality standard, the restrictions in paragraphs (a) and (b) of this section shall apply to any major stationary source or major modification that would be major for the pollutant (or precursors, where applicable) for which the area is designated nonattainment or a transport region, if the stationary source

or major modification would be constructed anywhere in the designated nonattainment area or transport region.

Subdivision (k) continues that 40 CFR part 51, appendix S, shall govern permits to construct “applied for during the period between the date of designation as nonattainment and the date the NSR permit program meeting the requirements of part D is approved.”

Here, BAAQMD attempts to carefully qualify that it “did not issue the PSD permit as a permit for the 24-hour PM_{2.5} standard” but “finalized the permit as a PSD permit for the annual PM_{2.5} standard only.” This almost hyper-technical construction would have one to believe that this 600 megawatt thermal gas fired plant, which will emit over 86 tons/year of particulate matter, is not permitted to emit “any” “nonattainment” particulate matter. BAAQMD completely ignores that it is allowing the construction of a major stationary source in a nonattainment area, which violates the NAAQS for the pollutant for which the region is in nonattainment. As the Court in *Weiler v. Chatham Forest Products, Inc.* 370 F.3d 339, 341(2nd Cir. 2004), observed,

The Clean Air Act, 42 U.S.C. §§ 7401-7671q (2000) (the Act), created a complex and comprehensive legislative scheme **to protect and improve the nation's air quality**. See *Sierra Club v. Larson*, 2 F.3d 462, 464 (1st Cir.1993).

Broadly speaking, Title I of the statute regulates stationary sources of pollution and Title II regulates mobile sources, most importantly motor vehicles. For specified pollutants, national air quality standards are promulgated by the EPA. 42 U.S.C. § 7409.

Whether new construction of polluting facilities is permitted in an area, and what kind of controls are required, depends on whether the area is below or above the standard for each pollutant.

An entity proposing to construct a major emitting source of pollutants must obtain a permit prior to construction. See 42 U.S.C. §§ 7475(a), 7502(c)(5). Part C of subchapter I of the Act (Part C), 42 U.S.C. §§ 7470-7492, governs requirements in geographical areas where the standard has been attained; Part D of subchapter I of the Act (Part D), 42 U.S.C. § 7501-7515, applies to so-called nonattainment areas.

Here, BAAQMD proposes to issue a permit under Part C for a major stationary source which will violate the NAAQS for a pollutant which is in nonattainment under Part D, claiming that because the project will fall below Appendix S's 100 tons/year, it need not even review whether the project will violate the NAAQS for which the region is in nonattainment. But, unlike in *In re Sutter Power Plant*, 8 E.A.D. 680, 683 (1999), where "Calpine was *required under the CAA [Clean Air Act] to obtain a nonattainment area permit from the Feather River Air Quality Management District []* for its prospective emissions of the ozone precursors NOx and volatile organic compounds," italics added, here, **"no additional federal permit will be required beyond the PSD Permit."** Response to Comments, at 78, fn. 158.

The School District submits that under 40 C.F.R. 52.24, as well as the applicable statutory provisions of the Clean Air Act which must be read together to accomplish Congress's legislative purpose to protect the public's health and safety, BAAQMD and RCEC's legal construction is not supportable and as a matter of law must be rejected as violating the Clean Air Act.

C. BAAQMD Committed Clear Error In Failing To Disclose The Results Of The Modeling For The 24 Hour Project Only PM2.5 At 9 lbs/hour, A Rate Minimally Guaranteed By The Vendors.

Assuming that BAAQMD has a duty to examine the 24-hour PM2.5 concentrations levels for NAAQS purposes, BAAQMD defends its air quality analysis utilizing the 7.5 lbs/hour BACT emissions rate for PM2.5 on the ground that "is the maximum emissions rate that the facility will be allowed to have under its permit." (BAAQMD Response at 18.) The underlying theory of both BAAQMD and RCEC is that because 7.5 lb/hr would be permitted it is "federally enforceable" and therefore the "worst case" emission rate. In addition to the fact that BAAQMD in its Response to

Comments acknowledged itself that 7.5lb/hr may not be achievable, and in fact rejected the School District's comparison to yet to be built Blyth on the ground it was not achievable, the School District submits that BAAQMD essentially has conceded that it is unsure of whether such a rate is achievable.²

RCEC additionally disputes that an applicable standard is the "maximum" or "worst case" scenario, but only what is "permitted." According to RCEC, there is no need to examine what might in fact be emitted. RCEC Response at 23. RCEC also

² The Response to Comments acknowledges that according to power plant owners and operators,

They stated that the Air District should not establish a BACT limit at less than 9.0 pounds per hour. The Air District acknowledges these points and is considering them, **but ultimately does not need to make a definitive determination in response because the project applicant is willing to accept the 7.5 pound-per-hour permit limit. The Air District understands that equipment manufacturers will not guarantee emissions below 9.0 pounds per hour.** Vendor guarantees are one important indicator of what emissions performance level is achievable for a BACT analysis, although the presence or absence of a vendor guarantee is not by itself determinative.[fn] The Air District is also fully aware that some of the test results it review showed emissions above 7.5 pounds per hour, as discussed in the Additional Statement of Basis. **The Air District agrees that the BACT limit needs to be established at a level that is achievable under all operating scenarios, but does not agree that a small number of test results over 7.5 pounds per hour necessarily means that a 7.5 pound-per-hour limit cannot be found to be achievable for purposes of BACT.** The Air District is investigating these test results further to develop more information on this issue. It may be that the high test results were due to inherent uncertainties in the test method as discussed above, or because of upsets in facility operation that led to excessive particulate matter. **Alternatively, it may be that the equipment cannot in fact ensure emissions below 7.5 pounds per hour under all foreseeable circumstances.** The Air District will continue to evaluate this issue going forward. **But for purposes of the Russell City permit, the District does not need to make a final determination of whether BACT for this type of equipment should be 7.5 pounds per hour, 9.0 pounds per hour, or some number in between.** The project applicant has agreed to accept a permit limit of 7.5 pounds per hour, and that limit meets or exceeds BACT.

Response at 86, emphasis and italics added.

contends that the School District misconstrues *In re Northern Michigan University*, PSD Appeal No. 08-02 (EAB FEB. 18, 2009). However, in *Michigan*, there [t]he parties do not dispute that worst-case emissions should be employed in the modeling analyses conducted to demonstrate a facility’s compliance with the NAAQS and PSD increments. . . They differ, however, on whether the emissions rates used in the air models in this particular case actually represented the proposed CFB boiler’s maximum worst-case emissions rates or some lesser, non-worst-case rates.” *Id.* at p. 49, emphasis added, *relying on* NSR Manual, section on “Source Data” inputs, also cited in the School District’s petition, at C.44-.45 and Guideline on Air Quality Models: “the load or operating condition that causes maximum ground-level concentrations [of air contaminants] should be established,” 38 70 Fed. Reg. 68,218, 68,240(Nov. 9, 2005) (codified at 40 C.F.R. pt. 51 app. W § 8.1.2.a).

This approach in *Michigan* cited in the School District’s petition at page 29, contrary to BAAQMD’s contention that the School District provides no basis, BAAQMD at 23, is further supported and explained in this Board’s precedents, including by *In re Prairie State, supra*, upon which BAAQMD relies in its response. There, in *Prairie State*, the Board explained this approach:

We also note that IEPA expressly stated that its determination is based, at least in part, on its conclusion that there is an uncertain current state of scientific knowledge about condensable particulate emissions, total PM10 emissions, and their control. . . . To deal with its uncertainty regarding the appropriate achievable limit, IEPA established the initial [higher] limit of 0.035 lb/MMBtu but required this limit to be adjusted downward based on subsequent tests of *Prairie State’s* actual performance. The provision for downward adjustment establishes a default limit of 0.018 lb/MMBtu if *Prairie State* fails to perform PM10 emission testing. . . . IEPA explained that the adjustment provision is an “essential component” of IEPA’s BACT analysis. . . .

.....

. . . . **On two prior occasions, we have sustained a permitting authority’s decision to issue a permit containing BACT limits that were subject to adjustment based on postconstruction performance data. . . .**

The permit at issue in *AES Puerto Rico* set a low BACT limit for PM10, but allowed upward adjustment after the facility obtained stack test data after construction.[Citation.] The permit at issue in *Hadson Power* set a high limit for NOX subject to downward adjustment after obtaining post-construction operating data. [Citation.] **In both cases, the permitting authorities explained that the adjustable permit limits were used because of uncertainty as to what emission limit would be achievable.** [Citation.] In the present case, IEPA specifically concluded that there is scientific uncertainty regarding the achievable PM10 emission limit. . . . Under these circumstances, just as we held in *AES Puerto Rico*, we conclude here that “the use of an adjustable limit, constrained by certain parameters, and ***backed by a worst case air quality analysis***, is a reasonable approach.”

. . .
Citing in support *In re AES Puerto Rico, L.P.* 8 E.A.D. 324, 348-50 (EAB 1999) and *In re Hadson Power*, 14 4 E.A.D. 258 (EAB 1992). Specifically noted was that in *AES Puerto Rico*, although the “permit. . . restricted the extent of an upward adjustment,” the “**air quality modeling was based on this maximum upward adjustment.**” *In re Prairie State*, supra, slip opn. 112, fn. 90. Emphasis and italics added.

Here, however, the “worst case air quality analysis,” at the emissions rate which the vendor guarantees and other power plant operators point out is achievable, was not published nor disclosed, although based on BAAQMD’s own records as provided to the School District, what is clearly achievable and the emissions rate upon which BAAQMD was prepared to base two earlier permits violated the NAAQS. In this regard, the School District disagrees with the accuracy of the contention in BAAQMD’s opposition that the “record speaks for itself.” BAAQMD Oppo. at 16. As pointed out in the School District’s petition, to date what the results of the air modeling at 9 lbs/hour reflecting

higher concentrations in violation of the NAAQS and over 2,400 additional sensitive receptors within a larger impact area remains unknown and undisclosed to the public.³

BAAQMD Abused Its Discretion In Excluding All But One Roadway

RCEC's response argues that by somehow including Hesperian Boulevard, a congested expressway operating at the levels of D-F, and interstate highway 880 with its approximate one-half million daily trips "would be 'double counting' its contribution" since the highway "segment's contribution would already be represented within the 'background' concentration taken from ambient monitoring data for purposes of determining compliance with the NAAQS. RCEC at 34. The problem with that argument, however, is that *there is no ambient monitoring data*. Although RCEC's applications for this project, beginning at a different location, has been pending since approximately 2001, over the past approximate nine years, Calpine has not provided any ambient monitoring data, instead relying on modeling. However, even if it had done so, the NSR Manual still contemplates that highways such as 880 be "explicitly modeled."

According to the NSR Manual,

While air quality data may be used to help identify existing background air pollutant concentrations, **EPA requires that, at a minimum, all nearby sources be explicitly modeled as part of the NAAQS analysis.** The

³ Contrary to BAAQMD's argument, the School District did not argue that BAAQMD's reference to the SIA report on the modeling results at 7.5 lbs/hour was not public disclosure, but that expecting the public to do the required work of the applicant, including plotting out on a map thousands of sensitive receptors concerning BAAQMD's results at 9 lbs/hour goes too far. According to BAAQMD's own June 2007 Permit Modeling Guidance, Section G provides that "the applicant should include a plot map showing the location of all increment-consuming sources from section G.1 a&b above which impact the proposed source impact area." By simply setting a disk in a file, the average interested person will not possess the necessary scientific or computer programs to read, assimilate and program this massive amount of data, which here overall involved over 30,000 sensitive receptors that Calpine reduced to approximately 6,000 by its utilization of the 7.5 lbs emission rate, not including the necessity to reformat the receptor data according to an acceptable format.

Modeling Guideline defines a **"nearby" source as any point source expected to cause a significant concentration gradient** in the vicinity of the proposed new source or modification. For PSD purposes, **"vicinity" is defined as the impact area**. However, the location of such nearby sources could be anywhere within the impact area or an annular area extending 50 kilometers beyond the impact area. (See Figure C-5.)

NSR Manual C-32, emphasis and italics added; *accord*, 70 Fed. Reg. 68243 (Nov. 9, 2005).

BAAQMD, on the other hand, “does not dispute the general notion that roadways such as I-880 and Hesperian Blvd. *could cause* significant PM concentration gradients nearby to those roadways,” but justifies its “exclusion of these sources . . . based on the conclusion that they will not cause a significant concentration gradient at any location *where the facility’s impacts will be above the SIL.*” BAAQMD at 30, fn. 18. Arguably, under the applicable standard to explicitly model **“any point source expected to cause a significant concentration gradient** in the vicinity of the proposed new source or modification,” BAAQMD essentially has conceded that if such roadways “could cause” such significant PM concentration gradients, they likewise would be “expected to cause” a significant concentration gradient, just as this was reflected with highway 92.⁴

Compare, Response at 143, quoted in the School District’s petition at 33-34: “The Air District also evaluated non-point sources within this area that *could cause a significant*

⁴ BAAQMD attempts to portray the School District’s summary of the various responses by BAAQMD on these roadways as “putting to rest” any contention that the District failed to provide the reasoning. BAAQMD at 31-32. What BAAQMD omits, however, is that the School District outlined how in fact BAAQMD’s various statements of basis provided differing stories: first contending that six different specific roadways were studied, including “238 junction,” which does intersection highway 880, then later claiming that description was all a typographical error, but then assuring the public, that these other roadway sections “*would not* cause a significant concentration gradient at locations where the project’s impacts would be above the SIL.” Still unknown is upon what analysis did BAAQMD rely on to make that determination. Given BAAQMD’s response, that determination was not made upon the modeling results generated by applying the 9lbs/hour emission rate.

concentration gradient at any of the areas where the facility's impact was above the SIL.”

Perhaps the most fundamental problem with BAAQMD's analysis, however, is that BAAQMD completely relies on the understated air modeling analysis utilizing 7.5 lbs/hour. Until the additional 2,400 sensitive receptors are mapped and plotted out generated by applying the 9lbs/hour emissions rate, where the facility's impacts will be above the SIL in relation to these non-point source roadways remains unknown. Until this is accomplished, BAAQMD's alleged exercise of discretion remains unsupported.

D. BAAQMD Was Provided The Siemen's Vendor Information On The Caithness Auxiliary Boiler For Natural Gas – The Confusion That Arises Is Based On Calpine's Records Provided To BAAQMD.

1. The Siemens Vendor Records For Caithness Records On The Auxiliary Boiler.

BAAQMD and RCEC contend that the College District somehow misled BAAQMD on reviewing the Caithness records and for some unknown reason the School District provided to BAAQMD the Caithness vendor information concerning an auxiliary boiler for oil, not the vendor information concerning Caithness's auxiliary boiler for natural gas. Hence, BAAQMD argues, this achieved in practice important BACT technology that BAAQMD has been resisting throughout, which would substantially reduce RCEC's CO emissions, must be thrown out the window. Interestingly, although RCEC's Exhibit 8 purports to provide copies of the School District's Comments, Exhibit 8 does not include any copies of the Siemens December 14, 2004 information concerning the Caithness auxiliary boiler.

On the other hand, BAAQMD's Exhibit 9 does include two pages of the four pages mailed to BAAQMD concerning the Siemens Vendor information on the Caithness auxiliary boiler which has both an auxiliary boiler for natural gas, as well as a back up

auxiliary boiler for fuel oil. In this regard, Exhibit 9 to BAAQMD's response includes a page numbered one entitled "combined cycle operation on natural gas – no auxiliary boiler" and a page numbered two "combined cycle on fuel oil – with auxiliary boiler."

Exhibit 4 to the School District's petition, which is attached for the convenience of the Board, consists of a total of four pages: 1. Natural gas – no auxiliary boiler; 2. Fuel oil – no auxiliary boiler; following next is 1. Natural gas – with auxiliary boiler; 2. Fuel oil – with auxiliary boiler. The numbers which the School District's September 16, 2009 letter refer to are to emission reductions for "natural gas – *with* auxiliary boiler" compared to what emissions would be permitted for RCEC based on the August 2009 ASOB ("proposed RCEC Limit").⁵

In response, rather than comparing RCEC's estimates with the Siemens' estimates with an auxiliary boiler, as had the School District to establish that RCEC could do better (the amounts bracketed in the School District's Sept. 16, 2009 letter), and that the cost effectiveness was far below the approximate \$83,025/ton cost of CO as asserted by Calpine, BAAQMD applied the Siemens table estimates without an auxiliary boiler, comparing them with an auxiliary boiler for fuel oil, arriving at a lesser differential of reduction in start-up emissions and claiming that the School District's estimates of \$11,515 (or \$11,451)/ton of CO were wrong, but that it was \$21,140/ton of CO, assuming the start-up scenario provided by Calpine for six cold-start-ups and 100 warm start-ups.⁶

⁵ The School District delivered its September 16, 2009 copies both by email and mail, attaching by email a total of five attachments: 1. Letter, 2. zip code map identifying the communities suffering from disparate health, 3. Alameda County Public Health Officer Sandra Witt's testimony from the California Energy Commission *Eastshore* hearings, 4. one map reflecting the two mile radius and 5. another map reflecting the 50 km radius. Not emailed but mailed was the four page Siemens vendor information.

⁶ The School District agrees with the other petitioners' contentions, such as CAP, that the operating scenario for this plant is extremely confusing. In this regard, there are two turbines and under the permit, each turbine would start-up separately. Under this

As established by the documentation provided by the School District concerning the Lakeside Utah plant and the New York Caithness plant, the success of the auxiliary boiler to reduce the start-up emissions of CO is well documented and clearly has been achieved as these plants are in operation. (*Compare*, Exhibit 4 of the School District providing Siemens 2004 information). Further, as discussed in the petition by Citizens Against Pollution, pages 19-21, under BAAQMD’s achieved in practice guidelines, the cost effectiveness does not trump what has been achieved in practice at other facilities. *See*, BAAQMD BACT Workbook: “Definitions” and “Policy and Implementation Procedure, Interpretation of BACT,” <http://hank.baaqmd.gov/pmt/bactworkbook/default.htm>.⁷ Clearly, remand is necessary

scenario, only one auxiliary boiler is needed. However, unclear is whether the operating scenario of six cold and 100 warm start-ups applies to each turbine, resulting in twelve cold and 200 warm start-ups, which would reduce the cost even further.

⁷ Under definitions, “The following is a list of associated definitions.

- BACT – Best Available Control Technology as defined in Regulation 2-2-206.
- TBACT – Toxics Best Available Control Technology as defined in Regulation 2-5-205.
- “Achieved in Practice” BACT – Most effective emission control already in use. Alternatively, it must be the most stringent emission limit achieved in the field for the type and capacity of equipment comprising the source under review and operating under similar conditions for at least six months of successful operation in the United States. **This control technology can be required as BACT without having to make a cost-effective determination.**
- Cost-effective analysis – Cost analysis which is performed for any BACT options that are technologically feasible but not “achieved in practice.”

Emphasis added. Further, under “Implementations,” interpreting BACT:

The second BACT category, "achieved in practice", applies to the most effective emission control device already in use or the most stringent emission limit achieved in the field for the type and capacity of equipment comprising the source under review and operating under similar conditions . . .

for BAAQMD to both properly apply its achieved in practice policy as well as to re-examine the documents which, although never having notified counsel for the School District of any inconsistencies, it now contends for the first time in its response that it did not completely receive.

2. BAAQMD Reliance On Calpine’s Confusing Auxiliary Boiler Documents To Justify Rejection Of This Necessary BACT Was Erroneous.

In response to the School District’s argument that BAAQMD’s reliance on Calpine’s documents is misplaced to justify BAAQMD’s rejection of an auxiliary boiler to satisfy BACT, RCEC accuses the School District of claiming that its Mankato plant in Minnesota consists of a 320 Mbtu auxiliary boiler. (RCEC at 40).⁸ Not so. As a preliminary point, RCEC quotes from the School District’s initial brief, not from its errata submitted on March 26, 2010, which specifically corrected the sentence RCEC quotes at page 40. As reflected in the School District’s errata:

Therefore, the last sentence on page 35 should state as corrected: “. . . BAAQMD’s error is then magnified by erroneously relying on cost estimates to install *much larger* auxiliary boilers, such as intended for *Minnesota, or others* six times larger than needed for RCEC, *while ignoring Lakeside*, which operates the same turbines and has the same operating scenario as contemplated by RCEC. Exhibit 4.”

School District’s March 26, 2010 Supplemental Errata to its March 22, 2010 petition at 2-3, italics original (representing corrected language), emphasis added.

Both BAAQMD and Calpine accuse the School District of failing to attack the alleged cost estimate provided by Calpine. However, what both ignore, is that it was not

Emphasis added.

⁸ The College District also wishes to provide to the Board the cost effective analysis prepared by Calpine, RCEC’s proponent, and provided to BAAQMD which is the source for confusion by apparently combining different facilities and listing on the page “320MMBtu/hr.”

until BAAQMD's publication of its response to comments that BAAQMD disclosed it was relying on facilities like Mankato, in Minnesota, near the Canadian border to come up with its cost estimates. Response at 114. Further, the School District's approach was to simply point out that BAAQMD was far underestimating the benefits of an auxiliary boiler which were achieved and subject to vendor guarantees, which reduced the cost/ton of CO from Calpine's incredible \$82,800/ton to just over approximately \$11,000/ton, even applying Calpine's annualized cost assumptions.⁹

What is reflected on Calpine's documents provided to BAAQMD, Exhibit 8 to CAP's petition, however, is "Mankato Energy Center start profile for *winter months*." Emphasis and italics added. Also reflected on that same first page is "LMEC Aux Boiler 320." Exhibit 8 to CAP at 1 (bottom right corner).

The School District does not dispute that the Mankato facility in Minnesota is a 70 MMbtu/hour auxiliary boiler, much larger than needed for RCEC; *compare*, School District's petition at 35, but attributes the reference to "LMEC Aux Boiler 320" to the only conclusion that Calpine must be referring to a 320 MMbtu auxiliary boiler in order to arrive at such high cost estimates. *See* attached copy of email communication from

⁹ Specifically, the School District's letter at page 4 stated the following:

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.

Clearly, pointing out that applying Calpine's own numbers, it had overestimated the cost of an auxiliary boiler by eight times is not "endorsing" or adopting Calpine's amounts as the School District's own as contended by Calpine and BAAQMD.

Kevin Poloncarz to Alexander Crocket dated April 2, 2009, discussing Delta Energy and Los Medanos, among others, which attaches the spread sheet with the “LMEC Aux Boiler 320” reference. Exhibit 8 to CAP’s petition.

The record reflects that Calpine has been providing BAAQMD with cost comparisons for much larger auxiliary boilers, such as Mankato for “winter months,” in Minnesota, together with “LMEC Aux Boiler 320.” As a result, these cost comparisons include expenses for much larger auxiliary boilers than needed.

As pointed out in the School District’s petition, not only does Lakeside in Utah have a smaller auxiliary boiler, but Caithness in Long Island, with an identical turbine, Siemens Westinghouse 501F has a 29 MMbtu auxiliary boiler. The School District has fully preserved its entitlement to demand that BAAQMD base its BACT analysis on documents applicable and similar to RCEC and the San Francisco Bay Coastal area.

E. In re Prairie State Confirms The Inadequacy Of BAAQMD’s Environmental Justice Analysis.

RCEC argues that the College District’s argument that BAAQMD’s environmental justice analysis is incomplete and inadequate should be dismissed. *See generally*, at 47-52. Specifically, RCEC argues that even if its impact on an environmental justice community “result[ed] in a concentration greater than the identified SIL,” this provides no grounds to deny it a PSD permit. RCEC at 50. Given the Bay Area’s non-attainment status for 8-hour ozone and PM2.5, and applying the facts at issue, including that the community already is at risk as documented by both Dr. Witt of Alameda County and BAAQMD’s CARE program, identifying Community’s At Risk from pollution, the School District disagrees.

As In re Prairie State Generating Company, supra explains, Executive Order 12898 instructs federal agencies to address, as appropriate,

“disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority and low income populations * * *.” Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994). We have held that environmental justice issues must be considered in connection with the issuance of PSD permits by both the Regions and states acting under delegated authority.

Citing in support *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 174-75 (EAB 1999) (remand to delegated state permitting authority to supplement the record with the environmental justice analysis); *In re AES Puerto Rico, L.P.*, 8 E.A.D. 324, 351 (EAB 1999), *aff'd sub nom Sur Contra La Contaminacion v. EPA*, 202 F.3d 443 (1st Cir. 2000); *In re EcoEléctrica, L.P.*, 7 E.A.D. 56, 67-69 (EAB 1997).

Unlike in *Prairie*, however, where there was no evidence of disproportionate impact, here BAAQMD’s own program has identified this community’s health at risk already from too much pollution, a community that already suffers disproportionately from poverty and lack of health care. As for RCEC’s argument that the project and its “significant impacts . . . lie *outside* of the identified priority community,” RCEC at 51, emphasis added, the School District strongly disagrees. As reflected by the map provided by the School District, even applying RCEC’s understated air modeling analysis, its particulate matter will most heavily impact the communities within one mile –the CARE line lies just within a half mile of RCEC.¹⁰ Given the disproportionate impact of RCEC on this minority and low income population, its failure to address these important issues on the cost to the community, as required by the Implementation of the New Source

¹⁰ Based on the School District’s understanding, the BAAQMD CARE lines were drawn along the residential zoning lines. The School District can supplement the record with this information if requested.

Review Program for Particulate Matter, Fed. Reg. Doc. E8-10768, this permit must be remanded for BAAQMD to perform a proper analysis.

Dated: May 28, 2010

Respectfully Submitted,

S/_____
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Community College District

CERTIFICATE OF SERVICE

I hereby certify that Motion By Chabot-Las Positas Community College District For Permission To File Reply Brief To Responses By BAAQMD And RCEC was sent to the following persons in the matter indicated:

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